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The papers presented in the number concentrate on many topics connected with organization and management. There are in the number papers about: the impact of Covid-19 pandemic on management, competitiveness, sustainable development, production management, customer satisfaction management, tourism management, logistics, service management, healthcare management, Society 5.0, Smart City, economics, Industry 4.0, international management, human resource management, sharing economy, Corporate Social responsibility, marketing, and innovation management.

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PANDEMIC SARS-COV-2 AND THE SALE OF REAL ESTATE – THE CASE OF THE CITY OF POZNAN

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Purpose: This article aims to assess the impact of the pandemic on the sale of real estate from the municipal real estate resource of the City of Poznan.
Design/methodology/approach: The implementation of the research goal was based on the assumption that the Sars-Cov-2 pandemic impacted the sale of real estate from the municipal real estate resource of the City of Poznan. In order to assess the analysed phenomenon, the analysis covered the sale of real estate, conducted in the form of a tender during the two years preceding the pandemic and the two years of the pandemic. The analyses were carried out using a list of tenders conducted by the City of Poznan in 2018-2021 and information on the state of the municipal property prepared during this period. The study considered statutory changes relating to the disposal process of municipal real estate. The assumed goal was implemented based on the classic review of the literature, supported by the analysis of legal acts and materials of the studied unit.
Findings: The pandemic resulted in significant changes in the sale of real estate from the municipal real estate stock of the City of Poznan. We can distinguish three characteristic periods, with the dynamics of change being the highest in the first year of the pandemic. We note the change in preferences of real estate market participants and the need to update the regulations on the sale of municipal real estate so that they take into account the opportunities for developing digital technologies.
Social implications: The article may influence public policy by drawing attention to the importance of adapting legal requirements to the current situation and strategic thinking in managing the communal real estate resource, considering future crises.
Originality/value: The article deals with the current and essential topic of the impact of the pandemic on the sale of real estate from the communal real estate resource, which is the research gap. The literature on the subject shows that this issue is analysed in the context of the commercial sector, while there are no analyses in relation to the municipal sector.

Keywords: sale of real estate, sale of land, real estate management, Sars-Cov-2 pandemic, commune, city, the budget of local government units, Poznan, new rules of work.

Category of the paper: research paper.

1. Introduction

The effects of the Sars-Cov-2 pandemic can be seen in almost every sector of the economy. They also influenced all real estate market participants, entrepreneurs, individuals, and public institutions. The quarantine effect and the implementation of the sanitary regime resulted in changes, among other things, in the way of selling real estate, which had to be done online (Białas, 2021). As the researcher notes (Białas, 2021), in the case of the commercial real estate market, most websites recorded a significant increase in online activity. Therefore, companies with an established e-commerce position could achieve a competitive advantage.

In the case of the public sector, we cannot speak of having any e-commerce position because the sale of municipal real estate takes place in a stationary form.

The decision to limit the functioning of enterprises, offices, and other public institutions meant that these units were forced to implement new rules of operation. For the local government units, this meant the necessity to develop mechanisms that would allow for the continuity of the office's operation.

Since the primary source of own income from the sale of real estate is the primary source of property income, securing the development of this area has become crucial from the point of view of minimizing the negative impact of the Sars-Cov-2 pandemic.

In the literature on the subject, this topic is analyzed more from the perspective of the commercial and residential real estate market (Koszel, 2020; Łaszka, 2021; Białas, 2021; Najbar, 2021; Cesarski, 2022; Gajowniczek, 2021; Koszel, Strączkowski, 2021) rather than the municipal resource. In the second case, the work focuses on the financial aspects of local government, including, inter alia, budget revenues from the sale of real estate (Swianiewicz, Łukomska, 2020; Łubina, 2021).

On the other hand, there are no studies on indications regarding the analysis of the impact of the pandemic on the sale of real estate as a form of managing the communal real estate resource.

There is, therefore, a research gap that this study covers. The above was a premise for undertaking research and allowed to define research questions:

1. How did the pandemic affect the sales results in individual segments of the real estate market and the organization of work in the unit?
2. How did the real estate market participants behave?
3. Can we isolate the factors shaping these changes?
4. What are the forecasts for the development of the real estate market in the coming years?

The primary purpose of the study was to determine the impact of the pandemic on the sale of real estate from the municipal real estate resource of the City of Poznan.

The article consists of three parts. The first discusses the problem of selling real estate to manage communal real estate resources. The second part presents the conditions for selling real estate during the pandemic in Poznan City Hall. The third focuses on assessing the impact of the pandemic on the sale of municipal real estate and identifying sales trends in the coming years. The whole of this study has been completed with a summary and conclusions.

From the point of view of the aim of the study, it was assumed that the analysis would cover the sale of real estate conducted by tender during the two years preceding the pandemic and during its duration. The analyses were carried out using a list of tenders conducted by the City of Poznan in 2018-2021 and information on the state of the municipal property prepared during this period. The study also considered statutory changes relating to the disposal process of municipal real estate.

In addition, during the research, research tools were used, such as the analysis of the literature on the subject, legal acts, statistical data, and materials of the studied unit.

2. Sale of real estate as a form of communal real estate management

The concept of managing real estate belonging to a communal real estate resource does not have a statutory definition. However, in the literature on the subject, attempts are made to define it. Examples include the definitions proposed by the authors of the commentaries on the Real Estate Management Act. According to G. Bieniek, "real estate management is all factual and legal activities that make up the management, administration and handling of real estate" (Bieniek et al., 2013). In turn, E. Bończak-Kucharczyk points out that "real estate management is the entire process of exchange of goods and services" (Bończak-Kucharczyk, 2020).

In art. 25 act. 2 (Ustawa o Gospodarce Nieruchomościami, 1997) lists examples of factual and legal actions falling within this concept. In terms of these activities, it was indicated, inter alia, the sale, and purchase of real estate constitute the resource. On this basis, it can be indicated that the concept of "real estate management" is associated with making decisions on the use of assets, which are real estate. Decisions falling within this scope are made by the head of the commune, mayor, or city president independently but within limits specified by law. As indicated by the Constitutional Tribunal, the exercise of ownership rights by a commune concerning communal property cannot achieve commercial goals but is intended to carry out public tasks (Ustawa o Gospodarce Nieruchomościami, 1997).

A natural manifestation of real estate management is deciding which real estate from the commune's resources will not be used to carry out the commune's tasks and may be disposed of. The provision of art. 4 points 3b (Ustawa o Gospodarce Nieruchomościami, 1997) defines the concept of "sale of real estate" as performing legal acts on the basis of which the ownership of real estate is transferred, or the right of perpetual usufruct of land is transferred, or it is put into perpetual usufruct. Thus, selling real estate may take place through many legal actions, for example, sale, exchange, or donation. The sale is the best-known and most common form of disposal in everyday life. By the contract of sale, the seller undertakes to transfer ownership of the goods to the buyer and hand them over to him, and the buyer undertakes to collect the goods and pay the seller the price (Art. 534, §1) (Kodeks Cywilny, 2022).

The sale of real estate by local government units as one of the forms of management that leads to the depletion of the commune's property in material terms is subject to detailed regulations, which have been defined in the Real Estate Management Act.

First of all, the act as mentioned above contains an obligation to prepare a list of real estate intended for sale, which is to contain a set of the most important, exhaustively indicated information about the real estate (Art. 35) (Ustawa o Gospodarce Nieruchomościami, 1997). The regulations in question reflect the commonly accepted view that the principle of openness of proceedings must be respected when managing public property. Violation of this rule may result in the invalidity of the contract (Bieniek, 2000). Placing a real estate on the list of real estate intended for sale made public is tantamount to a declaration of intent to sell it. This entails several legal consequences, for example, within the scope granted to specific entities of the right of priority in acquisition. The local authorities with the above-mentioned duties are the commune head, mayor, or city president.

Real estate belonging to the commune real estate stock may be sold in a tender procedure or through a non-tender procedure. The rule is the sale of real estate by tender, and the sale without a tender is treated as an exception to the rule, which may apply in strictly defined situations (Wyrok NSA, 2010).

The tender is organized on the principles set out in the Real Estate Management Act. It is announced, organized, and carried out by the competent authority, which is the commune head, mayor, or city president in the case of a commune. Before the tender is announced, it is the responsibility of the executive branch of the commune to consider and execute justified claims for the purchase of the real estate, disregarding the tendering procedure.

The invitation to tender must contain, in addition to the data in the list of real estate for sale, information specifying the time, place, and terms of the tender. In the event of announcing another tender or negotiations, it must contain the dates of the previous tenders. The tender notice must be made public.

The announced tender may be cancelled only for "important reasons", and this information should be immediately disclosed to the public, including the reasons for the cancellation.

The legislator indicated four forms of tenders: limited oral tender, open oral tender, limited written tender, and open written tender, assigning them different goals. The purpose of the oral tender is to obtain the highest price, while the purpose of the written tender is to select the best offer. Any entity that pays the bid security may participate in the open tender. The legislator also allows the possibility of organizing a limited tender "if the tender conditions can be met only by a limited number of people".

The procedure for selling real estate from the commune's resources is specified at the executive level (Rozporządzenie Rady Ministrów, 2021). Under the provisions of the legal act in question, the activities related to the conduct of the tender are carried out by the tender committee appointed by the competent authority.

It should be added that, under §1, point 1 (Rozporządzenie Rady Ministrów, 2020), the provisions on the manner and procedure of conducting tenders were supplemented with solutions applicable during the period of a pandemic or pandemic threat, announced based on (Ustawa o Zapobieganiu Oraz Zwalczaniu Zakażeń i Chorób Zakaźnych u Ludzi, 2008). They provide the rules for conducting tenders using electronic communication means that ensure:

1) real-time transmission of the tender between tender participants and members of the tender committee,
2) multilateral communication in real-time, under which the tender participants and the members of the tender committee may participate with the confidentiality, integrity, and availability of the information provided, as well as the possibility of identifying tender participants and members of the tender committee.

When conducting a tender in this manner, the competent authority shall indicate that in communication with the tenderers, electronic means of communication are used, the technical characteristics of which are non-discriminatory, generally available, and interoperable with products for electronic storage, processing, and transmission of data in everyday use.

The above provisions are new in the sale of real estate, and there are no decisions or scientific publications in this regard.

Activities related to the management of real estate belonging to the commune's resources, particularly their sale, are time-consuming and complicated. The procedure in this regard has been regulated in detail by the provisions of the above-mentioned legal acts, which entered into force at the end of the 1990s and in the first decade of the 21st century.

3. Conditions for the sale of real estate during the pandemic in the Poznan City Hall

The real estate sale process is carried out according to the rules (Ustawa o Gospodarce Nieruchomościami, 1997). Over the years, this act has been subject to changes, although no significant amendments have been made. Also, the administrative regulation issued to this act, regulating the rules and procedure for conducting tenders until October 2020, did not introduce any significant changes to this procedure. Therefore, the basic assumptions of the sales procedure have not changed for many years. Only organizational issues, such as the way of communication with potential buyers, were improved. Only the outbreak of the pandemic and the introduction of the sanitary regime significantly influenced the organization of the process of selling municipal properties. To prevent the suspension of sales, guidelines for the conducting and organization of sanitary tenders have been developed. They included recommendations of conduct for tender participants and members of tender committees.

The recommendations of the City of Poznan regarding safety rules during tenders were only recommendations. The adopted formula was the only one that could be applied in light of the applicable legal regulations, as they do not provide, for example, a limit as to the number of people participating in the tender as a representation of one entity. Therefore, any solutions imposing restrictions in this respect could be considered illegal, particularly with the principle of openness established in the regulation on the principles of organizing tenders.

At the same time, recommendations were developed for the employees of the Poznan City Hall regarding the conduct of tenders, and new rules of work resulting from the introduction of the pandemic were defined.

The process of presenting the tender offer to potential investors has also changed. The fair events at which the city's investment offer was presented were cancelled, and the direct meeting was limited. Therefore, all marketing activities took a remote form. Tender offers were sent to investors in electronic form, and face-to-face meetings were replaced by videoconferences.

The behavior of market participants has changed significantly since the introduction of the restrictions in connection with the COVID-19 pandemic. Numerous restrictions, often introduced at the last minute, resulted in a limited or lack of interpersonal contacts. In October 2020, inter alia introduced the possibility of conducting tenders during a pandemic emergency or pandemic using electronic communication, provided that: (1) real-time transmission of the tender between tender participants and members of the tender committee; (2) real-time multilateral communication.

Notably, electronic communication must have technical properties ensuring confidentiality, integrity, and availability of the information provided, as well as the ability to identify tender participants and members of the tender committee. In addition, they must have non-discriminatory, generally available, and interoperable technical characteristics. While working on the assumptions of such a system, the risks that should be considered and eliminated were identified. It should be emphasized that the occurrence of one of these risks could result in the cancellation of the tender procedure. In such a situation, the tendering procedure would have to be repeated.

Due to the pandemic, the place of organizing tenders has also changed. It was decided that they should take place in one of the largest rooms in the city hall.

It is worth emphasizing that the tender participants showed great understanding for the recommendation of the President of the City of Poznan. Despite the lack of a prescriptive form, the principle of one-person representation has been adopted. Compliance with the rules of conduct by both officials and clients allows for the organization of traditional tenders as the most transparent form of sale, guaranteeing the procedure's openness and uniformity and ensuring equal access to participation in the tender and obtaining the best price. It can also be indicated that the office employees and investors have adapted to the new conditions without significant difficulties.

4. Analysis of trends in the real estate market in the City of Poznan in 2018-2021

The sale of real estate without a tender requires the implementation of only some activities from the catalogue of activities necessary to be performed under the tender procedure. In addition, the sale of communal real estate in a non-tender procedure takes place only in exceptional situations specified by law. In Poznan, this generally applies to the so-called building masks, i.e., areas that cannot constitute an independent investment field but improve the use of the neighbouring property. The revenues to the city budget from selling this type of real estate are lower than those obtained from the tender sale.

From the point of view of the purpose of this research, it was decided to analyse the tenders regarding the sale of municipal real estate. They indicate the impact of the pandemic on the sale of real estate from the commune's resources.

The real estate offered for sale in Poznan has been divided into four categories:

1. real estate intended for single-family housing development,
2. real estate intended for multi-family housing,
3. real estate intended for service development,
4. real estate intended for economic activation.

Each property was classified to one of these groups on the based on the provisions of the local spatial development plan or the function specified in the study of the conditions and directions of the spatial development of the city of Poznan. These documents define the purpose and method of using a given property. Properties for other purposes have not been analysed, as their sale takes place incidentally - in the analysed period, it was only one property.

Sales analyses for the two years of the pandemic (2020-2021) were compared to the two years preceding the pandemic (2018-2019). The analyses were carried out in annual time intervals, considering: (1) unit offer price and obtained price; (2) the area of real estate offered and sold.

Moreover, it was assumed that the unit price of the real estate is the starting price in a successfully concluded tender. The size of the area of real estate put up for sale in the years covered by the study does not refer to the proportion of the number of investment fields sold during this period. Investment fields may have different surfaces. It was assumed that the area of the real estate would be more reliable in determining the size of the disposed areas than the number of fields or investment plots.

4.1. Properties intended for single-family and multi-family housing development

It can be seen that stable prices characterized the period preceding the pandemic in the real estate market for single-family housing. The difference between the starting price and the price obtained in the tender remained stable, ranging from PLN 65 to PLN 82/m^2 and was more favorable for the auctioned price. Since the middle of the first year of the pandemic, there has been an increased demand for plots of land for the construction of single-family houses. Due to the limited number of these types of offers, the difference between the starting price and the price achieved in the tender was noticeable. In 2020, it amounted to PLN 99/m^2; in 2021, it reached a record value of PLN 350/m^2. The average price obtained as a result of the tender was PLN 921/m^2 (Fig. 1).

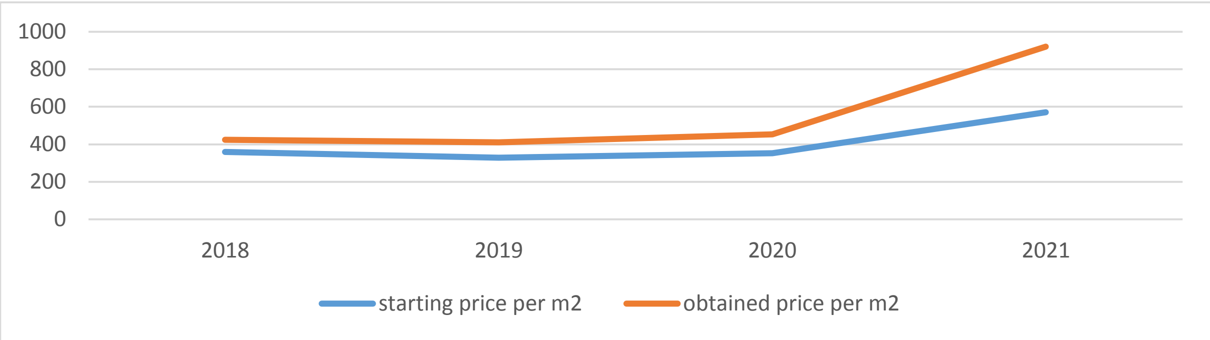

Figure 1. Prices of land intended for single-family housing sold by the City of Poznan in the form of tenders in 2018-2021.

Source: own study based on (*Komunikaty Urzędu Miasta Poznania. Oferty*, 2022), (*Komunikaty Urzędu Miasta Poznania. Wyniki*, 2022).

We notice an increase in the number of plots for single-family housing, which resulted from the economic situation in the country and the city of Poznan. This resulted in increased customer activity and the city's preparation of a more comprehensive sales offer. Due to the high complexity of legal conditions and the time-consuming nature of the sales procedure, the offer was not presented until 2019 (Fig. 2).

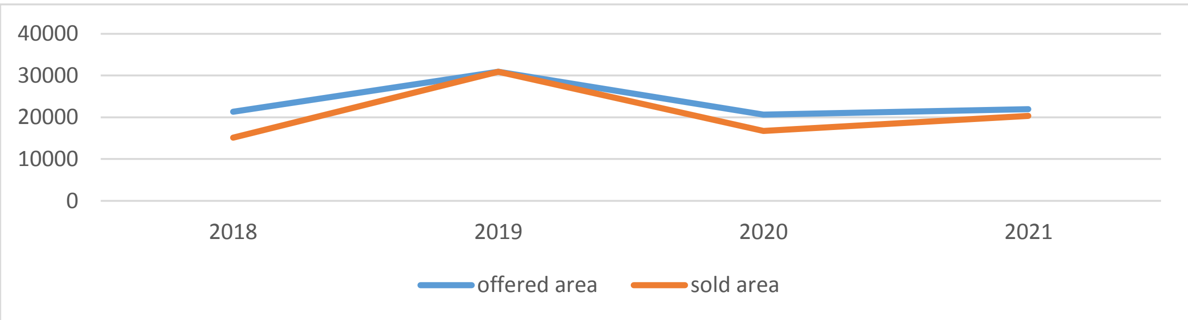

Figure 2. Area of land intended for single-family housing, sold by the City of Poznan as tenders in 2018-2021.

Source: own study based on (*Komunikaty Urzędu Miasta Poznania. Oferty*, 2022), (*Komunikaty Urzędu Miasta Poznania. Wyniki*, 2022).

As a result of the pandemic, the situation changed, and in 2020 the area of land offered and sold was lower. This resulted, inter alia, from the increased absenteeism of employees and the preparation of recommendations for conducting tenders under the conditions of a more stringent sanitary regime. This resulted in delays in the bidding process, and the consequences of this situation were still noticeable in 2021.

However, the behavior of potential buyers in this period was characterized by caution in purchasing decisions. The city's real estate offered for sale did not always find buyers in the first auctions, and this situation changed in 2021, and all the land unsold in 2020 found its buyers. There was also a noticeable increase in the space sold and offered for sale.

Another feature that distinguished people buying real estate preferences during the pandemic was the increased interest in purchasing single-family houses or land for this type of development. This resulted in a change in the situation in the real estate market for multi-family housing. The city's land offer has changed over the past four years regarding the land area and the number of plots, while the pandemic has lengthened the response time to market demand. The price of land for multi-family housing, offered mainly to developers, has also changed, although its highest level was recorded in 2020 (Fig. 3).

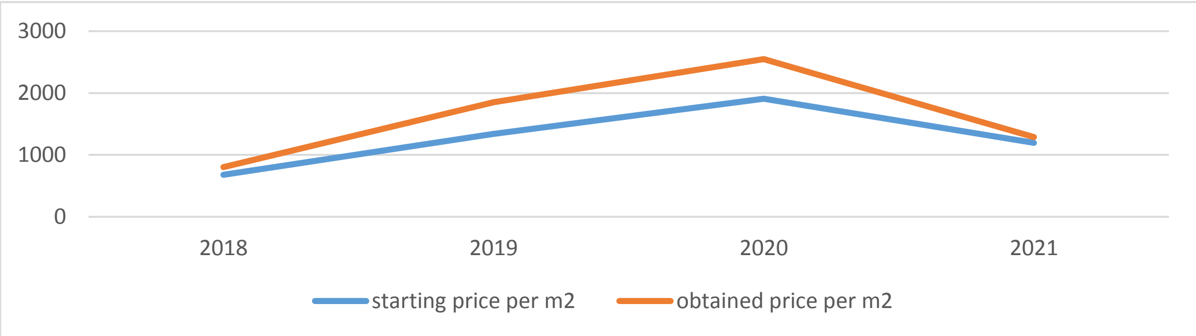

Figure 3. Prices of land intended for multi-family housing sold by the City of Poznan in the form of tenders in 2018-2021.

Source: own study based on (*Komunikaty Urzędu Miasta Poznania. Oferty*, 2022), (*Komunikaty Urzędu Miasta Poznania. Wyniki*, 2022).

In the first two years of the analysed period, there was an increase in the unit value of land, with a simultaneous deepening of the difference between the starting price and the price achieved in tenders. In 2018, this difference was PLN 125/m^2, in the next year already PLN 509/m^2, while in 2020, it reached a record value of PLN 642/m^2 of land. This was mainly due to the high demand for housing, easy availability of loans, an increase in salaries, an increase in average rental rates, a high rate of return on investment concerning the return on bonds, and a record low unemployment rate, which in the case of Poznan was only 1.2 % (Baldowska et al., 2019).

It is worth noting that in the first year of the pandemic, only two tenders were positively resolved, one in mid-January (before the outbreak of the pandemic) and the other in November. The remaining announced tenders ended with a negative result due to the lack of participants.

They were decided only in 2022, and the obtained price (PLN 77,500,000) was 155% higher than the starting price. It is worth emphasizing that despite the unresolved all tenders in 2020, record values were still achieved. Only two tenders were successfully concluded in the first year of the pandemic. One in mid-January (before the pandemic started) and one in November. The rest ended with a negative result due to the lack of participants. The decision was not made until 2022, and the obtained price (PLN 77,500,000) was 155% higher than the starting price.

On the other hand, 2021 was characterized by a decrease in the average offer and transaction prices and a decrease in the difference between these prices. The difference was PLN 94 per m^2 in favor of the transaction price. The above results from the uncertainty that increased in the housing market in 2020. As a result, it led to a situation where the year-round sale of apartments did not reach the level of previous years (Łaszka, 2021). This period was characterized by an increased interest in plots for single-family housing.

The analysis of land for multi-family housing in terms of the area of municipal properties offered for sale in Poznan in 2018-2021 shows a downward trend (Fig. 4). This was due to the size of the plots sold, not the number of investment fields; therefore, the analysis should be presented based on the number of plots intended for sale.

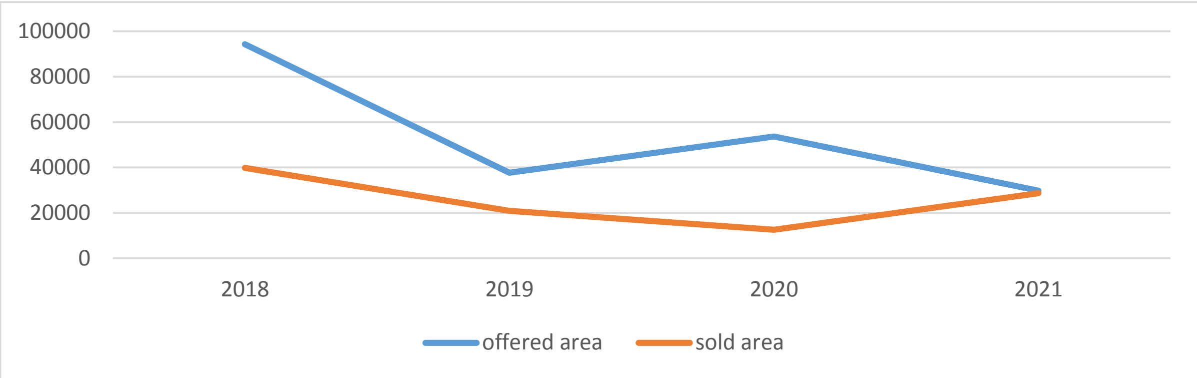

Figure 4. The area of land intended for multi-family housing, sold by the City of Poznan in the form of tenders in 2018-2021.

Source: own study based on (*Komunikaty Urzędu Miasta Poznania. Oferty*, 2022), (*Komunikaty Urzędu Miasta Poznania. Wyniki*, 2022).

In 2018 and 2019, we noticed an increase in the number of plots offered and sold by the City of Poznan. It was 6 exhibited and 5 sold, and 13 exhibited and 8 sold, respectively. In turn, in 2020, a decrease in the number of plots ready for sale is noticeable (4 plots put up for sale, 2 plots sold). This was due to labor and market conditions during the pandemic: on the one hand, limitations, and pandemic conditions (remote work, availability of employees, cancellation of tenders due to the introduced restrictions), and on the other hand, the noticeable restraint in investment by entrepreneurs. This effect was short-lived, as, in 2021, the number of plots offered for sale was the highest in the analysed period (11 plots put up, all sold).

4.2. Real estate intended for service development and economic activation

The analysis of the results of tenders for real estate intended for service development shows that the value of starting prices in 2018-2019 was similar, and the difference between the prices was relatively small and amounted to PLN 76/m^2. After a significant drop in prices in 2020, there was a sharp increase, reaching a record value of PLN 1,919/m^2 (Fig. 5).

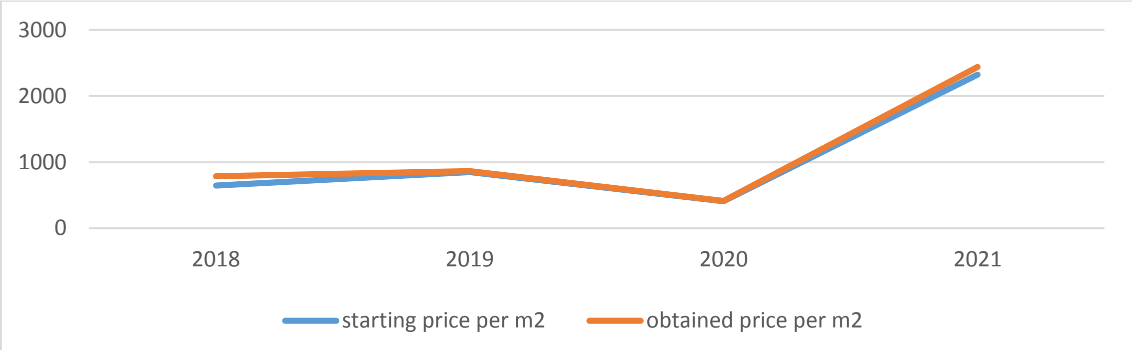

Figure 5. Prices of land intended for service development sold by the City of Poznan in the form of tenders in 2018-2021.

Source: own study based on (*Komunikaty Urzędu Miasta Poznania. Oferty*, 2022), (*Komunikaty Urzędu Miasta Poznania. Wyniki*, 2022).

The pandemic outbreak conditioned the above decline in transaction prices in 2020. Notably, the first tenders were successfully concluded only in June, after reducing sanitary restrictions. It should also be noted that the settled tenders were organized three times, and the starting price was reduced twice. The above indicates a very cautious approach of investors to purchasing this type of real estate and a change in the form of employment. However, as shown by the results achieved in 2021, this situation was temporary, and investors have noticed that a complete transition to remote work is not yet possible or not entirely acceptable to enterprises. On the other hand, the emerging model of a hybrid form of work encourages investors to continue investing. It should also be emphasized that the results of 2021 were most influenced by the sale of real estate located in an attractive part of the city, where the so-called urban dominant, i.e., a building up to 50 m high.

In the case of the area of land intended for service development, we notice a systematic increase in the amount of land prepared for sale in 2018-2020 (Fig. 6). It resulted from the provisions of the adopted local spatial development plans, in which large areas of land were designated for service functions. In order to maintain the proper diversification of plots in terms of their destination intended use, the real estate package dedicated to services has been divided into several years.

Figure 6. The area of land intended for service development was sold by the City of Poznan as tenders in 2018-2021.

Source: own study based on (*Komunikaty Urzędu Miasta Poznania. Oferty*, 2022), (*Komunikaty Urzędu Miasta Poznania. Wyniki*, 2022).

It should also be added that the above activities also covered the year 2021, where a relatively small area was put up for sale, while its investment potential was the largest among the areas put up in the analysed period. Therefore, the year 2021 in the service real estate sector was characterized by a small area but the highest price in sales. This does not mean, however, that the impact of the pandemic was not discernible in the behavior of potential buyers. As mentioned above, February 2020 was a month in which no transaction was made. The above circumstance did not occur in any of the analysed years. An example of the impact of the pandemic on the real estate market is the designation in December 2020 of an attractive area for services with an approved location of the dominant. As the works on the local spatial development plan lasted several months and began even before the pandemic, there was noticeable interest in its acquisition by investors. As the pandemic unfolded, this interest waned, and investors signalled the suspension of new spending. As a result, the plot did not find a buyer after adopting the local spatial development plan and putting it up for sale. The main reason was investors' concern about the decline in demand for office space caused by remote work.

The current situation with land intended for economic activation understood as a service function with a warehouse or production profile is entirely different. Due to the lack of interest from investors, real estate of this type was not put up for tenders in 2018-2019. In 2020, the situation changed. The introduced sanitary regime and the fear of contamination resulted in a change in the shopping preferences of customers who shopped online to a greater extent. This increased the demand for warehouse space. This situation prompted the city of Poznan to sell real estate, which was not planned for sale due to the lack of interest from investors. As a result of this decision, five tenders were organized, during which all properties found buyers, and the amount from the sale exceeded the starting price.

Analysing properties prepared for sale and properties sold in 2018-2021 in each of the sectors mentioned above, we can see the impact of the pandemic. Both are the number of completed tenders (Fig. 7) and the value of sales obtained. The most significant impact was recorded in the group of real estate intended for service development.

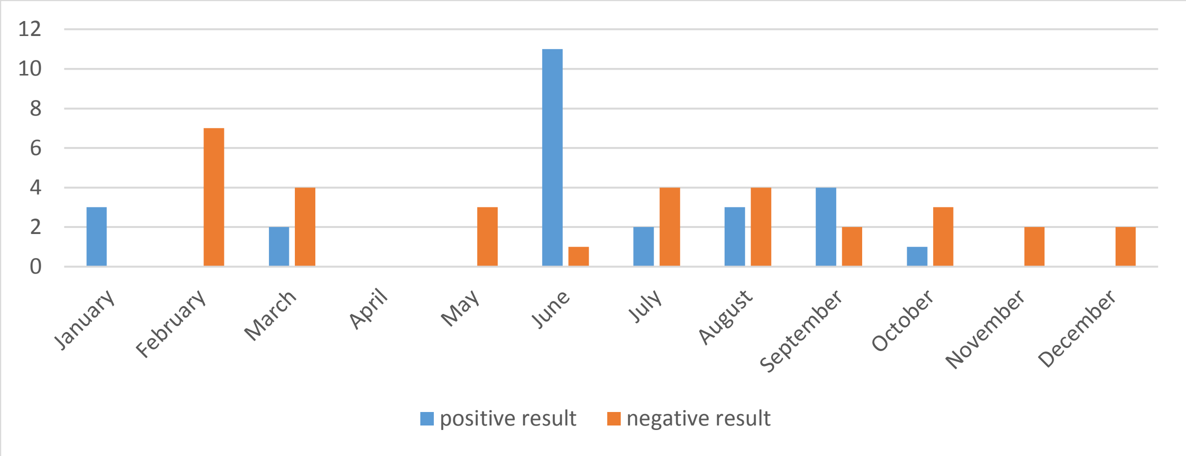

Figure 7. The structure of the tenders completed in 2020.

Source: own study based on (*Komunikaty Urzędu Miasta Poznania. Oferty*, 2022), (*Komunikaty Urzędu Miasta Poznania. Wyniki*, 2022).

Changes in the structure of real estate sales resulted, on the one hand, from external conditions, and on the other hand, from the need to implement internal changes. This was due to the conditions and organization of work of city hall employees, which were caused by the obligation to maintain the sanitary regime as well as the absenteeism of employees.

In addition, changes in the demand for real estate necessitate the modification of the real estate offer for single-family and multi-family housing for sale in the coming years. The shortage of flats combined with the demand for more extensive flats will result in further growth dynamics, and it is assumed that the upward trend in the years 2022-2023 should not change. The change in value, however, will be less dynamic than the increase that took place at the turn of 2020/2021. This assessment is based on taking into account three factors that may play a key role in the coming years: (1) the tightening of banks' lending policy; (2) increases in interest rates; (3) the crisis caused by the war in Ukraine.

It should be emphasized that this situation raises concerns related to the possibility of obtaining income from selling this type of real estate. Moreover, according to the statutory requirement, in the first auctions, the starting prices must be set at a level not lower than the value indicated in the survey. The basis for determining the value in this document is the average price calculated from the most recent transaction prices of similar properties. It may result in the fact that in the first auctions, the city will put up real estate for sale at prices higher than market transactions carried out on the date of the organized auction. For this reason, there is a risk that the first auctions organized for the sale of real estate may end with a negative result. Thus, it will be possible to obtain income from sales after adjusting the price in subsequent tenders, where the legislator has allowed the possibility of setting the price at a lower level.

In turn, the forecast for the development of the real estate sector intended for service development is burdened with a high risk. However, it should be assessed that the change of the work mode from stationary to remote or hybrid will permanently fit into the post-pandemic reality of enterprises.

Another factor that may cause a problem with selling real estate for new office investments is the number of commenced investments in this profile in Poznan. For example, only one of the investments planned for delivery in 2023 has 40,000 m2 of usable space. Additionally, investments transferred from Ukraine (such as the Allegro group) are an opportunity for the Poznan office sector. We also note that investors declare their interest in the market sector but are holding back with new investment purchases. However, in the case of real estate intended for warehouse space, a further price increase is forecast, resulting from the development of the e-commerce sector.

When assessing the impact of the pandemic on the process of selling municipal real estate, mention should be made of the amendment to the regulation on the organization of tenders. Until now, the regulations required the personal appearance of tender participants. The change that came into force was introduced, among others, by the possibility of holding tenders during a pandemic emergency or pandemic using electronic communication.

However, the introduced rules were defined succinctly and without specifying the tool for carrying them out. The most important risks resulting from the execution of tenders by remote mode are related to: (1) identification of data and documents of tender participants; (2) the possibility of appealing against tenders in the event of technical difficulties related to, for example, interruption of the connection; (3) allegations of discrimination against participants due to the lack of appropriate hardware or software, as well as the inability to operate them. It is worth emphasizing that reducing the first risk is possible through integrating the communal ICT system with the National Electronic Identification Node (*Budowa Krajowego Węzła Identyfikacji Elektronicznej*, 2022), enabling the use of a trusted profile.

5. Summary

The analysis of the results shows that the beginning of 2020 was characterized by a dynamic of changes that resulted in the property sale process in 2021. These changes were most visible in the first year of the pandemic. In addition, we can distinguish characteristic periods in individual years.

In the first period, which lasted from March to May 2020, the vast majority of tenders ended with a negative result due to the lack of participants or cancellation of tenders. This situation did not occur in the other years covered by the survey. The outbreak of the pandemic limited the activity of all market participants.

The second period, lasting from June to September 2020, was characterized by a reduction in restrictions, which stimulated the activation of market participants, although based on our analyses, their caution was still visible.

On the other hand, the third period, from October to December 2020, is the re-tightening of sanitary regulations. This period, like the first, was characterized by the limited activity of market participants and tenders, resulting in a negative outcome. However, the implementation of operating procedures under the conditions of the sanitary regime meant that tenders did not have to be cancelled.

On the other hand, in 2021, the first period, lasting from the beginning of the year to mid-March, is characterized by a negative outcome of most tenders, resulting from the lack of participants. Notably, tenders for pandemic reasons were not cancelled, although considerable caution was still in spending funds on new investments.

The second period of the pandemic is visible in real estate sales results from the second half of March to the end of December. It is a gradual departure from the previously introduced restrictions, increasing the activity of market participants. During this period, most tenders were awarded a positive result.

Moreover, the pandemic significantly changed the prevention of real estate market participants. In the analysed years, we can identify:

- increase in demand and prices of land for single-family housing,
- an increase in the price of land in the segment of real estate intended for economic activation, on which it was possible to create warehouse facilities,
- an increase in the sale of real estate intended for multi-family housing was recorded only in the second year of the pandemic,
- the decline in sales in the service real estate sector,
- an increase in the prices of real estate intended for service purposes in 2021,
- changing the living and working conditions of all participants in the real estate market,
- the need to adapt the way and conditions of work to the sanitary regime,
- development of new work standards by the office, along with the use of IT tools,
- the need for further development of modern ICT technologies in public administration,
- implementation of legal provisions allowing for the organization of tenders for the sale of real estate remotely. However, their laconic character indicates the need for their clarification,
- the need for changes in the regulations on the sale of communal real estate so that they consider the possibilities of developing digital technology. The current legal regulations were prepared at the turn of the 20th / 21st century, and all changes were cosmetic,
- construction of the National Node of Electronic Identification.

The conducted research clearly shows that the pandemic had a significant impact on the sale of real estate. It now seems that the current geopolitical situation caused by the war in Ukraine may have a more significant impact on the market for the sale of municipal real estate in the coming years. Undoubtedly, this requires further research and continuous monitoring of the situation.

Acknowledgements

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BUSINESS CONCENTRATION AS POLISH ENTERPRISES' PATH TOWARDS DEVELOPMENT AND COMPETITIVENESS IMPROVEMENT

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Objective: To present, based on subject literature, such important issues as the concept and types of business concentration, as well as the motives and barriers to this phenomenon. The article also aims to show the 2018-2021 scale and course of enterprise mergers and acquisitions in Poland.
Project/methodology/approach: The empirical material was drawn from the Navigator Capital and FORDATA annual reports presenting details and analyses of the most important mergers and acquisitions in Poland.
Results: As a result of the analyses carried out, the 2018-2021 scale of mergers and acquisitions in Poland was identified in quantitative and value terms.

Keywords: corporate mergers, corporate acquisitions.

1. The essence and types of business concentration

The last decades of the 20th century have seen yet another upsurge of activity in the global economy towards the integration of companies. An increased wave of mergers and acquisitions, in particular, could be observed. The fierce competition in global markets has triggered processes of globalization and liberalization in the movement of capital, goods and services, and people. Proponents of corporate integration believe that mergers and acquisitions are the driving wheel of economic development. Opponents of such processes are not in scarcity either.

One of the most common form of business concentration is merger and amalgamation (consolidation). The very concept of 'concentration' is defined diversely. The Encyklopedia PWN, among others, describes is as "the process of increasing the economic power of business entities", which concerns "production, capital and labor power" (Encyclopedia PWN, 2019, electronic edition). Corporate amalgamation, on the other hand, is interpreted by S. Sudoł as a situation where "one of the amalgamating companies remains an entity in the legal sense. The process is referred to as a merger (incorporation)" (Sudoł, 2005, p. 458). The determinants of a merger are the voluntariness of such a measure, the similarities between the merging entities, and the unequal economic power resulting in the absorption of the weaker company by the stronger one (Helin and Zorde, 1998, p. 8).

If a new legal entity is created out of the amalgamating enterprises and a simultaneous loss of the previous separateness and legal personality of the merging entities occurs, in turn, the process is then referred to as **consolidation**. One notable feature is the aligned economic power of the two partners (Radecka-Romaniuk, 2021, p. 38). Corporate consolidation allows companies to achieve various strategic goals, which most commonly pertain to the following planes (Suszynski, 2003, p. 88):

- economic plane (i.e., matters of ownership, object of activity, enterprise market and resources),
- technical-organizational plane (i.e., enterprise functions, processes and structure),
- legal plane (i.e., the rules and legal forms of corporate consolidation),
- sociological plane, referred to as the social plane (consisting of people, as well as the corporate value systems, hierarchies and organizational cultures).

Corporate consolidation is also understood as amalgamation of enterprises. The significant difference between corporate merger and consolidation is explained in Figure 1.

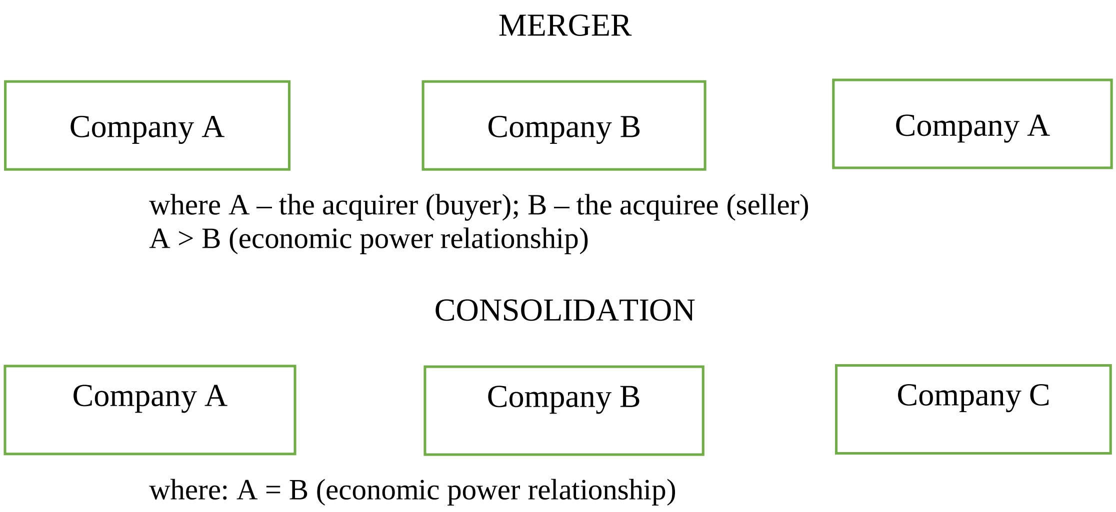

Figure 1. The essence of enterprise merger and consolidation.

Source: Radecka-Romaniuk, 2021, p. 39.

Another form of business amalgamation is **acquisition**. It involves the transfer of corporate control or supervision, from one group of investors (one investor) to another group (another investor) (Sudoł, 2005, p. 458). Oftentimes it brought about by:

- a purchase of shares/stocks,
- a purchase of property (enterprise's assets),
- acquisition of a proxy authorizing representation of other shareholders/stockholders at general meetings,
- share buy-out on the stock market and privatization of the company (removal from public trading),
- a lease with simultaneous voting rights at general meetings,
- a joint venture with the acquisition of the majority shareholder by one of the partners.

The primary feature of acquisition entails the fact that the acquired entity does not lose its legal capacity, although an acquisition can simultaneously become the initiating point for the process of a full fusion between the enterprises, i.e., the acquirer and the acquiree (Radecka-Romaniuk, 2021, p. 40).

The phenomenon of corporate mergers and acquisitions, as the results of studies show, is occasionally associated with certain risks and emergence of problems, which can entail the following issues (Ambukita, 2014, pp. 716-717):

- half of the business concentration processes (mergers and acquisitions) are considered a peculiar failure of the participating companies and the factor generating the high costs in these companies. It is believed that these costs are often difficult to recover. It is estimated that such consolidation processes are unsuccessful 50% of the time;
- merger and acquisition (M&A) processes are considered strategic, and most definitely difficult to reverse, due to the resource measures taken, legal factors and the pressure on the parties to the transaction;
- mergers and acquisitions are very often accompanied by haste, competitive pressure and pressing events, the implication of which is an increase in risk. Lack of adequate relevant information and improper preparation of the concentration processes are possible as well;
- merger and acquisition processes are accompanied by a proliferation of the information which the acquiring party would normally prefer to keep confidential;
- successful implementation of mergers and acquisitions require the buyers to have the right qualifications and skills to integrate the newly formed teams of employees characterized by different organizational cultures, lack of loyalty, commitment and willingness to change, and sometimes hostile attitudes. The time needed to form the right relationships ranges from 3 -5 years.

Mergers and acquisitions are not the only forms of business concentration. The phenomenon can also occur in the form of concern, holding company, trust, association formation.

2. Motives and barriers to business concentration

When studying and analyzing the motives underlying corporate mergers and acquisitions, those concerning both the buyers as well as the sellers ought to be considered. When examining the motives driving the buyers, four groups of motives can be distinguished (Figure 2).

I. Technical and operational motives	II. Financial motives
III. Market-related and marketing motives	IV. Managerial motives

Figure 2. Acquirer-side motives for merger and acquisition.

Source: Own compilation based on: Frąckowiak (ed.), 1998, p. 24; Pawlicki, Śliwa, 2015, p. 24; Radecka-Romaniuk, 2021, p. 49.

All groups of motives entail the pursuit of certain specific objectives (Frąckowiak, 1998, pp. 23-26):

Group I - technical and operational motives:

- increase in management efficiency,
- acquisition of more effective managerial personnel,
- operational synergy,
- economies of scale,
- resource and skill complementarity,
- reduction in transaction costs,
- technical integration benefits.

Group II – financial motives:

- use of excess funds,
- increase in debt capacity,
- takeover of cash,
- reduction in the cost of capital,
- tax benefits,
- undervaluation of the acquired company’s value,
- more favorable valuation by the buyer, compared to the stock market value.

Group III – market-related and marketing motives:

- increase in market share and added value,
- elimination of competition,
- product/market complementarity,
- business risk diversification,
- entry into new business areas (diversification).

Group IV – managerial motives:

- increase in the level of managerial salaries,
- increase in prestige and power,
- reduction of management risk,
- increase in discretion for action.

The seller-side motives for merger and acquisition can entail the following (Table 1).

Table 1.
Seller-side motives for merger and acquisition

Motive group	Motives/specific objectives
Financial motives – mainly entail the financial losses incurred by the company in connection with its operations	• financial losses on the part of the object of disinvestment • reorganization of investment portfolio • diversification of investment portfolio • conversion into cash • exit from investment after realization of goals • more favorable operating conditions for smaller companies • price of assets higher the value thereof for the current owners • liquidation • buy-back offer at a premium, or resale on favorable terms • share value increase on capital market
Strategic motives – divestment can constitute a component of the company's extensive strategy	• disposal of unneeded or mismatched assets • partnering with of a desirable/preferred business partner • safeguarding against hostile takeover • limited independent growth opportunities • improvement of competitive position
Administrative motives – these motives not so much lie with the enterprise-side, but are typical of and applied by government bodies	• sales order issued by state authorities, e.g., antitrust authorities; exemplified by the case of the US company AT&T, which was split into several smaller and specialized companies
Managerial motives – characterized by the managers' interest in divestment, due to the benefits obtained. Obtainment thereof is possible owing to the establishment of a subsidiary company, on the canvass of the plant/branch, by existing managers, and its subsequent acquisition. Shareholders (stockholders) are also the Stakeholders here. This carries certain risks, though. Managers most often have extensive knowledge regarding the real value of the company and the sold-off assets, which can lead to a takeover thereof at a price lower than the real value.	• new management positions • greater discretion for action

Source: Own compilation based on: Frąckowiak, 1998, p. 35; Radecka-Ronaniuk, 2011, p. 55.

Barriers to merger and acquisition processes are many and can include, inter alia, the following groups of varying nature: strategic, organizational, legal, as well as social, including cultural, political, financial, and capital, barriers. These barriers are associated with the phases of the merger and acquisition process and occur with varying intensity. According to J. Szczepankowski, the following phases can be distinguished in the process of merger and acquisition: preparation, conversion, implementation, post-implementation (Szczepankowski, 2000, pp. 140-147). Barriers to merger and acquisition, taking the phases of the process into account, are presented in Table 2.

Table 2.
Barriers to merger and acquisition

<table>
<tr><th>Phase of merger or acquisition processes</th><th>Nature of barrier</th><th>Merger or acquisition barrier</th></tr>
<tr><td rowspan="3">Preparation phase</td><td>Legal and organizational</td><td>• lack of regulations on the manner and form of mergers or acquisitions
• indispensable autonomy in the manner of merger/acquisition implementation
• lack of practical organizational arrangements for the process
• lack of relevant regulations governing merger/acquisition techniques
• unclear company ownership
• improper valuation of company assets</td></tr>
<tr><td>Socio-political</td><td>• lack of confidence, on the part of owners, employees and managers, in the likely investor
• employees' concerns regarding the change in the form of company ownership</td></tr>
<tr><td>Capital-financial</td><td>• the process implementation strategy assumed (the share conversion ratio proposed)
• underdeveloped and expensive system of merger/acquisition crediting
• artificial overestimation of the acquired company’s value
• the acquired company’s excessive debt
• high goodwill, which does not reflect the market price of the company’s assets
• the company’s poor financial condition, which prevents it from becoming a potential object of the merger/acquisition process</td></tr>
<tr><td rowspan="3">Conversion phase</td><td>Legal and organizational</td><td>• barriers arising in the aftermath of the merger/acquisition implementation procedure adopted
• barriers arising as an aftermath of shortcomings in the necessary solutions involved in the merger/acquisition process
• barriers consequent to inexperience in merger/acquisition process implementation</td></tr>
<tr><td>Socio-political</td><td>• fear of dramatic change in the company's operating system (lack of confidence in those implementing the changes, unfamiliarity with the new mechanisms and principles of company operation, fear of the consequences arising from the process, e.g., unemployment)
• disagreement with the existing ways of company asset division and sale
• employees’ entitlement and consumerist attitude, manifested in conditional acceptance of the merger/acquisition process, e.g., after employee expectations have been met</td></tr>
<tr><td>Capital-financial</td><td>• the acquiring company’s difficulties in raising the funds needed for share buyout
• lack of a strong capital market
• lack of a formulated policy on the acquired company’s debt relief</td></tr>
</table>

Cont. table 2.

Implementation phase	Legal and organizational	• change in the organizational culture, which accompanies the company management philosophy and the authority structure transformation • the acquiring company's problems with presenting its own offer on the markets acquired and establishing new distribution channels
	Socio-political	• high staff fluidity, resulting in shortages of top-qualified employees • employees' dissatisfaction, most often arising from failure to raise salaries • employees' fear of reduced standard of living and loss of social security
	Capital-financial	• lack of sufficient capital, including, inter alia, development, modernization and restoration investment capital • the need to take out loans
Post-implementation phase	Legal and organizational	• existing habits pertaining to the manner in which the acquired company operates • volatility of legal and financial regulations, which increases the risk of consolidation sustainability • inability to react quickly to changes in the company's environment • inadequate negotiation skills, resulting in increased conflicts
	Socio-political	• shortage of qualified management personnel • recession in the economy and reduced demand
	Capital-financial	• lack of developed capital and financial infrastructure

Source: Szczepankowski, 2000, pp. 140-147; Radecka-Romaniuk, 2021, pp. 56-57.

The barriers to mergers and acquisitions presented in the above Table 2 can vary by industry and sector of the economy, as well as may be dependent on the specifics of a particular market or management styles.

3. The scale of mergers and acquisitions in Poland between 2018-2021

3.1. Data sources used in the article

The data presented in the article is based on Navigator Capital and FORDATA annual reports describing the most important mergers and acquisitions in Poland. The M&A Index Poland reports, prepared quarterly for a given year by a consulting firm Navigator Capital and FORDATA - a leader in IT solutions supporting mergers and acquisitions, have become a regular attribute in the calendar of industry summaries in Poland. The reports are designed to show the scale and dynamics of the Polish M&A market, with emphasis on describing the most interesting transactions. The frequency of Virtual Data Room use in M&A transactions in Poland also entails the subject of observation in the reports.

Navigator Capital, together with the Navigator Brokerage House, has been a leading independent financial advisor to companies specializing in M&A transactions as well as public and private issuance of shares and bonds. Over the 15 years of its existence, it has completed more than 100 transactions of various types, while the several years of the Navigator Partners' market experience encompasses transactions with a total value of more than PLN 15 billion. Its cooperation with the international network of the consulting firms affiliated under Pandion Partners allows effective handling of international transactions.

FORDATA is a pioneer on the Polish capital market. Based on Virtual Data Room technologies, it streamlines document and communication management during complex transaction processes. It provides support for the largest M&A transactions, initial public offerings (IPOs), Private Equity investments, restructurings, privatizations, and financing acquisition projects in Poland and other countries of Central and Eastern Europe. FORDATA systems have improved the security and efficiency of several hundred transactions of various type with a total value of more than PLN 40 billion. Leading companies of numerous industries, both in Poland and abroad, have been using FORDATA services.

3.2. The nature of 2018-2021 mergers and acquisitions in Poland

The total number and value of the largest transactions in subsequent years are shown in Table 3.

Table 3.
Total number, value and dynamics of the largest merger and acquisition transactions (in PLN billion) in 2018-2021

Specification	2018	2019	2020	2021
1. Total number of transactions	199	179	229	328
2. Value of the largest transaction (PLN billion)	4.2	5.0	9.6	11.7
3. Dynamics compared to 2018 (%):				
- by volume	100.0	90.0	115.0	165.0
- in value	100.0	119.0	228.6	278.6

Source: Own compilation based on: 2018, 2019, 2020, 2021 Navigator Capital & FORDATA Annual Reports on Mergers and Acquisitions.

Table 3 shows that both the number and, especially, the value of the largest M&A transactions in the period analyzed are characterized by dynamic increase.

Transactions involving Polish entities are grouped by company activity (number of transactions), in distribution by given sector/industry. Industries with the largest share in transactions in a given year are shown in Table 4.

Table 4.
Entities and their share in total transactions (in %)

Entities in transaction	2018	2019	2020	2021
1. Acquired entity	• Media/IT/Telecom (18%) • Retail (12%) • Industrial (10%) • FMCG (10%) • Other (50%)	• Media/IT/Telecom (20%) • Industrial (14%) • FMCG (14%) • Biotech/ healthcare (10%) • Other (28%)	• Media/IT/Telecom (25%) • Financial services (9%) • Energy (9%) • Biotech/ healthcare (8%) • Other 49%)	• Media/IT/Telecom (26%) • FMCG (11%) • Biotech/ healthcare (9%) • Industrial (9%) • Other (45%)

Cont. table 2.

2. Purchasing party	• Media/IT/Telecom (14%) • PE/VC (11%) • FMCG (10%) • Financial services (8%) • Other (57%)	• Media/IT/Telecom (18%) • Industrial (11%) • FMCG ((8%) • Retail (7%) • Other (56%)	• Media/IT/Telekom (19%) • Financial services (12%) • PE/VC (9%) • Other services (8%) • Other (52%)	• Media/IT/Telecom (22%) • PE/VC (10%) • Biotech/ healthcare (9%) • FMCG (8%) • Other (51%)
3. Selling party	• Private investor (56%) • PE/VC (10%) • Financial services (7%) • Other (27%)	• Private investor (9%) • PE/FC (9%) • Media/IT/Telecom (5%) • FMCG (5%) • Other (25%)	• Private investor (57%) • PE/VC (10%) • Financial services (4%) • Other (29%)	• Private investor (62%) • PE/VC (9%) • Financial services (5%) • Other (24%)

Source: Own compilation based on: 2018, 2019, 2020, 2021 Navigator Capital & FORDATA Annual Reports on Mergers and Acquisitions.

Based on the report data analyzed, selected largest by value transactions in subsequent years under examination can be characterized. In 2018, the first of the two largest disclosed values of transactions on the Polish market entailed the following: the Acquired: Unipetrol; Buyer: PKN Orlen; Seller: Paulinino (J&T Group) minority shareholders; with Transaction value (PLN): approx. 4.18 billion.

PKN Orlen acquired roughly 37% of Czech Unipetrol shares on October 1, 2018, becoming the sole owner of the company. The acquisition process was initiated with a stock market tender offer closed in February. Approximately 6% of all listed shares were acquired through a squeeze-out completed in October. Unipetrol is a leading Czech producer of refinery and petrochemical products, mainly supplying diesel fuels, asphaltenes, liquid petrochemicals and other products. Unipetrol also operates the Czech Republic's largest network of Benzina gas stations, consisting of 405 outlets. Unipetrol's revenue in 2017 amounted to roughly PLN 19 billion, while its EBITDA reached about PLN 2.4 billion. PKN Orlen's full control of Unipetrol will allow it to strengthen its position on the competitive European market and develop the petrochemical arm of the business.

The second largest 2018 transaction disclosed involved: The Acquired: Raiffeisen Polbank's core business areas; Buyer: BGZ BNP Paribas; Seller: Raiffeisen Bank International; Value (PLN): 3.25 billion.

On April 10, 2018, BGŻ BNP Paribas Bank Polska acquired the core business of Raiffeisen Polbank, including the SME sector servicing, corporate banking, retail operations, private banking and foreign currency mortgage business, among others. The transaction was valued at PLN 3.25 billion, with a P/BV ratio of 0.87. BGŻ BNP Paribas1 is the sixth largest bank in Poland by assets. The acquisition of its competitor's core business has enabled the Bank to move

[1] The Bank changed its name to BNP Paribas Bank Polska in 2019, upon receipt of an entry in the National Court Register.

closer to the top five, which includes PKO BP, Bank Pekao, Bank Zachodni WBK, mBank and ING Bank Śląski.

In 2019, the first of the two largest disclosed values of transactions on the Polish market entailed the following: The Acquired: DCT Gdańsk S.A.; Buyer: PSA International IFM Investors Polski Fundusz Rozwoju [Polish Development Fund]; Seller: MTAAS Fund Macquarie Infrastructure and Real Assets Australian Super Statewide Superannuation; Value (PLN): approx. 5 billion.

On March 19, 2019, a group of investors, including the Polish Development Fund (PFR), bought DCT Gdańsk, i.e., the largest container terminal and the only deepwater terminal in Poland capable of handling the largest cargo ships, from Macquire Group funds. PFR's share in the investment was roughly 30%. In 2018, DCT handled nearly 2 million containers, while the PLN 2 billion PFR plans to invest by 2023 in its development is expected to allow the terminal to handle 4.5 million containers. DCT Gdańsk brings annual profits of approximately €22.5 million, generating €100 million in revenue and €70 million in EBITDA.

The second largest 2019 transaction disclosed involved: The Acquired: Impexmetal SA; Buyer: Granges; Seller: Boryszew; Value (PLN): 938 million. Boryszew signed a preliminary agreement to sell its Impexmetal shares to the Swedish company Gränges AB on November 28, 2019. Gränges is a global supplier of products from niche markets and aluminum products used in heat exchangers. Impexmetal, which is part of the Boryszew Group, produces non-ferrous metals (aluminum, copper, zinc), as well as semi-finished products and bearings. The company generated roughly PLN 3.3 billion in revenue and nearly PLN 100 million in profit. It currently employs about 760 people.

In 2020, the first of the two largest disclosed values of transactions on the Polish market entailed the following: The Acquired: Play Communications; Buyer: Iliad SA; Seller: Tollerton Investments; Value (PLN): 9.6 billion.

On November 21, 2020, the French telecommunications market leader and Free Mobile network operator - Iliad SAS - successfully completed a tender offer for shares of Play Communications, one of Poland's leading mobile operators. With the acquisition, Iliad became the 6th largest mobile operator in Europe and gained access to one of the most promising markets. The new shareholder's strategic plans assume to maintain the company’s competitive position on the Polish mobile telecommunication market and facilitate its entry into the fixed-line communications market, allowing Play's customers to benefit from an even more comprehensive product offer.

The second largest, by value, 2020 transaction disclosed involved: The Acquired: Energa; Buyer: PKN Orlen; Seller: State Treasury; Value (PLN): approx. 2.77 billion.

On April 28, 2020, PKN Orlen, a Polish fuel and energy company, acquired 80% of Energa Group's shares, through a tender offer at a price of PLN 8.35 per share. As part of the agreement signed, Orlen pledged to maintain the Company's employment policy and continue its strategic investments. The acquisition of the Gdańsk-based company is part of PKN Orlen's current strategy, as a response to the market changes in the energy sector. In addition to continuing the company's current operations, new investments in renewable energy sources, including offshore wind farms, are also planned.

In 2021, the first of the two largest disclosed values of transactions on the Polish market entailed the following: The Acquired: Aviva Polska; Buyer: Allianz SE, Seller: Aviva Plc; Value (PLN): 11.7 billion.

On January 28, 2021, Aviva Plc, a British insurer, sold all its Aviva Polska shares to a German insurer Allianz for about PLN 11.7 billion. Aviva now aims to focus on its strongest markets, i.e., the UK, Ireland and Canada, where it has been a leader, with high growth potential. It intends to use the increased capital to, inter alia, reduce debt, invest in long-term growth, and return excess capital to shareholders. The transaction has enabled Allianz to become the second insurance company in Central and Eastern Europe, allowing it to effectively move towards a strategic increase in its market share.

The second largest 2021 transaction disclosed involved: The Acquired: Polkomtel Infrastruktura; Buyer: Cellnex Telecom; Seller: Cyfrowy Polsat; Value (PLN): 7.1 billion.

A leading European wireless telecommunications infrastructure operator based in Barcelona - Cellnex Telecom - entered into a conditional agreement with the Cyfrowy Polsat Group on February 26, 2021, to acquire 99.99% of Polkomtel Infrastruktura, which is part of the Group. The acquisition target holds a rich portfolio of passive (7 000 locations) and active telecommunications infrastructure (37 000 radio carriers) in Poland. The deal was worth PLN 7.1 billion, making it the second largest on the Polish M&A market in 2021. Cellnex and Cyfrowy Polsat reached a service agreement allowing the Group to use the infrastructure sold for a period of 25 years. Provision was made for future extensions of the agreement for 15-year periods. Last year also saw the finalization of a deal announced in October 2020, under which Cellnex acquired, from Illiad, 60% shares in the company managing the Play network's telecommunications masts, for the amount of EUR 0.8 billion.

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GREEN MARKETING AND GREENWASHING – ANALYSIS OF THE PHENOMENON IN BRAND PROMOTION ON SELECTED EXAMPLES

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Purpose: The article presents green marketing and greenwashing as phenomena in the context of the promotion of selected brands. The aim of the article is to present the essence of green marketing and greenwashing and, on this basis, to show and expose bad practices used in marketing activities that pretend to be truly ecological projects.
Design/methodology/approach: In the article, the following research methods and techniques were used: problem, analytical, synthetic, chronological, interview, questionnaire, comparative, and participant observation.
Findings: Green marketing was sufficiently shown in many studies. Greenwashing, on the other hand, as a dynamic and willingly practiced in marketing activities phenomenon, aroused the greatest research attention of the Author, who, by giving many examples, revealed tricky methods and eristic tricks leading to a quick promotion of a company and achievement of undeserved profits. In the opinion of the Author, it is advisable to present brands that promote themselves through green marketing, because their names should be remembered. On the other hand, for companies that use greenwashing, as entities negatively assessed by consumers, being included in the scientific text, cannot be an opportunity to promote.
Originality/value: Despite many positive actions, we can still observe companies using greenwashing that soak their messages with ecological hollow words. Greenwashing harms not only consumers, but also honest companies that take problems of sustainable growth seriously. Therefore, the ability to recognize unfair practices is extremely important. At this point, we can indicate the relationship between the level of environmental awareness of customers and the actual or apparent activities of companies. Therefore, this article is aimed especially at consumers and people interested in sustainability.

Keywords: green marketing, greenwashing, promotion, brand, ecological products

1. Research problems and methods

The main research problem presented in this article concerns the following issues:

- identification of the credibility of the strategy and brand creation implemented in the trend of caring for pro-environmental and animal-friendly problems,
- showing the reliability of advertisements and their credibility against the background of brands that play unfair.

In the article, the following research methods and techniques were used: problem, analytical, synthetic, chronological, interview, questionnaire, comparative, and participant observation.

The following hypotheses were helpful in solving the main research problem:

- it is necessary to expose, disclose and publicly stigmatize companies, enterprises, corporations, and brands that use greenwashing in their activities,
- changes and modifications in the domestic law of Poland, as well as in the European Union and on a global scale are insufficient,
- the models of international cooperation and control of the greenwashing phenomenon developed so far only partially work,
- the period of the COVID-19 pandemic, and especially the consequences of the virus among millions of convalescents around the world, require special care of national and global brands to plan and implement a truly ecological method of production and distribution,
- the current state of knowledge on green marketing and greenwashing, as well as the hypothetically assumed improvement in the implementation of procedures developed by national and international experts, will make societies able to effectively take care of minimizing the impact of harmful methods of production, transport and sales on the condition of the environment.

2. Introduction

Green marketing, most often called ecological, green, environmental, natural or simply eco-marketing, is a phenomenon that has been functioning in the consciousness of pro-ecological social groups since the 70s of the XX century. Slow, but increasingly clear, perception of this phenomenon was a reaction to the evident examples disclosed by various specialists, but also by consumers themselves, demonstrating the harmful impact of production methods, organization of goods transport, their composition and forms of sale on the condition of the human environment. Constant progress of civilization, growing human needs, both food and related to the organization and rationalization of everyday life, force an increase in demand and, consequently, a dynamically growing scale of production and sales.

It is worth emphasizing that in 1975 the American Marketing Association (AMA) published one of the first definitions of green marketing - "environmental marketing is a type of activity that consists in the distribution of products considered safe for the environment on the market" (Zachnik, 2022).

In the following years, along with the development of ecological awareness and the accumulation of new experiences, many definitions appeared. In 1988, Richard N. Jeurgens stated that "green marketing is the deliberate awakening of the ecological awareness of potential customers who, by definition, are not interested in environmental protection" (Zaremba, 2002b). This American businessman argued that the company's policy is to change the behavior of its consumers and cause them to buy organic products. Pro-ecological behavior is to be generated by the producers themselves. Professor Ken Peattie, held a slightly different view. In 1992, he defined green marketing as "a management process that is responsible for identifying, anticipating and meeting the needs of consumers in a way that is cost effective for the producer and takes into account environmental protection requirements" (Peattie, 2008).

An approximate definition was presented in 1996 by marketing professor, Henryk Bronakowski. He claimed that "ecological marketing is a system of skills, knowledge and management styles that enable the fulfillment of the needs expressed by market participants of ecological goods and services" (Bronakowski, 1997).

In 1997, professor of economics, Józef Penc, described "green marketing as marketing activities that result in the production of products that are harmless to the natural environment" (Penc, 2007).

It is also worth presenting the definition proposed by Jan Leśniak, a professor of economics, who noted that "ecological marketing is a process aimed at analyzing the market in order to determine the needs of consumers. The needs for ecological, environmentally friendly products and services should be implemented into production, and consumers should be informed about the positive qualities of these products. The system of analysis, production and communication must work simultaneously to fulfill its role" (Leśniak, 2001).

An interesting definition of ecological marketing was also presented by Dr. Sabina Zaremba-Warnke. She recognizes that it is "the phenomenon of satisfying the expectations of customers and society through the effective implementation and planning of the concept, distribution and prices of goods, services and ideas in such a way that it satisfies both sides of the market - producers and consumers" (Zaremba-Warnke et al., 2009).

The above-mentioned definitions, selected as examples of an accurate definition of this phenomenon, do not end the whole problem. The concern for natural environment, at the level of managing the market of goods and services, is a very complex process, as it covers the functioning of the global marketing and promotion system. Each year in European and world markets brings new experiences and challenges, especially the years of crisis, marked by the

COVID-19 pandemic and after February 24, 2022 marked by the Russian aggression against Ukraine.

The constant increase in the level of social awareness, including concern for the extension and comfort of human existence, generates the need for a sustainable lifestyle, and especially respect for the principles of ecological development. The increasing demand for consumer products caused, especially in highly developed countries, a dynamic increase in the production and distribution of many goods. The irrepressible desire for profit caused the spread of advertising practices known as greenwashing, i.e. the imitation of ecological marketing. In this case, eco-trends are only a marketing gimmick which, after revealing real intentions, inevitably leads to a brand image crisis. In a colloquial language, this phenomenon is called dissemination of disinformation, green eyewash, green lie, or eco-scam. It is regrettable that deceptive marketing practices become popular, as signaled in the TerraChoice Environmental Marketing Report. The analysis of over 1000 advertisements promoting pro-environmental slogans showed that only one of them could not be accused of greenwashing (Lane, 2013). It is hard not to notice that the scale of the problem is serious.

3. The state of research

The analysis of literature on the subject revealed that the essence of the phenomena of "green marketing" and "greenwashing" was defined more or less accurately.

Since green marketing has already been introduced, the phenomenon of greenwashing will be discussed in the following part. Lucyna Witek, in her article, presented the genesis, concept and types of greenwashing. She presented an interesting analysis of factors which promote the development of these types of practice in the context of consumer behavior (Witek, 2013). Anna Jakubczak in the article "Greenwashing strategies in selected retail chains in Poland" presented a deep analysis of the phenomenon of greenwashing, more and more often practiced by business in order to "introduce consumers to the misconception about the image of a company or product as environmentally friendly" (Jakubczak, 2018). Interesting and valuable analyzes were also prepared by the following authors: (Chen, 2013; Delamas, Burbano, 2011; Polonsky, 2010; Griese, 2017).

The review of the works published so far allows for a sufficiently precise definition of the concept of greenwashing as an imitation of ecological marketing. However, the shortening path in search of new green technologies, false engaging in charity campaigns ("for own glory") with own interests in mind, false work on meeting the conditions specified by international certificates, generates additional company's financial resources. Moreover, it is very time consuming. The authentic green marketing requires commitment, consistency and care for credibility. The company cannot pretend and simulate ecological ventures. In pursuit of profit, companies consciously avoid officially declared rules of production and sales. What is more, they use noble and popular slogans instrumentally. On the other hand, even a cursory analysis of the reliability of the declared principles and methods of operation does not have much in common with the ecological activity of the company. The pseudo-ecological methods of production and distribution can be described as follows:

- company (brand) proclaims fashionable slogans and pro-ecological slogans, mainly in order to multiply its profit,
- corporation, company, brand fail to meet officially declared assumptions, consciously exploit the ignorance of consumers using deceptively captious slogans and advertising slogans that describe the false values of the product: "environmentally friendly, ecological, natural, green”.

One of the black greenwashing methods is captious but false information on the packaging. The distribution of goods, produced with a shameful violation of the basic principles of ecology, takes place in packaging made of recycled materials, which also had little in common with green manufacturing. Information about recycled packaging is intended to attest to the content that was allegedly produced also in accordance with the principles of ecology. In this case, green marketing turns out to be greenwashing. It is difficult to disagree with the opinion commonly expressed by many specialists that ecology is not always an element of corporate social responsibility and is only a way to achieve greater profits through the instrumental use of current trends. The remedy for this type of practice may be the increasing level of consumer awareness, sensitivity to environmental protection, discernment and vigilance to green lies. The assumptions of eco-marketing promote pro-ecological attitudes and behavior. Unfortunately, on the market, it is often observed the use of eco-trends as marketing tricks, which in the short or long term lead to an image crisis.

On the market, a positive symptom is more and more consumers who are allergic to eco-manipulation. They uncover flashy and green slogans on products that are supposed to be ecological and supposedly warming the brand image and its concern for the environment. In fact, the practices used are sheer scams. The research conducted in Bydgoszcz for the purposes of this article allows for the conclusion that Polish consumers can be divided into at least two groups:

- the first one - people who have already developed ecological, natural, pro-environmental habits. They check ingredients of products on labels by scanning barcodes, they use special applications, eg. „Healthy shopping”, „You know what you eat”. They pack products into reusable bags. After coming home. They store the food in appropriate conditions so that it will keep its freshness as long as possible. They bring uneaten products to special food share places (there are three eateries in Bydgoszcz-Karmnik near the WSG (14 Królowej Jadwigi Street), Wspólna Spiżarnia (79 Gdańska Street), and Jadłodzielnia Wisła Stary Fordon (1 Piekary Street) - the food is wholesome);

- the second one - people with still low level of environmental awareness. In Bydgoszcz and all over Poland, it is the predominant group of consumers, to whom companies use greenwashing without any reservations.

The survey and direct interviews were conducted in August 2022 in Bydgoszcz on a group of 60 people who bought various products at Galeria Pomorska, 141 Fordońska Street.

When presenting the negative face of greenwashing, it is necessary to appreciate, both on the Polish and European market, companies (brands) that effectively cultivate ethical values, modify production and distribution processes, offer customers goods and services that guarantee compliance with ecological standards. In this case, their achieved financial gains and competitive advantage are a derivative of green activities, not their main intention.

4. Positive examples of brand promotion

Ecological marketing is currently a tool used by companies, enterprises and ecological farms, because in the activities of this marketing, the greatest opportunities for brand development and promotion have been noticed, and thus achieving a competitive advantage on the market. Both the economic crisis, climate change and the increasing level of consumer awareness contribute to the growing popularity of this phenomenon. Moreover, consumers observe profit-oriented companies and expect them to act pro-ecologically. These feelings are perfectly read by companies that take advantage of the emotional commitment of their customers to promote their brands. This hypothesis is confirmed by the report Ekobarometr of the Market Research and Opinion Agency SW Research (2021). The report states that more than half of Poles (58%) declare that in the last month they saw an advertisement or promotion of a product or service that used ecological elements. It is also worth emphasizing that 74% of Poles have a very positive attitude to advertising and promotion with ecological elements, and more than half of the respondents claim that they increase eco-awareness (Ekobarometr, 2020).

The range of pro ecological activities of various brands is very wide. EKOmaty, i.e. vending machines, which enable the selective collection of plastic and metal beverage packaging, are becoming more and more popular. The collected raw material is used to produce new bottles. Such practices are used, for example, by Żabka and Żywiec Zdrój. Companies such as: Yope, Swapp, Carrefour promote refilling stations, i.e. automatic machines, thanks to which you can pour, for example, liquid soap and other cosmetics into their packaging. The aforementioned activities are aimed at reducing the number of disposable packaging used so far. For using this type of machines, customers get additional bonuses, e.g. discounts on subsequent purchases of this brand's products. An innovative and very interesting method of marking products with light is more and more often used, especially in the food sector, where fruit and vegetables are labeled non-invasively with natural light instead of bio stickers.

The focused beam of light works like a regular tattoo and such practices have already been introduced by the Lidl chain of stores. Pro-ecological projects are more and more often carried out by clothing brands. It is worth mentioning here the Loop system, in which old clothes are washed and new ones are sewn from recovered materials. Importantly, no harmful chemical reagents or water are used in the entire process, only a small amount of new cotton fibers are added. Such practices are implemented by the Swedish company H&M. The Answear brand collects clothing, for example as part of the "Eko Is The Answear" or Wear & Share campaigns. They involve giving new life to unworn clothes. From the collected funds, 500 trees were planted and some financial support was given to the ecological foundation Zielona Akcja. The brand also takes care of its shipments with its products. The company focused on certified materials, mainly from recycling and the so-called poly mailers made of at least 80% recycled materials. In turn, all cardboard boxes are made of recycled paper and are FSC MIX certified. This means that the waste paper used to make them consists of at least 70% wood from FSC® certified forests (Małecki et al., 2021).

Toy brands have also started to carry out activities aimed at protecting the natural environment. For example, Mattel launched the production of world-famous dolls made of plastic obtained from the ocean, and announced the "Play-Back" program, under which anyone who owns the brand's toys can send unused toys to the company for free. Everything will be recycled.

The projects related to the protection of fauna and flora are used by many companies. A good example is the Żubr brand, which in animated spots not only saves various species of animals, with the help of the mighty King of the Forest, but also successfully implements the CSR (Corporate Social Responsibility) strategy, which protects and rescues endangered species. Within two years, the brand donated over million Polish zlotys to organizations that support the protection of endangered species and carried out two nationwide educational campaigns. The Bison Fund (Fundusz Żubra) was also established, which has the ambition to become one of the most important nature protection organizations in Poland.

The companies that produce household appliances more and more often meet the ecological expectations of their customers. The BSH brand (manufacturer of Siemens, Bosch and Gaggenau) took care of such a course of its technological process that would be neutral in terms of carbon dioxide emissions. In practice, this means that the washing machine, refrigerator, dishwasher, oven, vacuum cleaner and all other devices manufactured by BSH are made without leaving a carbon footprint. The brand strives for the so-called the circular economy model, shifting from a one-way "production-use-disposal" to a closed cycle „production-use-repair-renewal-re-use-processing". All those actions are to offer customers high-quality devices that are developed and operated in an environmentally friendly manner as much as possible. It is also worth emphasizing that BSH headquarters in Poland are adapted to the highest ecological standards. The green areas around the factories are used in other ecological ways, e.g. in the area of the dishwasher factory in Łódź, an apiary for bees is established. Hundreds of thousands of bees live there. The company has taken steps to provide these beneficial creatures with conditions similar to natural ones - the frequency of mowing the grass is reduced, and the green areas around the factory are not artificially fertilized. Around the factory in Wrocław, BSH planted about 100 trees and built 600 meters of bicycle path and pavement, which contributes to improving the safety of employees and residents (Małecki et al., 2021).

The cooperation with food banks, withdrawal from egg production using cage breeding methods, are other positive actions at the ecological level (Eurocasach). An interesting form of caring for the environment was proposed by the BGŻ BNP Pariabas brand, which introduced the Carpooling application, enabling employees to commute to work together.

The projects of the world-famous Swedish company IKEA, which systematically strives to achieve energy independence, can be assessed similarly positively. It currently produces more electricity than it consumes. In addition, taking care of its brand image, it runs an anti-food waste program, uses and promotes recycling and rational disposal of raw materials. An important project carried out by IKEA is the "Buy Back" initiative. The chain buys used furniture from its customers, which is then put up for sale or - if it is not reusable - it is recycled. The brand also decided to completely abandon plastic in its disposable packaging, and also became involved in the Food Waste Watcher campaign - preventing food waste.

A notable positive example is Patagonia Company, which produces outerwear (jackets, coats, overalls, capes, tents, blankets) designed to protect the human body against adverse weather conditions. Following the animal maltreatment signals, the company began to make all its clothes from organic cotton, abandoning natural merino wool. In addition, the brand uses the down only from controlled sources. It was the first company in the world that started the production of surf foams made of natural materials, and developed and donated to producers the technology of using recycled raw materials free of charge.

Another positive example is Cheecky Panda company, which promotes the massive use of bamboo. Obtaining this raw material, which comes from the most renewable plant in the world, which grows extremely quickly, is a real pro-ecological action.

Due to the limited scope of this article, it is difficult to present all pro-ecological brands. In everyday life, we more and more often witness many actions and projects that, to a greater or lesser extent, change the world to be more environmentally friendly. Even small campaigns, such as „Kwiaty za elektrograty" (Castorama), „Pan Karp zarybia Wisłę" (Anwil), build environmental awareness, especially of the young generation.

In general, it can be said that there are many companies that strive to meet ecological standards in the production and distribution process with great care. It seems that the future in the global market belongs to these brands.

5. Pseudo-ecological activities

Companies that use catchy slogans to achieve short-term profits, hide the actual composition of their products, repaint their packaging green, pretend to be eco-friendly, and apply a not-so-praiseworthy practice - greenwashing, will not have clear prospects for a long time. The image situation on the market will force them to change their priorities. A brand that has so far devoted more time and resources to promote its own ecological image than actual ecological projects, must radically change the directions of its activities.

Very disturbing data appeared on greenwashing in the Ekobarmetr Report. The survey shows that only 13% of respondents knew this phenomenon and were able to define it. 35% of respondents said that they were most annoyed by pseudo-ecological packaging. The respondents emphasized that a product packed in paper or cardboard with plant graphics did not mean an ecological product. Very often, unfortunately, the packaging that looks like ecological is made of plastics. In addition, 32% of respondents paid attention to the so-called unhealthy compositions of supposedly ecological products. This is another point of conflict in the brand-consumer relationship. The brand owner ensures that the product is "natural", "vege", „organic” - and this is written on the packaging. In fact, the composition does not match the declared one (Ekobaromentr, 2020).

Greenwashing is also called feigned ecology. It is hard not to notice that eco-fraud is practiced by companies, associations, politicians of various levels, local public administration, celebrities and sports clubs. These practices are aimed primarily at consumers and customers with a low level of environmental awareness. The danger of practicing greenwashing is that it promotes products and services as ecological that are not ecological. Companies offer consumers "ecological" products to satisfy them and force to participate actively in environmental protection. Intrusive advertising and false promotional campaigns often cause consumers to become indifferent to products and brands that undertake genuine pro-ecological projects. For "specialists" promoting pseudo-ecological products, greenwashing seems to be a recipe for quick, convenient and cheap achievement of, for example, sales growth. In the longer term, the company's actions based on false assumptions may lead to loss of consumer confidence and damage to the company's reputation, image and well-established position on the domestic or international market. And the reconstruction of the brand's prestige is a long and costly process, often exceeding the profits obtained from the sale of pseudo-ecological goods and services. Nowadays, however, eco-manipulation, despite these threats, has become quite a common mechanism. It should be clearly emphasized that in the end it is not profitable for the company. Despite this awareness, many companies try to "green" their image, because there are still no specific legal regulations, as well as specialized authorities that could efficiently prosecute and punish brands that use unreliable and unethical practices.

The TerraChoice Report lists seven major violations and irregularities that should be attributed to supporters and practitioners of greenwashing:

- „hiding" unfavorable features,
- lack of information, evidence and certificates about the product as ecological,
- too general, imprecise, euphemistic product description (terms: "eco", "green", "bio", "earth-friendly", "100% natural"),
- information that the product does not contain banned chemicals, e.g. freons, the use of which has long been prohibited,
- using words "less evil" for some products, e.g. ecological cigarettes,
- „white lie" - when a company uses eco-labels and certificates illegally and groundlessly,
- false labels - eco-similar labels on products, using graphics and texts allegedly confirmed by an independent environmental organization" (ekologia.pl/srodowisko, 10.09.2022).

There are over a dozen entities in Poland that issue appropriate certificates and labels for ecological products. The certificate is issued after an in-depth analysis and control of the entire production process of a given raw material and then of goods for sale. The procedure often takes several years, therefore many companies, shortening this path, invent similar-looking packages, labels, e.g. "fully natural", "100% natural", "made of ecological ingredients". There is still a narrow group of entrepreneurs who apply, for example, for the Eco-label on the packaging (it resembles a daisy). The Eco-label is a guarantee that the product meets the highest ecological standards. The symbol of organic production in the European Union is the so-called Euro-leaf. It is also worth paying attention to the European quality markings of regional products - "Protected Designation of Origin", "Protected Geographical Indication" and "Traditional Specialty Guaranteed", as well as the most important quality markings of this type of products appearing in Poland, "Quality Tradition", "List Traditional Products","Pearl - Our Culinary Heritage", "Culinary Heritage", "Integrated Production" and "Meet Good Food". All these markings guarantee the highest quality of products (Bryła, 2015).

The cases of greenwashing can be reported to the Advertising Council. A form is published on the website www.radareklamy.pl. It must be completed and submitted to the Council. However, the Advertising Council does not have strong competences to effectively stop greenwashing. It is difficult to disagree with the opinion of experts that the greatest innovation would be to make organic products sold as ordinary products, and not ordinary products sold as organic.

It is regrettable that the phenomenon of greenwashing is practiced by both global brands and small companies. Their behavior is reprehensible and the brand image is definitely losing its shine. There are many examples that clearly demonstrate such practices. Brands consciously use the low awareness of many customers, and deceive them with the form and content on the packaging, similar to ecological, or even worse - the ingredients of the product. An example is an action organized by a distributor of well-known mineral water in Poland. The management of the company, using the image of a famous journalist (with her consent), tried to convince the public that plastic bottles are more environmentally friendly than those made of glass. This type of marketing campaign did not contribute to the increase in popularity and importance of the brand on the market. Some companies use their green image insidiously with very subtle methods. This is particularly reprehensible because the consumer does not know that the brand is misleading him. There are many more such practices on a daily basis.

TV programs and YouTube channels, run by, among others Katarzyna Bosacka "I know what I eat", "Re-wiselyJemy", "EkoBosacka", as well as profiles on Facebook and Instagram are very helpful in the fight against greenwashing. It is worth paying attention to the enormous role played by influencers in this regard. "Naturalnieproste" on Instagram by Dominika Chirek, who, together with a group of observers, exposes reprehensible practices carried out by the cosmetics industry, helping to distinguish natural cosmetics from those that only pretend to be them. Similarly, on her profile "Eko.paulinagorska", the author carries out ecological education. Sylwia_Majcher_Eko, on the other hand, argues that everything what is eco is great. The "Eco_friendly_change" channel continues similar activities. It is also worth noting the action of the "Ecosy" profile on Instagram. The site gathers in one place many ecological Polish brands, such as local manufactories, up-cycling, sustainable fashion. The "Czytamyetykiety" profile, which analyzes the labels of food and cosmetic products and runs educational e-books, also plays a positive role. There are also places where you can learn about the offer of regional eco products. Local producers of natural food play a major role there, e.g. Frymark Bydgoski in Bydgoszcz, where you can buy ecological products. Due to the limited scope of this article, only a few examples of both green marketing and greenwashing are provided.

6. Conclusion

When analyzing the reports on ecology and the natural environment, it can be clearly stated that Poles perceive a serious threat to the Earth, especially the natural environment, and notice the need to take appropriate remedial measures. The respondents consider armed conflicts (57%) and environmental pollution (55%) to be the greatest threats. They clearly expect specific actions from companies and brands to protect the planet and more and more care for the ecological production process (Małecki et al., 20021).

When we consider the problem on a global scale, it can be concluded that ecological marketing is an important element of the strategy of small businesses and large enterprises. In Poland, the process of active pro-ecological activities is more and more dynamic. In order to be able to boast about ecological products, the company should inform truthfully about the ingredients and production methods. In addition, it is obliged to use biodegradable or recycled packaging, it cannot violate the standards of ecological production method, and it is not allowed to carry out tests on animals. In its activities, it should focus on financial support for social campaigns promoting ecology and broad cooperation with eco-influencers.

The latest results of the Ecobarometer Report are optimistic, as they prove that Poles are eager to care for the environment - 84% of them regularly segregate waste, 83% - reduce power consumption, and 81% - reduce water consumption. They, as consumers, are also increasingly aware of their role in caring for the environment. Nearly half of our citizens pay attention to whether the packaging is ecological, and 44% of respondents are ready to pay more for clothes and shoes made of ecological materials. It is worth emphasizing, that the respondents are cautious in making decisions about changing eating habits for the sake of the environment. 54% of respondents admit that they will not give up eating meat, even knowing the fact that animal husbandry is non-organic. On the other hand, almost half of the respondents engage in promoting pro-ecological behavior. 46% of respondents claim that they instruct their friends to be more ecological (Ekobarometr, 2020).

Systematic observations are in line with the data from the Ecobarometer Report. In fact, more and more often we become more sensitive to phenomena and problems related to our Earth (on a micro and macro scale). Collaborative activities, focusing on waste segregation, responsible buying, switching from meat to a plant-based diet, sustainable development, using hybrid or electric cars, buying in second hand shops, using reusable bags, drinking with paper straws, are clear examples of pro-ecological behavior. Not only celebrities of world format, but also the so-called ordinary people contribute to the protection of the environment. They do it more and more boldly and without any complexes. It is worth mentioning one of the influencers on Instagram who strongly criticizes Coca Cola and puts mineral water on a pedestal. The examples of global brands that care more and more about the fate of the planet inspire optimism.

Despite many positive actions, we can still observe companies using greenwashing that soak their messages with ecological hollow words. Clever marketers know what vocabulary is often adopted without any reflection by customers. "Green empty words”, without a real content (”natural”, "environmentally friendly", "Eco & Bio", "Biodegradable", "green"), have a broad impact on consumers of goods and services. This procedure can be used freely, because in many countries there are hardly any effective regulations and official norms. Dishonest companies extensively use this situation to create their own ecological image with help of generalities and half-truths.

In the United States, the practice of greenwashing is restricted by law. An example is the American manufacturer of children's mattresses, who advertised his products as organic, environmentally friendly and made with the use of plant materials. The untrue information was further enhanced by the award of the Green Shield (which the company invented and admitted to itself, which was carefully hidden from customers). This evident example of greenwashing was interrupted by the US Federal Trade Commission, that ordered to stop deceptive practices misleading customers.

Greenwashing harms not only consumers, but also honest companies that take problems of sustainable growth seriously. Therefore, the ability to recognize unfair practices is extremely important. At this point, we can indicate the relationship between the level of environmental awareness of customers and the actual or apparent activities of companies. The possibility of verifying advertising messages of brands is determined by the environmental awareness of customers, as well as their readiness to undertake activities, including the functioning of market of goods and services. It is also worth considering the functioning of relevant services in this area. Their establishment could ensure a safe market of goods and services in Poland. It is difficult to accept shifting all responsibility onto customers and relying only on their choices. It is the relevant institutions that should take care of the ecological composition of products, the quality of services and the elimination of goods harmful to health from the market.

As a research problem, we can propose a wider dissemination, development and implementation of Codes of ethics for companies, specifying precisely, inter alia, all pro-ecological standards that should be strictly used in the production, distribution and promotion of a given brand. In this way, the quality guarantee, consistent with the content of the label, would become the brand's business card in contacts with their consumers. A company's code of ethics, strictly followed, should open wide doors in the global market. Breaking its rules would mean not only destroying the company's reputation, but most of all eliminating it from the group of honest producers and distributors.

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ASSESSMENT OF THE ACOUSTIC EFFICIENCY OF ROAD INVESTMENTS IN THE STAGE OF DEVELOPING NOISE PROTECTION PROGRAMS IN CITIES

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Purpose: The purpose of the article is to present the concept of calculating indexes of effectiveness and acoustic efficiency of road investments that facilitate decision-making on the sequence of work implementation and the development of investment task schedule. The presented indexes are used in the development of strategic noise maps of cities and in the creation of noise protection programs. The presented concept fits into the topic of managing the acoustic climate of cities.
Design/methodology/approach: The method of ranking road investments described in the article was developed based on the author's many years of experience in developing strategic noise maps of cities and presented as a case study for the city of Siemianowice Śląskie.
Findings: The proposed method supports urban investment management. It allows for selecting the sequence of implementation of road investments in cities which ensures the achievement of maximum acoustic efficiency. The developed index of acoustic efficiency is defined as the ratio of costs incurred to the number of people exposed to excessive noise before and after the implementation of the investment. This index can be used to rank investments in the development of strategic noise maps and the creation of noise protection programs.
Practical implications: Strategic noise maps are prepared every 5 years in accordance with EU legislation. Based on them, noise protection programs are developed, within which future investments reducing noise in the city must be identified and their effects determined. The presented concept of introducing a ranking index for investments in terms of their acoustic efficiency is a response to the cities' demand for the development of a uniform methodology supporting the selection of investments based on the criterion of acoustic efficiency. The applied method can be introduced to standardize the way of evaluating the justification of implementing noise reduction investments in cities for the purposes of developing noise protection programs.
Originality/value: The article presents a concept of calculating indexes of the effectiveness and acoustic efficiency of road investments. These indexes are helpful in managing urban investments aimed at reducing the exposure of residents to noise, and in particular for proper planning of the sequence of investment implementation when developing noise protection programs. The defined indexes and the method of their calculation relate not only to road investments but can also be used to rank investments related to reducing railway and industrial noise.

Keywords: Noise, acoustic efficiency, acoustic map, strategic noise map, noise protection program.

Category of the paper: Case study, research paper.

1. Introduction

The primary document requiring EU member states to develop strategic noise maps of cities was the Directive 2002/49/EC of the European Parliament and of the Council, which introduced the obligation to assess and manage environmental noise levels. As a result of its implementation into the Polish legislation, regulations were introduced in the Environmental Protection Act requiring the development of strategic noise maps, followed by the development of noise protection programs and action plans based on these maps. Since then, every 5 years new strategic noise maps have been created, and noise protection programs have been developed based on them. The IV round of mapping was completed in June 2022, and currently work is progressing on the development of noise protection programs. Over the course of the last 20 years significant changes have been introduced into the computational methodologies involved, the method of use and accuracy of 3D city models, and the way residents' noise exposure to various types of noise is evaluated. Calculation procedures have also been adapted to the technical possibilities of using 3D modeling and increasingly accurate spatial data at our disposal. The current mapping round is being carried out with the use of the CNOSSOS-EU (Common NOise aSSessment methOdS), and the spatial information infrastructure developed by EU member states based on the INSPIRE directive. The strategic noise map is prepared on the basis of data sets from the state geodetic and cartographic resource. Reporting obligations have also been imposed on the EU member states. Detailed information on the preparation of strategic noise maps is presented in the guidelines of the Chief Inspectorate of Environmental Protection (Institute, 2021).

The strategic noise map constitutes the basic source of data for the purposes of informing the public about noise-related hazards, developing noise protection plans, planning and implementing actions to reduce noise, and a broad range of strategic planning, for instance in the context of spatial planning. Noise protection plans and concrete noise reduction programs for a given agglomeration are therefore developed based on the strategic noise maps. The developed programs are adopted through a voivodeship marshal's resolution and are subject to execution. That is why it is so important during the preparation of noise protection programs to be able to make a correct assessment of the acoustic efficiency of possible investments and to choose those that allow for the maximum reduction of noise nuisance for the largest possible number of residents, while at the same time minimizing the cost per investment. To this end, it is necessary to adopt an appropriate method of action. Later in the article a broad literature analysis of the issue will be conducted, existing indexes of acoustic investment efficiency will be analysed and discussed, and an original concept for an investment efficiency index will be proposed. The discussed subject matter fills a research gap ralated to the constant search for appropriate indexes for assessing the acoustic efficiency of investments. The article uses examples taken from the strategic noise map of the main roads in the city of Siemianowice Śląskie (Strategiczna…, 2022).

2. Methodology for creating strategic noise maps of cities and developing noise protection programs

Strategic noise maps are prepared for cities with a population of over 100,000, main roads with a traffic volume of over 3 million vehicles per year, as well as main railway lines and airports. Strategic noise maps are based on data sets from the state geodetic and cartographic resource (GUGIK), using computational methods specified in the annex to Directive 2015/996 (Directive, 2015). Specialized acoustic software is used to prepare the strategic noise maps. This software has implemented computational algorithms for noise emission and propagation from various sources, as well as algorithms supporting statistical calculations using GIS techniques. The most well-known acoustic software includes CadnaA, SoundPlan, Immi, and LimaA.

The methodology for creating noise maps is precisely defined in EU legislation and described in detail in the guidelines of the Chief Inspectorate of Environmental Protection (Institute, 2021). The exact scope of data included within noise maps is described in the annexes to the Regulation of the Minister of Climate and Environment of 1 July 2021 (Regulation, 2021a) with subsequent amendments included (Regulation, 2022).

Based on current geodetic, cartographic, and demographic data a three-dimensional spatial model of the mapped area is created within the appropriate GIS map projection. This model takes into account the topography of the terrain (DTM), buildings, noise barriers, ground absorption, tall vegetation, and noise sources such as roads. Residential buildings within the computational model have an assigned number of residents, moreover the model also has specified location of areas subject to noise protection, based on local spatial development plans. An example geometric model of the city of Siemianowice Śląskie is shown in Fig. 1. This model formed the basis for calculating the long-term noise level indexes L_{DWN} and L_N. The former index represents the averaged noise emission over the whole 24 hour period, while the latter represents the night period. The L_{DWN} index is calculated using the following formula (Regulation, 2020):

$$L_{DWN}=10\log\left[\frac{1}{24}\left(12\cdot 10^{0,1L_D}+4\cdot 10^{0,1(L_W+5)}+8\cdot 10^{0,1(L_N+10)}\right)\right] \quad (1)$$

The L_{DWN} index expresses the average annual sound level A in dB. In turn the L_D, L_W, and L_N indexes respectively describe the average annual sound level during the daytime (from 6^{00} to 18^{00}), evening (from 18^{00} to 22^{00}), and night (from 22^{00} to 6^{00}).

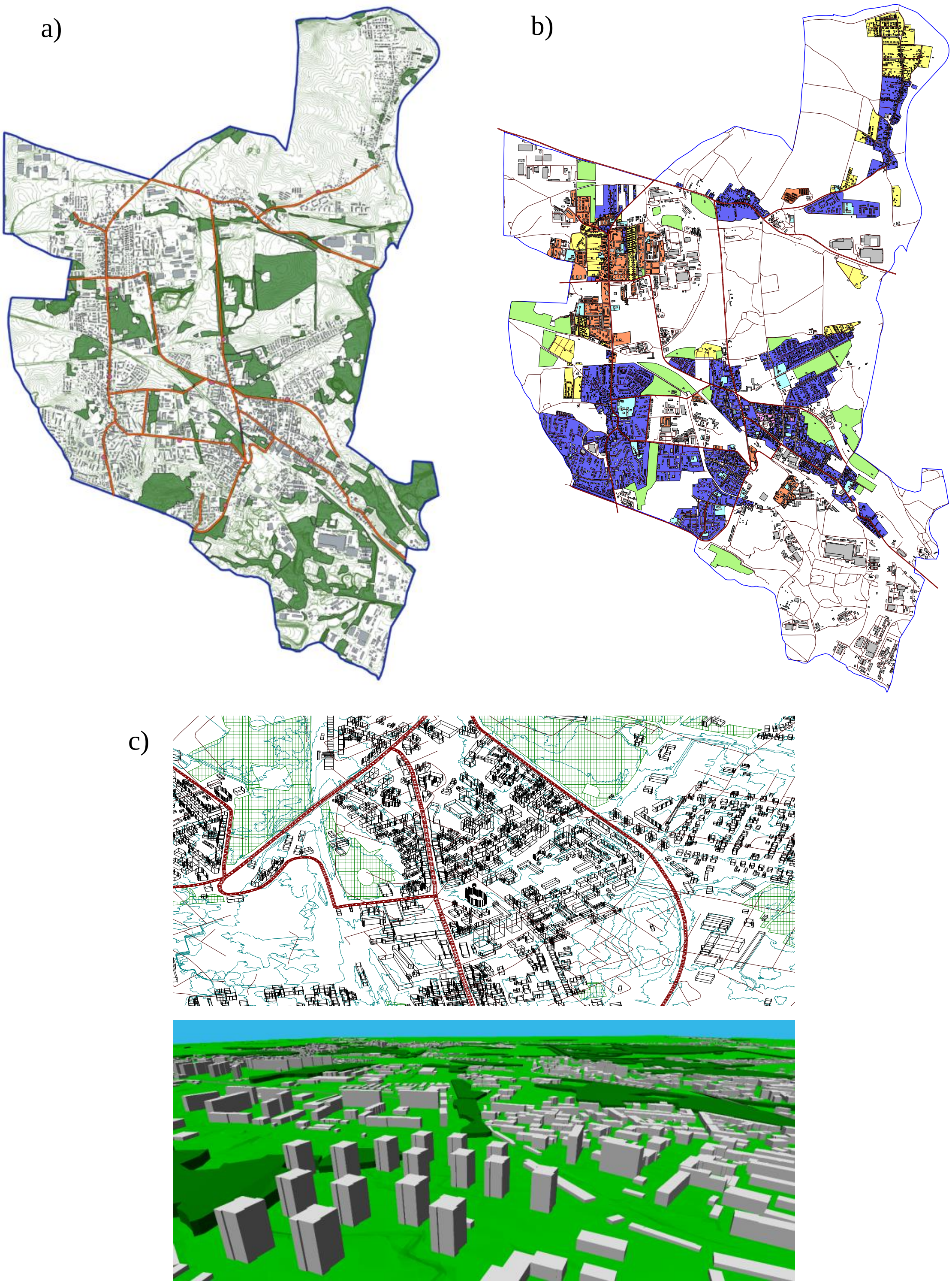

Figure 1. Geometric model of the city of Siemianowice Śląskie developed in CadnaA software: a) model in 2D view, b) areas subject to noise protection, c) model in 3D view.

Source: author's own elaboration based on the SMA of Siemianowice Śląskie (Strategiczna…, 2022).

Maps of road traffic noise immission, expressed by the L_{DWN} and L_N indexes, created on the basis of carried out calculations, are presented in Fig. 2. These maps indicate the ranges of noise impact in 5 dB intervals, ranging from 50 dB for the L_N index and from 55 dB for the L_{DWN} index.

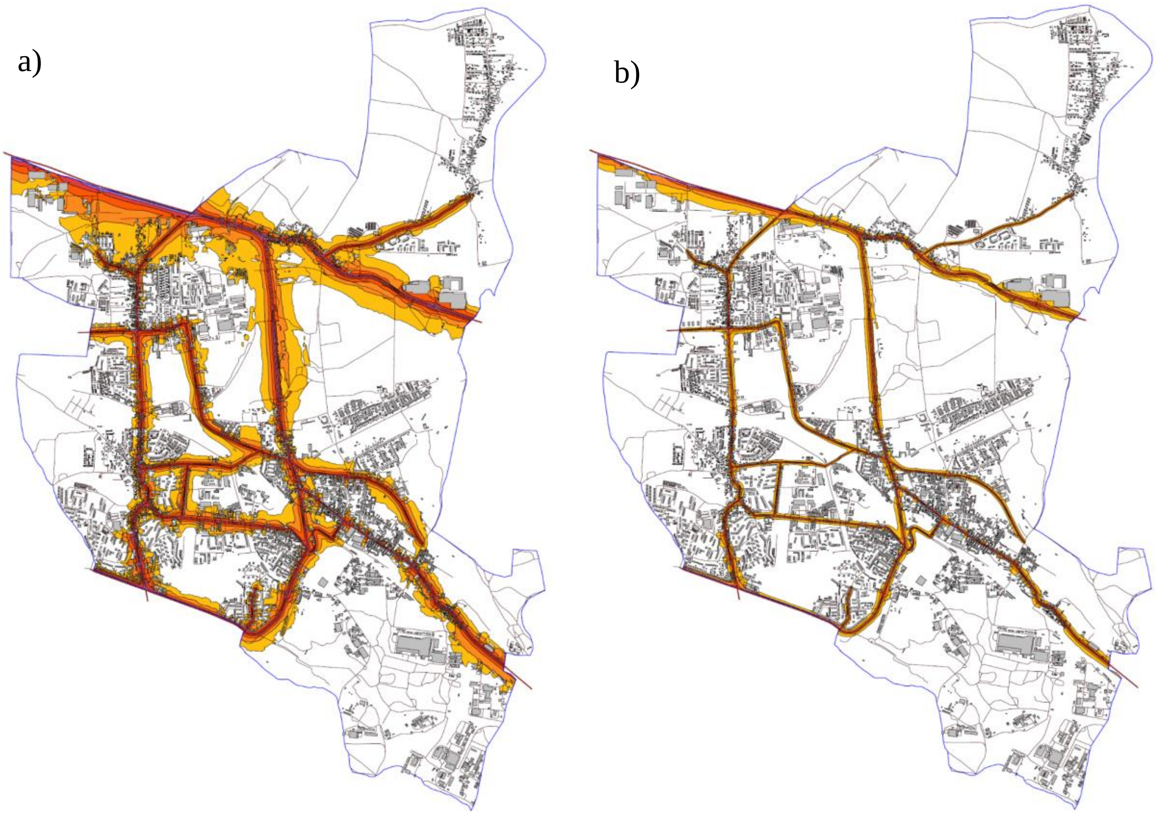

Figure 2. Maps of road traffic noise immission in the city of Siemianowice Śląskie: a) for the whole 24 hour period - L_{DWN} index, b) for the night period - L_N index.

Source: author's own elaboration based on the SMA of Siemianowice Śląskie (Strategiczna, 2022).

With the calculated distribution of noise levels in the environment (Fig. 2) and information on the location of areas subject to noise protection and their corresponding permissible noise levels (Fig. 1b), maps of areas threatened by noise are prepared (Fig. 3b). These are differential maps presenting areas where the permissible noise values are exceeded by a certain number of dB. According to the Cnossos methodology, for the purpose of detailed statistical data analysis, noise level distributions are also calculated for individual building elevations (Fig. 3c, 3d) and based on this, permissible noise level exceedances are determined. An example of analyses used to estimate the level of exposure of residents to excessive noise is presented in Fig. 3.

The most significant element of a strategic noise map is to determine the noise threat from different groups of sources (e.g. roads, railways, industry) and to estimate the number of people exposed to this physical factor. The next step is to calculate statistical measures describing the overall exposure to noise for the city's residents. Among calculated values are the area of threatened areas, the number of residential units, and the number of residents exposed to noise divided into 5-decibel ranges. Example results of noise threat assessments from main roads in the city of Siemianowice Śląskie are presented in Table 1.

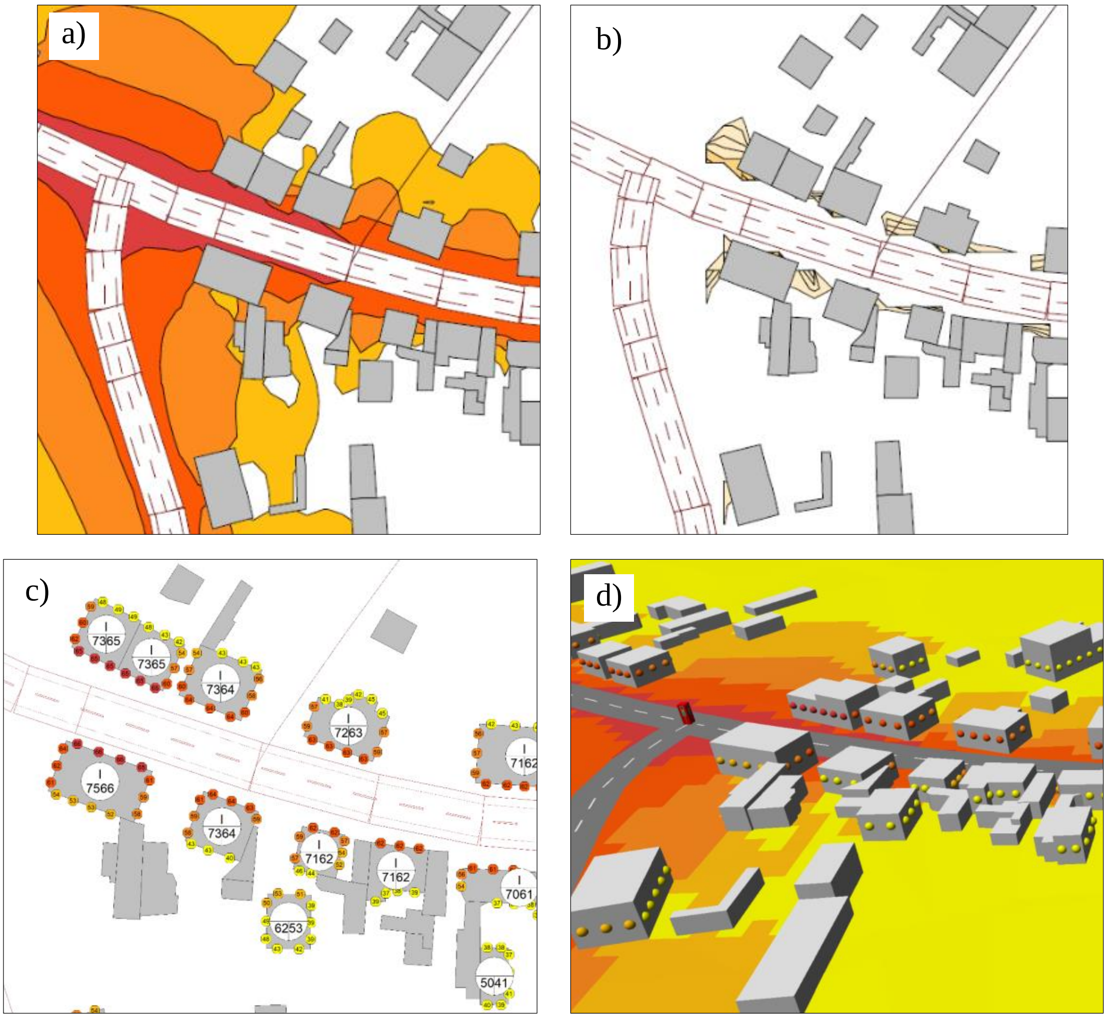

Figure 3. Examples of acoustic analyses: a) immission map of a city fragment, b) map of areas threatened by noise, c) distribution of noise on building elevations (2D view), d) distribution in 3D view.

Source: author's own elaboration based on the SMA of Siemianowice Śląskie (Strategiczna…, 2022).

Having information about the number of exposed individuals and the extent of noise level exceedance, it is possible to develop a noise protection program, which will implement investments aimed at minimizing noise. The catalogue of noise reducing investments is quite large and depends on the type of noise source. The most important include, for example, the construction of bypasses or new roads leading traffic away from densely populated residential areas, the construction of sound barriers, the use of low-noise asphalt, speed limits, etc. Organizational and planning activities are also important in the fight against noise, such as building residential areas away from main roads and city centers, planning the layout of buildings that takes into account external commercial-service areas and internal quiet zones, creating slow traffic zones, etc.

Table 1.
Results of noise threat assessment from main roads in the city of Siemianowice Śląskie

Ranges in dB	L_{DWN} index			L_N index		
	Total area [km²]	Number of residential units	Number of residents	Total area [km²]	Number of residential units	Number of residents
Data relating to noise exposure						
50,0÷54,9	-	-	-	1,025100	2562	5300
55,0÷59,9	1,577675	2441	5100	0,676150	3200	6700
60,0÷64,9	0,970900	2246	4700	0,280850	356	700
65,0÷69,9	0,649175	3487	7300	0,019300	9	20
70,0÷74,9	0,238200	123	250	0	0	0
75,0÷79,9	0,013100	0	0	-	-	-
Data relating to areas where exceedances of permissible noise values occur						
0÷1	0,025525	1007	2100	0,017025	719	1500
1÷5	0,036450	479	1000	0,028300	351	700
5,1÷10	0,001225	10	20	0,001150	14	30
10,1÷15	0	0	0	0	0	0
> 15	0	0	0	0	0	0

Source: author's own elaboration based on the SMA of Siemianowice Śląskie (Strategiczna…, 2022).

As can be seen, the spectrum of activities and investments aimed at reducing noise can be very large. This necessitates the adoption of a unified criterion that allows for their comparison and evaluation in terms of acoustic efficiency, expressed as a function that links the number of people with the level of noise reduction (limiting nuisance), as well as the financial costs incurred. The currently used methods of evaluating the acoustic efficiency of investments and their discussion will be discussed later in the article.

3. Analysis of methods of evaluating the acoustic efficiency of investments in development of noise protection programs

The primary goal of the strategic noise map is to determine the extent of exposure to noise for the population living in a given area and to develop solutions to reduce this exposure. Therefore, the evaluation of the effectiveness of noise reduction investments should take into account the number of people exposed to a given type of noise and the magnitude of the noise level exceedance. The first index that allows for describing and evaluating the effectiveness of noise reduction investments was the M index (Regulation, 2002), defined as follows:

$$M = 0{,}1m(10^{0{,}1\cdot D_L} - 1) \tag{2}$$

This index combines the number of residents in an area with an exceeded noise level m and the magnitude of the noise level exceedance D_L, which is determined as the difference between the calculated noise level L_{Ai} and the permitted noise level L_{dop}. In practical applications, the formula for the M index sometimes took on more complex forms (Chacińska, Adamczyk, 2012):

$$M = 0{,}1\left(\sum_{i=0}^{n} m_i \cdot K_i\right) \tag{3}$$

$$K_i = 10^{0{,}1\cdot(L_{Ai}-L_{dop})} - 1 \; dla \; L_{Ai} > L_{dop}$$
$$K_i = 0 \; dla \; L_{Ai} \le L_{dop} \tag{4}$$

The effectiveness of the applied noise reduction measure *E* can be determined by knowing the value of the *M* index before the investment was implemented and after its execution *M'* based on the following equation:

$$E = \frac{M - M'}{M} \cdot 100\% \tag{5}$$

The E index allowed for the hierarchy of importance of noise reduction measures to be determined and was used in the I and II rounds of acoustic mapping. Its main drawback was the lack of a clear definition of the area to which it referred. It was usually determined for a specific investment or in relation to residential buildings, and even to a raster, e.g. with a size of 10x10m, after preparing a population density map. This index was difficult to apply and interpret, did not express the actual amount of exposed population and oftentimes could not be compared against itself. Moreover this index does not take into account the cost of the investment.

Quite a few years ago Professor Rufin Makarewicz proposed a slightly different index, defining the effectiveness of an acoustic solution S as the product of the number of people living in a given area m_i and the size of noise reduction ΔL_i:

$$S_i = m_i \cdot \Delta L_i \tag{6}$$

The cost-effectiveness of noise reducing investment *KCH* is defined as the ratio of the investment cost *K* to its effectiveness *S*:

$$KCH = \frac{K}{S} \tag{7}$$

The *KCH* index informs us how much it will cost to reduce noise by 1 dB per resident. It is helpful in identifying the best solutions from among the possible options and therefore was widely used to evaluate investments in the II and III rounds of acoustic mapping when creating noise protection programs.

An important drawback of the above indexes is the lack of a clear definition of the procedure for determining them, such as the size of the area and the method and boundaries of summation. It is not specified whether the indexes should relate to entire investments, inhabited areas, or individual buildings. They may therefore be determined and interpreted differently by individual noise protection program implementers, making comparison difficult. The greatest drawback of the above indexes is however the fact that they do not take into account the variation in the magnitude of noise exceedances and do not introduce a variable that would link the degree of exposure to noise to the magnitude of the exceedance above the permissible level.

Should 100 people exposed to noise that exceeds the permissible level by 15 dB be treated equally with 100 people exposed to noise that exceeds it by 5 dB? It seems that they should not. Therefore, among investments that allow for noise reduction for the same number of residents, the highest rating should be given to those that reduce exposure from a higher level of noise hazard.

The above drawbacks are partially eliminated by the index introduced for use from the IV round of mapping when developing schedules for noise reduction activities (Regulation, 2021b) which was detailed in 2022 (Regulation, 2022a). The regulation introduces an index that determines the total number of people affected by the harmful effect of significant noise nuisance N_{HA}, referred to as the noise nuisance index.

The regulation introduces an index determining the total number of people affected by the harmful effects of significant noise nuisance (NHA), thereafter referred to as the noise nuisance index:

$$N_{HA,x} = \sum_{j} \left(n_j \cdot AR_{HA,x,j}\right) \tag{8}$$

where:

x – noise source (road, railway, airport),

j – range of L_{DWN} noise index values,

n_j – number of people exposed to noise in range *j* of L_{DWN} index values,

$AR_{HA,x,j}$ – probability of harmful effects in the form of considerable nuisance from a given noise source among the population exposed to noise in the environment within a given range *j*.

For road traffic noise, probability $AR_{HA,j}$ is calculated as follows:

$$AR_{HA,drogi} = \frac{\left(78{,}9270 - 3{,}1162 \cdot L_{DWN,j} + 0{,}0342 \cdot {L_{DWN,j}}^{2}\right)}{100} \tag{9}$$

Probability $AR_{HA,j}$ is calculated for the middle values of the L_{DWN} noise index in each of the following value ranges in dB: 55,0-59,9 dB (middle value is 57,5 dB), 60,0-64,9 dB (middle value is 62,5 dB), 65,0-69,9 dB (middle value is 67,5 dB), 70,0-74,9 dB (middle value is 72,5 dB), 75,0-79,9 dB (middle value is 77,5 dB) and over 80,0 dB (middle value is 82,5 dB).

The calculated values of the index are constant for each range and may have been provided directly in the regulation without defining a formula. The order of implementation of the noise protection program (POH) is determined from the areas with the highest value of the noise nuisance index N_{HA}, and the estimated reduction in the number of people affected by harmful effects of noise in the form of considerable nuisance $R_{HA,x}$ is determined as the difference between the noise nuisance index determined during the preparation of the strategic noise map and the index taking into account the effects of the planned investment (planned action):

$$R_{HA,x} = N_{HA,x}^{SMH} - N_{HA,x}^{POH} \tag{10}$$

Analyzing the records of the regulation introducing the noise nuisance index N_{HA}, one can notice the lack of a defined middle value for the $L_{DWN}\geq 80,0$ dB range. This value is assumed to be 82,5 dB, but it is rather an interpretation than an indication of the regulation. However, the biggest doubt arises from basing the noise nuisance index N_{HA} solely on the L_{DWN} average annual noise level for the whole 24 hour period, while the average annual noise level determined for the night period L_N seems to be equally, if not more important. Noise nuisance during the nighttime period is usually much greater than during the daytime. The regulation defines the N_{HSD} index in relation to the number of people affected by harmful effects of noise in the form of significant sleep disturbance, but it is not mentioned as an element of noise reduction investment planning. The N_{HSD} index is defined as follows:

$$N_{HSD,x} = \sum_j \left(n_j \cdot AR_{HSD,x,j}\right) \tag{11}$$

where:
x – noise source (road, railway, airport)
j – range of L_N noise index values
n_j – number of people exposed to noise in range j of L_N index values
$AR_{HSD,x,j}$ – probability of harmful effects in the form of sleep disturbance from a given noise source among the population exposed to noise in the environment within a given range j.

For road traffic noise, probability $AR_{HSD,j}$ is calculated as follows:

$$AR_{HSD,drogi} = \frac{\left(19{,}4312 - 0{,}9336 \cdot L_{N,j} + 0{,}0126 \cdot {L_{N,j}}^2\right)}{100} \tag{12}$$

Probability $AR_{HSD,j}$ is calculated for the middle values of the L_N noise index in each of the following value ranges in dB: 50,0-54,9 dB (middle value 52,5 dB), 55,0-59,9 dB (middle value 57,5 dB), 60,0-64,9 dB (middle value 62,5 dB), 65,0-69,9 dB (middle value 67,5 dB), 70,0-74,9 dB (middle value 72,5 dB) and over 75,0 dB (middle value 77,5 dB).

It seems that only the combination of these two indexes will allow for a full description of the validity of the investment, as in practice, there are situations where the noise level for a given area of the city during the daytime may be acceptable, but significantly more troublesome at night. It also seems that for the purposes of determining the order of implementation of tasks (work schedule) within noise protection programs, it should not be based on the annual average values of the L_{DWN} and L_N noise indexes, but on the actual values of exceedances of permissible noise levels in the environment. Human presence in an area of single-family housing in road noise with an L_{DWN} value of 64 dB is equally permissible as in a downtown area with an L_{DWN} value of 70 dB. This results from the provisions of the regulation of the Minister of the Environment specifying permissible noise levels in the environment. It seems that the introduction of indexes based on health aspects N_{HA} and possibly N_{HSD}, not correlated in any way with permissible noise values determined depending on the purpose of residential areas and their functions in spatial development plans, is currently pointless and causes divergent methods of assessing the same reality.

Currently, there are no clear and comparable methods for estimating the effectiveness of noise reduction investments in the regulations, because the regulation allows them to be planned arbitrarily - based on personal premises. The analysis of the literature clearly shows the need for further research on the evaluation of existing indexes and the development of new or modified indexes for assessing the effectiveness and acoustic efficiency of investments.

4. A proposal and an example of calculating acoustic investment effectiveness indexes

The indexes of significant noise nuisance NHA and significant sleep disturbance NHSD are determined based on the calculation of the number of residents living in areas with a noise level described by the respective LDWN and LN indexes, in the appropriate intervals. The results of calculating the above indexes for the strategic noise map of roads in Siemianowice Śląskie are presented in Table 2.

Table 2.
Results of calculating indexes of significant noise nuisance HA and significant sleep disturbance HSD for noise from main roads in Siemianowice Śląskie

Range in dB	Middle value of the range	Index HA				Index HSD			
		n_j	$AR_{HA,j}$	Nj	N_{HA}	n_j	$AR_{HSD,j}$	Nj	N_{HSD}
50,0-54,9	X	X	X	X	1926	2500	0,0514592	129	586
55,0-59,9	57,5	700	0,1281925	89		5200	0,0740795	385	
60,0-64,9	62,5	2000	0,1775825	355		700	0,1029995	72	
65,0-69,9	67,5	5800	0,2440725	1415		0	0,1382195	0	
70,0-74,9	72,5	200	0,3276625	65		0	0,1797395	0	
75,0-79,9	77,5	0	0,4283525	0		0	0,2275595	0	
≥80,0	82,5	0	0,5461425	0		X	X	X	

Source: author's own elaboration based on the SMA of Siemianowice Śląskie (Strategiczna…, 2022).

According to the guidelines for developing noise protection plans, the N_{HA} index should be used as a reference value. At present, no calculations have been carried out for specific investments, as noise protection programs for the IV round of mapping have yet to be created. The deadline for completing noise protection programs is July 18, 2024.

In the author's opinion, a much better index for ranking noise reduction investments would be an index based on exceedances of permissible noise values and the number of people exposed to such exceedances. Combining the index proposed by Prof. Makarewicz with the methodology for determining the number of people exposed to noise exceedances within a specified range seems to be optimal and eliminates the drawbacks of individual indexes described in the previous chapter. The number of people exposed to noise is determined using the Cnossos methodology, assigning the appropriate number of residents of a given building to receptor points located on the elevations of that building (Fig. 3c, 3d). This approach is already widely used to determine the number of people exposed to noise when preparing strategic noise maps. The author proposes the following index of acoustic efficiency - *S* is defined as the difference in the weighted number of residents exposed to noise exceeding the permissible value *N* before and after the implementation of the investment:

$$S = N_{przed} - N_{po} \tag{13}$$

$$N = \sum_{i=1}^{5}(n_i \cdot w_i) + 2 \cdot \sum_{j=1}^{5}(n_j \cdot w_j) \tag{14}$$

where:

N – the weighted number of residents exposed to noise exceeding the permissible values specified by the L_{DWN} and L_N indexes respectively, before and after the implementation of the investment [*person·dB*],

i, j – the number of intervals in which exceedances of permissible levels are grouped. It is proposed to adopt *i*=*j*=5, and to define the intervals as follows: (0,1), <1,5), <5,10), <10,15), <15,+∞),

w_i, w_j – the middle values of the intervals, respectively: 0,5; 3,0; 7,5; 12,5; 17,5,

$n_{i,j}$ – the number of people exposed to noise exceeding the L_{DWN}/L_N index belonging to interval i/j,

The definition of the acoustic efficiency index of investments S assumes that actions aimed at eliminating noise exceedances during the night will have twice the weight for the same number of exposed residents. Such an approach will promote prioritising actions aimed at eliminating exceedances of permissible noise levels during the night. The number of residents exposed to exceedance of permissible noise values before and after the implementation of the investment is determined using the same formula (14). The effectiveness index S is perfectly suited for ranking planned investments and may be helpful in creating schedules and planning activities related to noise reduction when creating noise protection programs.

The acoustic efficiency of an investment E is determined by dividing its planned cost *K* by the effectiveness *S:*

$$E = \frac{K}{S}\left[\frac{PLN}{osoba \cdot dB}\right] \tag{15}$$

The resulting value informs about the cost per person-decibel. The efficiency can also be expressed in relation to the actual number of residents for whom noise reduction was achieved. In this case, the difference in the number of people exposed to exceedance of permissible noise levels (for the L_{DWN} and L_N indexes) before and after the implementation of the investment should be substituted in the denominator of formula (15), without weighting these values in advance.

The results of the effectiveness and acoustic efficiency index calculations for two exemplary road investments in the city of Siemianowice Śląskie conducted using the proposed methodology are presented in Table 3.

Table 3.
Results of acoustic efficiency index calculations for 2 investments in the city of Siemian. Śl.

Ranges in dB	**Middle value i,j**	**SMH – before investments**				**POH – investment 1**				**POH – investment 2**			
		L_{DWN}		**L_N**		**L_{DWN}**		**L_N**		**L_{DWN}**		**L_N**	
		n_j	**$W \cdot n_i$**	**n_j**	**$W \cdot n_j$**	**n_j**	**$W \cdot n_i$**	**n_j**	**$W \cdot n_j$**	**n_j**	**$W \cdot n_i$**	**n_j**	**$W \cdot n_j$**
0-1	0,5	2100	1050	1500	750	1200	600	1000	500	1400	700	680	340
1-5	3,0	1000	3000	700	2100	700	2100	500	1500	500	1500	420	1260
5-10	7,5	20	150	30	225	0	0	5	38	5	38	2	15
Total:		3120	4200	2230	3075	1900	2700	1505	2038	1905	2238	1102	1615
Indexes:		N_{przed}=10350				N_{1po}=6775				N_{2po}=5468			
		X				**S_1=3575** [os·dB]				**S_2=4882** [os·dB]			
		X				E_1=280 [zł/os·dB]				E_2=204 [zł/os·dB]			

Source: author's own elaboration based on the SMA of Siemianowice Śląskie (Strategiczna…, 2022).

In the presented example, investment 2 should be implemented first, as its effectiveness S is higher. Assuming that the cost of both investments is similar and amounts to PLN 1 million, the calculated efficiency of investment 1, E1, is about 280 [PLN/person·dB], and for investment 2, E2 is approximately 204 [PLN/person·dB]. The actual cost per resident for the first investment is PLN 514, and for the second investment, it is PLN 426.

5. Conclusions

The currently introduced methodology for determining the order of tasks performed in the creation of noise protection programs requires the use of the N_{HA} index based on noise level intervals expressed by the L_{DWN} index. This index was introduced for the first time in the IV round of acoustic mapping, and therefore its application has yet to be tested in practice. The introduction of this index is associated with the view that noise nuisance does not necessarily have to depend on the size of the permissible level exceedance. This view is somewhat correct, but on the other hand, it remains in conflict with the fact that the permissible noise values vary depending on the function and purpose of residential areas. According to the author, the first priority should be to eliminate exceedances of the permissible noise values in urban areas, and only then deal with noise understood in terms of nuisance. Therefore, the article presents a concept for calculating indexes to support decision-making in the development of schedules for noise reduction investment implementation. The presented concept is largely based on already known index definitions, but the method of their calculation has been adapted to current techniques and calculation methodologies used in the development of strategic noise maps. Additionally, the applied method of weighting the population exposed to noise exceeding the permissible values means that not only the number of people but also the size of the permissible level exceedance determined by the L_{DWN} and L_N indexes affects the order of investment implementation.

The application of the proposed indexes for estimating the effectiveness and acoustic efficiency of noise reducing investments allows for additional consideration of the level of noise exceedance. The index prioritizes investments that limit exposure for the same population size but at a higher level of exceedance by ranking them higher. The issue described in the article now requires practical verification, which will be possible due to the ongoing development of noise protection programs in cities as a part of the IV round of acoustic mapping.

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EXPECTATIONS OF CUSTOMER AS A STAKEHOLDER OF AN AGRICULTURAL ENTERPRISE: CASE STUDY

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Purpose: to present the possibilities of using the CSI (Customer Satisfaction Index) method to manage relations with customers as one of the stages of managing company's stakeholders.
Project/ methodology/ approach: the studies were carried out in two stages. The first stage comprising a direct interview was used to identify the criteria used by the customers of agricultural products when choosing a supplier. In the second stage, after the criteria were grouped with the use of questionnaires, their order of importance was determined.
Findings: the method of reaching to the customers used in the study relies on the application of the main criteria that they take into account in their decisions. These are: freshness, flavour, price and appearance of the product. Perception of these criteria is important for the studied entity on account of the specific location of the sales point.
Study Limitations/Implications: the proposed method was tested with respect to the selected business entity. In the next stages, it is necessary to test its application in other industries in order to receive a broader range of the picture about perception of key stakeholders by the organisation. The results show critical points to which the company resources should be assigned in order to improve customer satisfaction and loyalty.
Practical Implications: the received results may be a prompt for the studied company and may indicate directions of development of stakeholder management, along with the areas that should be improved in this respect. Independent and uniform measurement characteristics of the studied model constitute a useful tool for carrying out a systematic comparative analysis in time. It also provides information about the weak and strong sides of the company in the opinions of its customers.
Social Implications: the paper indicates the possibility of reciprocal impact of the main sides of the process: the customer and the company. The studies indicate the possibility of using the CSI method for the first stage of managing the relations with the customers, namely learning the degree of validity of various criteria when purchase decisions are made. Thanks to the use of the CSI method, it is possible to determine an efficient strategy of impact on the customers, using the criteria that are of major importance for them.

Originality/Value: the authors made an attempt at using a tool from the realm of the CSI quality management for the process of managing a company's stakeholders. This is possible by learning the importance of the individual criteria which are guiding the customers' purchase decisions. This may inspire the companies to use the tool in the process of stakeholder management.

Keywords: CSI, relations, stakeholders, customers.

Paper category: scientific paper, case study.

1. Introduction

The functioning of any organisation at the market is conditioned by a number of factors. These factors include, without doubt, relations with stakeholders of a given organisation. In the case of a company, the parties interested in its operation include primarily entities directly related to the organisation. They are the company's employees, clients and other entities delivering goods and services necessary for the performance of operating activities by the company. Along with the socio-economic development, the number of entities that directly impact the company is successively growing. Fulfilment of the company's goals is increasingly dependent on the entities located in its environment, both the closest and the further one. The key stakeholders that exert significant impact on the performance of financial goals of the company next to the owners, the employees and the cooperating partners are the company's customers – they are called the first degree stakeholders (Żelazna-Blichorz, 2013). Familiarity with the customers' expectations with respect to the products and services offered to them allows for preparation of a product that is going to be more satisfactory for the customer and this – in a long term perspective – may improve the company's sales dynamics. That is why identification of customer requirements pertaining both to the products and other components directly related to them is a very important aspect in the functioning of every organisation. From the point of view of formation of proper relations with customers, an important element is identification of factors which the customers take into account and determination of the degree of their validity, so that an offer for the customer can be adequately prepared on this basis. Taking the above into account, the authors of the paper attempt to indicate the possibilities of using a method from the group of quality assessment methods, namely Customer Satisfaction Index, to assess its significance from the point of view of purchases of agricultural products offered by XYZ in Gdynia. Based on the factors identified and arranged in order according to their significance for the stakeholders/ customers when purchasing the goods, the company's strategy of making the products available to the customers may be determined. In the analysed case, the strategy of making products available used by the company that was covered by the study was evaluated.

2. Stakeholders and Stakeholder Management

All organisations, including enterprises, are becoming more and more dependent on the impact of the environment, i.e. a set of entities and factors that surround them (Downar, Niedzielski, 2006). In the middle of the 20th century, entities within the environment of an organisation were defined as stakeholders (Smolska, 2016). The term stakeholders was defined by Stanford Research Institute in 1963 and the premises related to this approach became, over the next years, a foundation for development of the concept of corporate social responsibility (CSR). Initially, the stakeholder theory referred to the groups which, by their support, contributed to the existence of a given organisation. This concept was pursued in the 1970s in R. Ackoff (Ackoff, 1974). The concept of a stakeholder defined as a person or a group of persons that influences or may influence the accomplishment of the goals of a company was introduced in 1984 by Freeman (Freeman, 1984). Since that moment, the concept has been used more and more often in the company management theory, and in particular in the management of actions pursued by companies and defined as projects. This follows from the fact that a stakeholder does not necessarily have to impact the entire enterprise – such impact may only be limited to a project or just a process implemented as part of the enterprise (Smolska, 2016). The popularity of the stakeholder concept (in particular in the scope pertaining to projects) is systematically growing, together with the growth of the significance of projects in the operation of business entities – in particular, this is happening particularly quickly in the 21st century. The analysis of English language literature on project management carried out between 1984 and 2009 showed a successive growth in the use of this term along with the advent of the year 2009 (Grucza, 2019). Developing the stakeholder theory, Freeman presented both the broad and the narrow meaning of the term. The broad meaning of the term determines the stakeholders as a group of persons or individuals who affect the goals accomplished by an enterprise or are ‘subjected to the impact on the part of an enterprise accomplishing its goals’. In other words, it is a group or an individual who ‘experienced harm or benefit from an enterprise’ (Roszkowska, 2011). The narrow approach to this concept defines the stakeholders as a group which determines the survival of an enterprise. Clarkson presented the stakeholders as the entities introducing risk, which determine the survival of a company. The author assumes that ‘an enterprise is defined as a system of basic groups of stakeholders and may survive in a long-term perspective only when it is capable of creating value for all the groups’ (Clarkson, 1994). Popularity of using the stakeholder concept in the case of projects resulted in a definition of this term prepared by an organisation involved in project management methodologies. And thus, according to the most popular organisation associating persons managing projects, PMI, a stakeholder is ‘an individual, group, or organisation, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project’ (PMI PMBok 6th Edition, 2017). Similar definitions of stakeholders were also prepared by other organisations associating project managers (as part of the IPMA or PRINCE2 standard (www.ipma.pl, www.prince2.pl). Attention should be paid to the fact that in the majority of definitions, bilateral impact both of the organisations/ actions on the stakeholder and impact in the other direction, i.e. of the stakeholder on the organisation/ action is indicated. Existence of both parties (organisations/ actions and stakeholders) thus results in mutual relations between them, determined as social relations (Adamska-Chudzińska, 2014), which are the basis of operation and development of an enterprise (Smolska, 2016). This happens thanks to the increase of the capacity to compete by the use of diverse resources of an enterprise and thanks to the building of a competitive advantage (Adamska-Chudzińska, 2014) – the above two elements are accomplished owing to the relations established with the stakeholders. Relations established by an enterprise, in particular with key stakeholders, may be treated as a resource that needs to be managed (Smolska, 2016; Sawhney, Zabin, 2002) in order to accomplish the designated goals in an effective way. Correct management of stakeholders requires a number of actions in the area of planning, organisation, motivation and controlling (Danielak, 2012). In the simplest model of efficient stakeholder management, a three-stage process has to be performed. In the first place, identification of stakeholders should be carried out – this stage of stakeholder management is of vital importance for the efficiency of the entire process (Dziadkiewicz, 2020). In the next stage, the identified stakeholders must be characterised in detail, which means determination of the major values that they expect from an organisation. As part of the last stage, based on the stakeholder characteristics, it is necessary to determine a strategy of impact on the stakeholders, which would assist the fulfilment of the entity's goals (Bukowska, 2008; Misiak, Serwach, 2016). Taking into account the first degree stakeholders, i.e. the company's customers, an important factor that describes them and that affects the purchase-related decisions made by them, is the degree of customer satisfaction. Measurement of this parameter is necessary in building relations with the customers and in consequence conditions stakeholder management (Adamczyk, 2009).

3. Customer Satisfaction Measurement Tools

Relations among stakeholders participating in the process should consist in mutual trust, which will translate to an increase in the level of satisfaction. The level of satisfaction depends on the levels of expectations, which are variable in time and depend on the user's expectations. Ongoing monitoring of this phenomenon is greatly important because based on the results of measurements, it is possible to react immediately and avoid dissatisfaction of any of the parties participating in the process. If lack of satisfaction is noted, action should be taken rapidly, primarily to diagnose the causes of the dissatisfaction and subsequently to improve the relation.

A number of instruments can be used to measure customer satisfaction. Survey studies performed on-line may be used to this aim, or via telephone, or face to face, processing of complaints and suggestions, analysis of loss of customers (Wolniak, 2016; Afthanorhan et al., 2019; Vatavwala et al., 2022), the mystery shopping method (Blessing, Natter, 2019), or the commonly known Servqual method (Vencataya et al., 2019). It relies on the determination of size of gaps between the quality expected by the client and the actual level of the provided service. The measuring tool of the SERVQUAL method is a questionnaire, which comprises 22 statements divided into five areas: tangibles, reliability, responsiveness, assurance and empathy. The method assumes that different recipients of the service may perceive the offer different and are going to assess it differently. Thence, it is important to define the area of difference between these two variables, in order to adjust the parameters of the service in a way that they can fulfil the customer's expectations to the broadest extent possible.

The instruments used to examine customer satisfaction also include the Kano method, which relies on assigning features of a service to the groups defined by the author of the method. This classification is based on the degree of satisfaction or dissatisfaction of the customer with the presence or absence of a given feature (Minh et al., 2015) and assumes occurrence of must-have, performance, attractive, indifferent and reverse features (Kano et al., 1984).

To measure the degree of the stakeholders' satisfaction with the relations that were worked out by the parties interested in the process, the CSI (Customer Satisfaction Index) method can be applied. It greatly contributes to the process of showing the relation between a supplier and a recipient (customer) and pictures the degree of customer satisfaction with the service or the product offered to the customer. This method may be used to show the internal relations between the stakeholders and the studied organisation with the so-called quality map, as well as used for the benchmarking studies (Ariffin et al., 2022). The quality map may be used to indicate actions that should undergo corrections in order to accomplish improvement. The method relies on the assumptions that customer satisfaction depends on such factors as: perceived quality, perceived value, customers' expectations, company image (Türkyılmaz, Özkan, 2007). Development and application of the CSI led to the emergence of various types of customer satisfaction indicators applied in various countries (Eboli, Mazzulla, 2005, Chen et al., 2015).

4. Role of Customer Opinions in Stakeholder Management

It seems that the current financial situation may contribute to changes in the consumers' conduct at the market, including the market of food products – given the information about the commencing crisis, the price of the product is going to be a more and more important factor, affecting purchase decisions. In spite of the fact that food products are predominantly first necessity products, as a result of development of the crisis situation, a gradual decrease in demand for such products is observed. In such case, the entrepreneurs should carefully look at the customers' requirements and align their offer to the customers' expectations. Fulfilling all such expectations is practically impossible; that is why it is important to determine the value of individual customer expectations and to align the offer to them.

4.1. Study Purpose and Methodology

With a view of aligning the offer to the customers' expectations (main stakeholders), the entrepreneurs can use instruments that are dedicated to measuring a generally perceived quality of services and products. That is why the purpose of the study is to present the possibility of using one of such methods, namely the CSI, to shape the entrepreneur's relations with its main stakeholders. The research problem is to search for the answer whether the CSI may be used as a tool allowing for subsequent construction of a relation of an entrepreneur with a customer. The authors put forward a hypothesis that the CSI method may not only be used to assess the quality of services, but also to manage the relations with stakeholders. Following a positive verification of the hypothesis that was put forward, it will be possible to apply the instrument to shape the communication strategy with the stakeholders, which may be a basis for maximising the enterprise's operating goals.

The study entity is an enterprise from the agricultural and food industry which, as part of its strategy of reaching to the customers, embarked on an innovative form of selling its agricultural products. They are available to the customers seven days a weeks, 24 hours a day, in a specially prepared self-service sale point. The commercial stand is located directly by the seat of the company and this allows for its ongoing monitoring and offers a possibility of controlling the level of stock of the goods along with efficient re-stocking. Payments are usually made in a non-cash form, but there is also a possibility of paying with cash left by the customers in a dedicated box.

The stakeholders of the studied entity are: customers, employees and suppliers of components necessary in the production process of the agricultural products. Given the purpose of the study, the customers' expectations with respect to the offered goods were subjected to an analysis.

The study was carried out in two stages. In the first one, thanks to the direct interviews carried out with 24 customers, identification of factors affecting the purchase decisions was made. The task of the study participants was only to indicate the factors that are important for them in the process of making purchase decisions of agricultural products. Next, a questionnaire form was prepared that formed the basis for collecting information about the significance of the previously listed criteria for another group of respondents. This stage was carried out in the first and third week of September 2022 (in every week, the studies were carried out on two business days, between 3.00 p.m. and 6.00 p.m. and on Saturdays and Sundays between 12.00 and 4.00 p.m.). At this stage, 88 respondents were studied in total; 68% of them were women. All the respondents lived in the Tri-City or the neighbouring area.

4.2. Results and Conclusions from the Study

The first stage of the study showed that the following factors pertaining to the product are taken into account during purchase decisions of agricultural products: price, availability, flavour, freshness, appearance and packaging: type and size, as well as the aesthetic of the sale point. These criteria were singled out with the use of the similarity diagram and the application of it allowed for selection of indications, removal of repetitions or determinations describing comparable criteria.

At the second stage, the respondents, using the Likkert scale, indicated the significance of the identified criteria. To designate the reliability of the measurement of the scale of answers used, Cronbach's Alpha was used (Cronbach, 1971), which amounted to 0.7233, which indicates a satisfactory reliability of the scale of answers applied in the study. Table 1 and figure 1 present the results received from assessment of individual criteria by the respondents. In the case of the figure, the criteria assessed by the respondents were ordered from the least significant to the most significant.

Table 1.
Scale of importance of the analysed purchase-related criteria

Criterion	Arithmetic mean	Standard deviation	Coefficient of variation
Price	5.88	1.16	19.79%
Availability	5.28	1.42	26.91%
Flavour	6.52	0.73	11.14%
Freshness	6.72	0.62	9.29%
Appearance	5.53	1.46	26.41%
Type of packaging	3.86	1.50	38.88%
Packaging size	4.15	1.73	41.77%
Store aesthetics	4.65	1.59	34.22%

Source: Authors' own studies based on the results of performed studies.

It follows from the analysis of the received answers that the three criteria with the highest significance for the respondents in the case of food products were: freshness, flavour and then price. Attention should be paid to the fact that in the case of the two most important criteria (freshness and flavour), the variability coefficient of the answers received was very small (for freshness, 9.29% and for flavour 11.14%), which indicates very slight divergence in the responses received from the respondents – they were close to the average value received (for freshness 6.72 and for flavour of the product, 6.52). The three criteria that were listed by the respondents as the ones to which they pay least attention were: type of packaging (average 3.86), size of packaging (average 4.15) and aesthetics of the store (average 4.65). In case of these criteria with the lowest significance for the respondents, the variability coefficient was higher, which indicates greater divergence in the received answers – for the type of packaging it amounted to 38.88%, for the size of packaging it was the highest at 41.77% and for the store aesthetics it amounted to 34.22%. Attention should be paid to the relatively great extent of significance indicated by the respondents, occurring between the most significant criterion – product freshness (6.72) and the least significant one – type of packaging (3.86) – the extent of significance amounts to 2.86.

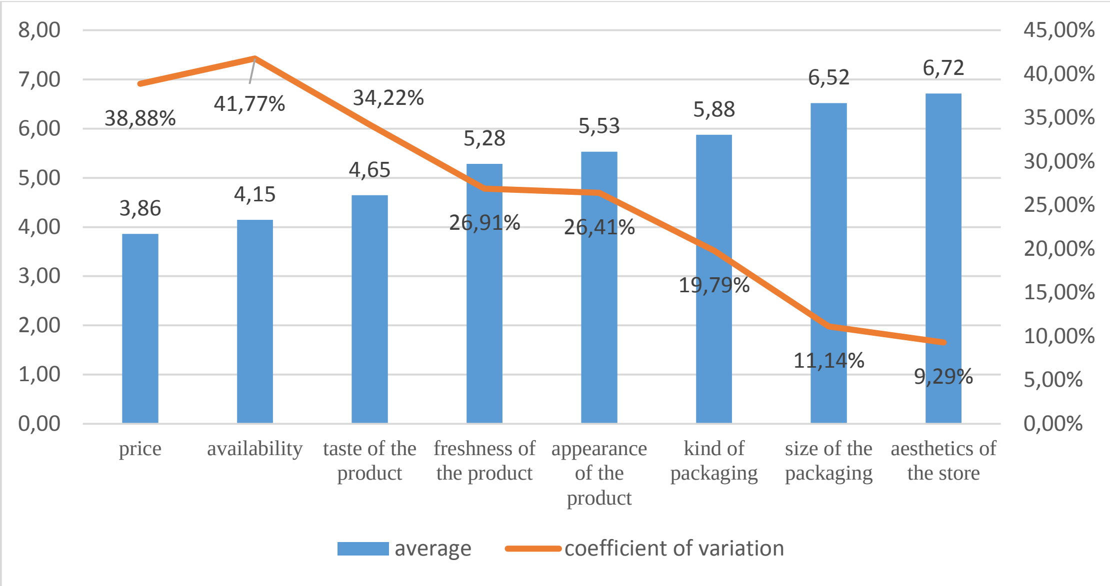

Figure 1. Scale of importance of the analysed purchase-related criteria.

Source: authors' own studies based on the results of performed studies.

The strategy of reaching the customers used by the analysed company makes use of the main factors that the customers take into account in their purchase decisions. Location of the store in the vicinity of the harvesting location of the products guarantees their freshness, which definitely also affects their flavour and appearance. This also affects the practically zero costs of transport, which indirectly influences the price of purchase of the offered products. The mode in which the products are offered to the potential customers (24 hours a day, 7 days a week) in a self-service point may be deemed another criterion that is conducive to building positive relations with the customers. The three criteria considered least significant by the respondents (type of packaging, size of packaging and aesthetics of the store) seem to be taken into account in the least degree in contacts with the customers in case of the analysed entity.

5. Recapitulation

The actions of the managers of an enterprise have a dual dimension. On the one hand, they are forced to produce products and services compliant with the expectations (e.g. standards) and on the other, they have to satisfy specific demands of their customers. It should be noted that such demands are not permanent and the managers have to analyse changes occurring in the customers' expectations on an ongoing basis. These changes follow from a number of factors. The main ones affecting changes in the customers' expectations include, among others: economic progress, competitiveness at the market, financial standing of the economy, customers' awareness and interests. An entrepreneur should be 'focused on the customers', satisfy their demands and even foresee their future expectations. Such an approach relies on the organisation's capacity to determine the customers' requirements and subsequently defining the steps to fulfil them. To be focused on the customers, the managers must have tools at their disposal that allow for identification of needs of the major stakeholders, namely the customers, and this issue applies, in principle, to every industry (Ogrodnik, Mieszaniec, 2017).

The paper presents an instrument from a group of methods used in the quality management process, which may be efficiently used to identify the customers' preferences and expectations. The study presented in the paper indicates the criteria that should be taken into account by the studied company from the agricultural and food industry. The analysis contained in the paper may be recommended as the first stage of the process of building a company's relations with its customers as part of stakeholder management. In the next stage, one has to answer the question whether the analysed enterprise proceeds in line with the customers' expectations. A supplement for the presented studies should be performance of a broad assessment of specific criteria, thanks to which strong and weak sides of an organisation are going to be identified. Creation of the so-called quality map may serve this purpose, which pictures the correlation of significance and assessment of the studied criteria (Kauf, Tluczak, 2017). At the same time, attention should be paid to the fact that alignment to the customers' expectations is an initial stage for changes introduced in an enterprise. In the next steps, the remaining areas of operation of the entity should be aligned to the introduced changes (Nita, 2016). The results of the research conducted using the CSI method indicated that it can serve as an effective tool for assessing the quality of services and goods offered by an enterprise. It is the basis for forming relationships with the enterprise's customers.

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CONTEMPORARY CONSUMER TRENDS

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Purpose: This article aims to present contemporary consumer trends, which include consumer ethnocentrism, prosumption, green consumption, deconsumption, servitization and dematerialization of consumption, home-centrism and privatization of consumption, homogenization and heterogenization of consumption, as well as the virtualization of consumption.
Design/methodology/approach: The article is based on a review of the literature and internet sources. The time range of the conducted analyses covers the years 2000-2022.
Findings: The article describes selected contemporary consumer trends. Among them, the most important are ethnocentrism, prosumption, green consumption and the virtualization of consumption. These trends are the domain of the young generation of consumers. It is important for business managers to be aware of them in order to take into account the specificity and scale of these trends in the process of creating and marketing new products and services.
Practical implications: The article characterizes the evolution of consumer behaviour through exposing modern trends in consumption. This is an important issue for business managers, for whom a thorough knowledge of consumers, consumer behaviour and market trends should be the starting point when developing concepts for new products and services.
Originality/value: The findings of the analyses have cognitive value. The article discusses selected consumer trends. Contemporary enterprises are increasingly taking into account in their business models the growing interest of consumers in such issues as green consumption, offer personalization, and consumer ethnocentrism.

Keywords: Consumption, consumer trends.

Category of the paper: General review.

1. Introduction

One example of new consumer trends is in consumerism, now often understood as the pursuit of luxury goods and social prestige. Other such trends include individualism, focus on a healthy lifestyle, smart shopping, offer personalization, and many others. Managers must skilfully extrapolate these trends and use them in the process of creating and introducing new retail brands (Ciechomski, 2018, p. 62). An interesting description of new trends in consumption that are favoured by young consumers can be found in the book *Zachowania konsumentów. Procesy unowocześniania konsumpcji* [Consumer behaviour. The processes of modernizing consumption] (Kieżel, Smyczek, 2014, p. 120). The presented trends include consumerism, prosumption, virtualization, individualization, home-centrism, ethnocentrism, green consumption and deconsumption.

In these consumer society times there is a growing drive for consumption, which does not always take the form of rational behaviour. Consumerism is developing and becoming a way of life in societies. This trend is connected with a range of phenomena that lead to the waste of material and human resources (Smyczek, 2020, p. 205). The pursuit of unlimited consumption and the constant pursuit of novelties in order to stand out from the crowd are constantly intensifying. This phenomenon cannot be ignored, if only because of its destructive impact on the use of common resources such as water, land, forests and atmospheric air as well as its generally destructive impact on the climate of the entire planet. Consumerism is usually identified with excessive consumption, in extreme cases taking the form of hedonism, the cult of possessing and distinguishing oneself from others, stimulating new needs, and deriving pleasure from possessing certain goods.

2. Consumer ethnocentrism

The term "consumer" is not uniformly defined, and the word itself comes from the Latin *consumens*, meaning a person who buys goods for their own use. In economics, this term is often used as a substitute for the word user, buyer or customer, although in fact these entities perform different functions in the market. A consumer can be regarded as an economic entity that uses or consumes products or services purchased or created in a household. At the same time, it can also be a buyer or user of products such as durable goods.

Ethnocentrism is a consumer trend defined in various ways and sometimes having a pejorative meaning. Generally, the literature on the subject emphasizes such features as a sense of belonging to an ethnic group, patriotism, national awareness, a sense of superiority in relation to other social groups, xenophobia or cultural traditionalism (Figiel, 2004, p. 34). Ethnocentric attitudes are typically strongly linked to a particular territory. Their essence is the preference for things that are one's own and familiar, and the rejection of those that are external, different, or threatening to what is native. The range of ethnocentric attitudes is very wide: from indifference, through distrust and discrimination, to hatred.

The concept of ethnocentrism was introduced to the social sciences in 1906 by the American ethnologist and sociologist William Sumner. He described ethnocentrism as a certain social behaviour of people. He believed that members of a given group live in peaceful relationships with each other, whereas contacts with other, external communities are based on conflict, which serves to cement the bonds that unite a given community. Among other things, he stated that "one's own group is the centre of everything and everything around is evaluated and hierarchized in relation to it" (Szromnik, Wolanin-Jarosz, 2013, p. 83). People's behaviours and the value of things are evaluated through the prism of affirming one's own community and depreciating other, alien groups. A social group can be a family, a local community or a nation. Family ties, place of residence, religion or nationality are the glue that binds individuals together into a community.

Research into the country-of-origin effect was first undertaken in the 1960s in the USA. The positive country-of-origin effect occurs when, in the eyes of consumers, the image of the perceived country of origin adds to those functional and symbolic values of the product that are important to consumers (Hereźniak, 2011, p. 65). Buyers therefore assume that there are significant differences between the qualities of products produced in different countries. In such circumstances, the image of the country becomes synonymous with the brand and often determines purchasing decisions. The importance of the country-of-origin effect is manifested in the benefits achieved by owners of reputable brands, who capitalise on the market reputation and prestige enjoyed by Japanese and German cars, French wines and perfumes, or American jeans (Ciechomski, 2014, p. 105). A universal tool for studying ethnocentric attitudes is the CETSCALE (Consumer Ethnocentric Tendencies Scale).

Consumer ethnocentrism is the belief of consumers that it is right and moral to buy goods of domestic origin. For ethnocentric consumers, purchasing foreign products is inappropriate, disloyal and even immoral because it weakens the domestic economy, causing an increase in unemployment (Hat, Smyczek, 2016, p. 52). The level of ethnocentrism depends on demographic factors such as age, education, and gender; and psychosocial factors such as openness to other cultures and conservatism. The strength of this trend is also dependent on the country of origin. In developing countries, buying foreign products is perceived as damaging to their economies, as it leads to job losses. Sometimes it is figuratively explained to consumers that buying imported products also means importing unemployment.

It is worth noting that Poles are a nation that declares their desire to support Polish companies and the economy as a whole. Over 60 per cent of Poles declare their willingness to support Polish organisations, and 90 per cent declare their support through increased purchases of products of Polish origin (Roman, 2020). The most positive characteristic of Polish goods is the safety of consumption. This fact is exploited by companies producing cosmetics and food products. However, it must be said that Polish products are not always perceived favourably, as exemplified by the consumer electronics, household appliances and automotive industries.

While discussing consumer ethnocentrism, it is worth mentioning another topic, namely the rationality of purchasing decisions. In the light of behavioural economics, which combines the perspectives of economics and psychology, consumers often do not make rational decisions in accordance with the *homo economicus* model, but are guided in their decisions by various emotions. Indeed, consumer behaviour is more the result of emotions, habits and stereotypebased thinking than the result of rational decisions. This means that the purchasing behaviour of people who deeply care about such values as consumer patriotism, protecting the environment or preventing climate change may not be fully rational from the point of view of mainstream economics (Kaczmarek, Wieja, 2021, p. 19).

3. Prosumption

Prosumption has become an increasingly important trend in consumer behaviour in recent years. The new dimension of consumption in the 21st century consists, among other things, in the fact that consumers create their own vision of the product and more or less consciously participate in the process of its production. Value is not created solely in the place where the products are made; moreover, it is the user and not the supplier who creates it through the experience of using the product (Mazur, 2021, p. 9). Many marketing theorists point out the importance of the customer being the company's partner in the creative processes (Prahalad, Ramaswamy, 2000, p. 79). It should be emphasized that modern enterprises are increasingly incorporating the growing interest of consumers in personalization and the involvement of end-users in the process of designing and manufacturing products into their business models (Ciechomski, 2016, p. 101).

Initially, a prosumer was defined as a person willing to take over the activities that were previously performed by the producer. This phenomenon is visible, for example, in DIY practice or co-designing and co-manufacturing products, and is motivated by the desire to have products that meet individual preferences, thus transforming consumers into co-creators. It is worth noting that in the literature one can find terms that are similar in meaning to prosumption or sometimes are even used as its synonyms, e.g. co-creation, co-production and co-creating value with customers (Baruk, 2017, p. 17). Determinants stimulating the development of prosumption include the desire to use more leisure time in an interesting way, the spread and progress of education, the increase in qualifications, and the change in the role that work, which can be increasingly creative, plays in people's lives.

Three main segments of prosumers can be distinguished:

- people evaluating and commenting on their satisfaction with the products they own,
- those who become involved and participate in campaigns/actions conducted by producers,
- innovators who take actions that aim to create or change the producer's offer.

Prosumers can be seen as external employees of a company who support creation and production, and their potential is a source of competitive advantage. An excellent example of this is the business success of IKEA stores, which is based on the involvement of buyers in the furniture assembly process. The approach to customers and their role in the production and distribution process has changed with the dynamic development of modern technologies and the growing individualisation of the offer (Schmidt, 2010, p. 55 et seq.).

A variation of prosumption is customization, which allows customers to create a product using the available parts, or design a product themselves. In addition, modern ICT systems and mobile applications make it possible to exchange information between consumers and the company. It is essential to treat consumers as co-creators of goods and to draw conclusions from their opinions in order to be able to improve the products offered.

An example of customization can be personalised engravings on jewellery. It could be said that customization is not new, that it occurred in the past when products such as footwear or clothing were produced in a personalised manner by shoemakers or tailors, but this phenomenon disappeared due to mass production. Mass customization involves large-scale personalisation of a company's offering, which has been made possible by the dynamic development of production technology and in-depth knowledge of consumer needs and preferences (Ciechomski, 2015, p. 77). Its aim is to optimally meet the needs of buyers by including them, for example, in the process of creating the functionality of products or the design of branded products. Product individualisation is particularly desirable in the automotive, jewellery, clothing, footwear and wedding industries.

4. Green consumption

From the perspective of the sustainable development paradigm and the concept of sustainable consumption, the concept of green consumption can be understood as activities that are directed towards reducing the use of non-renewable environmental resources, as well as reducing the generation of harmful waste. Generally, this trend is most often identified with customers' positive attitudes towards the environment and an increasing environmental awareness in societies. The green consumption trend focuses on the following issues:

- a rational use of consumer goods,
- limiting the consumption of rare and non-renewable goods,
- consuming goods that are safe for the natural environment from the point of view of post-consumer waste generation,
- recycling post-consumer waste, the afforestation of land, fish stocking in waters, etc.,
- consuming organic food,
- choosing products from humane animal farms,
- living in harmony with nature (Szwacka-Mokrzycka, 2018, p. 40).

Customers' high environmental awareness and their high ecological competences are not the only factors behind choosing ecological products. Other factors that determine the pro-ecological awareness of consumers include the following:

- rising fuel, raw material and energy prices,
- the activity of social organizations, also on social media,
- the emergence and popularisation of new lifestyles,
- socio-cultural changes,
- marketing determinants.

Among the behaviours characterizing people who are influenced by this trend, one can also indicate appropriate lifelong environmental education, regular contact with nature, consumption of ecological products, recycling of waste, and purchasing products with a long life cycle. Most of these behaviours bear the hallmarks of deconsumption (Patrzałek, 2017, p. 15). According to one definition, deconsumption is a conscious reduction in the consumption of products and services to a level consistent with an individual's reasonable needs. The following factors stimulate deconsumption:

- the need to rationalise consumption due to being tired of it and for health-related reasons,
- the increasing dematerialisation and servitization of consumption,
- a change in the perception of consumption as a means to an end rather than as the main goal in life,
- climate and natural environment protection.

In its early stages, the deconsumption trend manifests itself only in the behaviour of a small percentage of the most affluent consumers (Soon-Hwa, 2011, p. 117). Opponents of excessive consumption support zero-waste activities. In addition, one interesting manifestation of deconsumption is the development of the idea of the sharing economy (Lipowski et al., 2020, p. 103). It involves connecting people through online platforms, enabling them to provide services or share assets, resources, time, skills or capital without transferring ownership.

5. Virtualization of consumption

Three waves in the virtualization of consumption can be distinguished. The first one occurred 30 years ago, when online stores appeared in Europe and it became possible to buy goods via the Internet. The second wave concerns participatory consumption, when the conditions for sharing information in cyberspace, for example via social media, emerged. The third, in turn, concerns purchasing digital virtual goods, where consumption takes place only in the digital world because the consumed goods do not have a physical form, for example e-books and NFT's. An interesting manifestation of virtualization is also the creation of virtual consultants who replace real people. In the mass dimension, one can also talk about a virtual society consisting of digital doubles of specific people that are visible in cyberspace, for example in the form of profiles or avatars (Zacher, 2013, p. 19).

Virtual communities are a source of information as well as providing a sense of belonging and social identity to their members (Mazurek, 2012, p. 160). Manifestations of virtualization are particularly evident in the separation of life into virtual and real; individualization in the reception of content, which means that everyone can freely choose what they want and share it with others; and fulfilling one's needs at home at one's leisure rather than in public places.

Internet-connected devices make it possible for customers to freely use the web at various stages of the purchasing process, starting from realizing a need, through discovering ways to satisfy it, and ending with purchasing the goods and evaluating them. An important premise for the virtualization of consumption is the dynamic increase in the role of mobile applications in the purchasing process, which applies in particular to generations Y and Z (Ciechomski, 2017, p. 23). It is therefore a process in which needs are met using the Internet, electronic media or TV.

It is also worth noting the virtualization of behaviour in the area of leisure services, which manifests itself in the following ways:

- seeking ideas, inspiration, information about services, as well as consumer and expert opinions on these services,
- seeking information on the availability of services and, in the case of brick-and-mortar establishments, also on the availability of places of purchase (location, opening hours),
- seeking information on the terms and conditions of the transaction,
- booking seats and making payments,
- using group buying websites and social networking sites,
- informing others about one's purchase and giving feedback on it.

Consumers' interest in modern information and technology solutions can also take the form of a trend called gamification. It is a form of leisure activity which consists in playing various games with other participants of the virtual community and devoting large amounts of time to these games (Bartosik-Purgat, 2017, p. 48).

In summary, the virtualisation of consumption is a trend that will continue to develop dynamically in the age of modern communication technologies, and it is not limited only to purchasing goods, but also involves seeking and sharing information about them. Consumers do not want to be merely the recipients of intrusive advertising; they are interested in obtaining objective information, for example about the functionality, durability and the most attractive price offers of a given product, which is largely why the virtualisation of consumption is a trend with favourable prospects.

6. Other contemporary consumer trends

One of the attributes of contemporary consumption is its servitization, which consists in an increase in the share of services in consumer spending, i.e. in the generally growing consumption of services. The development of this trend is a consequence of an increase in people’s wealth; the emergence of new needs; technological progress in the area of production and sales; and civilizational progress in terms of lifestyle changes as well as a dynamic development of the Internet and mobile devices. Thus, servitization is about increasing the consumption of services, while dematerialization is about increasing the consumption of intangibles such as knowledge or improvement in well-being and health.

Home-centred consumption involves relocating consumption from the outside to the inside of the home, which means that the home becomes a place for fulfilling needs which previously used to be consumed outside, such as education, healthcare, culture or recreation. The alienation of some consumers, consisting in their withdrawal into the private sphere, is fostered not only by modern technologies, but also by security concerns, excessive competition in the workplace, and the development of a range of services, including commercial and financial ones, that can be acquired without leaving home.

Another contemporary trend is the homogenization of consumption, which consists in the unification of consumer behaviour both in the national and international dimension. The consequence of homogenization is the spread of specific patterns of purchasing behaviour around the world. Such attitudes usually originate in the USA; hence the phenomenon is often referred to as the McDonaldization or Americanization of consumption. Globalization fosters the interpenetration of consumption patterns, the creation of the so-called global consumer culture, and the emergence of global consumer segments distinguished on the basis of values, attitudes and approaches towards products and brands (Gardocka-Jałowiec, 2015, p. 161). The impact of globalization on consumption can be seen on several levels:

- the development of commercial and service infrastructure according to global models,
- consumer mobility, both socio-professional and spatial,
- unification of legal regulations connected with the international nature of transactions,
- the significant impact of external value systems and lifestyles on the level and structure of consumption and the emergence of modern trends,
- unification in terms of the methods of satisfying consumers’ needs.

It is worth adding at this point that an interesting discussion concerning the 27 European countries with regard to the level and structure of consumption in the context of its globalisation and at the same time its sustainable character (as well as its deviation from the model pattern of this structure) can be found in the work *Przemiany w strukturze konsumpcji w państwach europejskich w świetle koncepcji zrównoważonego rozwoju* [Changes in the structure of consumption in European countries in the light of the sustainable development concept] (Jankiewicz, 2022, pp. 5-189).

7. Conclusions

The modern consumer is a complex being, functioning in an environment characterised by turbulent conditions. Their behaviour is very diverse and heavily influenced by demographic, psychographic and environmental determinants, including the development of modern information technologies. It is the consumer who increasingly seeks to reduce the use of non-renewable environmental resources and the generation of waste which harms the environment. As a result, the trend towards green consumption is currently particularly intense. Sometimes the modern consumer consciously seeks to reduce consumption (deconsumption) or takes over some of the producer’s tasks, thus becoming a prosumer. Other relatively common trends include consumer ethnocentrism, the essence of which is a preference for products of native origin, and the virtualisation of consumption, which consists in satisfying consumers’ needs via the Internet, mobile applications and other electronic media. The issues discussed in this paper are extremely and invariably important, as the knowledge of consumer behaviour and contemporary consumption trends is the basis for the success of business managers.

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INCLUSIVE CITIES. DIVERSITY AND INCLUSION IN CITY MARKETING

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Purpose: The article aims to examine how cities incorporate diversity and inclusion into their policies and marketing practices.
Design/methodology/approach: The research was carried out using a case study with an exploratory qualitative approach. The case study was conducted involving two European cities, Barcelona and Wroclaw. The content analysis of official documents and publicised materials was the basis for describing each city's inclusive strategic policies and marketing initiatives. Considerations based on the literature review and case study led to the conclusions about the strategic role of diversity and inclusion context in city marketing and the use of inclusive marketing in cities' practices.
Findings: By supporting diversity and inclusion, inclusive marketing contributes to developing inclusive cities by creating a climate of equal opportunity and stimulating stakeholder engagement. Marketing cities through diversity and inclusion also strengthens internal and external city image.
Practical implications: The article's considerations highlight the essential role of diversity and inclusivity in marketing cities. Demonstrating the value, possibilities, and ways to implement inclusive marketing can contribute to its broader and more strategic use in the practice of cities.
Originality/value: Despite growing challenges, inclusive marketing in a territorial context has so far been an understudied area. The article launches the scientific discussion on diversity and inclusion in city marketing, forming the basis for further exploration and developing model solutions.

Keywords: inclusive city, diversity, inclusion, inclusive marketing, D&I.

Category of the paper: case study, viewpoint.

1. Introduction

Urbanisation is one of the most critical drivers of world development, creating opportunities for a better life for many people and acting as an engine of economic growth. More than half of the world's population now lives in cities. Due to advancing urbanisation, this percentage will continue to rise, reaching 70% by 2050 (The World Bank, n.d.). People stand to benefit from urbanisation and city development, but this requires embracing diversity, supporting inclusion and responding to problems of social inequity and exclusion.

International institutions, such as the United Nations, the World Bank and European Commission, foster cities adopting and implementing integrated policies and plans towards inclusion. Inclusive processes require leadership, partnership and marketing support at the local level. The city authorities' proactive role is crucial in policy development, bringing together horizontal networks of local communities, non-governmental organisations and other entities and creating new narratives for change (Broadhead, 2020).

Inclusive cities are places where everyone, regardless of personal characteristics and background, shares rights, responsibilities and opportunities. Inclusive cities create conditions where various stakeholders feel accepted, respected, valued and supported. Their marketing practices are intended to influence the sense of belonging and motivate participation in city decision-making and development processes. As the population diversifies by race, ethnicity, gender identity, sexual orientation, abilities etc., it’s imperative and a challenge for cities to authentically reflect a range of backgrounds and experiences within their marketing efforts.

The article aims to examine how cities incorporate diversity and inclusion into their policies and marketing practices. Based on a literature review and case studies, the author makes considerations to answer the following questions: What is diversity and inclusion's role in marketing? What challenges arise from the complexity of inclusive cities? How do cities implement diversity and inclusion in their city policies and marketing?

The case study involved two cities addressing diversity and inclusion challenges and leading active marketing efforts in this area: Barcelona and Wroclaw. The content analysis of official documents and publicised materials was the basis for describing each city's inclusive strategic policies, organisational alignment, and inclusive marketing programs developed or supported by cities' authorities.

The research contributes to the discussion on diversity and inclusion in city marketing. Recognition and description of inclusive cities and their marketing policies and initiatives can contribute to developing model solutions that will facilitate the conduct and evaluation of activities in this area.

2. Theoretical background

2.1. Diversity and inclusion concepts

Diversity and inclusion are becoming increasingly popular concepts in management sciences. Diversity includes “the ways in which people differ, encompassing the different characteristics that make one individual or group different from another” (Indiana Arts Commission, 2021). This encompasses an extensive range of attributes. Diversity can be considered in the following categories: race/ethnicity, nationality, age, gender and sexual identity, physical appearance, socioeconomic status, abilities, health status, religious affiliation, ethical values, etc. Some researchers relate diversity to the extent to which members of an entity differ from one another (Gonzalez, Zamanian, 2015). This approach addresses evaluation, not just the condition associated with the occurrence of differences.

Inclusion is “creating environments in which any individual or group can be and feel welcomed, respected, represented, supported, and valued to fully participate” (Indiana Arts Commission, 2021). It means providing diverse people equal capabilities, opportunities and resources to increase their motivation, satisfaction and commitment (April, Blass, 2010; Merrilees et al., 2014).

Licsandru and Cui (2018) treat the objective dimensions of social inclusion (proper living standards, access to education, work opportunities etc.) as essential conditions for an individual's sense of inclusion. They argue, however, that these dimensions do not account for a consistent subjective sense of inclusion. Therefore, the authors propose the concept of subjective social inclusion and provide a definition exclusively focused on individuals' feelings of being included in society. According to Licsandru & Cui (2018) subjective social inclusion is a multi-dimensional construct comprising acceptance, belongingness, empowerment, equality and respect. The distinction of these dimensions goes beyond inclusion in the ethnic sense, so it can also be applied to other differentiating characteristics.

The concepts of diversity and inclusion are interrelated but not interchangeable. Diversity refers to the differences and inclusion to synergise those differences to bring more meaning and collaboration (Kaur, Arora, 2020). Diversity refers to the state, and inclusion refers to diversity-related activities. This view is advocated by Jordan (2011), according to whom inclusion implements the concept of diversity by creating an environment of involvement, respect and connectivity. Diversity brings a richness of ideas, backgrounds, and perspectives (Jordan, 2011). Inclusion by embracing, providing significance and effectively using diversity creates organisational value.

2.2. Diversity and inclusion in marketing

Leveraging diversity and achieving inclusion for all individuals has recently become a focal topic among researchers, educators, and practitioners (Kipnis et al., 2021). A great deal of recent studies has focused on organisational and workforce diversity, diversity management and inclusive leadership (Ferdman, 2020; Gotsis, Kortezi, 2015; Kaur, Arora, 2020; Leslie, Flynn, 2022; Omotayo et al., 2020; Rice, Young, Sheridan, 2021; Shortland, Perkins, 2022). There is a rich body of research in the area of diversity and its related outcomes (Garg, Sangwan, 2021), including financial and innovation performance (Lorenzo, Reeves, 2018).

Diversity and inclusion are also increasingly reflected in the marketing practices of commercial and public entities. Marketers face challenges in executing marketing efforts aimed at diverse consumers, who are increasingly multicultural through the intersectionality of race, ethnicity, gender identity, sexual orientation, abilities and other features (Shelley, 2019). The Inclusive Marketing Study by Google and Ipsos in 2019 found that diverse consumers expect brands to be inclusive and reflect the reality of their lives in marketing practices (Google & Ipsos, 2019).

The literature review of publications from the Scopus database from 2000-2022 indicated that authors link diversity and inclusion (D&I) in marketing to the concepts of inclusive marketing, multi-ethnic marketing, multi-cultural marketing and diversity and inclusion engaged marketing.

Licsandru and Cui (2018) identify inclusive marketing with multi-ethnic marketing communications defined as “using multi-ethnic primes as cultural representations from more than one ethnic background to simultaneously reach ethnically diverse target audiences” (Licsandru, Cui, 2018, p. 333). They state that inclusive marketing contributes to preventing consumer alienation and improving the social inclusion and welfare of vulnerable individuals in society.

According to James (2022), embracing diversity in multicultural marketing involves using integrated marketing strategies and tactics for products and services that are race- and ethnicity-neutral and unrelated to sexual orientation. However, this neutrality is debatable in the context of the problems of total or partial exclusion and stereotypical treatment of representatives of certain groups, which raises the necessity of conducting inclusive practices.

Kipnis et al. (2021) propose the concept of diversity-and-inclusion-engaged marketing conceived as “actions in marketing research, education, and practice that proactively and consistently promote the advancement of D&I for all marketplace participants” (Kipnis et al., 2021, p. 144). The proposed definition refers to supporting the implementation of D&I through marketing activities and does not limit them to specific features or dimensions.

Due to the importance, growing practical appeal and social challenges of diversity, inclusive marketing is expected to receive more attention from researchers. The concept needs to address various aspects of diversity, expanding beyond its single dimensions. The scientific approach to inclusive marketing also requires consideration of the objectives, scopes and outcomes resulting from the potential impact on stakeholders.

Following the considerations above, inclusive marketing fosters positive social change, influencing attitudes and behaviour toward diversity. Inclusive entities use marketing to support their diverse stakeholders' feelings of value and belonging, create conditions, and motivate participation in organisational and development processes. By recognising and embracing diversity, marketing professionals shape brand image, deepen relationships with stakeholders and foster a sense of brand loyalty.

2.3. The complexity and importance of inclusive cities

According to Elias (2020), an inclusive city is one that, regardless of economic status, gender, race, ethnicity or religion, provides equal access to social, economic and political opportunities for a wide range of city residents. It is also a city where residents have the opportunity and are empowered to participate in its growth and prosperity. Anttiroiko & de Jong (2020) define inclusive cities as healthy and thriving cities that have removed all unnecessary obstacles to dignity, freedom, self-expression, and value creation.

Inclusive cities are places where diverse individuals feel accepted, respected, valued and supported. They support the feelings of belonging of their various stakeholders, create conditions, and motivate participation in decision-making and development processes. Broadly speaking, inclusive cities are places where everyone, regardless of personal characteristics and background, shares rights, responsibilities and opportunities.

Multidimensionality of the concept of an inclusive city and its challenges derive from differentiating features of the city's community and characteristics of individuals and groups experiencing exclusion and stereotyping (Figure 1). Strategies and initiatives related to developing inclusive cities can be connected to problems arising from various types of exclusions. No recognition of multidimensionality and various factors' importance, coexistence and interpenetration exacerbate problems of exclusion, inequality and marginalisation. The list of differentiating features constitutes the basis of which individuals and groups can be excluded but also included in something (Anttiroiko, de Jong, 2020). In the context of cities, this involves access to different types of capital (human & cultural, social capital, financial, physical and natural) and participation in city life.

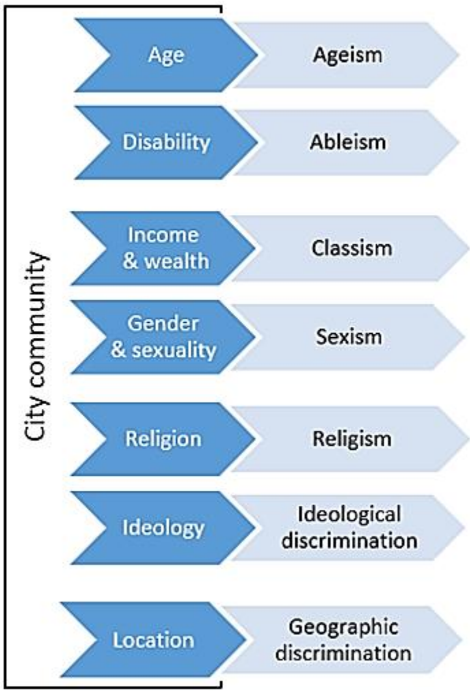

Figure 1. Differentiating features and exclusion types.

Source: based on (Alsayel, de Jong, Fransen, 2022).

The complexity of the inclusive city concept is also related to different dimensions, each raising challenges for cities (Table 1). The social, spatial and economic dimensions of integration are closely linked and tend to reinforce each other. It is also necessary to build bridges between different aspects of diversity and make city policies and activities more intersectional (European Commission, 2022b). Although the multidimensional and integrated approach is recommended, inclusive city efforts may require sequencing, prioritisation and scaling based on context, priorities and needs (The World Bank, n.d.).

Table 1.
The social, spatial, and economic dimensions of inclusive cities

Dimension	Challenge areas
Social inclusion	Guaranteed equal rights, opportunities and participation of all, including the most marginalised. Local communities can be treated as drivers of inclusion by planning and prioritising their needs.
Spatial inclusion	Providing access to essential infrastructure, public spaces and services. Making public spaces more welcoming to people with different characteristics. Using elements of the environment (signals, indicators) to make diverse people feel welcome in everyday city places (Hillier, 2018).
Economic inclusion	Creating jobs, education and skill-building, organisational and financial support and allowing city stakeholders to enjoy the benefits of economic growth.

Source: based on (The World Bank, 2015).

The international community recognises the importance of inclusive cities that provide opportunities and better living conditions for all. Making cities "inclusive, safe, resilient and sustainable" is prioritised in Sustainable Development Goals (The United Nations, 2016). The United Nations fosters cities adopting and implementing integrated policies and plans towards inclusion. The World Bank also supports urban inclusion, conducting research on inclusive cities to create a knowledge base on the issue. The institution encourages local governments to dialogue with urban stakeholders and mainstream inclusion in their cities (The World Bank, n.d.).

Diversity and inclusion are values that constitute a top priority for the European Commission, which supports the efforts of cities and local authorities to help build equal and inclusive environments for the benefit of all (EU cohesion policy priorities for 2021-2027, 2021; European Commission. Diversity and inclusion initiatives, 2022). It is about the representation and visibility of different groups, where diverse perspectives are valued and integrated into the environment. This also means giving equal opportunities to all to enjoy their rights and participate in community and social life, regardless of background. EU Action plan on Integration and Inclusion 2021-2027 (2020) gives guidance, proposes concrete actions, and delineates funding for initiatives meant to bring inclusion for all.

The European Commission (EC) launched incentives such as the European Capitals of Inclusion and Diversity Award to foster more inclusive and fair societies. In this way, cities are appreciated for promoting diversity and inclusion in terms of sex, racial or ethnic origin, religion or belief, disability, age and LGBTIQ identity and for building an environment that allows everyone to feel safe and fulfil their potential (European Commission, 2022a).

The EC also encourages the development of partnerships of NGOs, governmental institutions, companies or civil society representatives to work together to promote diversity (European Commission, 2022b).

The international institutions raise awareness of the importance and knowledge of urban diversity and inclusion. Their advocacy for inclusive cities is essential for knowledge exchange and establishing directions for good practices. Inclusive processes require, of course, leadership, partnership and marketing support at the local level. The city authorities' proactive role is crucial in policy development, bringing together horizontal networks of local communities, non-governmental organisations and other entities and creating new narratives for change (Broadhead, 2020).

3. Diversity and inclusion in marketing practices of cities

3.1. Research methodology

The research was carried out using a case study with an exploratory qualitative approach. Despite the ongoing discussion about methodological limitations, the case study method is progressively popular among researchers (Gustafsson, 2017). Case research is one of the valuable methods in marketing that allow understanding of the phenomena, thanks to their presentation within a particular and real-life context (Alsayel et al., 2022; Bonoma, 1985). When a study includes more than one single case, the researcher can analyse the data within each situation and across situations (Gustafsson, 2017; Yin, 2014).

The case study was conducted involving two European cities, Barcelona and Wroclaw. Selected cities are addressing diversity and inclusion challenges and leading active marketing efforts in this area. These are cities of different international positions, populations and challenges. Barcelona's inclusive practices are widely presented and appreciated internationally. Barcelona is among the highest-rated cities in the European Capitals of Inclusion and Diversity Awards 2022. Wroclaw is a Polish city whose policies and marketing activities have been in line with the idea of inclusiveness for years. It is a city known for its diversity support in a national context and is a member of the International Intercultural City Network.

Since the research aimed to examine how cities incorporate diversity and inclusivity into their policies and marketing practices, a content analysis of public sources was used to determine the strategic approach to inclusivity and marketing initiatives of two selected cities. The content of official documents, publicised materials and inclusive marketing programs and campaigns were analysed. The content analysis was the basis for describing each city's activities, presented in the context of its characteristics and challenges. The case study for each city identified: inclusive strategic policies, organisational alignment, inclusive marketing programs developed or supported by cities' authorities, and examples of grassroots initiatives. The synthesis of information led to conclusions about the strategic role of diversity and inclusion context in city marketing and the use of inclusive marketing in cities’ practices.

3.2. Inclusive cities – case studies

3.3. Barcelona

Barcelona is a well-known Spanish city with a population of 1.6 million residents within the administrative limits. However, Barcelona has a much larger urban area with a population of more than 4.6 million, making it the 6th most populous metropolitan area in the European Union (World Population Review, 2022a). The city represents great diversity, especially from the origins’ perspective. There are currently people from 183 different countries living in the city, and the relative proportion of members of the population born abroad is 27.8%. The city is also linguistically and religiously diverse, with approximately 300 languages spoken and 974 religious communities of up to 25 different faiths (City Council of Barcelona, 2021).

The inclusive activities of this city are widely presented as benchmarks of good practice and are appreciated by international institutions (Council of Europe, 2021b; European Commission, 2022c). Barcelona is a member of the Spanish Network of Intercultural Cities that facilitate the exchange of experiences between member cities to encourage further development of intercultural policies and practices (RECI Ciudades Interculturales, n.d.).

Barcelona City Council represents a long-term commitment and a strategic approach to diversity and inclusion. The city's inclusive policies found reflection in documents of a strategic nature. The Programme Citizen’s Agreement for an Inclusive Barcelona established a strong foundation for diverse citizens' participation in policy-making and city initiatives. The programme outcome is creating a joint city strategy and several action networks (Montagut, Vilà, Riutort, 2016). The Strategy for Social Inclusion and Reduction of Social Inequalities 2021-2027 reaffirms the shared commitment to ensure the city's rights and opportunities for everyone. As stated in the document, Barcelona would be a benchmark city “that safeguards the social rights of all its citizens, with public responsibility through collaboration and a commitment from social and citizen initiative” (Barcelona City Council, 2017, p. 6).

The Barcelona City Council consulted the city stakeholders and, in a participatory process involving many areas of civil society, agreed to the Barcelona Interculturality Plan (Barcelona City Council, 2012). In 2021, Barcelona launched a new Interculturality Plan 2021-2030 to move towards a more inclusive city and fight against discrimination (Council of Europe, 2021a). To ensure the City Council's commitment to proper adherence to the Plan, the document "Moving Towards Interculturality. Governance Tools and Mechanisms." was introduced. It describes in detail the governance tools used to monitor strategy implementation (Barcelona City Council, 2022).

Inclusive activities require organisational alignment and dedicated municipal structures. In Barcelona, the vital role has the Citizen Rights and Diversity Department, which works for "a diverse and intercultural city model where everyone has real and effective access, under equal conditions, to all human rights recognised and guaranteed in the city" (Barcelona The Citizen Rights and Diversity Department, n.d.-b).

Barcelona fosters networks, partnerships and the involvement of local municipalities, providing opportunities for various communities to co-create policies and initiatives. The Women's Council, LGTBI Council, Older People's Advisory Council, Municipal Immigration Council and Roma People's Council evidence commitment to grassroots participation (European Commission, 2022c).

Efforts to reduce the exclusion problems arising from differentiating groups and individuals' characteristics take organised forms. The Office fulfils important awareness-building tasks for Non-Discrimination. Barcelona is known for its involvement in supporting the LGBTI community. The LGTBI Centre, in cooperation with LGBTI organisations, offers guidance, cultural programmes and community action (European Commission, 2022c).

Internal integration, incorporating diverse residents' participation, is considered one of the essential aspects of place marketing (Romanowski, 2019). Barcelona has many structures and programs encouraging participation, including participatory processes and citizens’ initiatives. Barcelona's online engagement platform has over 26,000 participants and 12 participatory processes (Barcelona Digital City, 2022). The valuable municipal initiative is the Neighborhood Plan (Pla de Barris) which implements actions to improve the neighborhoods that need it most in collaboration with residents (Intercultural Cities Programme, 2022).

Introducing intercultural awareness, thinking and action into various professional and social areas in the cities are facilitated through Intercultural Training. The program aims to provide tools to gradually introduce the intercultural perspective in different organisations, facilities, associations, groups, media, etc. Free training courses are organised to suit the specific needs of each area or sector.

Barcelona fosters the development of projects of the City Council, the city districts, organisations, associations and facilities. The city provides financial and technical support for intercultural projects and promotes intercultural activities with organisations and community centres. Selected examples of such initiatives are included in Table 2

The Barcelona City Council runs marketing campaigns to support diversity and inclusivity. Among the important initiatives is the “Barcelona Anti-rumours Campaign”, which raises awareness to combat certain prejudices and stereotypes about cultural diversity (Barcelona The Citizen Rights and Diversity Department, n.d.-a). The project has been widely recognised as a good practice for building a more cohesive society between the local population and immigrants. Barcelona is conducting various communications campaigns to improve the image and visibility of migrants or minorities in the media (Intercultural Cities Programme, 2022).

Table 2.
Examples of intercultural projects promoted by the Barcelona City Council

Project name	Brief description
Sounds of Intercultural Barcelona	Workshops organised with community centres to jointly create a sound map of Barcelona's cultural diversity.
Imagine Barcelona. Intercultural Collection	Activities are undertaken to raise awareness and reflect on high school cultural diversity.
Rossinyol Project	The project of social mentoring brings students from different cultural backgrounds to meet and work together.
Barcelona Asia Choir and Forum Theatre Workshop	Cultural creation initiatives are based on the cultural diversity of participants working together for positive results through common objectives.

Source: (Barcelona City Council, 2012).

In the context of marketing activities related to diversity and inclusivity, it is worth highlighting grassroots initiatives led by city-related entities. Worth mentioning is the example of FC Barcelona's Diversity Program. The FC Barcelona Foundation uses sport as a fundamental tool for helping to create equal opportunities and break down prejudices against physical activity and functional diversity. The inclusive program "Diversity: We are all equal through sport" encourages all groups to include children and young people with and without functional diversity (Barca Foundation, n.d.).

Another good example of a program supporting diversity is the TODOS campaign by Barcelona SAE (Study Abroad Experience). TODOS focuses on promoting diversity and inclusion initiatives to remove barriers that keep students and educational institutions from different economic, educational, ethnic and social backgrounds from studying in Barcelona (Barcelona SAE, 2020). The examples described were selected from several city entities conducting marketing activities that support diversity and inclusion. What's worth highlighting is that Barcelona has built a dynamic map of all the local initiatives encouraging the construction of a more inclusive city (Unesco, n.d.).

Despite the many projects and efforts implemented, Barcelona still faces many challenges in developing an inclusive city. The diagnosis made for the strategic plans pointed to the need to recognise diversity as a structural element of the city's identity. There is also a recognition of the need for greater reflection of diversity in institutions or the various spaces and actors of civil society. Another challenge is that a greater adaptation of municipal services and facilities to diversity may guarantee the acknowledgement of diversity and create confidence in the system. It is necessary to create more space and opportunities for positive interactions between different stakeholders and generate ties and relationships on an equal basis. The city is working on a monitoring tool to monitor participation, which should bring more learning and is a key to designing better strategies to overcome barriers to participation. Barcelona also requires more marketing efforts and promoting opportunities for positive interactions based on inclusive initiatives (City Council of Barcelona, 2021; Intercultural Cities Programme, 2022).

3.4. Wroclaw

Wroclaw is one of the largest Polish cities, with an official population of 672,929 (World Population Review, 2022b), with a total of 1.25 million residing in the metropolitan area. Due to the outbreak of war in Ukraine, the incoming migrants and the population of Wroclaw increased significantly. According to a report by the Union of Polish Metropolises, Wroclaw became home to 892,000 people (as of May 2022), of which 28% were of Ukrainian origin (Unia Metropolii Polskich, 2022).

The city is a member of the International Intercultural Cities Network (Council of Europe, 2021c). Today's Wroclaw is undoubtedly an increasingly intercultural city. People originating from more than 120 countries live, work and study here (Wielokultury Wrocław, 2021). The multiculturalism of Wroclaw is also related to its history, which intertwines the fates of several nations, faiths and religious groups.

The basic document setting the directions of development of Wroclaw is the Strategy of Wroclaw 2030. It is consistent with two other documents Strategy of Cultural Development in the 2020+ perspective and the Strategy of Intercultural Dialogue. In the Strategy Wroclaw 2030 and its mission, Wroclaw is described as "the city that unites and inspires" (Wydział Partycypacji Społecznej, 2021). The city continues to follow the idea of "Wroclaw the meeting place", which has been its central marketing theme for many years.

In the strategy document, Wrocław is described as a city of solidarity, which forms a multifaceted and diverse community. It emphasises the value of diversity, which creates substantial social capital and can create shared value for city stakeholders through participation. In its goals, Wroclaw underlines concern for intercultural and intergenerational ties. Wroclaw strives to be a welcoming and inclusive city for diverse groups, among them seniors, people with disabilities and children (Wydział Partycypacji Społecznej, 2021). The challenge is translating generally formulated goals into projects and specific tasks and presenting concrete measures for implementation and evaluation.

When it comes to organisational alignment, an important role is also played by the Department of Social Participation responsible for organising and supporting public consultations, coordinating cooperation of city units with NGOs, and initiating and co-organizing training on building a civil society (Urząd Miejski Wrocławia, n.d.). The Department of Social Participation runs the platform Wroclaw Talks for public consultation, participation, and cooperation with NGOs. Inclusive projects are implemented, among others, by the Wroclaw Center for Social Development (a unit of the Municipal Office of Wroclaw) and the Team of Intercultural Dialogue that functions within it (Wrocław Center for Social Development, n.d.).

The Wrocław Center for Social Development implements the city project "Multicultural Wroclaw" (Wielokulturowy Wrocław), which strives to achieve a vision of the community of various residents who live in mutual respect. It incorporates multicultural projects, including training, workshops, educational fairs, debates, exhibitions, and multicultural and integration events. The Wrocław Center for Social Development supports the activities of national and ethnic minorities and cooperate with various institutions: universities, schools, public services, non-governmental organisations and business. Promotion and communication of the project are done through the platform “Wielokultury Wroclaw” (Wrocław Center for Social Development, n.d.).

As part of the inclusive activities area, the city implemented a program of animation and cultural activities, “Multicultural Street”, which assumes the participation of Poles and foreigners in events taking place in the space of Wroclaw. The project supports various multicultural events to create conditions and opportunities for residents, regardless of their country of origin, to get to know each other, integrate and explore the diversity of the urban cultural landscape during joint meetings (Wrocław Center for Social Development, n.d.).

One of Wroclaw's most important projects and most significant multicultural events is the “Kaleidoscope of Cultures” Festival. As part of the festival, concerts of bands representing national and ethnic minorities each year, workshops, culinary tastings etc. The festival involves not only professional artists but also amateurs fascinated by the culture of their ancestors and cultivating their traditions. Thanks to its open formula, it is a significant element of the activation and integration of minority communities (Kalejdoskop Kultur, n.d.).

The festival is one of the projects of the Kaleidoscope of Cultures Foundation, operating for the social and civic activation of immigrants, foreigners and national and ethnic minorities. The foundation Kaleidoscope of Cultures develops cooperation and dialogue initiated by a declaration signed by representatives of national and ethnic minorities. Agreement of representatives of national and ethnic minorities „Kaleidoscope of Cultures” (Kalejdoskop Kultur, n.d.).

Creating platforms and occasions for meetings and relational integration of people with different characteristics and backgrounds is essential to Wroclaw's inclusive practices. As part of the project "Year of Good Relations Wroclaw 2022", the campaign "Wroclaw free from loneliness" is being conducted. The initiative aimed at counteracting various types of social exclusion and related loneliness. Dozens of events of both citywide and neighbourhood character have also been planned and introduced (Waplak, 2022).

Among the Year of Good Relations events is the Wroclaw Dancing, as part of which one of the city's larger squares becomes a dance floor. The idea behind the event stems from the fact that coming together and dancing builds relationships between people. The first edition of the Great Wroclaw Dancing on Liberty Square w held in 2021 and was very popular with the people of Wroclaw, so s made a regular event (Wroclife, 2022). The initiative has an integrative role, bringing together people from different backgrounds. It should be noted that it also has marketing potential due to official and unofficial event coverage in traditional and social media.

Responding to the needs of Wroclaw residents who want to get to know and understand their neighbours from different countries, as well as to the needs of foreigners who wish to understand Poles and get to know their culture, the "Wroclaw on the Languages of the World" project is implemented by the Wroclaw Integration Center. The program initiates meetings in pairs and groups based on "language tandem". People who meet within the framework of the project talk about everyday life, what makes them different, what unites them, and their views and interests. The initiative is intended to increase the involvement of Wroclaw residents in the process of social integration of foreigners living in the city (Wrocławskie Centrum Integracji, n.d.).

In Wroclaw, civil society and grassroots activism are being reborn. The city supports the participation of residents through three programs: Wroclaw Civic Budget, Neighborhood Fund and Microgrants (Wrocław Rozmawia, 2021). Particularly popular is the Microgrants program that supports residents of Wroclaw to implement their projects in cooperation with the Wroclaw Institute of Culture and the Umbrella Foundation (Wrocławski Instytut Kultury, n.d.). An example of a grassroots initiative of an inclusive nature is intergenerational workshops. Both the participation programs themselves and the particular initiatives have marketing appeal.

One of the city associations is Culture of Equality, which supports LGBT+ people to bring about social change towards a society that is open, welcoming, respectful of each person and celebrates diversity. Its initiatives include the organisation of the Equal Place (LGBT+ Center in Wroclaw), Marches for Equality in Wroclaw, Equal Rights Festivals, debates, happenings, workshops and meetings (Kultura Równości, n.d.). The important marketing initiative is the "Just Know" campaign, through which Equality Culture shares knowledge about the LGBT+ community. The campaign ambassadors are Wroclaw men and women who have faced stereotypes and myths about themselves (Kultura równości, 2021).

The partnership initiative is the "Wroclaw - a city of dialogue and diversity" project implemented by the Regional Center for Supporting Non-Governmental Initiatives and the UP-DATE Social Diversity Association. The project aims to develop residents integrated community by forming social attitudes based on strengthening cultural identity, education for dialogue, respect, openness and social solidarity. The project includes the organisation of open anti-discrimination training and workshops on intercultural competence. During the "Streets of Dialogue" events, representatives of national, ethnic, religious and cultural minorities living in Wroclaw invite Wroclaw residents to a personal conversation in the city's public space (Regionalne Centrum Wspierania Inicjatyw Pozarządowych, 2021).

Wroclaw also undertakes partnership marketing activities with other cities to promote the value of interculturality for diverse societies. Such an initiative is the "Together Against Hate Speech" campaign. With two Polish cities, Lublin and Krakow, Wroclaw has joined forces to create a common communication platform to support the co-creation process that builds openness, understanding and unity, thus counter hate speech. The campaign was made to be replicated in other cities across the country (The Intercultural Cities Programme, 2021).

Because of the dangers posed by conflicts (political, ethnic, value-based, ideological, etc.), the city that unites is to seek opportunities for cooperation. This means forming partnerships for the benefit of Wroclaw, developing integrated projects and supporting initiatives based on sharing (Wydział Partycypacji Społecznej, 2021).

Wroclaw faces several challenges arising from increasing multiculturalism and inclusive trends that require action under certain conditions related to the political and social climate. The challenges also necessitate a better diagnosis and introduction of solutions to respond flexibly to environmental changes. It also seems advisable to adopt a more detailed planning perspective based on implementing specific tasks and outcome measures.

4. Discussion and conclusions

In response to growing social expectations and challenges, cities are increasingly fostering diversity and inclusivity in their marketing efforts. Using an inclusive approach, they are trying to achieve social responsibility and sustainability-related goals, as well as marketing goals related to strengthening the place brand and deepening stakeholder relationships and their city attachment.

The analysis resulting from the case studies of Barcelona and Wroclaw indicates the strategic importance of city-inclusive activities, which requires marketing support. Cities take various actions based on the directions in their strategic documents. Barcelona’s experience in this area can be a benchmark for other cities. This includes planning that identifies specific tasks and measures of success, organisational alignments, and platforms for collaboration and participation. Inclusiveness requires cities to stimulate, support and create a good climate for grassroots initiatives, which seems to be very well understood by the authorities of both cities.

Barcelona and Wroclaw link inclusive marketing mainly to culture and interculturality. This approach stems from the challenges cities face, the potential for city branding, and the possibilities associated with creating marketing initiatives. Culture and interculturality provide opportunities to build marketing communications based on positive messages and associations. They also offer a reasonable basis for creating platforms for integration and cooperation for people from different backgrounds.

Cities should create opportunities and places where diverse people can meet, discuss, get to know each other and work on a joint project for the city. Inclusive marketing involves promoting networking based on identified interests, needs, areas and opportunities for interaction. It also includes creating events that bring together people of different ages, backgrounds, religions, orientations, etc. Such events have marketing potential to influence the city's brand. They can strengthen residents' identification and bond with the city and its diverse stakeholders. And significantly, inclusive events are promoted through the city's official channels and independent and grassroots communication on social media.

Cities face many challenges due to local social conditions and trends, which require appropriate diagnosis and the development of monitoring mechanisms. It is, therefore, crucial to establish permanent channels of contact with as many social partners as possible to identify areas of need or concern. This is because cities must respond to problems of exclusion and stereotypical treatment related to the characteristics or origin of individuals and groups. Inclusive initiatives and projects should be accompanied by marketing activities that promote understanding and respect for diversity and build awareness of the importance of inclusion.

Summarising, inclusive marketing supports accessibility to the city's facilities and offerings for diverse stakeholders. It creates a positive climate around diversity influencing attitudes and behaviours toward various groups and supports integration and involvement in city initiatives. By employing the ideas of diversity and inclusion, marketing professionals shape a city image and deepen relationships with city stakeholders. City inclusive marketing can thus be understood as marketing that supports diversity and inclusion and marketing cities through diversity and inclusion.

Demonstrating the value, possibilities, and ways to implement inclusive marketing can contribute to its broader and more strategic use in the practice of cities. However, city inclusive marketing is still an area with the potential for further exploration. Future research on inclusive marketing of cities should move in the direction of developing model solutions, incorporating antecedents, implementation and effects.

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GENERATION Y & Z TOWARDS WELLBEING TOURISM – CHALLENGE OR NECESSITY FOR THE TOURISM INDUSTRY?

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Purpose: The purpose of this article is to present the consumer behavior of two generations - Y and Z - in the tourism market and to show how the concept of wellbeing tourism fits the needs and expectations of the two analyzed groups.
Design/Methods/Approach: The article used a systematic literature review based on the SCOPUS database. A search for the term "wellbeing" in abstracts, titles and as keywords identified 107 571 articles. After applying search restrictions to the term "wellbeing tourism" and "social sciences," 12 articles were identified. After reviewing the content, only 9 articles referred to the concept under discussion, indicating a significant unstructured research gap in this area. The article further includes excerpts from reports and analyses, conducted as part of projects, on the implementation of wellbeing tourism in the South Baltic region.
Findings: Critical analysis of the literature and experience gained from wellbeing tourism projects revealed challenges of a socio-demographic and technological nature. These challenges result from changes in the macro-environment and are closely interrelated. For example, the changing attitudes of representatives of generations Y and Z toward tourism are closely related to their increased awareness of the importance of wellbeing in their lives. In addition, the development of digital marketing is closely related to the growing popularity of these services among young buyers.
Research limitations: The authors described tourists from generations Y and Z, in terms of their approach to wellbeing tourism. It should be noted that dynamic changes in the environment may affect the emergence of new behaviors that are not presented in the article. Therefore, there is a need to develop future research using qualitative and quantitative methods to develop a more accurate picture of the groups studied in terms of their evaluation of wellbeing offerings.
Practical/social implications: The article can help tourism companies understand the behavior of Generation Y and Z tourists and identify solutions that can contribute to the preparation of wellbeing offers that meet their expectations.
Originality/Value: A systematic review of the literature and an analysis of its content allowed the creation of a compendium of knowledge on wellbeing tourism aimed at generations Y and Z. In addition, steps have been taken to consolidate this approach within management science. These activities will likely make it possible to direct perspectives on the perception of this phenomenon, and also to sort out the conceptual chaos in this area. The review of the issues

and the general and synthetic considerations carried out are part of the stream of studies on consumer behaviour.

Keywords: wellbeing tourism, Y generation, Z generation, wellbeing offer, consumer behavior.

Type of Article: viewpoint, literature review, research paper.

1. Introduction

Pandemic times have changed the view of tourists, composed of increasingly younger generations, on how they spend their leisure time. This situation has been further aggravated by the lockdown and macroeconomic uncertainty. Adapting the tourism market to the needs of new groups of tourists seems to be the only way for tourism companies to survive on the global market.

"Slow travel" is characterized by limiting mobility and taking time to explore local history and culture, while supporting the natural environment. The goal of a trip for the modern tourist is relaxation, self-reflection, novelty-seeking, engagement and discovery (Journal of Travel Research, 2021).

According to UNWTO experts, the recovery in international tourism seen in the second half of 2021 will continue throughout 2022 and 2023 (2020 was the worst year on record for tourism, as international travel fell 73%). Depending on the scenario, it is estimated that the number of international tourist trips will increase between 30% and 78% in all of 2022 (compared to 2021), thus returning to the 50% or even 63% level of pre-pandemic times (UNWTO, 2022). The UNWTO Tourism Survey (2022) indicates that the easing of travel restrictions has had an impact on unlocking tourism around the world, giving tourism entrepreneurs a chance to recover from the crisis.

This trend is evident in international tourism, as well as in local tourism. Domestic tourism and travel close to home, as well as outdoor activities, rural tourism and demand for natural and local products are among the main tourism trends shaping tourism this year. More than 50% of tourists report that environmental impact is an equally important factor when choosing a destination and mode of transportation, and 56% of tourists suggest the degree of environmental friendliness when choosing a place to stay (Kelly, 2010).

There is a growing interest in tourism, including physical activity (e.g., ski trips), relaxation and tranquility (e.g., spas, meditation retreats, pilgrimages, yoga, detox from technology) and its new variations incorporating nature observation, e.g., experiencing dark sky and stars, or forest bathing. This fits in with the current lifestyle trend of Generation Y and Z (Gen Y and Gen Z) towards mindfulness and proactive health as a way to overcome the challenges of society such as stressful lifestyles, alienation, obesity and other civilization diseases (Munar, 2018; Pearce et al., 2011). Thus, one can clearly notice a shift in the approach to travel of Generation Y and Z compared to earlier generations and a shift towards sustainable tourism and, even more broadly, towards wellbeing tourism.

2. Wellbeing tourism and its role in the modern world

Although wellbeing tourism is a relatively new concept (the first project on the subject in the South Baltic Sea region was only launched in 2016), in practice this type of tourism has been around for years. The term wellbeing tourism is primarily associated with tourism that promotes personal health. It is sometimes confused with wellness, but the two terms are not the same, although they refer to physical, mental balance and social wellbeing. The terms have different shades of meaning. Wellness, which is a combination of the words: "wellbeing" and "fitness," does not have a clear and widely accepted definition (Huijbens, 2011; Konu et al., 2010; Mintel, 2004). This conceptual confusion is partly due to linguistic, translational, and cultural differences (Smith, Puczkó, 2009). Moreover, different disciplines approach these concepts in slightly different ways, resulting in scattered research and fragmented terminology.

Wellness tourism refers to travel to destinations where one can improve one's health and sense of wellbeing through physical activity, spa treatments, and conventional and unconventional medicine, among other things (DeMicco, Poorani, 2022). The term is more popular than wellbeing (Global Wellness Institute, 2022) and capacious in its semantics. In addition to wellness, the term wellbeing is sometimes equated with health and medical tourism.

As research indicates (Lindell et al., 2022, Björk et al., 2011), the concept of wellbeing tourism differs in its framework from sustainable, medical, health and wellness tourism (see Table 1), but draws on their principles.

Table 1.
Wellbeing tourism and related types of tourism - links and definitional connotations

Type of tourism	Description	Environmental aspects	Economic aspects	Social aspects	Physical aspects	Mental aspects	Spiritual aspects
Wellbeing	Tourism that focuses on harmonizing human wellbeing in relation to host communities and natural environment (comprehensive)	X	X	X	X	X	X

Cont. table 1.

Wellness	Travel to maintain, manage or improve personal wellness, beauty, and relaxation (pampering)				X	X	X
Health	Travel to maintain or improve health in combination with tourism activities (preventive)				X	X	
Medical	Travel to undergo medical treatment (curative or cosmetic)				X	X	
Sustainable	Tourism that focuses on minimizing negative impacts on the environment, respecting local culture, and supporting local employment	X	X	X			

Note: The environmental, economic, and social aspects are part of the traditional concept of sustainable development (Giddings et al., 2002) and refer primarily to the external world - the enterprise and/or the community. The body, mind and soul aspects refer to a person's individual wellbeing.

Source: Lindell et al., 2022.

It is worth mentioning that in consumer research, wellbeing is a frequent synonym for quality of life. Researchers try to measure its level using both objective (economic, social and environmental) and subjective (happiness and satisfaction) measures (Sirgy, Lee, 2006; Seligman, 2011). This is because wellbeing refers to both the basics of life that are measurable, such as standard of living, livelihood, education or availability of food and services (Malinowska, Szymańska-Brałkowska, 2021), as well as more abstract aspects such as freedom (Konu et al., 2011) or other wellbeing values such as being kind, aware, honest, sincere, caring, and joyful (SB WELL project, Lindell et al., 2022b, Good Practice Report).

As can be seen, giving a measurable framework to this concept is challenging, since human wellbeing is subjective in nature and strongly linked to a specific time, place, culture, and context. Its resources (economic, social, human, natural) can change over time, and in addition, its meaning is often understood differently in different cultures and languages (Smith, Puczkó, 2009, Lindell et al., 2019).

For the purpose of sorting out terminology, the SB WELL - Wellbeing Tourism in the South Baltic Region - Guidelines for good practices & Promotion project defines wellbeing tourism as "sustainable tourism that supports harmony and balance of body, mind and soul for guests and hosts in a sustainable intereaction with the local community and environment" (SB WELL project, Lindell et al., 2022b). It is thus a much broader term than sustainable tourism, although it is very much related to it (Burroughs, Rindfleisch, 2002; Gordon, Carrigan, Hastings, 2011;

Kristensen, Boye, Askegaard, 2011). This holistic definition treats the person as a whole and emphasizes the connection of body, mind, and spirit (Miller, Foster, 2010; Lindell et al., 2022). In addition to physical, mental, and social aspects, wellbeing is also influenced by interaction with the social, cultural, and ecological environment. Thus, health, in a broad sense, is seen as a balance of internal factors (physical, mental, spiritual wellbeing) and external factors (social structures, social relationships, sociocultural lifestyles, ecological environments) affecting an individual's life (Lindell et al., 2022; Müller, Kauffman, 2001; Nahrstedt, 2004).

The interest in the topic of wellbeing among tourists, especially those representing younger generations, is no coincidence. For many years, the current times have been referred to as VUCA (Bennet, Lemoine, 2014). The term, which originated in the US military, has been adopted by the business world, emphasizing such features of reality as VOLATILITY, UNCERTAINTY, COMPLEXITY, and AMBIGUITY. In the wave of events initiated by the outbreak of COVID-19 (Śledzik et al., 2021), the acronym VUCA was replaced by another. For Jamais Cascio, listed as one of Foreign Policy Magazine's top 100 Global Thinkers and called "a leading futurist with a long career of thoughtfully contemplating the outlines of tomorrow, referred to the current reality as the world of BANI. The abbreviation deftly characterizes its main features, emphasizing that the world is BRITTLE, ANXIOUS, NONLINEAR and INCOMPREHENSIBLE.

Thus, looking for ways to improve wellbeing, health and quality of life, to reduce stress, and to enjoy moments of respite and pleasure, both for themselves and their loved ones, tourists are increasingly not only opting for sustainable travel, but they go one step further - looking for wellbeing destinations and services. This is due in part to increased economic affluence, demographic changes, the growth and commercialization of leisure time, and changes in values and lifestyles (Hjalager et al., 2011; Yeoman, 2008). Moreover, consumption has become a culturally accepted way of seeking happiness, prosperity, and a better quality of life (Burroughs, Rindfleisch, 2002). There are times when the relationship between consumer lifestyles and wellbeing is questioned by researchers (Burroughs, Rindfleisch, 2002; Inglehart, 1997; McLarney, Chung, 1999; Yeoman, 2011), yet it is undeniably the development of civilization that has led to a turn toward the search for meaning in life, self-development, and the search for new experiences.

Wellbeing can be defined as a comprehensive state of balance and harmony (Lindell et al., 2022). It challenges, among other things, systems thinking, the need for changes in supply chains, borderless interactions, inclusivity and consideration of the tourist's health and emotional state in the offer. It involves combining, collaborating, and co-creating economic, environmental and social aspects with values associated with wellbeing - engagement and respect for the body, mind and soul.

Wellbeing-oriented tourism implies an intention to do good, to have a positive impact on people (both guests and hosts), on the environment, on the planet, in the present and in the future (Lindell et al, 2022). It also responds to the new needs of the Generation Y and Z audience. Thus, it is becoming the future of tourism.

3. Tourism market potential vs. Generation Y

Millennials, or Generation Y, have quickly become one of the most powerful forces in the travel industry. They are creating a huge market, and their travel spending now accounts for about 40% of all travel spending. This is a generation that includes today's adults between the ages of 24 and 35. They want to use the money they earn for experiential travel. At the same time, they are looking for different experiences than their parents (Generation X) and grandparents (the Baby Boomers generation).

In Europe, the younger segments of tourists mainly travel to Germany, the UK and France. Instead of all-inclusive vacations, they look for unique bargains on the Internet. They shy away from mass tourism. Living in a world where offline mixes with online, the development of technology and social media influences their perception of certain values, approach to life and hence also travel. Starting with its planning, Generation Y looks to social media for inspiration and information about travel deals. They value the opinions of influencers and their friends. At the same time, in order for Millennials to pay attention to the content, it must be authentic and real, preferably created by other travelers. For them, information provided by marketers is insincere and not worth paying attention to. According to the Traveler Insights Report (2022, Q2), Millenials are most often inspired by travel photos posted by their friends or by travel experts, as well as travel blogs and posts. They browse reviews on TripAdvisor, look for information on travel brands or destination websites, or simply talk to friends and read posts by people who have visited a certain place. Studies show that Millennials are 23% more likely to search for travel brands through vlogs or celebrity reviews (so-called celebrity endorsements; Roy et al., 2021) than Generation X, and 19% more likely to search for deals through blogs created by influencers.

Despite their many digital similarities, Millennials do not form homogeneous groups in the same way as earlier generations. Indeed, they range from newlyweds to parents in their 30s with children and stable incomes. Many continue to be single and choose either not to have children or decide to have them only later in life. Despite their heterogeneity, they are usually portrayed in the media as innovative thinkers and influential buyers.

When traveling, Millennials value authenticity, fulfillment and sustainability in personalized experiences tailored to their own tastes and preferences. Unlike earlier generations, X and BB, they do not seek out popular destinations just to have their picture taken like a postcard, nor do they follow a guidebook or want to travel according to a strict, predetermined itinerary. Before deciding to go, they do extensive online research by surfing the Internet. They consider relaxation, disconnecting from the digital world, according to the JOMO (Joy-of-Missing-Out) concept, and having fun to be the most important part of the trip. Thus, they choose places and experiences from their to-do list, not out of the pages of guidebooks. Millennials avoid travel products that seem fake or staged for tourists, they recognize and appreciate a balanced approach to tourism by hosts. They are not just looking for quality, but personalized, top-notch service at a reasonable price. Thanks to ubiquitous social media, Millennials share travel experiences with their loved ones and online friends. They travel with friends more often than other generations, and thanks to social media, they are in constant contact with them. Table 2 shows the activities Millennials look for during their travels.

Table 2.
Examples of experiences for Millenials

Customer Experience	Travel activities
Acquiring new skills	Sailing, learning new languages combined with a trip to a country and sightseeing, photography course, handicrafts, cooking lessons, yoga, painting, martial arts, scuba diving, dance lessons such as tango or salsa
Sustainable development	Experiences that teach and promote local cultural and environmental heritage
Adventure	Paragliding, caving, rafting, kayaking, "surfaris" or surf vacations, bungee jumping, glider flying, kayaking, scuba diving, snorkeling, mountain biking, trekking, climbing, sandboarding, snowboarding, zip lining, jungle trekking, horseback riding, SUP boarding
Experience Design	Authentic and unique experiences
Immersion in locality	Coachsurfing and Airbnb - living in private homes in the absence of the owners, and peeping into the lifestyles of the residents by eating at their favorite places, living at their homes, talking to them, discovering farm-to-table experiences (Farm-to-table strategy)
Discovering gems	Collecting amber on the beach, searching for gold, amethysts, striped flint, etc., archaeotourism
A broader view of history, customs, monuments, etc.	Using technology (VR, AR) to enrich the travel experience
Hiking tours	Guided walking tours to explore the area, city, district, village, etc.
Taking care of health and shape	Traditional healing treatments, yoga, meditations, detox, cleansing, rejuvenation

Source: Author's elaboration based on the Centre for the Promotion of Imports from Developing Countries (CBI, 2021).

According to the Market Research Report (2019), more than 30% of Millennials choose short city breaks and 50% choose luxury vacations. At the same time, luxury is defined differently by them than by Generations X and BB. For earlier generations, luxury was associated with a sense of comfort and prestige, while Millennials define it as unprecedented experiences they can share with friends. It is a feeling rather than a category or an affiliation, and thus include unusual and limited editions, rare, customized, and sustainable experiences.

Millennial influencers will be indispensable in travel sector recovery according to GlobalData (Travel & Tourism, July 3, 2020), young travelers are key to the recovery of the travel sector after the pandemic, when the number of travelers outside of Europe dropped to almost zero. Due to the financial impact of the pandemic and rising inflation, Millennials are planning shorter and less costly trips, but they do not want to give traveling up. Hence, they are more inclined to travel locally or to neighboring countries than to make distant, exotic journeys.

4. Travel motivations of the Z Generation

With new generations come new values and ideals. The number of young people going on vacation is growing for each year. This is fostered by improved global mobility, technological advances and thriving economic, cultural, and political exchanges.

Generation Z is defined as people born between 1997 and 2012 (i.e. between 10 and 25 years old in 2022). They are highly adaptable, intelligent, and tolerant. They are "hyper-connected", born into the world of the Internet and thus are among the most digitally oriented generations, combining physical and digital experiences. They are growing up with the challenges of forced population migration, terrorism, climate change, pandemics etc.

According to Hotelmize (a portal catering to hotels and travel agencies, hotelmize.com), travel and hospitality companies often underestimate this group of travelers, thinking they are not interested in traveling. Meanwhile, for 43% of the Generation Z, travel remains a top priority. Projections show that 72% of them are planning or considering spending money on a big trip in 2022 and 2023, while the figure is 68% among Generation Y, 60% among Generation X and 51% among Baby Boomers (Travel Perk, 2022). More than half of the Z's choose to travel abroad, while 37% plan to vacation locally. According to Condor Ferries (2021), 40% of them travel to relax, and for 65% of this generation, "traveling and seeing the world" is the most important way to spend money (Telus International, 2021).

Generation Z is more likely to personalize their own experience with a company or brand by engaging on social media compared to Millennials. As digital natives, they expect brands to have no problem identifying their preferences. 90% of Generation Z travelers confirmed that they make international travel decisions specifically through social media (Expedia, 2018), and nearly 60% of them use smartphones for inspiration and exploration (Mandich, 2021). According to the European Travel Commission (2020), it is the smartphone that is the most important device for Gen Z. They use it to search for deals, make reservations, or cancel trips.

Gen Z individuals are also more likely than earlier generations to choose sustainable travel options (Expedia, 2018). 56% say they would like to stay in ecological or environmentally friendly accommodations, and 60% look for environmentally friendly transportation options when they arrive at a destination (Telus International, 2021). Although, perhaps surprisingly, the Z's value luxury far more than Generation Y. However, this applies to accommodation, not travel. Thus, they prefer hotels with higher standards (4-5 stars) but juxtaposed with the relatively low cost of a flight (European Travel Commission, 2020). This is because they view the flight as getting from A to B and not part of the travel experience. Meanwhile, quality accommodation is an opportunity to create experiences and, subsequently, share them with peers. More than half of Gen Z's (54%), while 48% of Millenials, state they are willing to pay a higher price for using a travel provider that demonstrates environmental responsibility (Telus International, 2021).

5. Design of wellbeing offerings for Generation Y and Z

In order to enable building a positive travel experience for generations Y and Z, it is first and foremost necessary to change the way people think about the entire travel process. The table shows the general characteristics of generations Y and Z, summarising the content of the previous sections.

Table 3.
Millenials and GenZ characteristics

<table>
<tr><th>Generation Y (Millennial Generation)</th><th>Generation Z (Post-millennials, GenZ or iGeneration)</th></tr>
<tr><td colspan="2">They are creators and early adopters of new trends, used to new technologies, optimistic, non-linear thinkers, innovative in problem solving.</td></tr>
<tr><td>Born between the eighties and the start of the new millennium.</td><td>Born at the beginning of the new millennium.</td></tr>
<tr><td>Defined by the internet and increasingly globally connected world.</td><td>Highly sophisticated media and computer environment is something this generation experiences as a normal state.</td></tr>
<tr><td>Optimistic persons, social, open to changes and have high expectations from themselves and others. They are more entrepreneurial, realistic, have a shorter attention span and higher expectations than previous generations.</td><td>Tend to be more individualistic, less focused, better multi-taskers, entrepreneurial, more globally oriented with higher expectations.</td></tr>
<tr><td colspan="2">Generation Y and Z are more likely to explore less visited destinations, while they are more than ever characterized as digital nomad population (they tend to use digital technology). They prefer to travel to a different world region, for a longer period.</td></tr>
</table>

Source: Scott, 2008; Postolov, Sopova, Iliev, 2017; PrincetonOne, 2017; Lundin, 2018; Beall, 2017.

As Anne Dimon, president of the Wellness Tourism Association, said, "Travelers seeking empowerment or wanting to start living healthier will have a specific goal in mind, whether it's learning how to become more mindful or finding new ways to sleep better, and pursuing that goal will lead to a niche experience."

Thus, the first step in designing a wellbeing offering is to understand the consumer behavior characteristic of each generation. Next, it is necessary to identify the motives for their travel. In research done in three international projects on wellbeing tourism, carried out between 2016 and 2022 under the Interreg South Baltic Program and under the auspices of the Swedish Institute, the following target groups were identified:

- Peace of Minds - tourists in this group are mainly well-educated, middle-aged people, often working in large corporations, who want to slow down and focus on seeking their inner self while on vacation. They want to feel the harmony of body and mind through, among other things, light physical activities, mental relaxation (meditation or yoga), organic food and natural ways of healing and relaxation.
- Curious explorers - are tourists who love to be active outdoors and enjoying amazing experiences. Wellbeing for them is a sense of pleasure in discovering new places, and spending leisure time in nature. They are interested in everything that is new and unexpected in nature. They prefer local products and services, so instead of going to restaurants known from guidebooks, they will choose small establishments while observing local communities, and on vacation they will choose walking, biking, paddling, sailing, bird- or star watching, etc. They are equally interested in experiencing modern and traditional lifestyles, food, and local culture.
- Sustainable idealists - these tourists care about the environment at home and on vacation. They use eco-friendly cosmetics, cleaning products and fabrics, etc. They do not like to buy products and prefer investing in experiences. Thus, they choose places that emphasize sustainability. They try to avoid traveling by airplane, and instead choose train and other public transportation, or better yet, eco-friendly transportation. They are willing to pay more for sustainable products.

In addition, wellbeing tourists may also include so-called "cultural rechargers", i.e., people who seek quiet to indulge in reading books, relaxation exercises and observing local people. They want to spend their free time in nature, prefer local cuisine and learning about local customs. The second, optional group is “luxury yin-yangs”. They travel to faraway places to taste exotic life, new foods, indulge in luxury spas, and want their senses to be "pampered".

Despite their young age, generations Y and Z value exploring local cultures and traditions, non-obvious excursions and traveling with friends. So, the choice of travel destinations for them ranges from a vacation in a not-so-popular place to learn about local customs, to picking fruit in an orchard, hiking in the mountains, experiencing forest bathing, visiting heritage tourist attractions, a culinary or mindfulness vacation, or a luxury spa.

From their accommodations to their experiences at every stage of their trip to their return home, Y and Z tourists want to feel relaxed and while relaxing, nourish not only their body and mind, but also their soul.

Research indicates that young people manifest a strong desire for a simpler life. Surveys conducted among Polish representatives of Generation Z have shown that the concept of work-life balance is close to their hearts. Implementing measures to gain and maintain mental balance positively affect their vacation time (Nieżurawska, Gałaś, 2022).

The survey results show that for the youngest generation, flexibility at work and during vacations is very important. Thus, it is worthwhile to extend their vacation time instead of accumulating all the attractions in a few days or on a weekend. Another important motivator for Generation Z is health and beauty programs. In contrast, discounts and loyalty programs, family picnics, or free tickets to tourist attractions, etc., are irrelevant or minimally relevant (Nieżurawska, Gałaś, 2022).

Given the needs of the two generations surveyed, it is critical to accommodate them in stylish, fun and smart places, such as boutique hotels or apartments from AirB&B apps. It is also important to have a good internet connection on site and to use smart technology in as many places as possible. Especially since young people, often combine business travel with leisure, or conversely, leisure travel with business travel, which is referred to as "bleisure travel." Although 37% of Generation Z worry that technology is undermining their ability to maintain strong interpersonal relationships and social competence (Tala et al., 2011).

65% of Gen Z respondents say they would rather go on a dream vacation than buy a new car. Experiences matter! The essence of any experience is the so-called USPs - the differentiators of the offering and the way messages about them are communicated (short video content, opportunities to engage users, and even creating a sense of FOMO (Fear-of-Missing-Out - literally: fear of missing out on something, the term refers to people who are afraid that not having access to the Internet might cause them to miss some important information or event). Since Gen Z follows new experiences, any ideas from wellbeing hosts about organizing special theme nights, exclusive events and other non-obvious activities are the best differentiators on offer.

If a travel service host does not actively promote itself on social media, it is potentially missing an opportunity to reach a growing market with disposable income. For both Generation Y and Z, reviews are key. 68% of Gen Z read at least three reviews before making their first online purchase, so following up on guest reviews is key. 63% of Generation Y representatives admit that recommendations from friends are the most reliable source of knowledge for them. This is due to the fact that they do not have time to invent interesting deals, among the many on the market. Without recommendations or reviews, these generations are unlikely to go to a place they find interesting and noteworthy. In the case of publicly visible bad reviews, the chances are even lower - no matter how good a company's marketing campaigns are. In the case of Generation Y, inviting influencers to stay for free and then having them promote a place, service or wellbeing product will gain their followers. For Generation Z, it is not the influencers that are important, but rather the natural ambassadors (opinion leaders). 90% of Millennials and Gen Z say that social media influences international travel decisions, but the same principles apply to local attractions. Instagram, Youtube, Twitter and TikTok are used most often to find inspiration about travel (Travel & Tourism, 2020).

For Generation Y and Z, mobile-friendly bookings are extremely important. This is because young people are not as savvy as other guests who grew up with traditional booking methods such as phone and email.

Finding new experiences is a huge part of Generation Z's travel experience. As more and more of this generation is ready to reinvent their own country, there has never been a better time to promote "staying put." Generation Z places a high value on physical and mental health (wellbeing). While the traditional gym is still popular, other activities such as meditation, yoga, walking, or hiking are helping to keep this generation on track.

Moving away from the issue of services, it is worth focusing on the strategy of designing new products for these generations. Millennials and Generation Z view shopping in a very different way than previous generations. For them, it means more than just physically acquiring an item. When buying items, they expect novelty, surprise, and personalization. Products should not only be original, aesthetically pleasing, but also respond to their individual, and unique needs. Uniqueness is highly valued, which is why Millennials and Gen Z's choose products from limited collections or personalized products. Moreover, these two generations are growing up with an awareness of climate change, so they are likely to focus more on sustainable, ethical, inclusive, and responsible travel. 72% of these Gen Y and Z representatives say they are more likely to buy from companies that contribute to social causes than others.

They pay attention to what's behind the brand - whether production is not harmful to the environment and whether products are supplied by local manufacturers. They value history and provenance, and the path the products have taken before they land on the shelves in the store is important. That's why wellbeing products fit perfectly into this philosophy. Young people care about the planet and sustainability and are more likely to buy from places that adhere to the same ideals. In fact, 73% of Generation Z shoppers said they would be willing to pay 10% more for sustainable products.

6. Discussion

The article presents the concept of wellbeing tourism along with a description of the target groups that were identified during the project work on the implementation of the concept in the South Baltic region from 2016-2022 by a group of researchers, representatives of regional authorities and non-profit tourism organizations from Sweden, Lithuania, Germany, Denmark and Poland. They pointed out how this type of tourism focused on supporting localism and nurturing a region's cultural and environmental heritage, as well as promoting activities to improve wellbeing, exploded during the pandemic and made a shift in consumer attitudes toward more sustainable practices. This is all the more so because the current times, full of uncertainty and threats, as well as the Covid-19 pandemic, have often led many people to chronic fatigue, feelings of loneliness, fear and doubt, and even mental health problems.

Generation Y and Z, described in the article, were more vulnerable than other generations to the effects of lockdown, and thus the severance of social ties, due to their age. Researchers have no doubt that this condition can be improved by taking care of one's wellbeing (Cloninger, 2006). By regaining composure, accepting one's limitations, and dealing with fears and conflicts, people can learn to flourish and be more self-controlled. And by improving mindfulness, they can learn to work better with each other.

Domestic travel spending is estimated to reach $1.1 trillion a year by the end of 2022, exceeding pre-pandemic levels by 11.3% (Thomaselli, 2021). This includes so-called "revenge travel," the re-booking of vacation destinations and types of tourism that were previously interrupted by the pandemic. This is the main motivator cited by 70% of tourists. However, the pandemic and the uncertainty of the current times have caused tourists' attitudes to change. 87% of consumers want to travel more sustainably, and 68% are actively seeking sustainable travel brands for their upcoming trips (Elliot, 2020). This just goes to show that tailored offerings aimed at improving people's wellbeing is the direction of the future. These changes in consumer values and behavior will define the coming months and years.

The impact of the wellbeing concept on travel culture and spending is profound - and how each company in the industry responds to these trends will be critical to its success.

7. Conclusion

The purpose of the article was to present the consumer behavior of two generations - Y and Z - in the tourism market and how the concept of wellbeing tourism fits into the needs and expectations of these groups.

In order to fill this research gap, this study analyzes how the described concept is defined in consumer research and how it is used in the tourism industry. First, based on previous literature, the similarities and differences between wellbeing tourism and related types of tourism are examined. And second, based on qualitative data from reports and analyses produced by wellbeing tourism projects, its supply side was examined. The literature review presents a framework for health-related consumption, traces differences in attitudes about tourism among younger generations, and discusses wellbeing tourism in the Baltic Sea region.

It was pointed out that the defining characteristic of the audiences studied is that they make decisions based on their values and experiences. These elements drive the decisions of these groups, as more than eight in ten Generation Z and Millenials are looking for unique experiences on their next trip (Expedia, 2018). The prioritization of experiences over the purchase of material things by these generations is just one of the opportunities facing the travel industry.

Generation Y and Z travelers are still discovering their consumption preferences, which is a huge opportunity for the travel industry, and learning about their expectations and gaining a better vision of what a travel offering should be based on will go a long way toward achieving their satisfaction.

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MOBILE BUYING BAHAVIOR DURING THE COVID-19 PANDEMIC – THE CASE OF POLAND

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Purpose: This pilot study aimed to understand the mobile buying behavior of Polish respondents in terms of the number of transactions per month during the Covid-19 pandemic time. The respondents' gender and place of residence were taken into consideration as chosen socio-demographic characteristics.
Design/methodology/approach: The field survey method was applied to collect the primary data. Descriptive and inferential statistics that include the matched-pair test, the Wilcoxon signed-rank test, and the chi-square test of independence were applied for the primary data analysis.
Findings: According to the chi-square test of independence, such socio-demographic characteristics as gender, place of residence, women's place of residence and men's place of residence in relation to mobile buying behavior are independent. The results of the matched-pair test and the Wilcoxon signed-rank test in the large and medium cities show that there is a significant difference in the average number of mobile shopping transactions per month before and during pandemic time.
Research limitations/implications: The authors suggest conducting the same analysis with a larger sample size to generalize the phenomena.
Practical implications: In order to stay competitive on the market, enterprises should constantly develop mobile distribution channels. Moreover, while communicating with a mobile shopper, enterprises can create similar messages, despite the gender and / or place of residence of the receivers.
Originality/value: The findings will be helpful to FMCG-related marketing decision-makers and mobile shopping-related app developers.

Keywords: Covid-19 pandemic time, consumer behavior, mobile shopping, gender, place of residence.

Category of the paper: Research paper.

1. Introduction

Back in the first quarter of 2020, the world was unprepared to cope with an unpredictable and sudden human health-related catastrophe. Nevertheless, human society is trying to cope with the ongoing Covid-19 pandemic through different adaptations. This pilot study focused on understanding the mobile buying behavior of Polish respondents in terms of the number of transactions per month during the Covid-19 pandemic time. The respondents' gender and place of residence were taken into consideration as chosen socio-demographic characteristics. Thus, the first objective was to determine whether the respondents' are demonstrating a significant increment in the average mobile shopping transactions per month during the Covid-19 pandemic time based on their place of living. The second objective was to determine whether there is an association between gender and mobile shopping usage during the Covid-19 pandemic time. The third objective was to determine whether there is an association between gender-based places of residence and mobile shopping usage during the Covid-19 pandemic time. To create a foundation for further research studies focusing on the same scenario, however, in-depth behavioral analysis is also one of the objectives of this research study (Wiścicka-Fernando, 2021).

Online shopping and mobile shopping is not a new term in the modern economy. However, digitalization is changing the form of the retail industry and it has the potential to gain competitive advantages (Frishammar et al., 2018). The Covid-19 epidemic caused unusual customer buying behavior such as large-scale panic buying, resulting in an imbalance in supply and demand of goods and threatening social stability. Moreover, the study found that epidemic information about Covid-19 intensity has a significant impact on the emergence of group rush buying behavior. Government intervention also plays a significant role in reducing the scale of group rush buying (Chen et al., 2022).

Nevertheless, novel Covid-19-related news dissemination by media led to an increase in the level of anxiety among humans and opting for unorthodox consumption behaviors as consumers (Çelik, Köse, 2021). According to the qualitative study conducted during the Covid-19 lockdown in China, three overarching dimensions related to consumers' online purchasing behaviors during the Covid-19 pandemic time were identified: triggers of enhanced digital engagement, transformative capacity of digital technologies, and socio-economic adaptability during crises (Jiang, Stylos, 2021). To cope with the Covid-19 outbreak Chinese citizens took the advantage of available modern information and communication technology to work, teach, learn and shop online (Tiejun, 2021; Gao et al., 2020). An investigated structural equation model of three shopping channels including physical, web, and mobile reveals that haptic traits act differently across channels and consumers with strong haptic traits prefer physical and mobile channels (De Canio, Fuentes-Blasco, 2021). Results of initial studies conducted in

China also indicate the increasing significance of online channels (Guo et al., 2020; Li et al., 2020).

Contemporary mobile phone devices are much more sophisticated and go beyond their voice communication ability and modern mobile technologies can provide hi-tech solutions to cope with the ongoing Covid-19 pandemic time (Wiścicka-Fernando, 2021). The Covid-19 pandemic time has forced people to limit their regular day-to-day activities including physical interactions, which has led to explosive growth in online grocery shopping rather than shopping physically. However, there is no clear argument in the retailing literature on whether consumers prefer to buy groceries online or offline. This paper tries to fill in that research gap.

2. Methods

For the purpose of the study, three conceptual frameworks were created.

According to the conceptual framework of study I (Figure 1) the authors investigated the average mobile shopping transactions per month before and during the Covid-19 pandemic time taking into consideration the place of residence (big versus medium cities). Matched-pair t-test and Wilcoxon signed-rank test were used for the investigation (sections 3.2, 3.3 and 3.4).

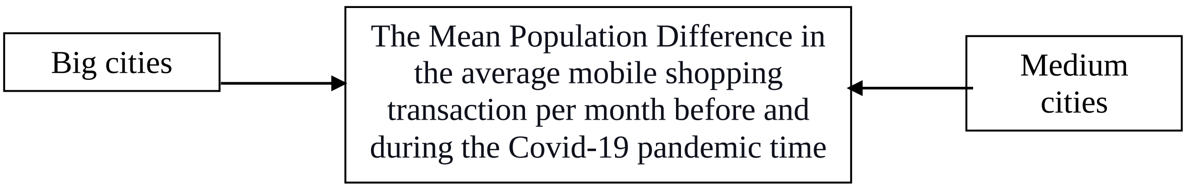

Figure 1. Conceptual framework of study I.

Source: own elaboration.

Further, the authors verified the independence of mobile buying behavior (dependent variable) and gender, place of residence, women's please of residence and man's place of residence (independent variable). Guided by conceptual framework of study II (Figure 2), the authors ran the chi-square test I and II (section 3.5).

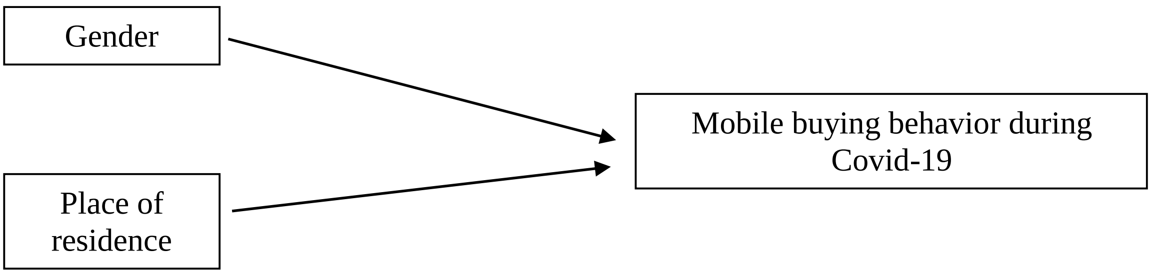

Figure 2. Conceptual framework of study II.

Source: own elaboration.

Moreover, women's please of residence (chi-square test III, section 3.5) and man's place of residence (chi-square test IV, section 3.5) were analyzed in relation to mobile buying behavior, as shown in conceptual framework of study III (Figure 3).

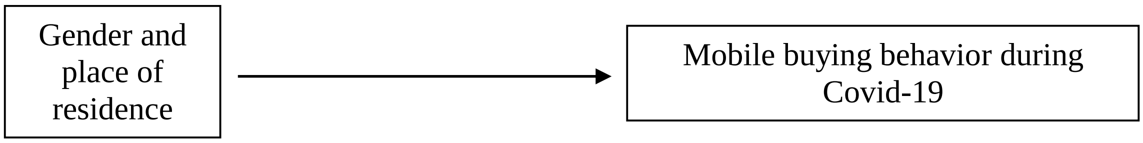

Figure 2. Conceptual framework of study III.

Source: own elaboration.

The population of this pilot study was Polish respondents. The field survey method was applied to collect the primary data. The research questionnaire was in the Polish language to ensure that all the participants are Polish respondents. The research questionnaire was able to collect nominal, ordinal, and ratio scale data from the respondents. On the 10th of April 2021, the online social media survey was launched based on the Microsoft Teams platform and reached 102 respondents by the end of the 13th of April 2021. The researchers used a quantitative approach for the analysis. Descriptive and inferential statistics including the matched-pair test (alpha = 0.01), the Wilcoxon signed-rank test (alpha = 0.05), and the Chi-Square test of independence (alpha = 0.01) were applied for the primary data analysis. The Shapiro-Wilk test was performed to explore the normality of the relevant distributions. Microsoft Excel and SPSS were utilized for data analysis.

3. Results

3.1. Mobile and non-mobile shoppers by gender and place of residence

In this pilot study, the total number of respondents was 102 Polish individuals. Out of 102 total respondents, 71 respondents are mobile shoppers. Out of 102 respondents, 74 respondents are female respondents and 28 respondents are male respondents. Out of 71 total mobile shoppers, 53 respondents (approximately 75%) are female respondents and 18 respondents (approximately 25%) are male respondents (Table 1).

Table 1.
Mobile and Non-mobile shoppers by gender

Specification	Female		Male		Total
	in numbers	in %	in numbers	in %	

Respondents	74	73%	28	27%	102
Mobile shoppers	53	75%	18	25%	71
Non-mobile shoppers	21	68%	10	32%	31

Source: own study base on the survey.

Taking into consideration the aim of the paper, the authors analyzed the data considering mobile shoppers by place of residence (Table 2).

Table 2.
Mobile shoppers by place of residence

Place of Residence	Female mobile-assisted shoppers		Male mobile-assisted shoppers	
	in numbers	**in %**	**in numbers**	**in %**
Big cities	19	36%	12	67%
Medium-size cities	16	30%	1	6%
Small-size cities	9	17%	3	17%
Villages	9	17%	2	11%
Total	53	100%	18	100%

Source: own study base on the survey.

Out of 71 total mobile shoppers, 31 respondents (approximately 44%) live in big cities, 17 respondents (approximately 24%) live in medium-sized cities, 12 respondents (approximately 17%) live in small-size cities, and 11 respondents (approximately 15%) live in villages.

3.2. The matched-pair t-test – I (big cities)

The matched-pair t-test I was conducted to determine whether the respondents' from the big cities are demonstrating a significant increment in the average mobile shopping transactions per month before and during the Covid-19 pandemic time. According to the field survey data, 31 out of 71 respondents (approximately 44%) belong to big cities, while all are mobile shoppers.

Descriptive analysis for big cities' mobile shoppers shows that the average mobile shopping transaction per month before the Covid-19 pandemic time was about 2.58, the median mobile shopping transaction per month before the Covid-19 pandemic time was 2, and the standard deviation was about 2.50. Moreover, the average mobile shopping transaction per month during the Covid-19 pandemic time was about 5.39, the median mobile shopping transaction per month during the Covid-19 pandemic time was 4, and the standard deviation was about 5.01. The matched-pairs test was performed as a statistical test to determine whether the big city residents' are demonstrating a significant increment in the average mobile shopping transactions per month before and during the Covid-19 pandemic. Moreover, the mean sample difference was about -87.

The Shapiro-Wilk test was performed to explore the normality of the difference between mobile shopping transactions per month before the Covid-19 pandemic time and mobile shopping transactions per month during the Covid-19 pandemic time. According to the Shapiro-

Wilk test, the p-value was .000. Thus, it was concluded that the data did not come from a normal distribution.

D donated as a Mean Population Difference of the average mobile shopping transaction per month before and during the Covid-19 pandemic. Accordingly formulated hypotheses are:

$H_0 : D = 0$
$H_a : D \neq 0$

The decision rule was if the observed test statistic is greater than 2.75 or less than 2.75, then the null hypothesis will be rejected. Because the observed t value was less than the critical t table value in the lower tailed (t = -4.21 < t = -2.75) value it was in the rejection region (see Table 3). Thus, the null hypothesis can be rejected.

3.3. The matched-pair t-test – II (medium-size cities)

The matched-pair t-test II was conducted to determine whether the respondents' from medium-size cities are demonstrating a significant increment in the average mobile shopping transactions per month before and during the Covid-19 pandemic. According to the field survey data, 17 out of 71 respondents (approximately 24%) belong to medium-size cities, while all are mobile shoppers.

Descriptive analysis for medium-size cities' mobile shoppers shows that the average mobile shopping transaction per month before the Covid-19 pandemic time was about 3.29, the median mobile shopping transaction per month before the Covid-19 pandemic time was 3, and the standard deviation was about 2.69. Moreover, the average mobile shopping transaction per month during the Covid-19 pandemic time was about 6.76, the median mobile shopping transaction per month during the Covid-19 pandemic was 5, and the standard deviation was about 6.02. The matched-pairs test was performed as a statistical test to determine whether the big city residents' are demonstrating a significant increment in the average mobile shopping transactions per month before and during the Covid-19 pandemic. Moreover, the mean sample difference was about -59.

The Shapiro-Wilk test was performed to explore the normality of the difference between mobile shopping transactions per month before the Covid-19 pandemic and mobile shopping transactions per month during the Covid-19 pandemic. According to the Shapiro-Wilk test, the p-value was .006. Thus, it was concluded that the data did not come from a normal distribution.

D donated as a Mean Population Difference of the average mobile shopping transaction per month before and during the Covid-19 pandemic. Accordingly formulated hypotheses are:

$H_0 : D = 0$
$H_a : D \neq 0$

The decision rule was if the observed test statistic is greater than 2.92 or less than 2.92, then the null hypothesis will be rejected. Because the observed t value was less than the critical t table value in the lower tailed (t = -3.28 < t = -2.92) value it was in the rejection region (see Table 3). Thus, the null hypothesis can be rejected.

Table 3.
Summary of the matched-pair t-test I and II

Place of residence	n	Hypothesis	α	The critical table t value	Observation
Big City	31	$H_0 : D = 0$	0.01	$t_{0.005,30} = \pm 2.75$	(t = -2.75 < t = -4.21)
		$H_a : D \neq 0$			
Medium City	17	$H_0 : D = 0$	0.01	$t_{0.005,16} = \pm 2.92$	(t = -2.92 < t = -3.28)
		$H_a : D \neq 0$			

Source: own study base on the survey.

According to the Shapiro-Wilk test, it was concluded that the data did not come from a normal distribution. Thus, the matched-pair t-test results are arguable. To overcome this debatable situation the authors ran the Wilcoxon signed-rank test as an immediate statistical solution (influentialpoints.com, 2022).

3.4. Wilcoxon signed-rank test

The Wilcoxon signed-rank test was conducted to determine whether the respondents' from the big cities and medium cities are demonstrating a significant increment in the average mobile shopping transactions per month before and during the Covid-19 pandemic.

Test for big cities

Hypotheses

H_0: Monthly average mobile shopping is equal between the two situations (before and during Covid-19 pandemic)

H_a: Monthly average mobile shopping is not equal between the two situations (before and during Covid-19 pandemic)

The calculated test statistic was 0 and the critical value was 147 (see Table 4). Thus, the observation was 0<147 and the null hypothesis can be rejected.

Test for medium cities

Hypotheses

H_0: Monthly average mobile shopping is equal between the two situations (before and during Covid-19 pandemic)

H_a: Monthly average mobile shopping is not equal between the two situations (before and during Covid-19 pandemic)

The calculated test statistic was 1 and the critical value was 34 (see Table 4). Thus, the observation was 1<34 and the null hypothesis can be rejected.

Table 4.
Summary of the Wilcoxon Sign Rank Test

Test for	Hypotheses	α	n	Test statistic	Critical value	Observation
Big Cities	H_0: Monthly average mobile shopping is equal between the two situations (before and during Covid-19)	0.05	31	0	147	0<147
	H_a: Monthly average mobile shopping is not equal between the two situations (before and during Covid-19)					
Medium Cities	H_0: Monthly average mobile shopping is equal between the two situations (before and during Covid-19)	0.05	17	1	34	1<34
	H_a: Monthly average mobile shopping is not equal between the two situations (before and during Covid-19)					

Source: own study base on the survey.

3.5. The chi-square test of independence

Test I

The researchers have performed the chi-square test of independence using the following hypotheses:

H_0: Gender and mobile buying behavior during Covid-19 are independent.

H_a: Gender and mobile buying behavior during Covid-19 are not independent.

A chi-square test of independence (Test I) showed that there was no significant association between gender and mobile buying behavior during the Covid-19 pandemic time, $\chi 2$ (1,N=102)=0.472, p>.001 (see Table 5). Thus, the researchers failed to reject the null hypothesis.

Test II

Hypotheses:

H_0: Place of residence and mobile buying behavior during Covid-19 are independent.

H_a: Place of residence and mobile buying behavior during Covid-19 are not independent.

A chi-square test of independence (Test II) showed that there was no significant association between place of residence and mobile buying behavior during the Covid-19 pandemic time, $\chi 2$ (3, N=102)=0.318, p>.001 (see Table 5). Thus, the researchers failed to reject the null hypothesis.

Test III

Hypotheses:

H_0: Women's place of residence and mobile buying behavior during Covid-19 are independent.

H_a: Women's place of residence and mobile buying behavior during Covid-19 are not independent.

A chi-square test of independence (Test III) showed that there was no significant association between women's place of residence and mobile buying behavior during the Covid-19 pandemic, $\chi 2$ (3, N=74)=0.840, p>.001 (see Table 5). Thus, the researcher failed to reject the null hypothesis.

Test IV

Hypotheses:

H_0: Mans' place of residence and mobile buying behavior during Covid-19 are independent.

H_a: Mans' place of residence and mobile buying behavior during Covid-19 are not independent.

A chi-square test of independence (Test IV) showed that there was no significant association between a Man's place of residence and mobile buying behavior during the Covid-19 pandemic, $\chi 2$ (3, N=28)=0.529, p>.001 (see Table 5). Thus, the researcher failed to reject the null hypothesis.

Table 5.
Summary of the chi-square test of independence

Test ID	Chi-Sq test Statistic	df	α	p-value	Observation	Decision
Test I	0.516	1	0.01	0.472	*p-value* > α	Fail to reject the null hypothesis
Test II	3.514	3	0.01	0.318	*p-value* > α	Fail to reject the null hypothesis
Test III	2.155	3	0.01	0.540	*p-value* > α	Fail to reject the null hypothesis
Test IV	2.210	3	0.01	0.529	*p-value* > α	Fail to reject the null hypothesis

Source: own study base on the survey.

4. Discussion

The research results led to many conclusion, that can be discussed. First of all, according to the matched-pair t-test I and the Wilcoxon Sign Rank Test, there is enough evidence from the data to declare a significant difference in the average mobile shopping transactions per month before the epidemic and average mobile shopping transactions per month during the epidemic based on the respondents from the big cities. Moreover, it is visible that there is an incremental usage pattern of mobile shopping transactions during the Covid-19 epidemic than before the epidemic. Further, according to matched-pair t-test II and the Wilcoxon sign-rank test, there is enough evidence from the data to declare a significant difference in the average mobile shopping transactions per month before the epidemic and average mobile shopping transactions per month during the epidemic based on the respondents from the medium-sized cities. Moreover, it is visible that there is an incremental usage pattern of mobile shopping transactions during the Covid-19 epidemic than before the epidemic.

The authors also analyzed the basic socio-demographic factors such as gender and place of residence in relation to mobile buying behavior:

- According to the chi-square test of independence test I, there is enough evidence from the data to declare that there is no association between gender factors and mobile buying behavior among the respondents during Covid-19.
- According to the chi-square test of independence test II, there is enough evidence from the data to declare that there is no association between place of residence and mobile buying behavior among the respondents during Covid-19.
- According to the chi-square test of independence test III, there is enough evidence from the data to declare that there is no association between women's place of residence and mobile buying behavior among the respondents during Covid-19.
- According to the chi-square test of independence test III, there is enough evidence from the data to declare that there is no association between a man's place of residence and mobile buying behavior among the respondents during Covid-19.

With the research results authors tried to fill in a research gap regarding mobile behaviors of consumers in Poland. However, it is worth it relate to other studies conducted in different countries. The US-based study found the mechanisms behind the increase in online grocery shopping during the Covid-19 pandemic time by presenting a decrease in the importance of its strongest determinants (i.e., perceived usefulness and attitude) (Tyrväinen, Karjaluoto, 2022). Moreover, panic buying during Covid-19 pandemic time is most associated with the need for control, the belief that it is the smart thing to do, and the urge to minimize the number of trips to grocery stores (Kassas, Nayga, 2021).

Behavioral gender differences have been found in a wide range of human activities and according to the Austrian study, women showed a stronger tendency to avoid shopping centers and more men frequented recreational areas during the Covid-19 lockdown (Reisch et al., 2021). The Finish study investigates the demographic and household characteristics of adapters to online grocery shopping due to the Covid-19. According to this study a typical adopter of online grocery shopping has a higher household size, higher household earnings, and/or is more likely to live in the capital region of the country. Further analyses indicate that in the older age group 45+, women and those with some degree of worry over their health and/or that of a loved one are a little more likely to be adopters than the rest (Eriksson, Stenius, 2022). Another study found that consumer demographic factors such as education and income significantly increase their number of mobile purchases meanwhile males have been found to spend more on mobile shopping than females (Hou, Elliott, 2021).

It is also worth to mention that digitalization is one of the evolving trends and will shape not only future global trade but also investment (Euromonitor, 2022). This report that shows 'The World Beyond the Pandemic' also indicates the importance of more people-centered and less geographically-centered global manufacturing. The study conducted in USA also shows that since January 2020 an increase by approximately 20% in online spending was noted (McKinsey, 2022). Convenience was definitely redefined by ecommerce, and even grocery shopping became much more popular in analyzed society.

To summarize with research conducted in EU-27 countries, it needs to be underlined that Covid-19 determined an increase on only in online retail turnover, but also in its market share (Szasz et al., 2022).

5. Summary

The aim of this paper was to understand the mobile buying behavior of Polish respondents in terms of the number of transactions per month during the Covid-19 pandemic time. The authors considered respondents' gender and place of residence as chosen socio-demographic characteristics. This paper also tries to fill in a research gap regarding whether consumers prefer to buy groceries online or offline.

Results of this pilot study show that the place of residence does not influence mobile shopping usage among Polish respondents. However, there is an incremental mobile shopping usage pattern during the Covid-19 epidemic than before the epidemic in both - respondents from big cities and the respondents from medium-sized cities.

The limited sample size is one of the main limitations of this study. Thus, the researchers are not in a position to generalize those findings. However, this study has shown the reality of the mobile shopping transaction behavior of Polish respondents based on their gender and the place of living during the Covid-19 pandemic time. Thus, the researchers would suggest conducting the same analysis with a larger sample size to generalize the phenomena. A study based on the stimulus-organism-response (S-O-R) theory found that the significant impact of mobility, personalization, product assortment, and hedonic motivation on impulsiveness, except for the app's visual appeal (Chopdar et al., 2022). A novel DIT-based evaluation method for the convenience of mobile apps in e-commerce retailing from the perspective of consumer online shopping behavior patterns is proposed (Li et al., 2020). Thus, the findings of this pilot study will be helpful to business managers, marketers, mobile solution developers, and any other stakeholders of e-commerce in their business decision-making.

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MODEL OF INSTRUMENTS FOR MEASURING THE QUALITY OF LOGISTICS SERVICES IN THE COOPETITION OF ENTERPRISES

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Aim: The idea, and at the same time the aim of the paper, was to develop a model of instruments dedicated to the assessment and improvement of the quality of logistics services in coopetition and this goal was achieved. The presented article features, against the background of the coopetition of enterprises in a network, essential instruments for measuring the quality of logistics services both from the point of view of its essence as well as an innovative form of relationship, i.e. in the coopetition of enterprises in which logistics services, especially their quality, are of fundamental importance.
Design/methodology/approach: Literature critical analysis. Analysis of international literature from databases as well as exploratory own research work and expert analyses.
Results: The article presents the results of conceptual research on the use of an original model of instruments for measuring and improving the quality of logistics services in the coopetition of enterprises in the Deming Cycle standard and the ISO 9001 quality management system.
Originality/value: Model of instruments for measuring, evaluating and improving the quality of services in competitive cooperation. The obtained results attest to the cognitive and practical value of the developed model of instruments.

Keywords: coopetition, logistics services, quality of logistic services, logistics services measurement instruments, TFL sector.

Category of paper: research work.

1. Introduction

Logistics operators (enterprises operating in the supply chain between the supplier of goods - the principal of logistics services and its end customers), creating a comprehensive logistics service and operating supply networks, have generated a need for a change in the paradigm of the transport-forwarding-logistics sector, the so-called TFL sector (Rydzkowski, 2011). A crucial element here has been the transition of the economy from the marketing orientation of a seller's market to a buyer's market. Logistics services are an integrated area related to the flow of goods and information. The liberalization of rail, air and mail transport has led to the emergence of new businesses in the logistics services market. New players in the logistics services sector are, for example, national postal services. The face of the market has also been changed by numerous strategic alliances, mergers and acquisitions as well as the intensifying phenomenon of competitive cooperation (in the literature referred to as coopetition) of not only logistics enterprises (Aluchna, 2013; Bengtsson, Kock, 1999; Czakon, 2021; Frąś, 2020; Zakrzewska-Bielawska, 2014).

One of the essential ways of measuring, evaluating and improving the quality management system of logistics services in enterprises is the use of various methods, tools and techniques of quality management. Since a significant number of such instruments can be found in the source literature, enterprises cannot use all of them at once (Wolniak, 2013, 2016, 2017; Wolniak, Skotnicka, 2011; Skotnicka-Zasadzień et al., 2017, 2018; Wolniak et al., 2017; Zendla, Wolniak, 2015; Sułkowski, Wożniak 2018).

Therefore, a crucial problem addressed by business managers in competitive cooperation is made up of issues concerning the selection of proper instruments for measuring, evaluating and managing the quality of services in the TFL sector. Therefore, it is useful to know instruments for measuring, evaluating and improving the quality of logistics services. Hence, the aim of this publication is model development of instruments, i.e. methods, tools and techniques used to measure the quality of services in the coopetition of enterprises in the TFL sector and filling the research gap in this area.

2. Quality of logistics services

There is no unequivocal definition of a logistics service in the source literature, due to its characteristics. The scope of activities carried out by logistics operators indicates (Biesok, 2013; Harrison, Hoek, 2010; Zamkowska, Zagodżon, 2011) that it may include activities related to relocation, forwarding, storage, picking, refining (e.g. labelling, repackaging, shrink-wrapping, creating promotional packages), inventory management, consulting, etc.

In a basic sense, a logistics service is an activity aimed at satisfying logistics needs of enterprises and people (Zamkowska, Zagodżon, 2011). Characteristics distinguishing services from other objects of market exchange include:

- intangibility,
- inseparability of the production and consumption process,
- diversity,
- nondurability,
- inability to acquire ownership (Rydzkowski, 2011).

A service feature, from among those mentioned above, which is the most frequently addressed and characterized by authors is intangibility. This feature allows to distinguish services from other objects of market exchange (Dyr, 2009). Service operations do not have a material form. They are intangible and it is not possible to check a service before its purchase (on a trust basis). It is not possible to provide services in advance or store them - a service is experienced (Chojnacka, 2011). Services are sold - provided and then consumed in contrast to goods that are first produced, then sold and consumed (Rydzkowski, 2011).

A logistics service is the performance, on the basis of a contract, of activities consisting in the execution by a contractor of one or more logistics functions for an ordering party (Rydzkowski, 2011). Logistics services combine both transport services, storage and replenishment of stocks, transshipment as well as many other services that were previously in the sphere of activities performed by manufacturing and trading enterprises. As part of logistics services, a customer can purchase storage services, stock handling, transport, cargo handling, market research, creating a marketing information system, financing transactions and insurance banking services. The logistics services sector is developing and changing dynamically under the influence of many factors. In a market transaction not only a product itself or its price are important, but also its delivery, a logistics service, and above all its quality.

Currently, there are three groups of logistics service operators on the market which provide transport-forwarding-logistics services along with additional services, e.g. informing an ordering party about the state of the performance of a contract. They provide the following services:

- *transport* - consisting only in the performance of transport tasks against payment, the result of which is the shipment of people and materials with a limited scope of consultation provided contributing to the efficient and effective operation of all sectors of the state economy,
- *forwarding* - in its basic form, consisting in organizing the shipment of goods, insurance, issuing necessary documentation, and customs service when dealing with Polish conditions,
- *logistics* – including the performance of transport and forwarding activities, terminal services (from cross-docking, through storage to picking and packaging), and refinement activities (labelling, shrink-wrapping, adding documents to goods, creating promotional sets, repackaging, collecting receivables and others).

The area of activities covered by a logistics service can be very diverse (Rydzkowski, 2011). For each of the logistics functions performed, there are a number of detailed activities that make up the scope of a logistics service (Zamkowska, Zagodżon, 2011). The sphere of logistics services and enterprises that provide them are referred to as the TFL sector. This term seems imprecise because it suggests that transport and forwarding are separate from logistics. In fact, they are a part of it. Transport is a part of logistics related to the movement of goods, and forwarding is a more extensive service, within which there is not only transport but also its supplementation with necessary transport documentation, cargo insurance, preparation for transport through appropriate packaging, etc. Forwarding activities also consist in obtaining and combining goods for economic transport (use of the cargo space of a given means of transport, distance, costs).

The task of transport and forwarding is to ensure the declared level of service in such a way that goods are delivered to an indicated place at a specified time and in an undamaged state. In a logistics service, a customer is to receive the ordered goods in appropriate quantity and quality, and the preceding activities related to the process of picking, storing and packaging are to be carried out at the lowest cost possible (Fig. 1).

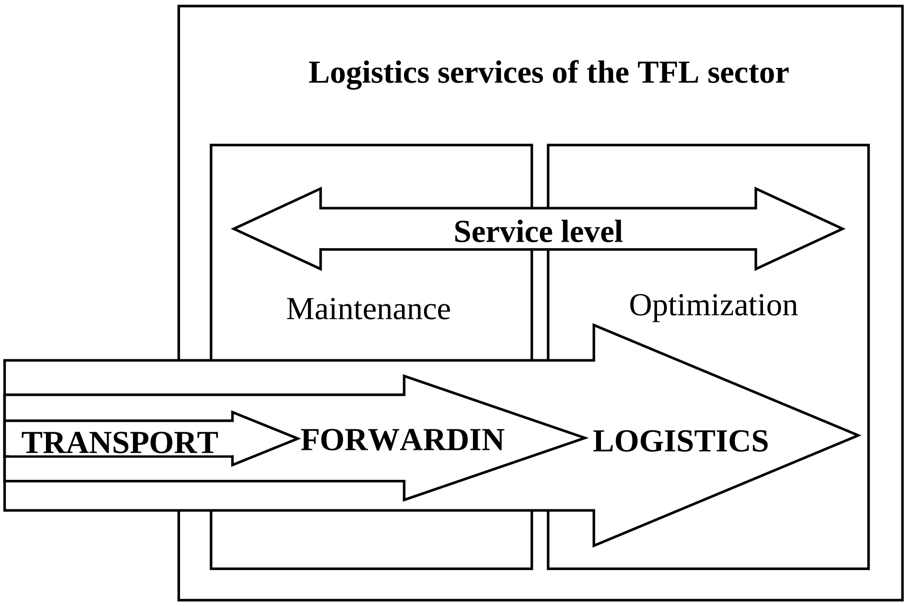

Figure 1. Relationship between the type of a logistics service of the TFL sector and the level of service. Source: Rydzkowski, 2011; Fajczak- Kowalska, Kowalska, 2017.

Quality assessment of logistics services is related to quality determinants, which are understood as the most important properties that a logistics service has or should have. In view of the above, a logistics service should meet the following requirements in accordance with the 7R concept:

- the right product,
- the right quantity,
- the right time,
- the right condition,
- the right place,
- the right customer,
- the right price (Biesok, 2013).

The 7R principle is a basic axiom used in logistics. It can be said that this principle is a kind of shortened and simplified definition of logistics, and at the same time is a set of determinants of the quality of a logistics service. It puts forward 7 conditions that each logistics enterprise must meet in order to exist and compete on the market.

According to A. Harrison and R. Hoek (Harrison, Hoek, 2010), the quality of a logistics service is fundamental to achieving long-term market success. This is due to the fact that the quality of a service is difficult to measure and counterfeit by competing enterprises. The most important determinants of efficiency and effectiveness, and thus the quality of the provision of logistics services, include:

- convenience of customer service,
- order processing time,
- flexibility of deliveries,
- flexibility and comprehensiveness of a service,
- reliability of deliveries,
- handling of returned goods (Frąś, 2015; Zimon, 2013).

In order to achieve the above determinants in the provision of logistics services by enterprises in the coopetition processes, the concept of a model of instruments for shaping and improving the quality of services presented in point 4 of this paper was developed.

3. Coopetition as a contemporary direction in shaping the quality of services in the TFL sector

The beginnings of coopetition can be found in the theory of strategic alliances, game theory, resource concept of strategic management, network approach, competition theory, transaction costs theory and others (Mierzejewska, 2018). However, the number, intensity and variability of this type of relationships made it necessary to deepen this subject and single it out as an independent theory (Bengtsson, Kock, 1999; Zakrzewska-Bielawska, 2014; Czakon, 2010; Jankowska, 2009; Zakrzewska-Bielawska, 2014; Aluchna, 2013). Currently, coopetition as a strategic phenomenon has a strong theoretical basis. One even talks about a theory of coopetition, thus distinguishing it from other relationships that may occur between competitors (Aluchna, 2013).

Coopetition is interdependence, dynamism and complexity of relationships, but also opportunism and asymmetry (Dal-Soto, Monticelli, 2017). Coopetitive relationships occur between enterprises that have convergent cooperative goals and divergent competitive goals (Hamel et al., 1989). Enterprises connected by this relationship cooperate in some parts of the value chain, and in others they compete (Cygler, 2009). It is therefore an extremely complex phenomenon, meaning the occurrence of two opposing streams of relationships: competition and cooperation, and is characterized by significant variability in intensity during a period of time (Rogalski, 2011; Czakon, 2017).

Coopetition is not a homogeneous phenomenon. The richness of coopetitive relationships and their heterogeneity is evidenced by numerous classifications appearing in the source literature (Bengtsson et al., 2010,;Dagnino, Padula, 2002; Luo, 2007; Nalebuff, Brandenburger, 1997; Czakon, 2010). Coopetitive relationships can be dominated by cooperation, balanced or dominated by competition. The type of a coopetitive relationship depends on many factors, including market requirements, customer expectations, institutional environment, entities' resource autonomy, pressure to integrate the global value chain and others (Bengtsson, Kock, 2000; Stańczyk-Hugiet, 2011).

Some researchers distinguish coopetitive relationships in parts of the value chain located close to a customer (sales, marketing) as well as in those located far from a customer (logistics, research and development, production) (Lindström, Polsa, 2016). In modern, turbulent times, it often turns out that enterprises are forced to implement both the strategy of competition and the strategy of cooperation (Lado et al., 1997). Coopetition may be a strategy for achieving a competitive advantage by individual participants of a competitive cooperation network, but it may also be generated at the level and in relation to other entire competitive networks. There are a number of benefits that entering into coopetitive relationships brings. The most frequently mentioned are:

- cost reduction,
- risk and knowledge sharing,
- synergy, increased market share,
- increase in efficiency indicators,
- development of new technologies,
- acquisition of resources (Gnyawali, Park, 2009; Czakon, 2007; Zakrzewska-Bielawska, 2014).

Unfortunately, coopetition can also encourage the emergence of various pathologies and creation of new types of risk. This can be a limitation of the flexibility and independence of an enterprise, opportunism, emerging conflicts of interest and difficulties in coordinating coopetitive activities. All these negative effects can contribute to the reduction of efficiency and competitiveness of coopetitors (Baumard, 2009; Bonel, Rocco, 2007). Therefore, it is worth looking at the factors that determine the success of coopetition, identified with the generated positive above-average effects.

Referring to the logistics services market as an organized structure and logistics service providers operating on it, they can also generate various types of indirect interactions that have the hallmarks of both competition and cooperation. Aside from extreme forms of competition-cooperation relationships, it is possible, in efforts made by logistics services providers, to designate such an area of cooperation that would allow to partially develop the existing resources and set common goals in such a way as to enable each party to ensure:

- creation of specific added value,
- provision of mutual benefits,
- sharing a partial convergence of interests, e.g. courier services market, mobile telephony operators, etc.

An important problem is, therefore, to find such an optimum that, on the scale of intensity of processes of both competition and cooperation, would allow, on the one hand, to better use the resources, and, on the other hand, to achieve a higher level of benefits that is possible on a given market of logistics services. Competition processes can be developed either independently or jointly with other enterprises. Independent development of competition processes is the simplest way, but at the same time it is only recommended for two types of enterprises: small ones – operating only locally and/or in the niche sector, and large ones, which can use the effects of economies of scale. However, in the era of increasing globalization and environment turbulence, even these large enterprises are forced to develop their competitiveness in conjunction with other enterprises. It can be assumed that the second option is more pro-developmental.

The symbiosis of competition and cooperation may lead to the emergence of a new way of regulating the behaviour of enterprises, i.e. coopetition. The structure of coopetitive relationships between logistics service providers is presented in Fig. 2.

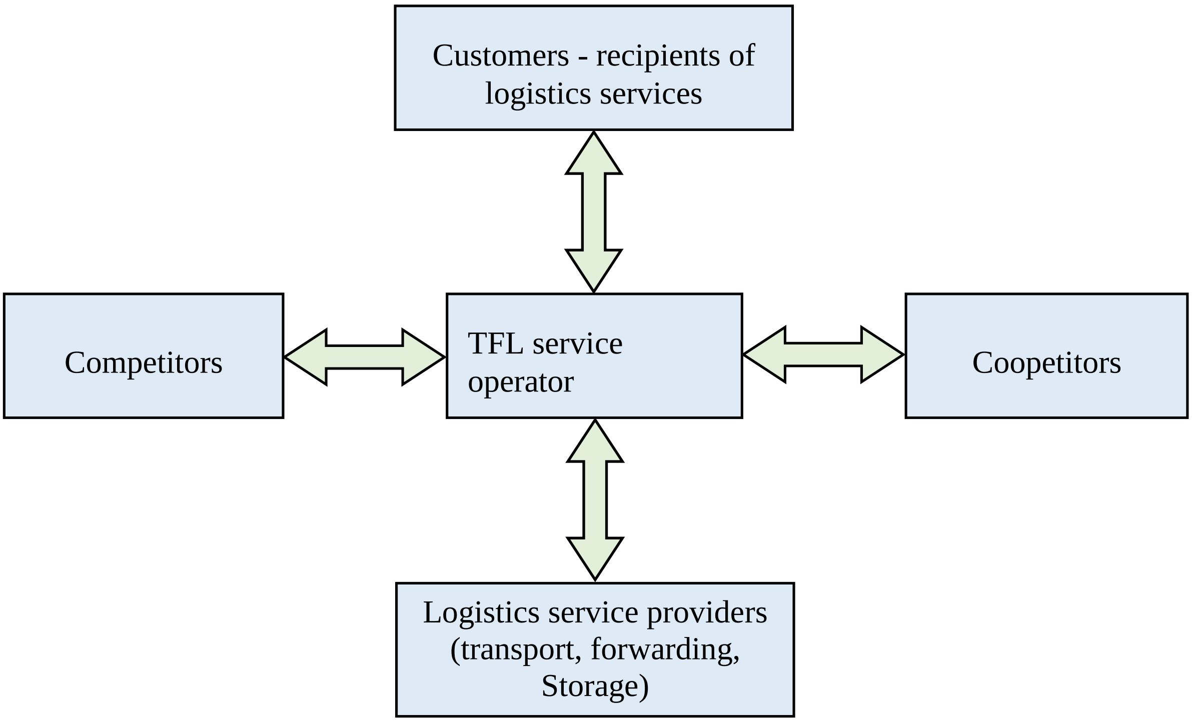

Figure 2. Structure of coopetitive relationships of logistics services.

Source: Brandenburger, Nalebuff, 1996; Jankowska, 2009; Frąś, 2020.

Coopetition is an attempt to look for a "third way" that would be an alternative to competition and cooperation leading to one type of coopetitive relationships between entities on the logistics services market. The essence of coopetition is expressed in the fact that logistics service providers, striving to gain a competitive advantage thanks to specific resources, competences and a specific market position, try to integrate their strengths with current rivals, suppliers, customers and other partners in the process of providing logistics services. Coopetition is, on the one hand, a joint use of their competitive potential by logistics operators (coopetitors), and on the other – constant competition for cost leadership, share in the logistics services market and stimulation of technological changes in the TFL sector.

4. Instruments and model for measuring and improving the quality of logistics services in competitive cooperation

In many publications related to the subject of quality management (Wolniak, Skotnicka, 2011; Wolniak, 2013, 2016; Sułkowski, Wolniak, 2018; Frąś, 2011, 2020, 2021; Zakrzewska-Bielawska, 2014; Rydzkowski, 2011; Hamrol, Mantura, 2005; Detyna, 2011), one can find an approach which states that tools, techniques and methods, referred to in the literature as instruments, implemented for quality management are extremely important in supporting the development and improvement of the quality of products purchased by customers. The spectrum of tools and methods as well as the principles of measuring, evaluating and improving the quality of logistics services, which is contained in the source literature, is broad (Wolniak, 2017; Hamrol, Mantura, 2005; Zimon, 2013, Frąś, 2013, 2021 and others). The attempt to define quality assessment instruments by various authors makes it difficult for the reader to understand unambiguously their essence allowing to assess the quality of services, including logistics.

Quality management instruments are used to monitor the entire production cycle, from the design stage, through production, to the control of the finished product or the service purchased. All tools and methods are characterised by a planned, repeatable and scientifically based approach to their use.

Based on the above-mentioned research (Wolniak, 2017; Hamrol, Mantura, 2005; Zimon, 2013; Frąś, 2013, 2020), the following typology can be presented:

- *quality management principles* (QMP) – define the attitude of an enterprise and its employees to generally understood quality problems, do not give operational guidelines, and the results of their application are difficult to assess on an ongoing basis, but constitute canons of conduct in shaping the quality of products, services and processes.
- *quality management methods* (QMM) – are characterized by a planned, repeatable and scientifically based way of proceeding in the execution of quality management tasks, they are more complex than quality tools, they use data collected through them, they allow to shape the design quality and the quality of workmanship, both of products and services.
- *quality management tools (QMT*) – are used to collect and process data related to various aspects of quality management, they are distinguished by simplicity and they are used to collect and process data related to various aspects of quality management, their impact is limited in time, their effective use usually requires connection with methods.

Various classifications of quality management instruments can be found in many source literature publications (Wolniak, 2017; Wolniak, Skotnicka, 2008; Zimon, 2013; Frąś, 2013, 2015 and others). One of the universal classifications, due to the complexity and use of quality measurement instruments, is presented in Table 1.

Table 1.
Key instruments of quality management in logistics

	Characteristics and manner of impact on the quality of services	Examples
Quality management principles	Long-term impact – define the strategy of enterprise development. They go beyond the framework of an enterprise. They do not give operational guidelines. The results of the application are difficult to assess on an ongoing basis.	Deming, Juran and Crosby principles. "Zero defects" principle. Teamwork principle. Kaizen – the principle of continuous improvement, enhancement and perfection.
Quality management methods	Medium-term impact. They allow to shape the design quality and the quality of workmanship. They are based on generally accepted algorithms of conduct.	QFD – quality control by the customer. Value analysis. SPC – statistical process control. FMEA – of a process, product. Servqual – measuring the quality of services. CSI – customer satisfaction index. DOE – design of experiments.
Quality management tools	Short-term (operational). The results of the application are visible "almost" immediately, but effective use requires a combination with methods.	Traditional tools: Flowchart, Ishikawa diagram, Pareto chart, Histogram, Control sheets, Correlation graphs, Control chart. New quality management tools: Affinity diagram, Relationship diagram, Systematic diagram, Matrix diagram, Matrix data analysis, PDPC chart, Arrow diagram.

Source: Frąś, 2013, 2021; Hamrol, Mantura, 2005; Wolniak, Skotnicka, 2008.

Instruments used to solve quality problems in enterprises in coopetition in the area of analysis and evaluation and improvement of the quality of logistics services in the Deming Cycle standard and the ISO 9001 quality management system are shown in Fig. 3. It is an original model of instruments, developed on the basis of the analysis of bibliographic sources, own reflections and many years of experience in this area. This model is related to the extent of the impact of these instruments in enterprises in the coopetition network.

The instruments are characterised by short, medium and long-term impact. Their effective use is noticed in combination. Then the results of activities are visible almost from the very beginning of their application and have a synergistic effect.

The principles, tools and methods for analyzing, evaluating and improving the quality of services in the TFL sector presented in the model are widely known in the source literature and will not be discussed separately due to the volume limitations of this paper (Hamrol, Mantura, 2005; Wolniak, 2013; Wolniak, Skotnicka, 2011; Frąś, 2015; Zimon, 2013).

In the conceptual research of the model creation, the priority in the selection of tools and methods was a risk occurring in coopetition. Hence, among the methods for solving quality problems of services (Frąś, 2011, 2015), the key method of analyzing failure modes and effects - FMEA was indicated, which takes into account risk estimation using the point method.

Risk estimation using the FMEA method has several aspects, allows to assess the level of risk of coopetition, manage the risk of this cooperation and is a strategic determinant of the development of competitive cooperation in a network of enterprises. Solving quality problems using this method is supported in the ISO 9001 quality management system (requirement 6.1 - activities aimed at determining risks and possibilities) (Frąś, 2020).

It is also important to use the Ishikawa diagram in the model to solve quality problems of services, in which, in addition to the main causes of inconsistency, i.e. man, machine, material, management, method, environment, the assessment of a risk occurring in competitive cooperation is also important (Frąś, 2011).

This will constitute a synergy or antagonism of both methods – FMEA and the Ishikawa diagram, and thus confirm or exclude a risk and its level as a positive or negative phenomenon in the coopetition of enterprises.

The final part of the paper presents the idea of continuous improvement of the quality of logistics service processes in coopetition between enterprises using the Deming cycle (Fig. 4).

The above-presented approach to continuous improvement of processes and products and the PDCA method used for this purpose, have their roots in focusing on customer needs, striving for quality, continuous improvement of processes and services, efficiency, cooperation and mutual respect, using *internal motivation* as a natural force for development (Hamrol, Mantura, 2005). All of them break the paradigm of management of the 19th and mid-20th centuries (Taylor, 1911, scientific management, use of *external motivation*) and introduce the paradigm of learning organizations (Deming, Senge, 1990). They have their place in **empiricism**, i.e. experiencing, observing and collecting the necessary data, and on their basis, the existing qualitative activities of production and service processes are improved (Frąś, 2013). Such an activity improving the quality of logistics services in the coopetition of enterprises is presented below in Figure 4 and is based on the PDCA Deming Cycle. This is a basic pattern in the implementation of Lean and Agile or Toyota Kata methodologies.

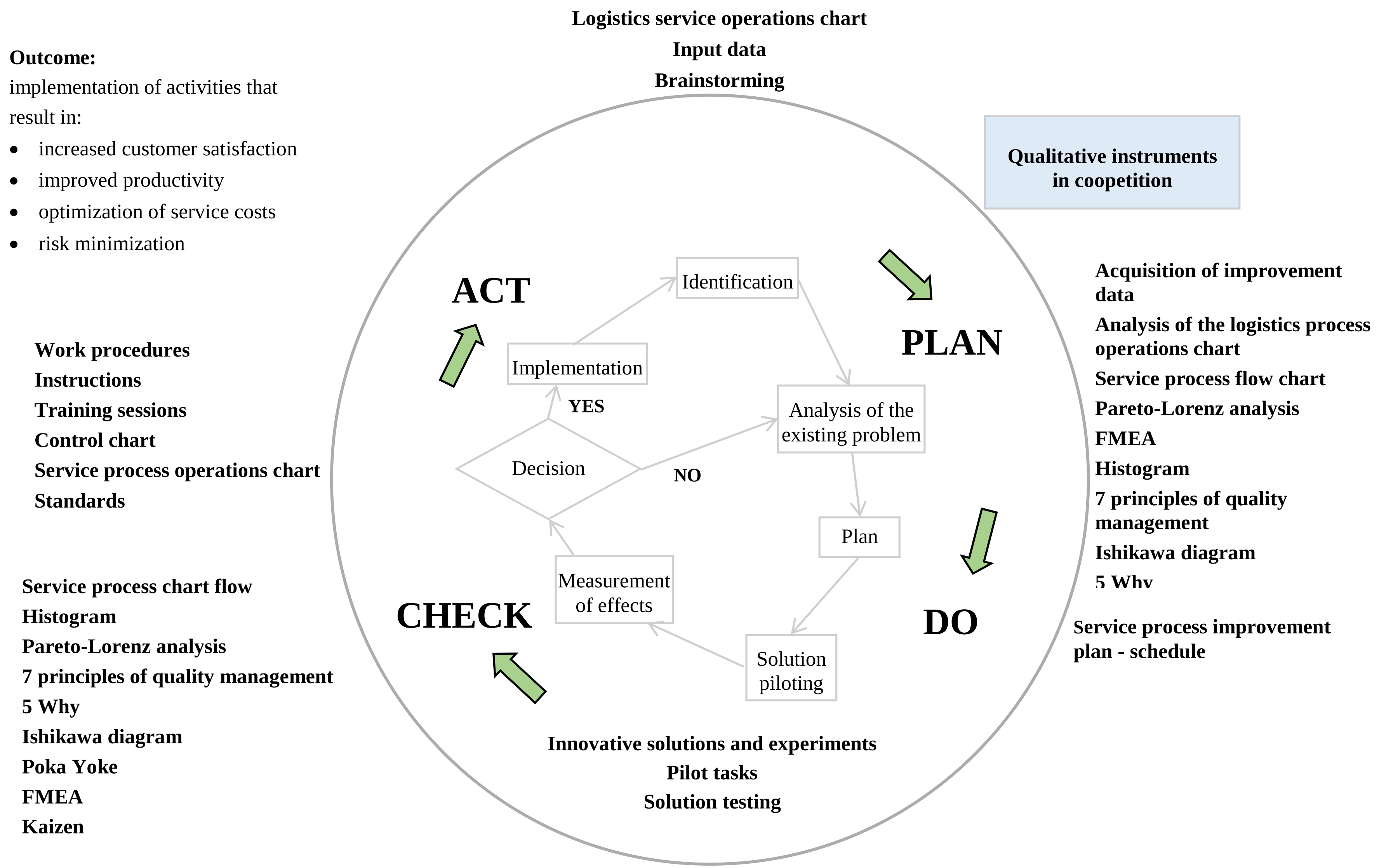

Figure 3. Model of instruments for solving quality problems of logistics services in the coopetition of enterprises in the Deming Cycle and ISO 9000 standards.

Source: author's own development.

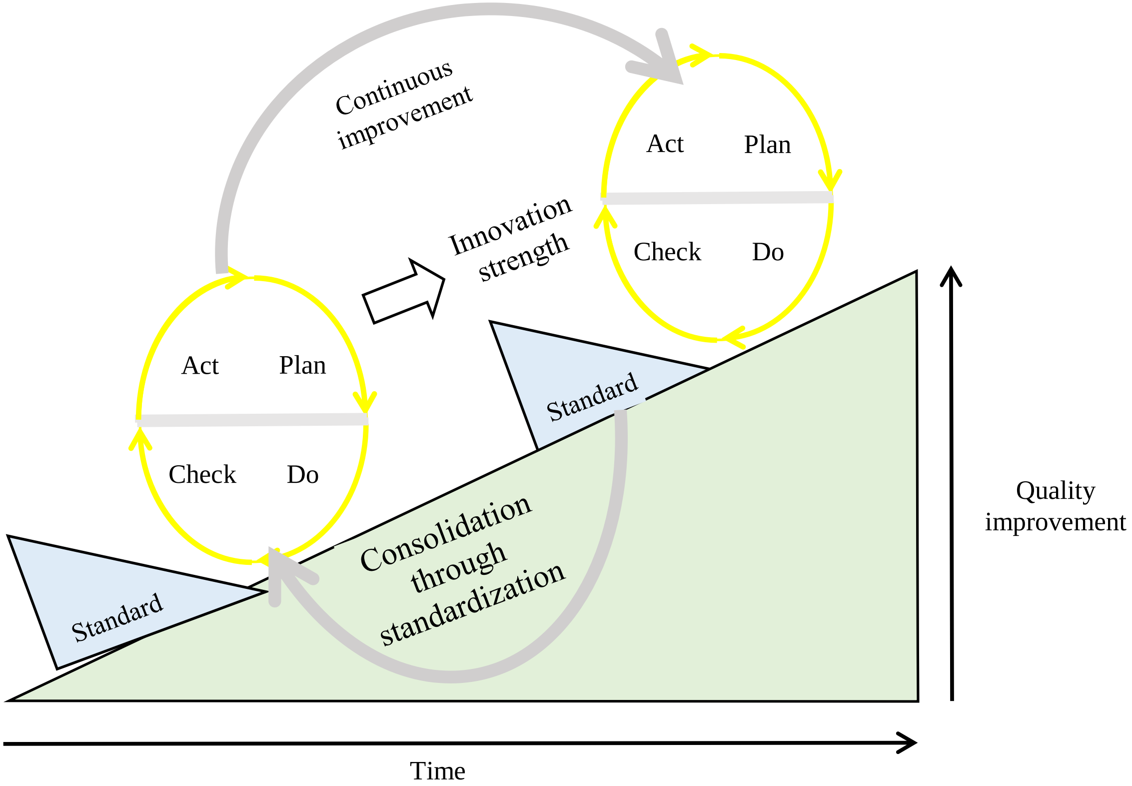

Figure 4. Continuous improvement of the quality of processes in logistics services in the coopetition of enterprises.

Source: own development.

Summary

Using the presented model of instruments in shaping and improving the quality of logistics services in the conditions of the competitive cooperation of enterprises will effectively solve the problems of quality logistics services in competitive cooperation in the Deming Cycle and ISO 9000 standards.

The model of instruments, due to the extensive possibilities of its use at many stages of the product or process life cycle, can be very useful and constitute a convenient tool for shaping the quality of logistics services in enterprises involved in coopetition, however, it requires further empirical research.

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SELECTED PROBLEMS OF SPATIAL ORDER AND CULTURAL HERITAGE IN THE ASPECT OF THE ECONOMIC DEVELOPMENT UNDER THE INFLUENCE OF EUROPEAN INTEGRATION AND GLOBALISATION ON THE EXAMPLE OF TORUŃ AND ITS SURROUNDINGS

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Purpose: The main reason for writing the article is a will to research the current problems of spatial order and cultural heritage in Toruń and its neighbourhood.
Design/methodology/approach: There were three methods used for the research – the document examination method, the quantitative-statistical method, and the observational method. The objectives can be considered as achieved. The main subject scope of the paper was applying a very broad and multidisciplinary approach to the topic, considering whether globalisation and European integration, in terms of economic development, have an impact on the condition of the architectural space, especially the spatial order and the cultural heritage in Toruń and its closest vicinity.
Findings: The situation of spatial development, town planning and preservation of cultural heritage in Toruń and its surroundings is not in the best condition. The built environment in this area does not experience such a harmonious and aesthetic development as it could. In many cases, one can talk about a decrease in different kinds of its values, for instance, cultural ones, perhaps except the financial values of real estate. Important drawbacks causing this state of affairs are market mechanisms, pressure from investors, and the inefficiency of blocking and securing mechanisms, which is related to the wrong law and weak management.
Research limitations/implications: The main problems of spatial order and cultural heritage are very complex and require further research.
Practical implications: The paper is connected with practice in the subject field.
Social implications: The article's social implications are an important value of the work.
Originality/value: Even though this is not the first voice about spatial chaos in Poland, the situation is fundamentally not improving. The problem has been repeatedly confirmed not only in publications of scientists and specialists but even in government documents. In this study, an attempt was made to draw attention to a special, interdisciplinary aspect of the issue. The value of the paper is putting together many different issues which influence spatial order and cultural heritage. It is addressed to both scientists and monument lovers.

Keywords: Cultural heritage, spatial order, development, town planning, architecture, European integration, globalisation, Toruń.

Category of the paper: Research paper. It can also be additionally regarded as a review paper.

1. Introduction

In this text, the author tried to collect some information from various fields to consider the title problem. Although this article concerns problems that have already been raised many times in other publications, i.e. spatial chaos and the unsatisfactory situation of tangible cultural heritage in Poland, there is still no clear answer to the question of how their future will look like. Observing the spatial reality for years on the example of Toruń and its surroundings, it becomes clear that two seemingly contradictory phenomena occur simultaneously – on the one hand, the undeniable success of human and economic development, on the other hand, the mess in the spatial planning of buildings and the poor situation of cultural heritage, including the poor state of monuments. Despite this noticed temporal and local coincidence between these two different states, it does not prove that the first one directly caused the second one. Errors, shortcomings and threats (e.g. legislation, administration, pressure from investors) have already been identified in earlier documents and other publications.

2. Methods

The main scientific method used in the research was the document examination method, including the query of source materials, for instance, legal acts, documents and other publications.

In addition, the quantitative-statistical method was used, too. This method was concerned mainly with statistical data on Human Development Index (HDI) and the gross domestic product (GDP) indicators.

Finally, the social research method – based on observations – was also important. The observational method was focused on the case study of the situation of spatial order and cultural heritage in Toruń and its development. Observations were conducted from various fields, but above all from the perspective of an architect operating in the market and simultaneously a resident interested in the good of the local community. The very extensive problem of the paper leads to the search for a way to deal with it properly. Among others there are involved in the topic many, sometimes quite different disciplines. On the one hand, there are spatial development, town planning, architecture, conservation and restoration of historic buildings. On the other hand, important issues can also be provided by, among others, such areas as economy, politics, administration, management, sociology and law.

3. Results

The economic transformation, after the times of the People's Republic of Poland (in short in Polish: PRL) and people's democracy, began in 1989. After the initial problems and significant social costs of this undertaking, there was an opening to the world and a tightening of relations with it. Poland became a member of the European Union on May 1, 2004. European integration, which, of course, started dozens of years earlier, has led to increased well-being in this new member country from the beginning of the 21st century.

There was a huge economic gap between Poland and Western Europe in the early 90s. It also was a vast distance in the human development level between this state and the most developed countries in the world. But this gap over thirty years has been significantly reduced.

This favourable trend is noticeable both with the naked eye and in numerous publications and statistics, such as the study of the gross domestic product (GDP) level, the Human Development Index, the Sub-national HDI, the OECD Better Life Index, the OECD Regional Well-Being and others. For instance, Poland ranks very high in the Human Development Report 2021/2022 – with an HDI (Human Development Index) rank of 34 (somewhere about the middle of the very high human development group of 66 countries) and an HDI value of 0,876 (United Nations Development Programme, 2022, p. 272). In turn, another table of this study also shows the previous values of this indicator and the average annual trends in its growth. In the case of Poland, the records of this indicator in the past for selected years (given in brackets) were as follows: 0.716 (1990), 0.793 (2000), 0.841 (2010), and 0.876 (the same in 2020 as in 2021). So the total increase of this indicator in the years 1990-2021 was 0,16. These values indicate a significant upward trend during this period.

Moving to the regional level, information published by various institutions can be used. Using the GlobalDataLab's data conducted by the Institute for Management Research at Radboud University in the Netherlands, it can be read that the Sub-national HDI index (v. 5.0) for the Kuyavian-Pomeranian Voivodeship in the period 1990-2019 also increased significantly (by 0.15), which can be seen in the following figures (years given in brackets): 0,712 (1990), 0,786 (2000), 0,824 (2010), and 0,862 (2019) (Sub-national HDI 2019 – Maps, 2022).

The general view of data mentioned below, concerning the regional gross domestic product (GDP) per capita, provided by such an institution as Eurostat, gives a clear picture of the economic success of the discussed area – both on a national and regional scale. Also, comparing the GDP of regions with the average value of this indicator for a given year in the European Union (annual, purchasing power standard, per inhabitant percentage of the EU27 from 2020 average), it turns out that significant economic growth was achieved in each of the Polish regions from the moment of joining the Community in 2004 until today, or to be exact to latest records. Poland was divided into 17 regions according to NUTS 2 (nomenclature of territorial units for statistics), where Mazowieckie Voivodeship was divided into two regions in this classification – Warszawski Stołeczny and Mazowiecki regional. In the case of the Kujawsko-Pomorskie Region (which is in NUTS 2 the same as the Kuyavian-Pomeranian Voivodeship), where Toruń is located, the readings of GDP at current market prices by NUTS 2 measured in PPS (i.e. purchasing power standard) per inhabitant in percentage of the EU27 (from 2020) average were: 43% in 2000, 45% in 2004, 58% in 2019, and 62% in 2020 (latest research results). Eurostat dataset enables also taking an even closer look at the city selected in the work and its surroundings – at the regional statistics by NUTS 3 (another geographical level) classification. This is the lowest classification available and therefore the most accurate. Toruń is located in the Bydgosko-Torunski Region, which consists of four units. Apart from Toruń, there is another city – Bydgoszcz, and two land units surrounding them – consecutively Toruń County and Bydgoszcz County. The following readings of GDP at current market prices by NUTS 3 measured in PPS per inhabitant in percentage of the EU27 (from 2020) average were recorded values for the Bydgosko-Torunski Region as follows: 56% in 2000, 57% in 2004, and 73% in 2019 (latest research results). It is visible that the gradual development of this region is faster than the average for the entire European Union. For Poland, i.e. the whole country, the above indicator looks like this: 48% in 2000, 52% in 2004, 73% in 2019, and 76% in 2020 (Eurostat, 2023a).

A similar improvement was also recorded using the unit of measurement of the GDP indicator in Euro (i.e. not in PPS) per inhabitant in percentage of the EU27 (from 2020) average – for the Kujawsko-Pomorskie Region, this value measured as a percentage was 24% in 2000, 22% in 2004, and 37% in 2020. Comparatively, this indicator for Poland was: 27% in 2000, 25% in 2004, and 46% in 2020 (Eurostat, 2023b).

By creating a statement presenting the dynamics of GDP growth, one can even more clearly see the huge development that Poland, and all its regions, including Kujawsko-Pomorskie Region. Using data published by Eurostat in a table entitled *Gross domestic product (GDP) at current market prices by NUTS 2 regions*, a statistic of the GDP growth dynamics of Poland and its regions (in NUTS 2 classification) compared with EU 27 countries (2020) in percentage (where values for the year 2004 equals 100%) (Eurostat, 2023c). Figure 1 presents such a summary, which shows the average for the European Union (27 member states in 2020), Poland and all its regions, according to the NUTS 2 geographical level (see Figure 1).

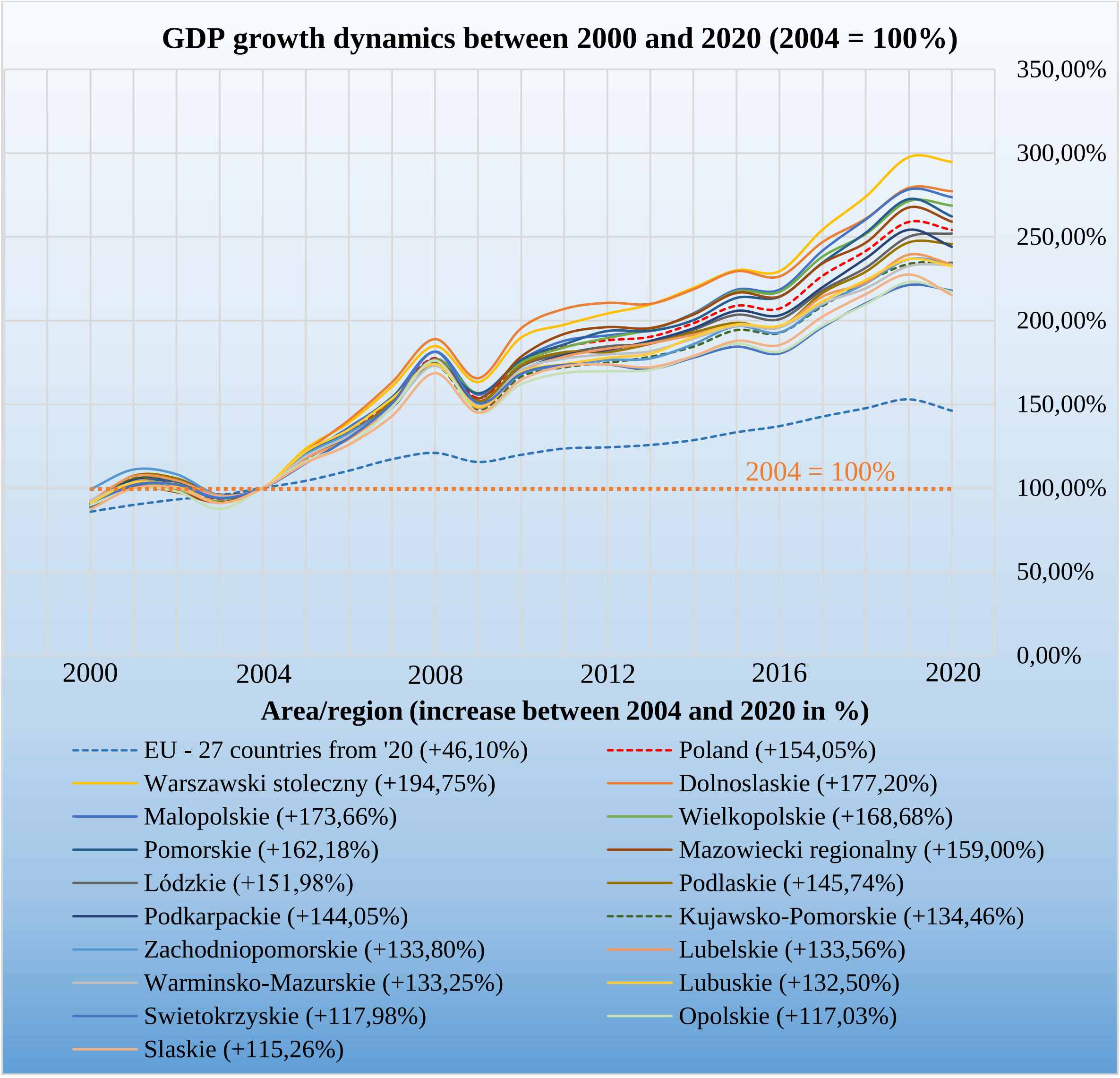

Figure 1. GDP growth dynamics of Polish regions compared with EU 27 countries (2020) in percentage (2004 = 100%).

Source: own study (2022) based on data published by Eurostat in a table entitled *Gross domestic product (GDP) at current market prices by NUTS 2 regions* (Eurostat, 2023c).

These above-mentioned data showing significant economic and human development in Poland and its areas, including Toruń and its vicinity, make it possible to assume that land use and settlement areas have also increased in recent years. Other Eurostat data indicate this sufficiently clearly. As it turns out, there is a significant increase in land use and settlement area in Poland. This applies also to the land use in the voivodeship where Toruń is located. The relevant data can be found in the dedicated sections of the Eurostat dataset – Land use overview by NUTS 2 regions (Eurostat, 2023d) and Settlement area (Eurostat, 2023e).

This convergence between significant economic and human development and the increase of land use and settlement area in Poland is natural because built development is always an important element of the entire socio-economic development of countries. This has its special aspect in this country due to the relatively small stock of available flats. As a result, state policy is focused on making it as easy as possible for residents to meet their housing needs, especially in a situation where the rulers, despite promises made for years, are unable to ensure that these needs are met to a sufficient extent. For this reason, almost any measures that will facilitate construction investments in the area of housing, especially single-family housing, become acceptable. And the price for this can be high because the problem is serious. One of such costs is often spatial chaos in Polish cities, especially around their borders.

One of the foundations of spatial development and urban planning is the issue of **spatial order**. According to the *Act of 27 March 2003 on Spatial Planning and Development* (title translated into English from Polish), which is a binding legal act in Poland, spatial order is understood as "a shape of space that creates a harmonious whole and takes into account all functional, socio-economic, environmental, cultural and compositional and aesthetic conditions and requirements in orderly relationships” (Ustawa z dnia 27 marca 2003 r…, 2022, p. 4).

One of the most important documents dealing with spatial development is Koncepcja Przestrzennego Zagospodarowania Kraju 2030 (title in English: *National Spatial Development Concept 2030*) was adopted by the Polish Council of Ministers on 13th December 2011. It comprehensively covered the issues of spatial development in Poland at the national and regional levels. As a result of legislative changes, its provisions became invalid in 2020 and so far nothing has satisfactorily replaced it. The last of the six goals of the country's spatial development policy included in this document was: *Restoring and consolidating spatial order*. According to it: “Spatial order is the main objective of spatial development at all levels of planning: national, regional, local and functional. […] In spatial development, spatial order means the order and harmony between various components of space and functions of spatial structure, constituting a criterion for assessing the quality of changes in land use in relation to the efficiency of socio-economic processes and the quality of life” (Ministerstwo Rozwoju Regionalnego, 2012, p. 163).

Unfortunately, the situation in terms of spatial order has not been the best for many years. There is no room here for an in-depth analysis of this, and there is no need for it because a lot of serious studies have already been written, also in the recent period. It is worth mentioning here, for example, such publications as *Polska Polityka Architektoniczna. Polityka jakości krajobrazu, przestrzeni publicznej, architektury* (title in English: *Polish Architectural Policy. Landscape, public space and architecture quality policy*) (Polska Rada Architektury et al., 2011), *Polska Polityka Architektoniczna. Studia i szkice* (title in English: *Polish Architectural Policy. Studies and sketches*) (Chwalibóg, 2020), Studia nad chaosem przestrzennym (title in English: *Studies on Spatial Chaos*) (Polska Akademia Nauk Komitet Przestrzennego Zagospodarowania Kraju, 2018), *Narodowa Strategia Rozwoju Kultury na lata 2004-2013: Narodowy Program Kultury „Ochrona zabytków i dziedzictwa kulturowego” na lata 2004-2013* (title in English: *National Strategy for the Development of Culture for 2004-2013: National Culture Program "Protection of monuments and cultural heritage" for the years 2004-2013)* (Ministerstwo Kultury), and *Strategia Rozwoju Kapitału Społecznego (współdziałanie,* *kultura, kreatywność) 2030* (title in English: *Social Capital Development Strategy (cooperation, culture, creativity) 2030* (Strategia Rozwoju Kapitału Społecznego (współdziałanie, kultura, kreatywność) 2030, 2020).

Figure 2. A satellite image of terrain near the eastern side of Toruń – the villages Lubicz Górny, Krobia and Brzozówka that are affected by urban sprawl.

Source: Geoportal (2022), https://geoportal.gov.pl (Geoportal Krajowy).

An important problem of Polish cities is the **inconsistent shaping of urban areas**, including both public and private spaces, free for development. It has many faces, and it is one of them is **urban sprawl** – suburbanisation, which is a global problem of spatial development, exists also in Poland. This phenomenon does not only affect Silicon Valley, the vast neighbourhoods of the world's largest metropolises. Gradually, it also appeared in Poland, not only near the metropolis of Warsaw but in numerous places near local centres of socio-economic activity, scattered throughout the country. In the vicinity of the capitals of voivodeships, as well as the largest cities, chaotic suburban development has appeared, the location of which is mainly due to economic reasons – primarily lower prices of building land than within the boundaries of a large city. The extensive neighbourhood of Toruń from the east and northeast is an example that illustrates this phenomenon well. The villages located there - e.g. Złotoria, Lubicz Dolny, Lubicz Górny, Grębocin, Krobia, Brzozówka, Głogowo - are experiencing an investment boom caused by the intensive and largely chaotic development of single-family houses erected there, which *de facto* become new residential districts of the main city, although formally they do not belong to it (see Figure 2).

An important in this field document is the *Polish Architectural Policy. Landscape, public space and architecture quality policy*, which was already mentioned above. It was published for the first time in 2009, and in 2011 its second edition was developed by the Polish Architecture Council (in Polish: Polska Rada Architektury), SARP (Association of Polish Architects), TUP (Society of Polish Urban planners) and the Chamber of Architects of the Republic of Poland (in Polish: Izba Architektów Rzeczypospolitej Polskiej). It contains an unambiguous critique of the state of Polish space – inconsistent shaping of public spaces, including urban centres, urban substandard of newly erected buildings and housing estates, a random expansion of suburban zones, the distraction of buildings in agricultural and recreational areas, destruction of cultural and natural landscapes, including contemporary culture, the ugliness of suburban and rural areas, etc.) (Polska Rada Architektury et al., 2011, p. 8). There were also causes of spatial chaos and an appeal regarding the necessary counteracting the process of anarchizing Polish space, because: "Matters of landscape, public space and architecture, cultural and natural heritage, including contemporary cultural goods must be considered and resolved with the highest attention" (Polska Rada Architektury et al., 2011, p. 9). It describes in detail nine important problems of Polish architectural policy. In its part dedicated to the spatial planning system, there is stated that cities, especially their periphery, grow chaotically, because of no spatial plans in a significant part of urban areas. Construction and aggressive external advertising destroy the landscape. The basic planning tool of spatial planning – local spatial development plan – is not widely used, because local authorities are not too much interested in it. Such a situation promotes *ad hoc* private interests and leads to the degradation of space. Another problem presented in this document is the protection of cultural heritage, including also contemporary cultural goods. A devastating diagnosis was listed there, among others: the low rank of the issues of cultural heritage protection in the minds of public administration authorities and other participants in space design and management processes, cultural heritage protection tools in space planning and management processes are not used and protection of monuments is understood only as the desire to fulfil statutory obligations, incorrect interpretation of respect for tradition, historical objects are often renewed in a way that blurs their original values in the name of concern for incorrectly understood aesthetics and/or raising the energy standard, the social awareness of the need to protect your cultural heritage is not common, the construction of civil society, landscape protection and monuments are associated with limiting freedom and seem to be contrary to the interests of residents undermining the right of ownership (Polska Rada Architektury et al., 2011, pp. 17-19).

Recently, as a kind of continuation of the material described above, the National Institute of Architecture and Urban Planning published in 2020, edited by Krzysztof Chwalibog, its next instalment entitled *Polish Architectural Policy. Studies and sketches* Adam Kowalewski, author of the chapter entitled the crisis of spatial management, indicates that: "Spatial economy crisis, urbanization pathologies and growing spatial chaos generate huge social and economic losses.

[...] The last 10 years have brought a special severity of negative phenomena related to economic development and investment boom. As a consequence, the distraction of buildings and uncontrolled, destructive suburbanization took the size unheard of in civilized countries. [...] This crisis is confirmed by reports and research, as well as the speeches of professional and local government organisations" (Kowalewski, 2020, p. 27). The text mentions the costs of spatial chaos and losses, primarily social and economic, in many areas (e.g. settlement, transport, real estate market, infrastructure, environment, etc.) in this respect. It is also recalled that the costs of spatial chaos are PLN 84.3 billion, which were presented in another study, originating from 2018 entitled *Studies on Spatial Chaos* (Polska Akademia Nauk Komitet Przestrzennego Zagospodarowania Kraju, 2018), only include documented costs, and in fact, they are much higher. Because they are either not monitored or they cannot be counted thoroughly (Kowalewski, 2020, p. 32). For example, one of the many types of spatial chaos costs is its effects on the real estate market, which was more accurate in one of the chapters of the second volume of the book *Studies on Spatial Chaos*. There were, among others various economic, social and environmental effects - both direct and indirect (Maćkiewicz et al., 2018, pp. 280-316). And this is just one of many negative aspects of spatial chaos and the costs it causes.

In another important document – *National Strategy for the Development of Culture for 2004-2013: National Culture Program "Protection of monuments and cultural heritage" for the years 2004-2013* – it was noted that: "An extremely important function of the state is the patronage of culture, even in times of prosperity. The state, by conducting an appropriate cultural policy, can maintain continuity and prevent the loss of cultural heritage. The commercial sector is usually unable to play a similar role due to frequent and rapid economic fluctuations, even in the most developed economies of Europe" (Ministerstwo Kultury, p. 14). Of course, it is difficult to say what part of the gross domestic product is accounted for by cultural heritage, but it is certainly a significant share.

The document entitled *Social Capital Development Strategy (cooperation, culture, creativity) 2030*, which was adopted by the Council of Ministers in 2020, also paid a lot of attention to the unsatisfactory situation of monuments in Poland nowadays. According to it: "Cultural heritage, together with collective memory, form the basis for the formation of social bonds. Monuments, which are one of the essential elements of heritage, are an emanation of the values with which the communities that created them in the past identified themselves. The creative interpretation of monuments is therefore the foundation for the formation of contemporary collective identity in various dimensions and aspects: local, regional, national, social, cultural, political, etc. Care for the past preserved in monuments can therefore foster solidarity within local communities, as well as allow for the development of sensitivity to the heritage of other communities" (Strategia Rozwoju Kapitału Społecznego…, 2020, p. 27). Besides, according to the authors of the *Strategy*: "All historic buildings require special storage and protection conditions. Meanwhile, **only less than 1/3 of historic buildings listed in the**

register do not show signs of damage that would justify the need for renovation interventions. Over 70% of the registered objects were assessed as showing signs of destruction. It is therefore clear that the effective preservation of heritage requires the intensification of actions implemented by the state in this area. Responsible development should also be understood as caring for the established, e.g. in historic buildings, the achievements of past generations, without which the process of strengthening social capital will be significantly hindered" (Strategia Rozwoju Kapitału Społecznego…, 2020, pp. 27-28).

The facts quoted above illustrate, of course, only to a limited extent, the satisfactory progress in the economic and, more broadly speaking, human development of Polish regions in the last twenty years, and, on the other hand, the unsatisfactory, even alarming situation of the space of cities and villages, including the cultural heritage located in them.

4. Discussion

At the beginning of this chapter, it is worth trying to take a broader look at the problem under consideration. It would be much easier to find coincident relations between the construction and real estate industries and European integration and globalisation, for instance by observing changes in land cover, funds, business co-operations etc.

Can urban sprawl be considered as a kind of backlash of the excessive and fast economic growth, which has its roots in globalisation and integration of European Union Member States? This phenomenon has an impact on the cultural landscape, which is changing from agricultural to suburban in an uncontrolled and uneven way. Often, towns resemble vast residential districts, although formally it is still a village. Here's another economic aspect – the inhabitants of these areas, who in large part come from the main city, do not want their areas to be attached to this central centre. They prefer to pay taxes locally and thus have a greater guarantee that they will be used for the benefit of the local community.

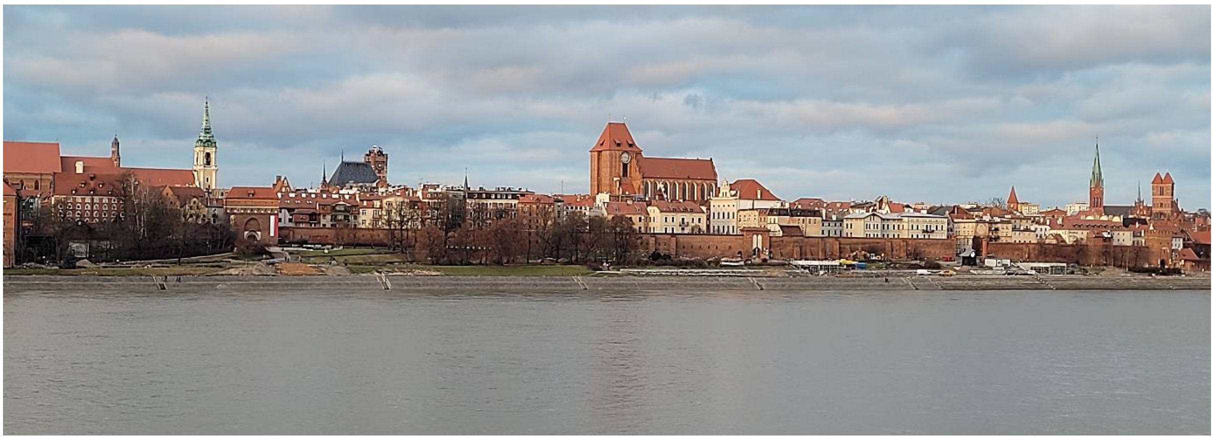

Figure 3. The panorama of the waterfront of the old town of Toruń.
Source: own study (2023).

There is no room here for a broader discussion of the theoretical foundations on which contemporary spatial and town planning, architecture and conservation of monuments are based. However, because the old town of Toruń was inscribed in 1997 on the List of World Cultural Heritage Sites and is generally considered to be one of the most valuable historical cities, it is worth mentioning here the most important issues in the field of monument protection. This area looks particularly picturesque from the side of the Vistula river, creating a wonderful panorama of the cultural landscape – a place created by nature and man with natural elements (water, greenery, embankment with an escarpment) and anthropogenic elements (buildings, roads, squares, riverside boulevard), which form a harmonious and extremely valuable whole (see Figure 3).

The author of this article has written many times about the protection of monuments. An interesting addition to the considerations contained here may be reading his article *The influence of architectural practice in Poland on cultural heritage – selected problems*, published in the IOP Conference Series: Materials Science and Engineering (Furmanek, 2019) or a chapter (in Polish) called *Odpowiedzialność w zawodzie architekta a miasto historyczne – wybrane problemy na przykładzie Torunia*, which is included in the post-conference monograph, edited by K. Guranowska-Gruszecka, *Miasto zwarte. Miasto rozproszone. Materiały ogólnopolskiej konferencji Doktorantów Wydziałów Architektury. Warszawa, 4-5 listopada 2011* (Furmanek, 2011). In the first one, there is some information about the situation of the profession of an architect in Poland along with selected theoretical aspects of the conservation of ancient monuments and their importance for architects, as well as the free-market economy in design branch issues. The second text contains considerations on the relationship between the architect's responsibility and the historic city. They are carried out, as in this article, on the example of Toruń. The issue of architect's responsibility towards the historic monuments was even more extensively and thoroughly described in his doctoral dissertation entitled *Odpowiedzialność etyczna architekta w dziedzinie materialnego dziedzictwa kulturowego w Polsce* (title in English: *Architect's ethical responsibility in the field of tangible cultural heritage in Poland*) (Furmanek, 2013).

The foundations of the theory of conservation of ancient monuments go back at least to the 19th- and 20th-century scientific discourses between architects, conservators, art historians and lovers of monuments of the past. Among them, such characters deserve special mention: John Ruskin and William Morris in Britain, Camillo Sitte, Alois Riegl and Max Dvořak in the Austro-Hungarian Empire, Georg Dehio in Germany and Camillo Boito in Italy. It's hard to miss one of the most famous characters here – the 19th-century French architect Eugène Emmanuel Viollet-le-Duc who made a special contribution to the history of this field – with his coherent conservation theory emphasising stylistic purism, he provoked his adversaries to criticism, and at the same time strengthened interest in the history of architecture and its existing monuments. Based on the consensus among the greatest experts in the field of monuments in the 20th century, created as a result of many years of scientific dispute, many international doctrinal documents were created, among them, the Athens Charter of 1931 and the Venice Charter of 1964 were the most important. Both contain some recommendations regarding the surroundings of the monuments. There are such guidelines for this in the charter from 1931: "[…] in the construction of buildings, the character and external aspect of the cities in which they are to be erected should be respected, especially in the neighbourhood of ancient monuments, where the surroundings should be given special consideration. Even certain groupings and certain particularly picturesque perspective treatment should be preserved the character" (The Athens Charter…, 1931, III). The Venice Charter largely confirms, clarifies and extends the provisions of the Athens Charter of 1931. There is a special rule concerning historical sites – according to Article 14: "The sites of monuments must be the object of special care in order to safeguard their integrity and ensure that they are cleared and presented in a seemly manner […]" (The Venice Charter, 1964, Article 14). Later, many international doctrinal documents in this field were also created, which have recently moved away from orthodox conservation in favour of managing changes in the spirit of sustainable development.

Looking at the magnificent monuments of Toruń, dating back to different times, one may wonder whether such phenomena as globalisation or at least the integration of the European Western world, originating from Europe, and more precisely from the circle of Mediterranean civilisation, occurred during their construction. Of course, this is the case today, but it was also the case before the 20th century. Former master builders and architects wandered around Europe in the Middle Ages and Renaissance, and later also other continents, bringing technological innovations and the ability to build respectable grand buildings, such as cathedrals or palaces, to distant places. This was the common way of transmitting knowledge, art and culture until the 19th century, when the influence of other cultures began to intensify, which in the early 20th century led to the flourishing of modernism, and in a broader sense in architecture and urban planning – the International Style.

The processes of globalisation, as well as European integration, have significantly intensified since the second half of the 20th century until now. Michael Davis in his text *Has globalism made architecture's professional ethics obsolete?*, that is a chapter of a book entitled book *Architecture, Ethics and Globalization* and edited by Graham Owen, noticed that: "If we understand «globalization» to mean no more than architects designing structures for distant lands, getting the designs approved, and overseeing construction, then the globalization of architecture is not new. Almost a hundred years ago, Frank Lloyd Wright saw to completion his famous hotel in Tokyo, more than two hundred years ago, a Frenchman designed Washington, DC; and, of course, architects were trotting the globe long before that. We have only to think of Leonardo da Vinci's years in Paris" (Davis, 2009, p. 122). Following this track, we will notice that he was not the first. Hundreds and thousands of years ago countless architects and construction masters travelled vast areas of countries and continents, bringing knowledge and transferring architectural fashions and styles into more and more nooks of the globe. Hasn't ancient art spread in this way, first in the Mediterranean area, and then throughout the entire Roman Empire, among others to Cologne and Trier in current Germany, London (called *Londinium* in Roman times), or to the Iberian Peninsula? Davis indicated that: “The problem is not that standards differ from place to place, they always have. The problem – or at least one of them – is that the old hierarchy is gone. Every culture is, in some sense, equal. The architect can no longer claim to be an agent of civilization – or, at least, can only make that claim knowing it to be controversial. Understood as complete ways of life, cultures are immune from criticism from outside. No culture can even understand another” (Davis, 2009, p. 122). This author concludes at the end of his text that “globalization presents few, if any, new problems for the ethical practice of architecture. The profession has been dealing with similar problems for a long time. It has worked out solutions for most of them and incorporated those solutions into its codes of ethics (with ordinary morality forming a baseline or backstop). For the most part, at least, the difficulty is to see the old in the new. The big new problem, if it is new, is one of scale, developing a global profession of architecture to match the global practice of architects” (Davis, 2009, p. 131).

Figure 4. The CKK Jordanki building at Aleja Solidarności, in the northern vicinity of the old town of Toruń. Design: Fernando Menis architect with an international team.

Source: own study (2022).

Just as it was in the past, also today there is a transfer of ideas, architectural styles, fashions, and of course modern technology. A good example of architecture in the vicinity of the historic city centre is the project of the Spanish architect Fernando Menis, who together with his team won the international architectural competition for the design of the Cultural and Congress Centre Jordanki (in Polish: Centrum Kulturalno-Kongresowe Jordanki; in short: CKK Jordanki) building. Its original form was significantly different from other concepts proposed by Polish architects participating in this competition. The Spanish architect, however, tried to refer to the identity of the place – its *genius loci*. The dynamic form and earth embankments refer to the old past (from over a hundred years ago, when modern military fortifications were located in this place), and the ceramics used on the façade and inside the building - to the brick character of the old town formed in the Middle Ages, when these the walls of buildings, neither external nor internal, were usually not plastered. Looking at the means used, the scale and the artistic quality of the CKK Jordanki building, we can say that it is a successful investment that positively combines global influences, and international integration with local cultural heritage and co-creates spatial order in this part of the city (see Figure 4).

In turn, Michael E. Zimmerman in his chapter of the above-mentioned book *Architecture, Ethics and Globalization* that is entitled *Globalization, multiculturalism, and architectural ethics* observed: “Global economic integration is taking place at the same moment that totalizing political narratives (whether modern ones from developed worlds or traditional ones from developing worlds) have been giving way to a host of new, often competing, frequently exclusionary narratives that tend to disintegrate what modern ideologies sought to unite” (Zimmerman, 2009, p. 160). And after that, he continued: “Despite other disagreements, capitalists and socialists alike concurred on the basic premises of Enlightenment modernity: that humankind takes part in a universal history; that basic rights ought to be extended to all humans; and that the human estate can be improved by eliminating political oppression, by providing economic well-being and opportunity, by dominating nature through scientifically-guided technology, by encouraging universal education, and by preventing religious dogma and clergy from interfering in political, economic, and scientific affairs” (Kowaluk, 2011, p. 160). In the next paragraph, he pointed out that: “Postmodern theorists claim that modernity’s noble promises have often had dark consequences, ranging from marginalization and virtual extermination of indigenous cultures to degradation of the biosphere by industrialism, all of which are intensified by ever more intensive globalization” (Zimmerman, 2009, p. 160).

An interesting problem was undertaken by Maciej Kowaluk in his article *Public space in contemporary housing estates – attention to the common good versus maximization of investor’s income*. He observed a dynamic development of the Polish housing market, especially located mainly in towns’ outskirts, because of the cheaper land price there than in the city centre. Besides, very often these areas do have not any official local land development plan. In his opinion: “A really serious problem is the lack of a comprehensive concept of newly built districts. Structures are frequently created in a chaotic and inconsistent way. Moreover, these districts also lack the basic infrastructure such as roads. Another typical defect is negligence in relation to the public space which constitutes one of the characteristic elements of the city tissue that determines the residents’ quality of life” (Kowaluk, 2011, p. 71). As he noticed further: “Developers’ activities are focused only on achieving profits on the sale of flats. Investors usually expect usable areas of flats to be maximised locally; at the same time, the building law strictly defines conditions of locating car parks, rubbish heaps or recreation areas without specifying their minimum sizes. Due to these conditions, many housing estates have a very limited area of common space or in fact, there are no such places" (Kowaluk, 2011, p. 71). It is worth adding here, that usually the developer does not build something for himself, but only manages the investment in a limited time. In addition, he or she is reluctant to delegate decision-making to other parties, including architects. This means that he or she is not emotionally attached to the investment, and is not very interested in how it will be lived in, and how the designed buildings will be used. From a simple economic point of view, profit is the most important for him or her, the success of the investment as such is of secondary importance. After all, according to the law, he or she is not allowed to act to the detriment of the company he or she manages. It is worth adding here that, it is primarily about preventing financial loss in this case.

However, incurring costs is not a one-off and will not end soon, and their current negative effects will have a long-term and multi-faceted nature in many aspects of the social and economic life of current and future generations. The success of the country and its regions in the field of measurable economic and human development does not translate into the fields of spatial order and cultural heritage. Looking at this difficult situation, it is impossible not to get the impression that the problem is not globalisation nor European integration. The problem lies in the internal conditions in Poland. Admittedly, there is a time coincidence, but the essence lies in insufficient, and sometimes even inappropriate, actions not only at the national level, like the deregulation of the profession of an urban planner, but also at the regional, and local levels.

5. Conclusions and summary

The situation in the topic's field is fundamentally not improving. The general problems of spatial planning and historic monuments' protection have been repeatedly confirmed not only in the publications of scientists and specialists but even in government documents. In this study, an attempt was made to draw attention to a special, interdisciplinary aspect of the issue of spatial order and cultural heritage in Toruń and the vicinity of it, together with a look at the economical aspects of globalisation and European integration of this place. European integration and globalisation have only an indirect impact on this, and it does not have to be negative at all. On the one hand, contemporary progress in economic development itself, which can largely be attributed to these two, cannot be considered as something unequivocally negative in the discussed issue. On the other hand, errors and oversights, as well as many years of neglect, may not only not help in creating and preventing spatial order, as well as in the protection of historic monuments, but may even pose a certain threat to it. Sometimes, free market mechanisms, bad laws, insufficient supervision and inappropriate decisions of governments and administration, and in the absence of appropriate protective and securing mechanisms, may gradually contribute to incurring more and more costs, including the degradation of the country's space into spatial chaos and loss of value of cultural heritage. All this leads to the loss of the achievements of civilisation developed by previous generations. The destruction of the level of culture achieved in the past and present in the form of preserved architectural monuments, and urban and rural cultural landscapes leads to measurable and immeasurable losses, including economic ones, which can be estimated today and which will be also felt for a very long time. Paradoxically, spatial chaos and the loss of cultural heritage may in the future contribute to slowing down gross domestic product or even limiting further human development growth.

Summing up the considerations from the main part of the article, some of the answers to the main problem of the work have been found and stated above, but the matter occurred to be very complex and certainly requires further research.

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THE MANAGEMENT OF HOSPITAL MARKETING COMMUNICATION

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Purpose: To verify how and with what instruments hospital managements handle marketing communication. An important aspect of the analyses is a diagnosis of hospitals' promotional activities addressed to external and internal stakeholders, the purpose of which is to create appropriate relationships with patients and the socio-economic environment, and to build a favourable image of the medical establishment.
Design/methodology/approach: The research included a study of specialist literature in the field of marketing in healthcare facilities and the execution of two individual in-depth interviews (IDI) with Dr. Radek Neuwirth, director of the Agel Třinec-Podlesí cardiology hospital operating in the border areas of Těšín Silesia in the Czech Republic, and Ms. Monika Kubalíková, PhD., who is the quality manager at this hospital.
Findings: The marketing communication of hospitals has a multi-faceted nature. It can be evaluated not only from the perspective of providing information to current and future patients, but also from the point of view of the effectiveness and efficiency of promotional activities. In the long run, the competition for a favourable position in the market of medical services and for the limited financial resources of customers will be won by those hospitals which not only provide a higher standard of medical services, but which are also able to efficiently communicate with entities from the socio-economic environment. A particularly important role in this regard is played by the managerial competences of hospital executives and the optimal selection of the forms and tools of marketing communication.
Research limitations/implications: In the future, it would be worthwhile to repeat the research among both actual and potential patients of specialist hospitals as well as representatives of other stakeholder groups.
Practical implications: The effective management of a hospital's marketing communications provides many benefits in terms of their corporate image, which leads to market and financial advantages. The models for the optimal communication between a hospital and the public are constantly evolving, with the main emphasis now being on the growing importance of social media and inbound marketing.
Originality/value: The results of the analyses have cognitive and pragmatic value, especially in the context of the implementation of hospitals' marketing communications with stakeholders.

Keywords: Marketing communication, quality of medical services, patient service.

Category of the paper: Research paper.

1. Introduction

Improving the quality of healthcare services and patient service are the priority objectives in the marketing strategies of modern medical facilities. The need for a permanent increase in the quality of medical services is an important social and economic issue. A lot is said and written about it, especially in medical publications. However, it is worth emphasizing that quality, as discussed there, concerns primarily the technical quality of service provision (Ciechomski, 2008a, p. 254). From the point of view of marketing, the so-called functional quality of the process of providing medical services and the quality of the environment are of great importance, as these are the main aspects in a patient's evaluation of the quality of healthcare services.

The many factors that determine patients' satisfaction with the quality of medical services in terms of the treatment received and the comfort of a hospital stay include the following:

1. Responsibility – patients rely on the responsibility of doctors, nurses and physiotherapists, entrusting them with their health and often their lives.
2. Reliability – patients expect accuracy, reliability and dependability of services.
3. Expertise – patients expect specialized knowledge from medical personnel.
4. Availability of services and personnel at times and places convenient for patients.
5. Sensitivity – patients trust that the staff will show empathy.
6. Politeness – patients expect staff to be friendly towards them and treat them with respect (communicativeness).
7. Appearance – cleanliness and orderliness in the hospital, presentable attire of the staff and ID badges.

The quality of medical services also comprises such elements as communication with patients, the competence and responsiveness of the staff, as well as the reliability of the information conveyed (Wiśniewska, 2021, p. 27). An extremely important issue in the medical services market is responsibility for the patients' health, which also lies with those involved in communicating promotional messages that are addressed to actual and potential patients. Thus it is important that marketing communications should be characterized by ethical attitudes and directed at implementing good practices with regard to corporate social responsibility (Pilarczyk, Rogala, 2022, p. 240).

A hospital's marketing communication with its patients and other internal and external stakeholders must be designed and implemented in such a way that positive and up-to-date information about the quality of medical services should reach the addressees swiftly and seamlessly. An interesting description of the French model of hospitals' communication with the socio-economic environment is included in the work *Komunikowanie w ochronie zdrowia – interpersonalne, organizacyjne i medialne* [Communications in health care – interpersonal, organizational and media-based] (Goban-Klas, 2014, pp. 98-106).

Among the marketing communication tools used for shaping the image of a given establishment in the medical services market, public relations and publicity activities are considered the most important. The latter include creating objective information about the facility and its services, its public activities, and the organization of events aimed at creating a positive image of the medical entity. Public relations activities concern such areas as building relations with the media, crisis management, lobbying, internal and external public relations understood as reputation promotion, as well as sponsorship and patronage (Mruk, 2009, p. 121 et seq.). The effective public relations activities of a hospital have the following effects:

- they increase the recognition of the hospital, its employees, programmes and services,
- they increase the awareness of the standard of the medical services provided,
- they position the hospital as a community healthcare leader and create a desirable image of the hospital,
- they support raising funds for the development of new services,
- they help to anticipate and respond to potential negative media reports about the hospital,
- they support the staff recruitment process,
- they boost employee morale (www.awphd.org).

2. The marketing of hospitals and other healthcare facilities

Marketing is a market-oriented concept in which at least three elements are necessary for a common exchange process to occur: two market entities as parties to the exchange (suppliers, customers) plus the object of exchange (products and services). Market orientation means that all marketing activities should be based on the requirements, needs, preferences and expectations of various stakeholder groups associated with a given healthcare facility. The following are the most important goals of marketing activities in healthcare:

- communication with current and potential patients (presentation of offering and medical staff),
- acquiring new customers (sanatoriums, physiotherapy centres, dental offices and others),
- gaining the trust of patients ("ambassadors" of the medical facility in their community),
- increasing the hospital's revenue (an increase in the sales of services and treatments offered),
- maintaining a positive image of the medical establishment,
- providing information about new services and treatments, purchases of innovative equipment and new specialists on the medical staff, that is implementing extensive internal marketing activities.

The distinctive features of hospitals, pharmaceutical companies and other healthcare institutions relate not only to their organizational structures, but also to their strategic management goals, missions and development objectives, as well as ways of implementing innovations (Buchelt, 2017, p. 142). The specific characteristics of the healthcare system, including the characteristics of stakeholder groups and their activities, are discussed in more detail in the work *Projakościowe zarządzanie w organizacjach ochrony zdrowia* [Pro-quality management in healthcare organizations] (Lisiecka, Czyż-Gwiazda, Lisiecka-Biełanowicz, 2017, p. 13 et seq.).

The economic assessment of the performance of a healthcare provider includes primarily such parameters as the evaluation of costs and benefits as well as an analysis of the efficiency of the entity's operations (Getzen, 2013, p. 219 et seq.). Among the many indicators used in measuring the efficiency of hospital operations are those related not only to patient satisfaction, but also to organizational and financial efficiency (Liu, 2013, p. 166). Measuring the current level of patient satisfaction should be the starting point for defining the objectives of quality-oriented measures and developing strategies for their implementation (Ciechomski, 2008b, p. 415).

The main barriers to increasing the efficiency of healthcare institutions are the following:

1. low productivity (efficiency) of hospital wards implied by unpredictable variables in terms of the demand for medical services,
2. fragmentation of treatment in the case of multi-organ conditions,
3. dispersion of medical services of one type in a given area,
4. shortage of medical staff, mainly doctors and nurses (Rogala et al., 2014, p. 164).

The managerial competences of a hospital's executives are extremely important for improving the efficiency of its functioning. Unfortunately, Poland lacks systemic solutions regarding competence requirements with minimal qualification restrictions (Kęsy, 2013, p. 222). Although career paths for employees working as doctors and nurses have been described and regulated, the same has not been done for managerial positions in healthcare facilities. As a result, these positions may be occupied by people who do not have the necessary knowledge, skills or other qualities predisposing them to leadership positions. It also sometimes happens that these competences are formally confirmed by various documents, but not by actual skills or aptitudes. Meanwhile, managers in charge of specialist hospitals are expected to have an innovative, flexible and effective approach to managing healthcare facilities (Głód, 2020, p. 13 et seq.). Scientific studies examining the impact of leadership on the broadly understood performance of various organizations, including hospitals, have quite a long tradition. Interesting results of research and analysis relating to Poland and Scandinavian countries can be found in the monograph *Przywództwo w placówkach medycznych. Doświadczenia z Polski i krajów nordyckich* [Leadership in medical institutions. Experiences from Poland and Nordic countries] (Tańska, 2017, p. 107 et seq.).

Interesting analyses concerning the demand for managerial knowledge in the areas of finance, marketing, quality management, infrastructure supervision, human resources management, information management and change management in healthcare are included in the work *Postawy personelu medycznego wobec zarządzania szpitalem* [Attitudes of medical personnel towards hospital management] (Nęcki, Kęsy, 2013, p. 108 et seq.). It contains the results of a survey conducted on a sample of 99 doctors and 63 nurses.

The marketing strategy of a healthcare facility should put an emphasis on efforts to constantly improve the quality of the services it provides and should skilfully communicate this fact to the hospital's external and internal stakeholders. The role of the quality of services is constantly growing, and this is related to an increase in patients' expectations and demands and the need to personalize patient service. On the other hand, medical facilities apply for certificates and accreditations, and this is related to the standardization of the range of services provided by various hospitals.

Different forms of organizing marketing services in public and non-public hospitals in Poland are summarized in Table 1.

Table 1.
Organization of marketing services in hospitals in Poland [%]

Itemization	Public hospitals	Non-public hospitals
A separate marketing department	19	21
A separate marketing position	14	25
Functioning within another department	12	6
Activities dispersed across many positions	15	23
No marketing is done	40	25

Source: own compilation based on: Kautsch, 2011, p. 216.

Through its promotional activities, a healthcare facility must communicate with potential buyers, inform them about the range of services offered and create the best possible image. The primary objectives of promotional activities are the following:

- increasing the facility's turnover and at the same time increasing its market share,
- increasing the sales of an offered service or group of services,
- seeking and acquiring new patients,
- creating a good image and gaining the trust of patients,
- proper transfer of information about the healthcare facility, including information about new services offered (Nowotarska-Romaniak, 2013, p. 70).

Table 2 lists the main marketing activities carried out by public and non-public hospitals in Poland.

Table 2.
Types of activities undertaken by hospital marketing services [%]

Itemization	Public hospitals	Non-public hospitals
Creating and implementing a marketing strategy	29	44
Creating the image of the organization	53	54
Communication with contractors	72	64
Health promotion activities	56	36
Hospital promotion activities	62	85
Other marketing activities	40	18

Source: own compilation based on: Kautsch, 2011, p. 218.

It also has to be remembered that with the current incredibly dynamic development of communication technologies, classic marketing tools and strategies may not be particularly effective in terms of achieving goals, or may even fail (Brzozowska-Woś, 2013, p. 31 et seq.). We live in times when patients are very active when it comes to searching for information and want to make their own choices (Pacenti, Mancini, 2015, p. 100). A consequence of this is the expansion of social media and the growing role of inbound marketing. The media used by public and non-public hospitals for communicating with the addressees of promotional activities are listed in Table 3.

Table 3.
Communication channels used by hospitals [%]

Itemization	Public hospitals	Non-public hospitals
Own website	96	98
Local press	80	78
National press	32	32
Sector-specific press	46	51
Radio	61	44
Television	63	51
Local web portals	43	39
Nationwide portals	19	22
Sector-specific portals	44	37
E-mail	66	59

Source: own compilation based on: Kautsch, 2011, p. 218.

In health services, building the market position of an entity that provides them depends on many factors, among which image is considered to be very important (Mruk, 2015, p. 86). The image determines how a given facility is perceived by current and potential patients, the level of patients' trust in the services provided, as well as the satisfaction of the medical personnel and their identification with the establishment where they are employed. Among the many elements that make up the image of a healthcare facility are its location, the design and functionality of the waiting room, the facility's website, and the behaviour of the staff, i.e. receptionists, nurses and doctors (Bukowska-Piestrzyńska, 2017, p. 88). The success of communication is determined also by the way in which medical interviews are conducted, which should be based on building trust, creating positive emotions and overcoming the patients' reservations.

The main pillars for creating the image of any organization are monitoring the environment and an efficient communication and information system (Pokusa, 2007, p. 110). The main institutional addressees of hospitals' image-building activities include the following:

- local government institutions, political parties, supervisory institutions,
- entities that provide financial resources (National Health Fund, banks),
- companies providing outsourcing services (security, cleaning)
- competitors and suppliers of equipment, drugs and medical supplies,
- educational institutions and labour market entities,
- opinion-forming institutions and organizations (unions, associations),
- institutions that cooperate in the treatment process, e.g. sanatoriums, physical therapists (Rogala et al., 2014, p. 165).

Relationship management with the stakeholders of a medical institution can be defined as a continuous and long-term process of creating relationships with partners in the internal and external environment through joint value creation, in such a way that the goals of both parties are achieved (Dobska, Kosinski, Urbaniak, 2022, p. 110). The foundation of relationship management, both at the strategic and tactical level, is the analysis of the relationship portfolio, in the light of which every organization should identify the network of all the relationships and skilfully manage it (Zolkiewski, Turnbull, 2022, p. 586). The quality of relationships in the healthcare environment is understood as the value carried by a type of bond between the exchange participants, characterized in terms of the compatibility of organizational cultures, decision-making styles and convergence of perceived values. It can be evaluated through the prism of three criteria: commitment, trust and satisfaction (Palmatier, 2008, p. 120). Effective relationship building with patients should include not only respect for their rights, but also the ability to increase patient satisfaction (Chalimoniuk-Nowak, 2022, p. 100). In doing so, it is also important to be able to resolve conflicts with difficult patients and manage the patient experience.

Various classifications of inter-organizational and intra-organizational relationships, depending on the adopted division criterion, are included in the work *Zarządzanie jakością relacji w organizacjach ochrony zdrowia* [Managing relationship quality in healthcare organizations] (Lisiecka-Belanowicz, 2016, p. 62 et seq.). Relationships are characterized by reciprocity, time span, process specificity and contextual dependence. An example of a concept that systemically explains the management of hospitals' relationships with their customers is CRM (Customer Relationship Management), which is intended to contribute to raising patients' satisfaction by fulfilling their requirements, wishes and expectations.

3. Healthcare in Poland and the Czech Republic

In order to better understand the conditions of managing healthcare facilities, and their efforts to offer high-quality services and the use of marketing tools, it is worth looking at selected data relating to the healthcare of two countries: Poland and the Czech Republic. According to statistical data, in 2022 healthcare expenditure in Poland amounted to 172.9 billion PLN, and in the Czech Republic 17.9 billion CZK (www.google.cz/search?q=analyza-zdravotnictvi-final.pdf+(ecn.cz.). When converted into Euros for the purpose of comparison, the expenditure in Poland is 36.9 billion and in the Czech Republic 7.4 billion EUR. Since there is a significant population difference between Poland and the Czech Republic (37.8 million in Poland and 10.7 million in the Czech Republic), more meaningful data were obtained after calculating healthcare expenditure per capita, which in Poland is 976 EUR, while in the Czech Republic 688 EUR. Patients in the Czech Republic can receive treatment in 134 general hospitals, which include 8 academic hospitals, 65 provincial hospitals, 23 municipal hospitals, 37 private hospitals and 1 church hospital (Brothers of Mercy hospital in Vizovice). Private hospitals in the Czech Republic operate on different terms than in Poland. All of them have contracts with national health insurance funds and most of the services are financed from these funds except non-standard, cosmetic, corrective and similar treatments, which are chargeable, also in state hospitals.

The Polish healthcare system is organised according to ministerial identification codes. The number of hospitals with the code denoting a specific organizational and legal form (a limited liability company or a joint-stock company in which the State Treasury, local government unit or medical university hold shares amounting to at least 51% of the share capital) is 652, including 39 hospitals which are run by state medical universities and 17 by research institutes. The number of remaining hospitals is 723, including 5 facilities run by the church. The numbers of hospital beds cannot be meaningfully compared as the available data from the Polish health service are from 2020, while the Czech data are from 2018, so the data can only be treated as approximate. There were 167,567 beds in Polish general hospitals, and 57,578 in Czech hospitals, which when calculated per 10,000 population amounts to 44 beds in Poland and 54 beds in the Czech Republic.

It is also worth mentioning that an interesting description of alternative solutions regarding the functioning of the health sector in 16 countries, including Poland and the Czech Republic, can be found in the book *Organizacyjne i prawne aspekty systemów ochrony zdrowia wybranych państw* [Organizational and legal aspects of healthcare systems in selected countries] (Urbaniak, 2019, pp. 9-333).

4. Management of patient service quality and marketing communication based on the example of the Agel Třinec-Podlesí Hospital

The Agel Třinec-Podlesí Hospital is a cardiology hospital operating in the border areas of Těšín Silesia in the Czech Republic. It is a private hospital, its sole shareholder being the Agel joint-stock company. It is a member of the Agel Group, the most successful private healthcare provider in Central Europe. The hospital provides high-quality specialist care in the treatment of cardiovascular diseases. It is part of the Czech Ministry of Health's network of comprehensive cardiovascular care centres. The hospital is fully certified, regularly renews its accreditation, and is one of the leading specialist medical centres in the Czech Republic.

Regarding the organizational structure of the Agel Třinec-Podlesí Hospital, the facility's management is the 7 people on the Board (director, 2 deputies, 2 members, quality manager, plus head nurse and personnel manager in one person) and it comprises the following departments: Department of Cardiac Surgery; Department of Cardiology; Centre for Vascular and Mini-invasive Surgery; Anaesthesiology and Resuscitation; Department of Clinical Biochemistry; Department of Rehabilitation; Interventional Radiology; Emergency Room; and Specialist Outpatient Clinics. Since 2001, the hospital has been fully committed to improving the quality and safety of patient care. In 2002, the Accreditation Committee awarded the "Accreditation Certificate" to the Podlesí Hospital for the first time, confirming the high quality of its services. The last periodic accreditation of the Agel Třinec-Podlesí Hospital took place in 2021.

In order to obtain comprehensive information regarding the forms and instruments of marketing communication by the Podlesí Hospital, which is a significant institution in the Czech healthcare market, in-depth research was conducted in the form of two interviews: one with the director of the hospital, Dr. Radek Neuwirth, MBA, Chairman of the Management Board; and the second with the quality manager, Ms. Monika Kubalíková, PhD. The interviewees answered identical questions. The first question concerned the importance of marketing in the management of a specialist hospital. Both respondents stated that marketing is of great importance to the hospital. It is multidimensional and distinctive in nature. Its distinctiveness is related to the diversity of its medical facilities performing different missions and goals that apply in different development strategies. The specific nature of marketing in health services is also connected with the intensity of applying individual marketing tools and process management. In the hospital in question marketing is handled by a marketing specialist, who also cooperates with the marketing department of the entire AGEL Group. The need to apply the rules of marketing in the hospital is primarily related to the search for tools and ways to achieve the effects of an existential nature. The importance of marketing stems from the importance of the quality of services and how these services fulfil the needs of patients. The hospital applies the concept of marketing management to stimulate demand for its services. In turn, doctors and other medical personnel must strive for the best possible professional reputation in their exceptional occupation.

The next question concerned the image of the organization and in particular how the Agel Třinec-Podlesí Hospital strives to maintain a positive image. The respondents indicated that the basis for maintaining a positive image is achieving excellent medical results and providing high-quality specialist care. It is essential to introduce modern treatment methods, especially with regard to catheter-based treatments of cardiovascular diseases and other minimally invasive treatment methods, which helps the hospital maintain its reputation of a leading medical centre in the Czech Republic and an important specialist hospital in Europe. The way to customer loyalty is primarily through a positively perceived brand. The image and overarching values create emotional bonds in the minds of customers that keep patients coming back. Creating a bond between the institution and customers is a key element of the brand. As a result, the level of customer loyalty increases. A strong hospital brand confirms the quality of the facility, and vice versa.

Current patients are "ambassadors" of the medical facility in their community. Therefore, the next question of the in-depth interview concerned the hospital's gaining of patients' trust. According to the interviewees, the patient is always at the centre of attention; partly because this is the hospital's mission, but above all because a satisfied patient is a guarantee of the hospital's long-term existence. Healthcare in the hospital is patient-centred. The hospital tries to fulfil patients' wishes and thus ensure their satisfaction. Patient satisfaction is also an important indicator of the quality of nursing care. Patients assess the quality of nursing care in relation to meeting their basic needs. The priority of nursing is a thorough identification and analysis of every patient's needs as well as helping in fulfilling them. A patient who is examined or treated is assured of anonymity and guaranteed that the performed procedures are safe. All services are provided at a professional level with the use of modern medical equipment. Ultimately, the hospital wants to provide not only a full diagnostic examination but, above all, immediate therapeutic intervention so that the patient leaves the hospital not only with a diagnosis but also with a resolved health issue. This is one of the key ways to gain patients' trust.

An important element of the marketing of healthcare facilities is the quality of the information that patients receive. The Agel Třinec Podlesí Hospital does this very well. The hospital informs its current and potential patients on the hospital's website about new services and treatments, about the purchases of innovative equipment, and about new members of the medical staff. Information is provided both electronically and during patients' visits to the hospital. In addition to the above-mentioned marketing tools, the hospital uses social media (Facebook, Instagram), sends e-mails and newsletters, and uses marketing communication via mobile phones (SMS, MMS, mobile applications). The hospital's marketing also makes use of QR codes, which, when scanned, redirect users to a specific website.

Building a brand means not only good relations with patients, but also optimal relations with the environment. The hospital in question shapes its social relations with the environment through a company blog, which it sees as not only an attractive but also effective form of reaching potential patients. The hospital also creates a positive image of itself in the professional press; participates in events for the public, e.g. providing first aid or hygiene training for children and adults; and regularly participates in charity events.

Guaranteeing quality clinical care and controlling the level of care are also important aspects of hospital operations. Therefore, during the interview, the respondents were asked how the hospital ensures clinical quality and the availability of professional medical staff. The answer was that the hospital monitors the behaviour and activity of medical personnel, including their appearance and verbal communication skills. Quality is not only the ability to provide the best care, but above all the ability to meet all the needs and expectations of patients, who are the hospital's customers. The quality of nursing care is usually assessed by the degree to which the patient's needs are met during treatment, and the degree of professional sensitivity of nurses and doctors to patients' problems. When taking care of patients, teamwork between doctors, nurses, physical therapists, dieticians and other staff is essential.

The patient, being a customer, expects "professional behaviour", i.e. a doctor or nurse introducing themselves properly at the first meeting and addressing him or her appropriately and with patience. The quality of the services provided is monitored regularly every three years by an independent external organization, which checks compliance with the accreditation criteria in accordance with national standards. In addition, as part of quality improvement, the hospital conducts periodic audits focused primarily on so-called high-risk activities, such as proper handling of medical products, keeping medical records, adherence to hygiene procedures to prevent the transmission of hospital-acquired infections, safety audits and others.

The hospital has an effective process for monitoring adverse events. Employees are informed of the possibility of reporting potential risks that could lead to patients being harmed or put in danger, and are appropriately motivated to report them preventively. The occurrence of adverse events is regularly reviewed. Increasing safety is a long-term goal and one of the priorities for the hospital management.

In order for the hospital to be positively assessed during the audit and be able to receive a certificate, it must continually strive to ensure patient satisfaction and verify its level. Agel Třinec-Podlesí Hospital monitors the following elements of patient satisfaction:

- correctness of the applied treatment procedures,
- form and course of patient care,
- amount of information for the patient and their family during treatment,
- compliance with patients' rights and ethical principles in the provision of health services,
- humanitarian (holistic) and not only a medical approach to the health problem,

- empathy – kindness, willingness and ability to understand and support the patient’s personality,
- effective communication – smile, touch, willingness to listen,
- respect for patients’ rights – the right to dignity, privacy, intimacy, etc.,
- properly kept medical records.

The hospital obtains feedback on patient satisfaction through patient satisfaction surveys. Patients receive the surveys via a QR code. The hospital has received numerous awards for its exemplary satisfaction surveys for both inpatients and outpatients.

An important element in the quality of medical services is the availability of medical services, including the waiting times for tests and treatments. The surveyed hospital provides medical services mainly with regard to cardiovascular diseases. The second group are patients with urological conditions. Despite the fact that patients come to the Agel Třinec-Podlesí Hospital from all provinces of the Czech Republic, the waiting time for examinations is relatively short, not exceeding one month, and in emergency cases the service is provided immediately.

As part of quality assurance, the hospital has implemented a number of projects to improve the quality of services for patients. Examples of such projects include electronic documentation done on tablets, telemedicine, and scientific research work of the hospital staff.

Despite the relatively high level of medical services offered, very few foreigners are treated at the Agel Třinec-Podlesí Hospital. The most common cases are foreigners residing in the Těšín Silesia area who experience sudden cardiac problems. Czech regulations allow non-residents living in the EU to be reimbursed for medical procedures up to the amount for which treatments for Czech citizens are valued. The rest of the total amount must be paid by the foreigner themselves. Non-EU patients, on the other hand, must cover the full cost of the medical services received.

It is also worth mentioning that the period of the Covid-19 pandemic was a very difficult time for the hospital. Its management was urged to transform part of the hospital into Covid wards. However, this would have meant risking the health and possibly lives of the hospital’s primary patients whose condition required immediate specialist intervention. However, various restrictions complicated the hospital’s operations, and patients deprived of personal contact with their families recovered more slowly. In addition, some patients, fearing Covid infection, abandoned their planned procedures, which not only disrupted the hospital’s work schedule, but in many cases caused the disease to progress.

In summary, it can be said that the medical successes of the Agel Třinec-Podlesí Hospital to date and the generally high quality of patient service, together with its optimal relationships with various entities in the socio-economic environment, are the result of a well-thought-out and consistently implemented strategy. According to the institutions management, its success can be attributed primarily to creating favourable conditions for the continuous improvement in the quality of patient service by doctors, nurses and administrative staff.

5. Conclusions

Effective management of a hospital's marketing communication provides many benefits. First and foremost, it increases the recognition of the hospital, its services, health programmes and staff, and enables the positioning of the hospital as a healthcare leader in the community. In addition, it builds and consolidates an internally coherent image of the hospital among patients and entities in its environment. It positively influences the awareness of the significance of the medical services provided and supports the acquisition of funds for the development of new services.

Marketing communication directed within the hospital as an organization strengthens the satisfaction and morale of employees and supports the process of recruiting new staff. In addition, it helps to properly respond to possible negative media reports about the hospital and efficiently implement crisis management procedures.

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THE ROLE AND IMPORTANCE OF COURTYARD SPACES IN PRESERVING THE IDENTITY OF THE URBAN FABRIC. EXAMPLES FROM BYDGOSZCZ

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Purpose: The objective of this article is to analyse the condition of the preserved courtyards in the city centre part of Bydgoszcz, to determine their division in terms of the degree of functional and formal transformations, and to show how this space influences the shaping of the image of the city's identity and social behaviour.
Design/methodology/approach: In the research, methods of case studies, analysis and critique of sources, including planning documents and direct observation were applied. The spatial scope of the study was limited to the centre of Bydgoszcz. Detailed analyzes were carried out in five areas, after getting acquainted with the architectural and urban structure of 30 solutions
Findings: The assumption is, that the revitalised or preserved in their traditional form urban courtyard spaces constitute an important element of the city's cultural legacy and a record of the life and activities of earlier generations. They therefore require protection and care in their historical expression to complete its image.
Social implications: Public spaces, as elements of the city's structure and a reflection of its history, are the official, created image of urban life and are intended to demonstrate its character. As open spaces they stand in opposition to what is associated with the notion of the home, its nearest surroundings and what is associated with the sense of identity of place.
Originality/value: Studies of the literature on the subject have shown that the previous research on the space of backyards as an important element of the social spaces of the city was carried out to a small extent. In scientific publications of the architectural and urban structure, the information comes down to cataloging their form, without indicating their role. The lack of studies opened the possibility of undertaking research studies on their form and function, its evolution serving the purpose of preserving urban identity, and indicating examples that determine the right directions of changes in this area.

Keywords: architecture, urban planning, city identity, European funds, backyard spaces.

Category of the paper: Research paper.

1. Introduction

Public spaces, as elements of the city's structure and a reflection of its history, are the official, created image of urban life and are intended to demonstrate its character. As open spaces they stand in opposition to what is associated with the notion of the home, its nearest surroundings and what is associated with the sense of identity of place. The courtyard can be regarded as such a space, which is an extension of the privacy of the open space.
According to the Grand Dictionary of Polish Language “it is the area inside a group of buildings or around a building but forming a certain whole together with it”. It is also a social space. As pointed out by J.M. Chmielewski, the term itself derives from the Latin word socius, which means common, united. In the discipline of architecture and urban planning, it defines a group space, i.e. a group of individuals who are united by a community of place and purpose. The prerequisites for the creation of such a space are the areas and objects of common use, the established forms of social coexistence, a sense of identity of place and identification with that area (Chmielewski, 2010, p. 18). Such a role in the city centre residential developments, has also, until recently, been played by courtyards.

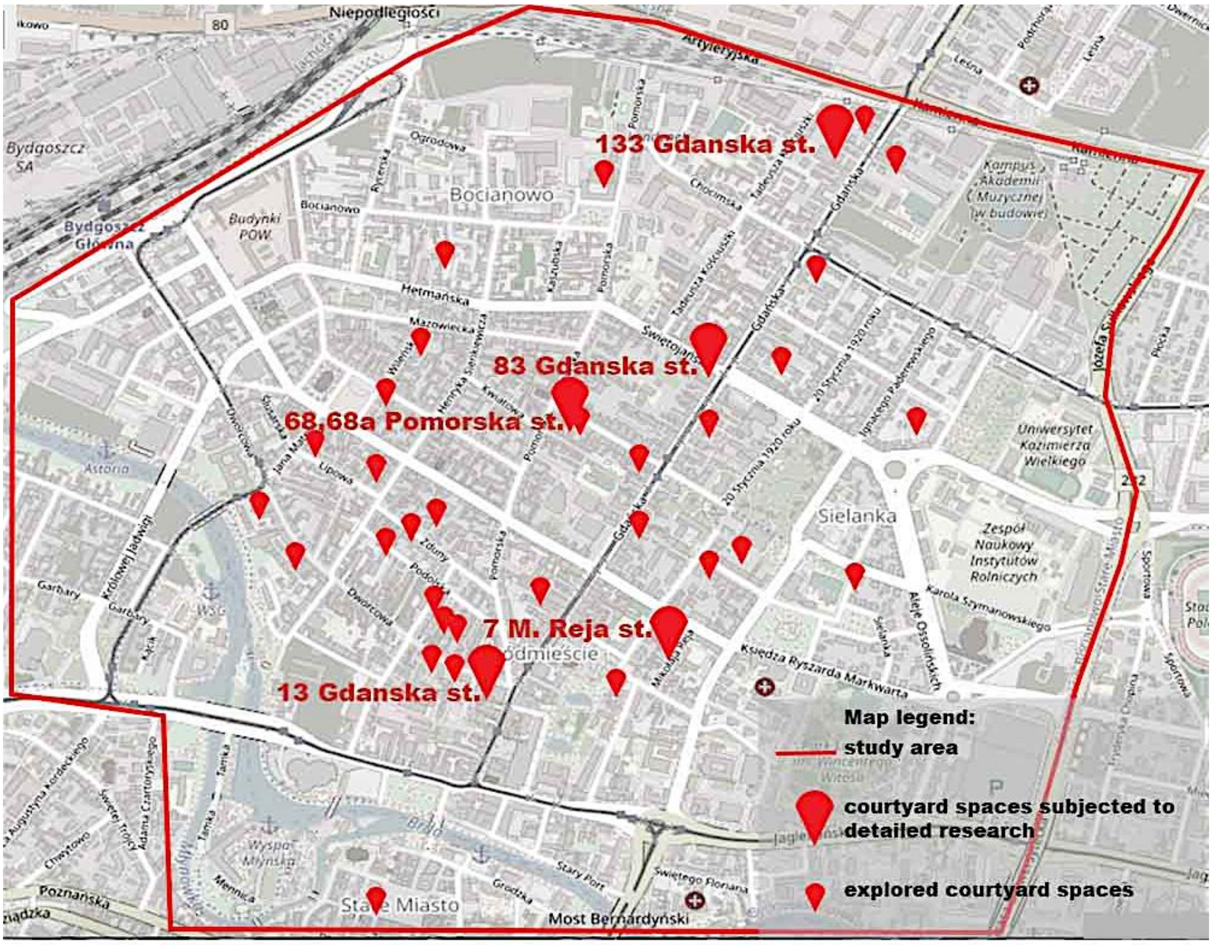

Figure 1. Research area of backyard space in the center of Bydgoszcz.
Source: author`s own study.

The spatial scope of the study was limited to the centre of Bydgoszcz. It is a fragment of the city, the area of which amounts to 542 ha, and is delimited by: Artyleryjska and Kamienna streets to the north, the so-called Zbocze Bydgoskie of the Brda River to the south, Ogińskiego and Sułkowskiego streets to the east, and Zygmunta Augusta street, Czarna Droga, Kruszwicka street to the west. The area started to develop dynamically in the XIXth century, mainly along the axis of Gdańska, Dworcowa, F. Focha and Jagiellońska streets. At that time, a number of important administrative and service facilities were being constructed in the city, residential buildings were expanding, courtyards were being formed.

Nowadays, thanks to the grants acquired from the city council, such as the Municipal Revitalisation Programme 2023+ or the Cohesion Fund within the Technical Assistance Operational Programme 2014-2020, the planned revitalisation works give hope for the improvement of the inhabitants' quality of life in their immediate, everyday surroundings.

2. The role of courtyards in the historic structure of urban development

The areas of courtyards are mainly accompanied by residential buildings. Their shape has its origins in the form of the ancient peristyle, atrium, patios and medieval viridor. In the Renaissance, their equivalent was the quadrilateral type of enclosed arcaded courtyard. In the architecture of the Baroque and Classical periods, open, extended representative forms of buildings became widespread, which were preceded by forecourts highlighting the existing buildings (Kozakiewicz, 1969, p. 97). On the other hand, the small spaces accompanying XIXth century multi-family houses, the so-called courtyards, served a particularly utilitarian and economic role. According to the Polish language dictionary, it is a square next to a house, fenced off or surrounded by buildings (https://sjp.pwn.pl, 2022). The courtyard, within this sense, forms the space of a person's daily life, his or her immediate environment with the issues and situations that affect him or her. (https://wsjp.pl, 2022). As pointed out by Anna Rumińska in 'Antropologia podwórka' (Jarczewski, Huculak, Janaś, Klepacki, Rumińska 2013, p. 51), two concepts of space that remain in opposition to each other are linked here: public and private. Courtyards are located next to single-family houses as well as multi-family houses. In both cases, they are private spaces, but belonging to a specific local community, surrounded by a boundary marking the area of ownership and access.

In the central areas of cities, they are most often located next to tenement houses. This form of multi-family housing, which first appeared in Poland in the Middle Ages together with German settlers, became the most popular structure erected in cities in the XIXth century. Buildings of this type were inhabited by representatives of different classes and of different levels of wealth. In city centres there dominated complexes of frontage, tenement buildings. Typically, in wide plots of land, a magnificent front house was built, to which from the yard, as the number of inhabitants increased, wings or outbuildings were added, in various configurations. As such, courtyards with different functions were separated. Within them, the hidden and less official life of the town was going on. It was here, that small craftsmen and workshops were located, as well as bakeries, carpenters, furriers and shoemakers. It was in the courtyards that enthusiasts of the breeding industry had their chicken coops, pigeon houses and small gardens. It was also here that there were all the kinds of storerooms and "conveniences", i.e. toilets for buildings without sewage systems, and even stables. In the courtyard, often paved with stones, the so-called "cobblestones", for the convenience of carts carrying supplies or firewood, there was a carpet beating stand and often a cast-iron pump. Older residents basked in the sun on makeshift benches, boys played football. There was also always a place to hang out the washing on a sunny day and other children's games. A glazier, an organ grinder and an antique dealer came to the courtyards.

Together with the increasing number of inhabitants in the tenements, legal regulations were implemented to ensure a proper quality of life and to improve the hygienic and sanitary conditions of their tenants. In one regulation it was ordered, that from the windows of the ground floor of the outbuildings, the sky should be visible. Even though the purpose of construction regulations was mostly to protect buildings from fires, efforts were also made to make them aesthetically pleasing.

The issues concerning the development of tenement buildings in Poland have been addressed in a number of scientific studies, including monographs, chapters in periodicals and articles (Ostrowska-Kębłowska, 1982, pp. 73-78; Łupienko, 2015; Putkowska, 1985, p. 181; Kwiatkowski, 1973, p. 192).

The form and shape of courtyards are determined by the surrounding architecture. Nowadays, their role is mainly determined by the way in which they are developed by the users. In terms of ownership, these are the areas belonging to the commune authorities or are private spaces. They are usually closed areas and are inaccessible from the outside, separated from the public space usually by a gate or grating. In the anthropological studies conducted within the frame of the "Backyard Culture" project, A. Rumińska pointed out that this space is an extension of the home. Therefore, the expectations of contemporary residents regarding their courtyards focus on ensuring safety, creating a pleasant and friendly atmosphere for different age groups. Courtyards are now perceived as a refuge and a place of recreation. They are intended to be quiet areas, providing opportunities for carrying out household activities and hobbies. Their potential users expect that these within these areas will include greenery, both trees, bushes and colourful seasonal plants. There will be installed elements of small architecture such as benches with backrests, fountains, paddling pools, roofing, trellises, canopies, playing fields, playgrounds, climbing walls, dance and performance platforms, dog runs, entry barriers and closed gates.

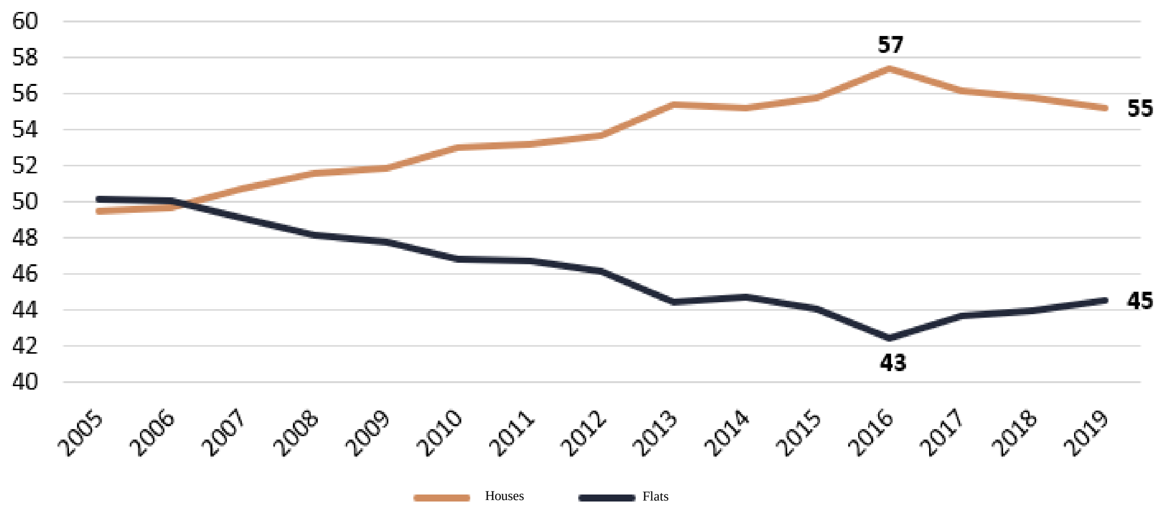

Figure 2. The chart shows the change in the structure of residence from the overwhelming number of multi-family apartments in 2005 to single-family houses in 2019.

Source: HRE Investments and Eurostat data, https://zdrowie.dziennik.pl, 20/09/2022.

The quoted statistical data from 2019, worked out by Eurostat, show a change in the housing structure of urban residents over the last 15 years. They showed that around 45% of residents now live in multi-family buildings and the courtyard is still a space of daily life for them. „The courtyard is a spatial anchor of memory and a text of culture. It is a book of intergenerational, intercultural and peer education, a territory of challenges posed by strangers to their own when the latter comes here for a certain reason” (Jarczewski, Huculak, Janaś, Klepacki, Rumińska, 2013, p. 52). Anna Rumińska defines the courtyard phenomenon in a similar way in in the publication chapter *Anthropology of a courtyard*. She thinks that, the flat and the courtyard construct the *territory of the house*. The courtyard becomes a grouping of many fragments of someone's *houses*, a semi-private and sometimes even private space, - if a local group feels an exceptionally strong commitment to this space and the flat does not constitute for them a territory sufficient for the construction of their local identification”. As an area where residents separate themselves from the public space, left behind gates or bars, it constitutes an area they can control and manage themselves. Nowadays, to a large extent, it should depend on the initiative and creativity of the users of this space, whether the yards and courtyards become a zone which improves the quality of life of a particular community, or whether it is a place which nobody takes care of, often exposed to inappropriate behaviour, abandoned and degraded, deprived of the role and character ascribed to it.

3. Courtyards in the XIX c. Bydgoszcz city centre development

The multi-family housing in Bydgoszcz started to develop at the turn of the XVIIIth and XIXth century, after the period of the devastating Swedish wars, the post-partition loss of independence and numerous fires. The new Prussian authorities undertook a comprehensive modernisation of the housing development and its expansion. These activities transformed the town into a big industrial centre. According to the specified architectural and urban plans, private and tenement houses were erected, which were constructed according to two types of solutions. One developed inside the plots, the other drew patterns from German functional and formal tendencies (Bręczewska-Kulesza, 2014, pp. 14-18). Their shape was derived from particular building regulations, however, in the XIX century very liberal, adapted to private investors. A change in the rules for the construction of new buildings occurred initially in 1905 after the publication of the "Regulation of the building police for cities and several rural municipalities with the urban way of building of the regency district of Bydgoszcz”. Detailed regulations concerned also the courtyards and areas of vacant land, where it was indicated that the property could only be developed in 2/3 (corner ¾) of the area, and each plot must have a vacant courtyard with a minimum side dimension of 6 m and an area of 60 m^2. The only exceptions were plots of up to 200 m^2 and corner plots, but in such cases the courtyard could not be less than 36 m^2.

The courtyards in the central part of Bydgoszcz were shaped by the XIXth century development. In their interiors, similarly to the generally prevailing trend of those times, there were constructed smaller buildings with craftsmanship, workshop and also economic functions. There were also rooms intended for stables, dovecotes, chicken coops, toilets. The spaces were often complemented by impressive entrance gates, fences and small architectural elements that appeared at different time intervals such as benches, decorative low walls, stairs, balustrades, verandas and the indispensable carpet beating racks and, sometimes, a summerhouse. In the majority of the tenement buildings, mainly private, the courtyards to the rear were accompanied by extensive garden areas, which, not always open to the public, formed their green hinterland. These areas together with the city's greenery formed a system that not only provided the proper aesthetic qualities of the surroundings of the tenements, but also positively affected the proper functioning of the entire urban ecosystem.

The form and function of the Bydgoszcz city centre courtyards often had a specific character, resulting from the specific nature of their development. The predominant space was rectangular in plan with a front tenement with one annex wing and outbuildings. In some of the larger plots, an additional back building was constructed behind the outbuilding. The main buildings were constructed peripherally along the building line, which resulted in the formation of yards behind them, including garden yards. The large, representative edifices had a small auxiliary courtyard providing light to the staircase and additional rooms.

Figure 3. The state of development of the space of the damaged yard at Gdańska 133 st.

Source: a: own study based on https://metropoliabydgoska.pl/, 10.08.2022; b, c: author`s own photo.

Contemporary architectural transformations in the city, due to often ill-conceived development decisions, have eliminated much of this urban structure, built up over the decades. In the historic part of the city, there have disappeared and are still disappearing many yards, gardens and courtyards that are unique in their specificity. They have been developed or transformed into paved areas with a utilitarian function, mainly for parking. However, there are still such spaces in the city, mainly in private tenements, where the owners, together with the residents, wish to restore the proper role and importance of their surroundings. As the studies indicate, i.e.: "The culture of the courtyard", "About the tenement houses", the users of these areas perceive them as an extension of the space of the home, a place for meetings, leisure and the execution of hobby activities. The fulfilment of these expectations is possible with the active participation of those concerned and the involvement of the city authorities in the process of revitalisation or regeneration of these areas. From the conducted analyses and observations of courtyards in Bydgoszcz, it appears that this is possible to a limited extent or, due to the irretrievable destruction of these spaces, no longer realistic.

An example of the complete destruction of the neighbourhood space, including the courtyards and the extensive garden belonging to the back of the tenement house, is the area at 133 Gdańska st. In the years 2019-2022, on the area of the former gardens, vegetable gardens, greenhouses, outbuildings, annex houses and playgrounds, there was constructed for one of the grocery store chains a large 900 m^2 commercial facility, a concrete hall surrounded by XIX-century buildings. The district between the city's main street and Kościuszko street, with an area of over 0.4 hectares, constituted a direct space for the residents of one tenement house and indirectly for the four adjacent ones. This area, through many years of building layering, constituted an element of a system of linked urban interiors, the composition of which for more than 100 years has been characteristic for the whole city centre. The service facility, with a standard form for this type of function, has broken the traditional connections, has dominated with its size the plots bordering it, depriving them of their role as neighbourhood spaces. In the area of the former gardens, there dominates an extensive, monotonous car park, devoid of plants. From the windows of the upper storeys of the tenement houses, there is a view of the finial of a flat roof with technical infrastructure. The designers, wishing to preserve the frontage line of the development from Gdańska street, have suggested the creation of a concrete structure of the height of the neighbouring buildings, acting, however, as an advertising wall. This form, which merely introduces the shopping and parking area, has not been assigned, through deliberate compositional elements, any aesthetic or functional attributes that would attest to a link with the XIX century architecture.

Figure 4. Yards spaces with servis building at 58 Dworcowa, 13 Gdańska, 7 Stary Rynek, 2 Matejki streets.

Source: author`s own photo.

Another predominant example of contemporary courtyards is their transformation into homogeneous parking areas, with a division between the ability to leave as many cars as possible, whether for residents of the tenement house or for visitors. The first solution dominates in most of the analysed courtyards. The opportunity to change the function of the courtyards into spaces accessible to the cars of all those wishing to park often stems from the activities of the service premises which are located behind or within the front building on the property. In addition, the access is provided from the back street connected to the outbuildings and annexes. The areas of both the groups are characterised by paved driveways and parking places, made of cobblestones, which have been introduced instead of lawns or stone paving and which significantly disrupt the harmony between the block of the tenement house and its, devoid of original character, surroundings. The detail of the XIXth century buildings, the colours, the materials used in the buildings are juxtaposed with the fine, monotonous forms made of concrete. Tightly filling the courtyards with this material also changed the mass of rainwater runoff into the ground and the urban rainwater system, additionally burdening it. In the historic centre of Bydgoszcz, there are some exemplary models of such solutions in multi-family houses around the Old Market and in Długa st., 35 Gdańska st., 1 Pomorska st, Podolska, Zduny, doctor E. Warmińskiego streets. Solutions of the second type dominate in the very centre of the city, e.g. along Gdańska and Dworcowa streets. Their common feature is that they combine into one parking system of the whole system of internal quarters between tenement houses.

The third type of courtyards are the areas where the service developments have been erected or preserved. In the area of Bydgoszcz's city centre there are numerous factories and craftsmen's workshops, and nowadays offices, which are connected to the main streets of the city through a gate passage. They do not create social spaces that improve the quality of life of the residents, but when taken care of and skilfully managed, they successfully fulfil a commercial function. These locations are often fronted by a parking and entrance area to the buildings. An example of such a solution are the areas at 29 Gdańska st. or 22 Dworcowa st., where service companies, retail outlets, catering facilities, customer car parks, among others, have been located inside. Some of the solutions are distinguished by the details of greenery and small architecture (gazebos, benches, carpet beating racks and swings for children), which are left in the use of the tenants. Some examples of courtyards are the courtyards of tenement houses at 7 and 13 Dworcowa st. or at 58 Gdańska st. A solution of this type is also the courtyard at 13 Gdańska st., developed between the main building and the inner annexe. In 2016, a coffee shop combined with a cinema was opened there. In the intimate space, a cultural space has been created for the townspeople, with shows, meetings with artists and thematic fairs taking place there. The courtyard does not perform the social function previously assigned to it, as it is an area for the customers of the service and catering facilities. The development for the residents of the tenement building is limited only to the area designated for the rubbish bins and the carpet beating rack.

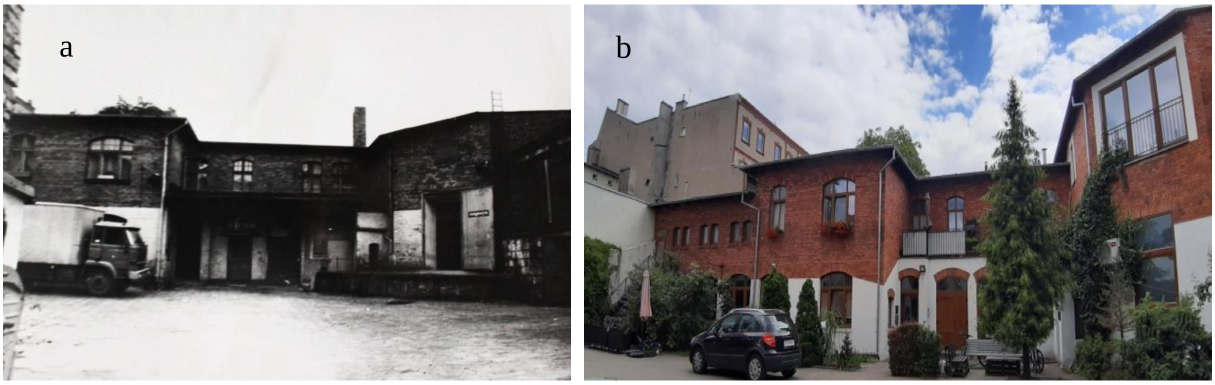

Figure 5. Courtyard of Photography Foundation at Pomorska 68a street.

Source: a: www.fotografistka.pl, 16.09.2022; b: author`s own photo.

A similar solution can be found at 68 and 68a Pomorska street. The courtyard space there consists of two parts. The first one closer to the front building belongs to the residents. It is dominated by untidy greenery with three parking spaces, garages and a technical zone. From the north, along the border with another plot, there is a road leading to the second part where, similarly to 13 Gdańska street, one of Bydgoszcz's cultural institutions is located. The history of the complex of buildings dates back to the end of the 1870s. The first owner of the area constructed a stable here and later a residential annexe, which was expanded in subsequent years. In the 1890s, the area was bought by the Kunterstein brewery, which equipped a mineral water and beer bottling plant here. Over the years, the premises have changed their function, but until the end of 1999 they were connected with the brewing industry. On the top floor there was also invariably a residential facility. Currently, in the renovated premises, the seat of the Photography Foundation is located, and the former industrial rooms have been used as research studios, photography galleries with workshop and exhibition spaces. The courtyard contains a separate parking area and a section that forms the foreground of the gallery. There are three separate entrances to the building complex, which are preceded by tall and medium-high greenery. Its purpose is to separate semi-private and private spaces, where elements of small architecture are located - benches, tables with chairs, bicycle racks. Shows, vernissages and thematic meetings take place here. The entire premise is dominated by a mural depicting the figure of Jadwiga Szopieraj. The artist ran her photography business in the building enclosing the courtyard on the north side, where the mural is located. The courtyard is fenced off, but open to the public during gallery hours. The operation of the photographic studio does not restrict the accessibility of the area to local residents.

To the overview of Bydgoszcz's courtyards, an example of an interior type unchanged since the architectural building was erected should be added. In the city centre, the tenement house at 83 Gdańska St. was chosen. The first owner of the eclectic building, erected in 1890, was Carl Rose, a master bricklayer and carpenter, the author of several buildings in the city. This tenement house closes the corner of the main street frontage and Świętojańska street. In 2017, the front elevation underwent a careful renovation that restored its original appearance.

Figure 6. Bydgoszcz, a downtown tenement house at ul. Gdańska 83, the renovated façade in the front part and the inner courtyard built in 1890.

Source: a - own study based on https://bydgoszcz24.pl, 22/09/2022; b, c - author's own photos.

The courtyard is separated from the public space by a metal gate topped by an arch. From the beginning, it was used as a business and utility area for the residents; there was no green space. In the rear elevation, a separate entrance has been preserved, which led to the kitchen staircase for suppliers and servants. A second entrance was used by the tenants as a downstairs to the basements. Carts carrying coal, agricultural goods and other supplies were driven in through an extensive gate. The courtyard was paved with solid granite cobblestones. The geometric, rectangular-shaped courtyard space has been preserved unchanged. This space, enclosed on four sides by walls that did not give access to the sun's rays, still allows us to clearly read the functions that this courtyard performed. The unchanged shapes of the windows and their arrangement in the tenement, indicate the original location of the toilets and utility rooms on the side of the courtyard. The logical and well-thought-out development of this space, the location with regard to the sides of the world and the functions of this courtyard, have decided to keep its form unchanged.

The last presented examples are courtyards that have been renovated and revitalised, taking into account the needs and expectations of residents. These include courtyards located in various parts of the city centre, e.g. at 7 M. Reja st., 74 Pomorska st., 13 Cieszkowskiego st., 13 H. Sienkiewicza st., 27 Dworcowa st. Among those mentioned, the property at 7 M. Reja st. stands out, where on the initiative of residents revitalisation works were undertaken. The two-storey tenement consists of a front section to the east and an outbuilding wing to the north, which emphasises the geometric rectangular shape of the courtyard. To the west and south it is separated from the neighbouring plots by a wall. In 2015, the works, started four years earlier by the local community, were completed. The renovation was the culmination of the activities of previous investments concerning: technical infrastructure, roof replacement, renovation of the staircases. The tenants have jointly developed a functional programme. In an area with dimensions of 20x20 m, it will separate the following zones: children's play area, leisure area for adults and technical area. The casual composition of the whole is emphasised by the green dominant, which is a specimen chestnut tree. The urban floor is mostly a lawn area, as well as hardened surfaces made of recycled solid ceramic bricks and permeable sand, safe for the playing youngest users. There are suspended trellises on the walls of the fence and house, with ivy climbing up them. On the west side, a small square has been constructed, complemented by pruned shrubs and a bench has been placed. On the north side, an area was located with a house for storing garden tools, chairs with a table, a wood shed, bicycle racks and a covered arbour. Under the windows of the flats, on the east side, low ornamental plants have been planted. In the south-east corner of the courtyard, a rock garden was created using the elevation of the terrain. The space does not have a gated opening with the street, so no parking spaces for cars have been planned. As a culmination of these efforts of the housing community, it has twice been awarded the highest prize in the competition "Aesthetics around the house", organised by the Bydgoszcz Municipal Houses Administration.

Figure 7. The courtyard revitalized by the residents at M. Reja street, creating a social space for the community.

Source: own study based on https://bydgoszcz.wyborcza.pl, 16.09.2022.

4. Summary and conclusions

As demonstrated by the studies of the literature on the subject, to date, research into courtyards in the city centre has been conducted to a limited extent. In studies dealing with architecture or the functional-spatial structure of Bydgoszcz, their role and importance is limited to signalling their occurrence. This lack of scientific publications has contributed to taking up the subject and analysing the compositional solutions of courtyard areas and searching for factors that condition the proper protection of this cultural heritage and its modern management.

The discussed examples of Bydgoszcz's courtyards make it possible to qualify them. Among the indicated five types of tenement interiors, group space for residents is only found in two types of courtyards. The first are the traditionally unchanged areas and the second are the areas revitalised with the participation of residents. In the remaining examples, the function given to them today has deprived the courtyards in the historic part of the city of the role they were originally given. The solutions applied in them restrict them to mainly commercial and parking spaces.

At the same time, it has been shown that the factors that are responsible for building relationships with the immediate surroundings that is the courtyard and social with neighbours are: the identification of tenants with their place of living, a conscious reading of its historical significance, the preservation of the traditional arrangement of the interior system in the development quarters, taking into account both the areas of residential and commercial outbuildings and green areas.

Another factor contributing to this relationship is the proper urban composition, which creates the boundaries of the individual neighbourhood spaces, assigning them a specific meaning of a place. Elements complementing this picture are the preserved architectural details in parts of the facades of the buildings, but also the shapes and decorations of the entrances to the staircases and entrance gates, restored or reconstructed their original sections. Of equal importance is the retention of historic materials and patterns in the floors.

Due to technical reasons, it is important to separate utility zones depending on the needs of the tenants, such as shelters for waste bins, bicycle racks, the right proportion of parking spaces, space for drying laundry, or beating dust out of carpets. The details of the small architecture foster social relationships in this space. The basic attribute of a courtyard is a bench with a backrest, as well as pergolas, covered gazebos, places for communal meals, stages for shows and performances.

An indispensable complement to this space is the greenery exposed in the form of decorative and functional gardens already traditionally functioning in the development quarters and carefully implemented in new design solutions. Its natural role influences the uniqueness of each interior, but also brings order to urban arrangements, improves the quality of life and aesthetics of courtyards, while at the same time improving the health and climatic qualities of the entire city. Appropriately delimited green areas and their subsequent maintenance should result from the involvement, already at the initial planning stage, of all the residents as much as possible. A sense of community and responsibility for one's own piece of space, creates social bonds among the residents and an attachment to their place of residence.

The historic areas of the interiors of city-centre townhouses and their development are also an alternative to the inhabitants of the unified, created from repetitive designs and materials of and materials, contemporary housing developments, mainly in blocks of flats. The same urban and visual composition solutions, often used there, without reference to individually shaped housing complexes, results in a sense of monotony and lack of participation by residents in the creation of their immediate surroundings. The accidentally placed benches or impersonal playgrounds in these areas in no way resemble historic, urban courtyards and frequently amount to empty and no-man's land.

In this context, the city centre courtyards of Bydgoszcz are the areas where traditional XIXth century forms have been preserved, and the revitalisation with public participation carried out in some of them, ensures the maintenance or restoration of social spaces, which are an element of the cultural heritage and individual identity of the city and its inhabitants. Despite the fact that, in the overwhelming majority, these areas are still mistakenly transformed or waiting for their proper development, Community funds such as the Municipal Revitalisation Programme 2023+, the Cohesion Fund under the Technical Assistance Operational Programme for the years 2014-2020, give hope for taking the right initiatives in this regard and for subsequent actions in the degraded areas of the city.

Because courtyard spaces are often the places where the spirit of urban life from decades ago lives on, unadulterated by the official image of renovated façades. The identity image of the city from the "inside out", a kind of the reverse of the city. This is why it is worth taking care of this heritage, which is disappearing right before our eyes. As noted by Monika Zawadzka (Autoportret, 2007, p. 43), "People pass away objects and cities go on - in the irregular strip of Central Europe this is not a very strict rule. Here, only a faint trace of the absent and the permanent abandonment...”.

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ACTIVITY OF SOCIETY 5.0 ON SOCIAL MEDIA VS SELF-ESTEEM. EMPIRICAL STUDY BASED ON INSTAGRAM

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Purpose: The purpose of the article is to attempt to identify the relation between social media activity and self-esteem.
Design/methodology/approach: To achieve the purpose of the article, the study was carried out in the form of an online survey technique supported by an online questionnaire, created in the Microsoft Forms environment, on a sample of 300 individuals who possessed the characteristics of representatives of society 5.0.
Findings: The conducted study indicated that there is a significant negative correlation of low strength between self-esteem measured by the RSES scale and activity on the Instagram app. In addition, we found that self-esteem depends on gender (men have significantly higher levels of self-esteem than women), while activity on the Instagram app depends on gender (women spend significantly more time on the Instagram app than men) and age.
Research limitations/implications: The limitations of the survey conducted are the non-random sampling of individuals and the size of the study sample, which make it impossible to relate the results to the general population as a whole. In addition, the study was conducted taking into account only one social network, which was Instagram. This type of study makes it impossible to relate the results to the general population of various sites, or even social media. Future research should focus on taking into account the differences in activity between the available social networks, and should also take into account other determinants that may affect it in some direct or indirect way.
Practical implications: The study conducted can be useful for brands communicating with users and promoting their products via social media. Companies can pay attention to the differences in the use of Instagram by young users and, based on this knowledge, create and then publish advertising content on the said platform.
Social implications: The results of the study can make social media users - both viewers and creators - aware that showing an ideal life on the Instagram platform, can decrease the self-esteem of the recipients of these messages. Having this kind of information, it is worth considering whether online activity significantly alters behavior and lowers well-being, and whether the actions of creators are carried out in a sustainable manner.
Originality/value: While most of the studies covering the topic covered focus on the Facebook platform or social media in general, this article focuses on the Instagram platform.

Keywords: marketing, society 5.0, social media, Instagram, self-esteem.
Category of the paper: Research paper.

1. Introduction

Social media has been an integral part of most societies around the world for many years. It is estimated that in 2022 as many as 4.62 billion people are active users of them with 7.91 billion of the total population (Datareportal, 2022). Social networks were created to communicate with others and share moments that are important to the user. It is also integral to responding to content made public by others, or activity, defined as the quantity and quality of audience engagement and interaction with other users and other social networks (Keles, 2020). According to the Statista platform, in 2022 the average time spent on social media platforms was 147 minutes (2 hours 45 minutes), which is 57 minutes more than 10 years earlier (Statista, 2022). The frequency of users' use of social media is primarily due to the widespread availability of smartphones (Pew Research Center, 2018), which is the result of huge advances in science and technology (Tabarés, 2022). A study of Korean students showed that smartphones and social media are not only constantly present for them, but have become an important part influencing their lives and thinking (Webster, Paquette, 2023). In contrast, Filipino Millenials use selfies (self-portrait photos) as a way to express themselves and show freedom of expression (Cortez, 2021). Researchers are also addressing the topic of social media in the context of the dangers it poses, as well as the negative effects from its use (Yang, Zhang, 2022). Among other things, studies are being undertaken on the consequences of obsession with beauty through online advertising on women (Mishod et al., 2022), lowering self-esteem among adolescents, and emotional problems caused by excessive use of social media (Acar et al., 2020). Given that it is mainly young people who use social media and, as mentioned above, they are influenced by it, it was decided to formulate the purpose of the study, which is to try to identify the relationship between social media activity and self-esteem.

The achievement of the objective was based both on secondary sources - academic articles from databases such as SCOPUS and industry papers and reports, and primary sources in the form of an empirical survey conducted by questionnaire method on a sample of 300 individuals.

2. Theoretical background

2.1. Society 5.0

Technological, informational and social revolutions have their positive effects - new opportunities for opportunities and benefits economically, demographically and sociologically (Calp, 2022). The latest revolution - society 5.0 (a.k.a. information society) is a good example of this. This concept was created to solve the current problems of the population, which is a progressive, ultra-intelligent society in which everyone can lead a high-quality, comfortable life, thanks to the combination of cyberspace and physical space and the full use of information and communication technologies (Huang, 2022). A simplified diagram of how society 5.0 works is shown in Figure 1. Data that is collected from the real world is processed by computers, and the results have their application in the real world.

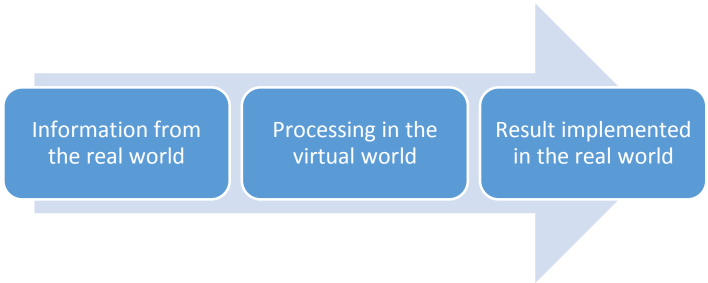

Figure 1. Diagram of the functioning of society 5.0.

Source: Own elaboration based on: Deguchi, A. *et al.* (2020). What Is Society 5.0? In: Society 5.0. Springer, Singapore. https://doi.org/10.1007/978-981-15-2989-4_1.

Society 5.0 is human-centered (Sá, 2022). It is also a creative society, in which digital transformation combined with the imagination and creativity of diverse people will be able to solve social problems and create value (Kitano, Nakanishi, 2018). It integrates physical space with cyberspace, makes very intensive use of knowledge, processes all data and information (Smuts, 2022), so as to balance economic development with solving social problems (Pu, 2020). A super-intelligent society is very adept at adapting to technological changes and is aware of their impact on society, so it tries to carry out activities aimed at promoting talent, diversity and empowerment (Huang, 2022).

Nakanishi and Kitano distinguished 5 key characteristics of society 5.0. These are:

- The ability to solve problems and create value.

Society 5.0 is not primarily focused on efficiency, as was the case with its predecessors in society 3.0 and 4.0. Society 5.0 has more diverse needs than mere efficiency. It focuses on individual needs, problem solving and value creation.

- Diversity.

Society 5.0 values the diverse skills, ideas and needs of others, transforming them into business. Individuality becomes a value where discrimination and prejudice have no place.

- Decentralization.

Defined as liberation from inequality. Society 5.0 seeks to give everyone a chance to learn and work, regardless of circumstances. It attempts to minimize the information disparity left by societies 3.0 and 4.0.

- Resilience.

Society 5.0 is focused on freeing people from fear and anxiety. It pays special attention to security by strengthening the level of medical care, regardless of location, strengthening resilience to: disasters in physical space, attacks in cyberspace, unemployment and poverty.

- Sustainable development and harmony with nature.

Society 5.0 values living in harmony with nature. It becomes independent of traditional energy grids, manages water supply and waste both technologically and systemically, enabling people to live in a variety of places in harmony with nature. As part of the development of the sharing economy, it promotes food that is good for both the environment and health, but its price will increase significantly, contributing to the non-waste of food.

Another tool for conducting and promoting this type of activity can be, among other things, social media, which, as already mentioned, includes a large part of the population, especially the younger generation.

2.2. Social media

As research demonstrates, individuals using social media have the ability to satisfy their desires, connect with others, share, access and receive information regardless of spatial (Purva, Grover, 2022) and temporal boundaries (Whelan et al., 2020). Using social media platforms is part of society's daily routine (Shorter et al., 2022), which can communicate through voice calls, video calls, text messages, and by creating and sharing content (Rozgonjuk, 2020). Most social media users are young people between the ages of 20 and 29. However, it is the group of teenagers from age 16 to young adults up to 24, which ranks third in terms of numbers, that spends the most time on social media - an average of 3 hours 13 minutes among women and 2 hours 43 minutes among men (Datareportal, 2022). For young groups of consumers, current teenagers, social networks are the main source of information about consumption options, outweighing other media (Ho, Shin, Lwin, 2019). The research of the aforementioned Datareportal report also shows that when differentiating active social media users by gender, the vast majority of age groups, especially young people, are outnumbered by men. Only in the 50-59 age group are the results almost identical considering both genders. And the group of 60 years and older is only minimally dominated by women. However, it is women, in all age groups, who spend more time on social media than men.

This article takes up the consideration of a selected social network - Instagram. It is the fourth in the ranking of social media platforms applications, after - Facebook, Youtube' and Whatsapp, respectively. Among the apps available on the market, Instagram is shaping up as one of the most influential (Casalo et al., 2021), with 1.28 billion users worldwide. Instagram is a visually oriented platform (Alshawf, Wen, 2015), initially allowing users to add and view photos. However, since 2013, it has been updated to include the ability to display and share video content (Kusumasondjaja, 2019). The aforementioned visual content has become a primary means not only of communication, but also of identity exploration and self-expression (Soo-Hyun, 2022). Instagram being an application particularly oriented towards visual content and self-presentation (Hong et al., 2020) is an ideal place to explore the issue of self-esteem in the context of user activity.

2.3. Self-esteem

Self-esteem is recognized as an important aspect of human social and cognitive development (Berndt, 2002; Pulkkinen, Nygren, Kokko, 2002; Wigfield, Battle, Keller, Eccles, 2002). It is an individual's overall assessment of his or her self-esteem (Rosenberg, 1965). It refers to the degree to which a person appreciates, approves and values himself (Tazghini, Siedlecki, 2013). Any individual's experiences can affect his or her self-esteem (Rahma, Setiasih, 2021), which can be stable or variable due to other factors or events (Jan et al., 2017).

Previous studies addressing self-esteem have mostly focused on the Facebook platform (Tazghini et al., 2013; Eşkisu et al., 2017; Marshall et al., 2015) or addressed social media in general (Cingel et al., 2022; Jan et al., 2017). Juxtaposing the phrases self-esteem and Instagram, for instance, 36 items are available in the Scopus database. However, they include other research samples, for example Insta Moms (Moujaes, Verrier, 2021), teenagers (Feijoo et al., 2022), young women (Kim, 2020; Jolanda et al., 2020), etc. Studies are also being undertaken in other contexts, such as the influence of influencers on the ideal appearance of teenagers (Antonietti et al., 2020) or covering other markets, including Spain (Feijoo et al., 2022), Kuwait (Alfailakawi, 2018), Singapore (Jiang, Ngien, 2020), etc.

The present study is more narrowly focused, focusing on Instagram and primarily young people - statistically the most frequent and longest-acting of the day, representatives of the 5.0 generation.

Based on the above, the following hypotheses were formulated:

- H1: The level of self-esteem significantly differs in terms of:
  - H1a: gender.
  - H1b: age.
  - H1c: education.
  - H1d: place of residence.

- H2: The level of activity on the social network - Instagram significantly differs in terms of:
  - H2a: gender.
  - H2b: age.
  - H2c: education.
  - H2d: place of residence.
- H3: There is a significant correlation between activity on social networking site - Instagram and level of self-esteem.

3. Methods

3.1. Procedure

The study was conducted using a survey method, in the form of an online survey technique, supported by an online form questionnaire created in the Microsoft Form environment. The process of collecting responses lasted from February 2022 to July 2022. The selection of individuals for the survey sample was based on a purposive selection scheme, in which the categories were the age of the respondent (young people) and the use of the Instagram application.

Initially, a total of 324 responses were collected in the electronic questionnaire, however, due to missing responses and errors, 24 items were rejected.

3.2. Sample characteristics

In the final analyzed sample - 300 individuals, the majority were women (67.7%, compared to men - 32.3%). The average age of respondents was M = 22.4 with a deviation of SD = 2.360. The sample was dominated by respondents with a high school education - 68.0%, while the rest had a university degree - 32.0%. Almost half of the respondents lived in cities with a population of more than 500,000 - 47.3%, 8.7% of the respondents lived in cities of 200,001 to 500,000 people, 12.7% of the respondents lived in cities of 50,001 to 200,000 people, while 12.0% and 19.3% of the respondents lived in cities of up to 50,000 people and villages, respectively. The reasonableness of the selection of individuals was based on the possession of the characteristics of Society 5.0 within the framework of the foundations of this concept such as, among others: technological transformation in the context of openness to new technological or digital solutions, value creation and co-creation; living in harmony with nature (Kitano, Nakanishi, 2018). Young and middle-aged people (up to 44 years old), mostly with a university education in Poland are considered techno-enthusiasts, who have positive attitudes towards technology, often use most of the available technological solutions, and see it as one of the development factors of the economy (Digital Poland, 2020), among others, in the context of creating business opportunities (Gregor, Kalińska-Kula, 2016). Research conducted by the IBM Institute Bsiness value and the National Retail Federation shows that 40% of consumers pay attention when shopping whether the products or services they are looking for are in line with values, and 57% say they are willing to change their shopping habits in order to reduce their negative impact on the environment (Inquiry Market Research, 2021; IBM Institute for Business Value & National Retail Federation, 2020).

3.3. Measures

The Polish adaptation of the Rosenberg Self-Esteem Scale (RSES), which has been validated on representatives of the Polish population (among other publications - (Laguna, Lachowicz-Tabaczek, Dzwonkowska, 2007)), was used to examine the level of self-esteem. This construct consisted of 10 questions to which respondents referred according to a scale from 1 to 4, where 1 meant "strongly disagree" and 4 meant "strongly agree." The sum range of the scale ranges from 10 to 40 points, the higher the sum of points the higher the level of self-esteem. For some analyses, the variable was transformed to the ordinal level to 3 classes - low level of the index (values from 10 to 20 points), medium level of the index (above 20 points to 30 points) and high level of the index (above 30 to 40 points) (Hellwig, 1968; Łogwiniuk, 2011).

Activity on the Instagram application was measured by an index calculated based on the following formula.

$$A = \frac{T}{C} \tag{1}$$

Activity in the Instagram app (A) is the relation of the declared amount of time spent in the app in hours (T) to the declared number of logins to the app per day (C). Thus, this variable represents how much time in hours a respondent spends in 1 login to the app.

4. Results

The analysis began by examining the distributions and detailed statistics for the variables: self-esteem and activity in the social media - Instagram.

The RSES scale measuring self-esteem proved to be reliable (Cronbach's Alpha at $\alpha = 0.865$). Detailed statistics for the scales are presented in the following table (Table 1).

Table 1.
Values of statistical measures of the scales: self-esteem RSES and activity on the Instagram app in the study sample (n=300)

Statistical measure	Values of statistics	
	RSES	Activity on the Instagram app
Mean	30.3067	0.2600
Standard deviation	5.69098	0.20697
Median	31.000	0.2000
Dominant	31.000	0.2000
Skewness	-0.551	1.537
Kurtosis	0.139	2.788

Source: Empirical research.

Considering the presented descriptive statistics of the scales: RSES and Instagram activity index, such as similar values of central measures (mean, median and dominant), asymmetry and kurtosis indices, it can be concluded that in the case of RSES scale, the distribution of the variable is close to a normal distribution (skewness and kurtosis falling between -1 and 1), while the distribution of Instagram activity index is not close to a normal distribution (values of skewness and kurtosis falling between -1 and 1).

Then, in order to verify hypotheses H1 (a, b, c, d) and H2 (a, b, c, d), the corresponding tests of dependence of the previously indicated scales were performed in relation to the demographic characteristics of the respondents. The results of the tests are included in the following table (Table 2).

Table 2.
Probability p-values of statistical tests for the scales of RSES self-esteem and Instagram app activity in relation to respondents' demographic characteristics (n=300)

Variable	RSES	Activity on the Instagram app
	p - value	
Gender	0.005*	0.012*
Age	0.129	0.007*
Education	0.157	0.076
Place of residence	0.415	0.231

Note. Due to the impossibility of meeting the requirements for parametric methods, such as equality of units, distribution close to normal and homogeneity of variance in the subgroups examined, it was decided to use non-parametric equivalents - the Mann-Whitney U test for the number of subgroups k = 2 and the Kruskal-Wallis H test for the number of subgroups k > 2. For age, scatter plots were made which did not show the linear nature of the correlation, so the non-parametric equivalent - the Spearman rank correlation coefficient - was used.

* p < 0,05.

Source: Empirical research.

The level of self-esteem (RSES) differs significantly in terms of respondent gender (U = 7871.500; p < 0.05), with men (M = 31.505; SD = 5.566) having significantly higher levels of self-esteem than women (M = 29.734; SD =5.674) in the sample. Statistical tests showed no relation between the RSES variable and age (rho = -0.088; p = 0.129), education (U = 10781.000; p = 0.157) and place of residence (H = 3.938; p = 0.415).

Activity on Instagram depended on the gender of the respondent (U = 11602.500; p < 0.05) - women (M = 0.272; SD = 0.198) spend significantly more time on Instagram than men (M = 0.234; SD = 0.223); and age (rho = 0.154; p = 0.007). No relationship was found between Instagram app activity and education (U = 8552.500; p = 0.076) or place of residence (H = 5.603; p = 0.231).

In order to verify hypothesis H3, a scatter plot was made for the respondents: RSES and Activity on the Instagram app.

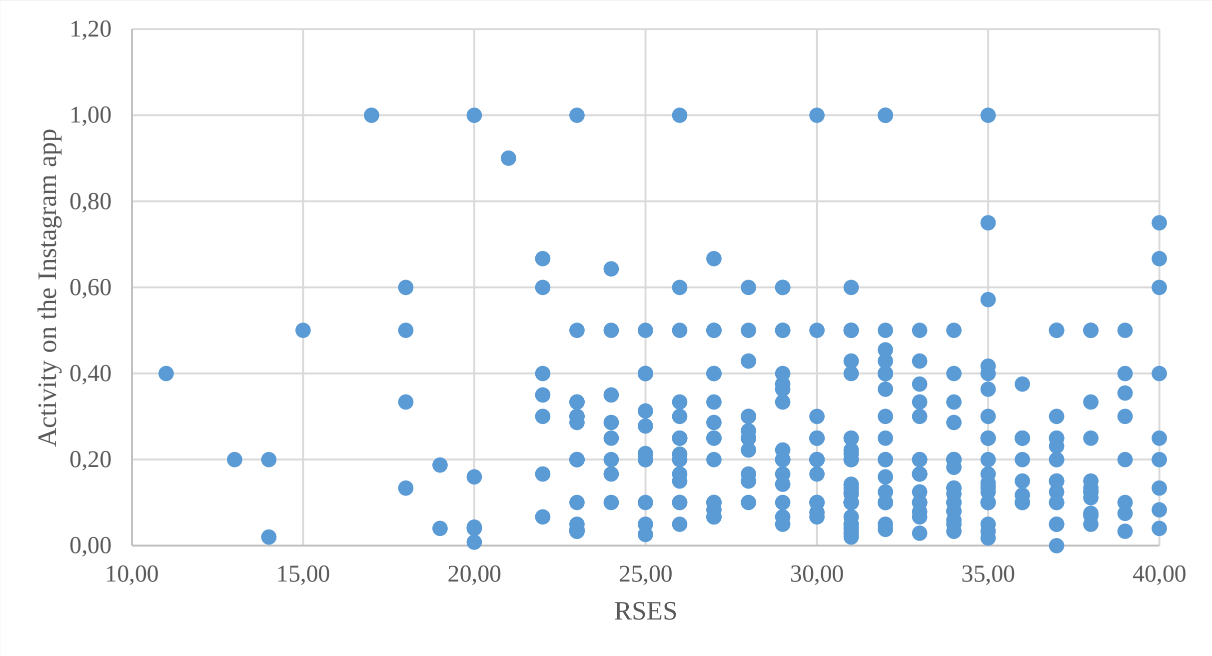

Figure 2. Scatter plot for the variables RSES and Activity on the Instagram app (n=300).

Source: Empirical research.

Analysing the aforementioned diagram, it can be observed that there are a significant number of outlier observations and the nature of the data is not linear. According to the Pearson correlation coefficient assumptions, the variables should be characterised by a linear relationship (Wiktorowicz et al., 2020). Thus, it was decided to use a non-parametric statistic - the Spearman rank correlation coefficient. The correlation turned out to be significant, negative, but of low, insignificant strength (rho = -0.120; p = 0.38).

In order to further analyse the relationships between the variables studied above, the RSES variable was aggregated into 3 classes (low, medium and high levels) (Hellwig, 1968; Łogwiniuk, 2011). The results of the transformation are shown in the chart below.

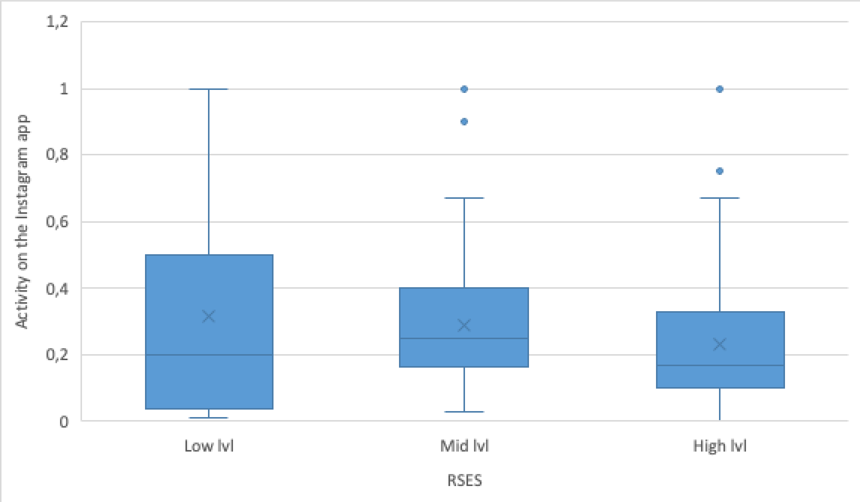

Figure 3. Box plot for the variables RSES and Activity on the Instagram app (n=300).

Source: Empirical research.

As the requirements for parametric tests were not met, a non-parametric equivalent was used for comparisons when the number of groups $k > 2$ - the Kruskal-Wallis H test.

The test showed significant differences among the subgroups studied ($H = 8.328$; $p = 0.016$), respondents with a medium level ($M = 0.290$; $SD = 0.205$) of self-esteem spending significantly more time on the Instagram app than representatives of the subgroup with a high level ($M = 0.233$; $SD = 0.192$) of RSES ($D = 30.119$; $p = 0.012$). There were no significant differences between the groups of respondents with low versus high levels ($D = 12.278$; $p > 0.05$) and low versus medium RSES ($D = -17.841$; $p > 0.05$).

5. Discussion

A study conducted demonstrated a negative significant correlation between activity on the Instagram app and self-esteem as measured by Rosenberg's RSES scale. Similar results were obtained for a study on the Facebook platform with a similar sample in terms of age (Jan, Soomro, Ahmad, 2017; Kalpidou, Costin, Morris, 2011).

An explanation for this correlation could be that people with low self-esteem, by spending a lot of time on social media and logging a high frequency, try to replace their social needs (Tazghini, Siedlecki, 2013; Zhang et al., 2017; Faraon, Kaipainen, 2014; Jan et al., 2017) or even have the opportunity to expand their social capital (Kalpidou, Costin, Morris, 2011).

In the case of the Instagram platform, activity comes down to both consuming and creating content in the form of posts in the form of graphics or video, testimonials (so-called stories) or, until recently, IG TV (a longer form of video content). Nowadays, a new alternative is also reels, which are inspired by a form from the popular social network Tik-Tok. Such consumption or creation often relies on the phenomenon of comparison. It is very common to see profiles of people who are professionally or privately successful, respected, travelling, taking care of themselves and comparing themselves to their not-so-perfect selves, which can quite often contribute to lower self-esteem (Vogel et al., 2014).

The results of the conducted study also showed that women spend significantly more time on the Instagram app than men, which has been substantiated in works (Ellison, Steinfield, Lampe, 2007; Ryan et al., 2014; Błachnio, Przepiorka, Rudnicka, 2016). According to the results of the aforementioned works, women are more dependent on social media than men, which translates into a longer time of use, and gaining social popularity online.

6. Conclusion

Based on a critical analysis of the available literature on society 5.0, self-esteem, media and social networks, mainly on the Instagram platform, research hypotheses were formulated on the relationship between the aforementioned variables, in relation to control variables - metrics such as respondent's gender, age, education or place of residence (Table 3).

Table 3.
Hypotheses and decisions on their acceptance and rejection based on the empirical study

Hypotheses	Decisions
H1a – Level of self-esteem significantly differs in terms of gender	Lack of basis for rejecting the hypothesis
H1b – Level of self-esteem significantly differs in terms of age	Rejected hypothesis
H1c – Level of self-esteem differs significantly in terms of education	Rejected hypothesis
H1d – Level of self-esteem significantly differs in terms of place of residence	Rejected hypothesis
H2a – Level of activity on social networking site - Instagram significantly differs in terms of gender	Lack of basis for rejecting the hypothesis
H2b – Level of activity on social networking site - Instagram significantly differs in terms of age	Lack of basis for rejecting the hypothesis
H2c – Level of activity on social networking site - Instagram significantly differs in terms of education	Rejected hypothesis
H2d – Level of activity on social networking site - Instagram significantly differs in terms of place of residence	Rejected hypothesis
H3 – There is a significant correlation between activity on social networking site - Instagram and level of self-esteem	Lack of basis for rejecting the hypothesis

Source: Empirical research.

The results of the study presented that gender significantly differentiates activity on the social networking site Instragram and levels of self-esteem. It was also discovered that there is a correlation between Instagram activity and age, as well as between activity and self-esteem.

The limitations of the present study are undoubtedly the non-random nature of the selection of individuals for the study sample and its size, which makes it impossible to relate the collected results to the general population. It is also worth mentioning that the study carried out concerns one of the available social networks - Instagram, therefore, inferring attitudes, behaviours or relationships in the context of all the various networks or even social media does not seem valid. Future research should focus on taking into account the differences in activity between the available social networks and should also take into account other determinants that may influence it in some direct or indirect way.

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ORGANIZATION AND MANAGEMENT SERIES NO. 173

THE EUROPEAN GREEN DEAL AND THE SUSTAINABLE DEVELOPMENT OF THE LUBUSKIE VOIVODESHIP

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Purpose: The publication presents the challenges facing the European Union but also Polish regions in implementing the Green Deal.
Design/methodology/approach: The method of statistical data analysis and source materials was used in the work.
Findings: The paper presents the most important issues of change posed by the European Union for the implementation of climate policy.
Originality/value: The paper is aimed at those interested in EU policy and climate policy in particular.

Keywords: regional development, region, green deal, climate policy, sustainable development, climate.

1. Introduction

The European Green Deal entered into force in the first half of 2021 in the implementation phase. This was preceded by a number of milestones setting the course of action. The European Commission, with the support of Member States and many stakeholders representing various business circles, non-governmental organizations and even many ordinary citizens, has set a new course of action.

Despite the ongoing COVID pandemic, the European Union’s climate policy is being gradually developed by the European Commission (EC), which presents new projects and documents in this area. Just before the start of the pandemic in December 2019, the President of the European Commission, Ursula von der Leyen, presented a new EU development strategy, i.e. the European Green Deal (EGD). The Commission has published a Communication on the European Green Deal, which details the vision of the EU reaching climate neutrality in 2050 through the adoption of legislative solutions and measures to implement them, including unprecedented financial outlays. It is worth emphasizing that the Green Deal is not limited only to climate policy, but also includes, among the others, a biodiversity strategy or the establishment of a circular economy (https://raport.togetair.eu/…, 2022).

It is an initiative aimed at achieving climate neutrality by the European economy by 2050. Unlike the energy and climate packages, the EGD was to be characterized by a holistic approach, covering both the energy sectors and other areas of the economy. Thus, the EGD is not only a new climate policy strategy, but de facto comprehensive transformation of the EU economy towards zero-emissions (Wojtyło, Musiałek, 2022).

The aim of the study is to present the changes that are faced by the European Union, but also by Polish regions in the implementation of the Green Deal. These are very big economic and climate challenges that are to shape the future of Europe.

2. Green Deal in the EU

Climate change and environmental degradation are a serious problem not only for Europe but also for the rest of the world (www2.deloitte.com/…, 2022). In order to be able to meet all the challenges related to this, it was decided to develop an action plan, which is commonly referred to as the European Green Deal. This plan is intended to support the transformation of the European Union into an innovative, resource-saving and additionally competitive economy, i.e. one that:

- by 2050 will be able to achieve zero level in terms of net greenhouse gas emissions,
- will develop an approach that decouples economic growth from resource consumption,
- cares for every citizen and every region, which guarantees sustainable development, which includes, above all, supporting changes taking place in regions that are most dependent on fossil fuels (commission.europa.eu/…, 2022).

At the same time, it should be pointed out that the plan in question is also intended to help in the fight against the coronavirus pandemic. It is added that the European Green Deal will be financed from funds that constitute 1/3 of the amount of EUR 1.8 trillion, allocated for investment tasks in relation to the recovery plan for the European Union, and additionally from funds from the 7-year EU budget.

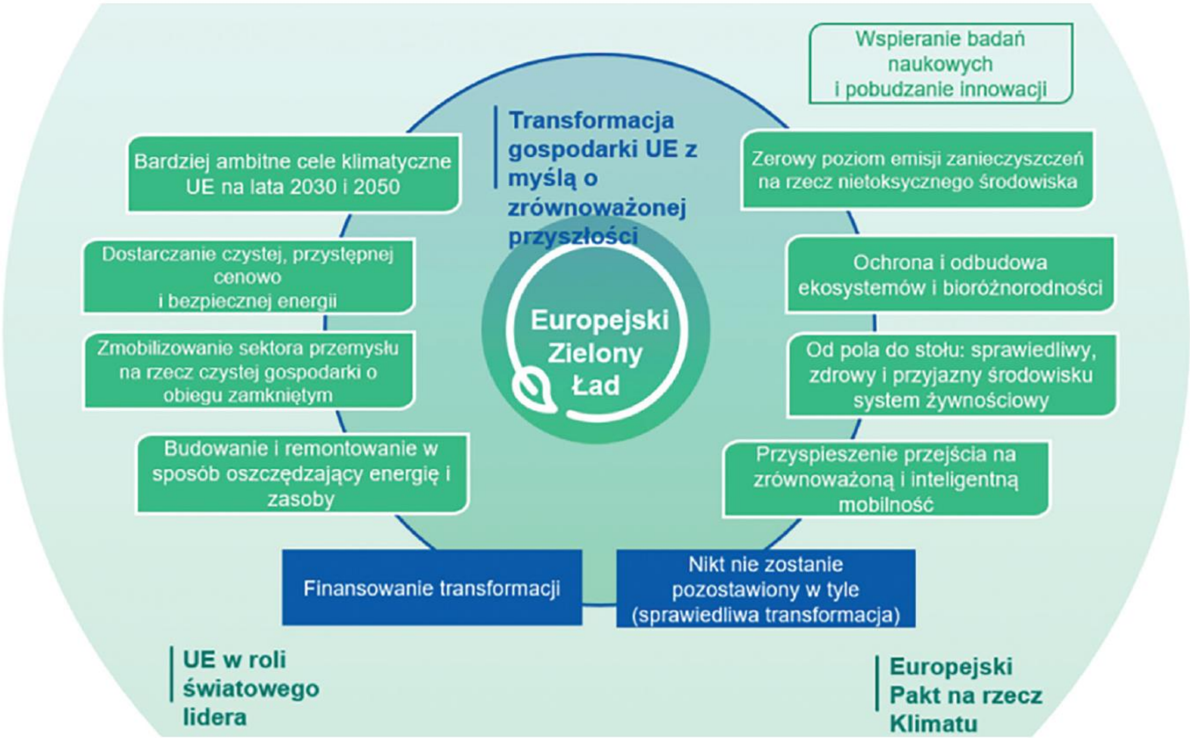

Figure 1. European Green Deal.

Source: Europejski Zielony Alert. Zrozumieć zieloną politykę UE, aby skutecznie uczestniczyć w konkursach Horyzontu Europa. NCBR, Warszawa 2022, p. 10.

The European Commission has decided to adopt a package of legislative proposals aimed at adjusting the climate policy, as well as energy, tax and transport policy within the European Union for the purpose of achieving the goal of reducing net greenhouse gas emissions, which is to take place by 2030, at the level of at least 55%, compared to 1990 emissions. As for the most important assumptions of the discussed plan, the following can be mentioned in particular:

- providing both clean and safe energy, including the introduction of a border carbon tax,
- more ambitious climate goals, including achieving climate neutrality,
- implementing a circular economy,
- construction of buildings with much lower energy demand,
- accelerating the transition to sustainable mobility, including minimizing emissions from passenger cars by 55% in 2013, and additionally emissions from vans by 50% respectively, and finally introducing zero emissions for new passenger cars, which is to be achieved by 2035,
- ensuring the care and restoration of ecosystems, including tackling soil and water pollution and taking action to implement a new forestry strategy,
- supporting scientific research,
- restoration of biodiversity,
- faster adaptation to climate change,
- health protection.

Considering the issue of what the idea in question means for Poland, it can be said that the European Union today plays the most important role when it comes to undertaking international activities for the protection of the natural environment and biodiversity. This organization also strives to become an example for other countries in the world. Achieving climate neutrality is declared by countries such as Japan and Korea, among the others. For Poland, this is mainly an opportunity for systematic transition to a low-emission economy and thus to move away from an economy that consumes too much non-renewable natural resources. It is becoming obvious that the transformation from the energy point of view is a significant challenge for Poland, but at the same time, it is the direction in which the entire European Union is currently following (www.pois.gov.pl/…, 2022). In Poland, minimizing the emissivity of the economy will focus on such areas as:

- energy system,
- construction industry,
- industrial activity,
- transport,
- functioning of households.

It should also be emphasized that many instruments and approaches are to be used to implement all the assumptions resulting from the plan. Among the most important ones, the following can be distinguished:

- administrative tools - their essence boils down to limiting the use of hazardous substances, introducing most of the labelling requirements and additionally reducing emissions,
- governance measures - this is mainly about introducing new obligations for boards, due diligence requirements and extending the responsibility of producers,
- economic interventions - this is a category of tools including, among other things, subsidies, the imposition of taxes on emissions, a system of carbon dioxide emission levels and trading in their shares, the introduction of carbon tariffs, refunds, emission offsets and finally tradable recycling credits,
- financial and market incentives - this is about the introduction of green public procurement, awarding price bonuses for undertaking green investment tasks, concluding contracts for differences on carbon dioxide emissions (www.ey.com/…, 2022).

It can be indicated that the European Green Deal will not be indifferent to individual sectors of the economy, because it will become a driving force for the possibility of introducing new business models, and additionally it will dictate new obligations to comply with applicable laws. The consequences of implementing all the assumptions of the plan will have an international character. The deal will encourage companies to minimize their carbon footprint, introduce business models in their structures that would take into account the framework of the circular economy, and also to undertake investments in renewable energy sources and clean technologies. Business entities will be obliged to take into account both environmental and social consequences from the point of view of individual links in the supply chain in their business activities.

The effectiveness of the EU climate policy requires not only actions aimed at Member States, but also external activity, aimed at key non-EU emitters. The European Commission's Communication "Ready for 55": *achieving the EU's 2030 climate target on the way to climate neutrality* emphasizes that the European Green Deal and its initiatives are to confirm the EU's global leadership in the fight against global warming. At the same time, it was noted that the EU alone is not able to take sufficient steps to stop the changes and needs the support of the rest of the world.

According to the European Environment Agency, the European Union is responsible for 8% of global greenhouse gas emissions (15% in 1990). Thanks to years of efforts, these emissions for the EU as a whole fell by 24% between 1990 and 2019 (according to Eurostat data). However, at the same time, there was an increase in global emissions – in 2016 they were 40% higher than in 1990.

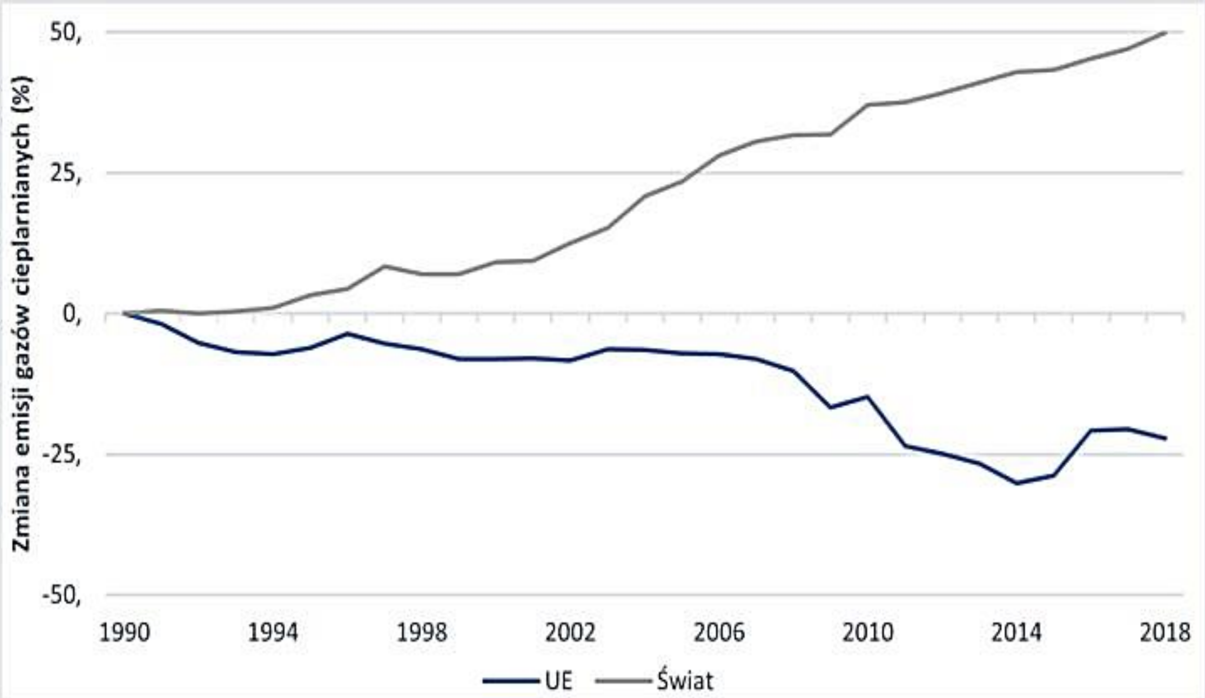

Figure 2. Change in total GHG emissions for EU-27 and globally, including land use, land use change and forestry (LULUCF) emissions, 1990-2018 vs. 1990 (%)**.**

Source: Europejski Zielony Ład. Stan realizacji, wyzwania, nadzieje., Report 06/2022, Kraków 2022, p. 36.

The above statistics clearly demonstrate the very limited effectiveness of Brussels' climate diplomacy so far. To understand the reasons, it is necessary to look at the factors that influenced this, in particular the EU's relationship with other major emitters and the outcome of the negotiations at last year's 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26).

The Polish government – as the only one of the 27 countries – remains sceptical about the EU's ambitious climate goals. In particular, it does not accept the goal of climate neutrality in 2050. The laggard attitude stems primarily from concerns about political consequences at the national level: loss of support in sectors that are declining or in need of fundamental transformation. Meanwhile, the voice of business is much more nuanced. Transformation is seen as the only sustainable solution, and companies see it as both a challenge and an opportunity to improve competitiveness and introduce innovative solutions. However, it requires a clear action plan that takes into account the needs of various stakeholders and significant financial support. The ability of Polish companies to compete globally and on the single market, as well as the ability to create and develop market niches will depend on the effectiveness of the transformation process. The stakes are high here (Europejski Zielony Ład…, 2021, p. 7.).

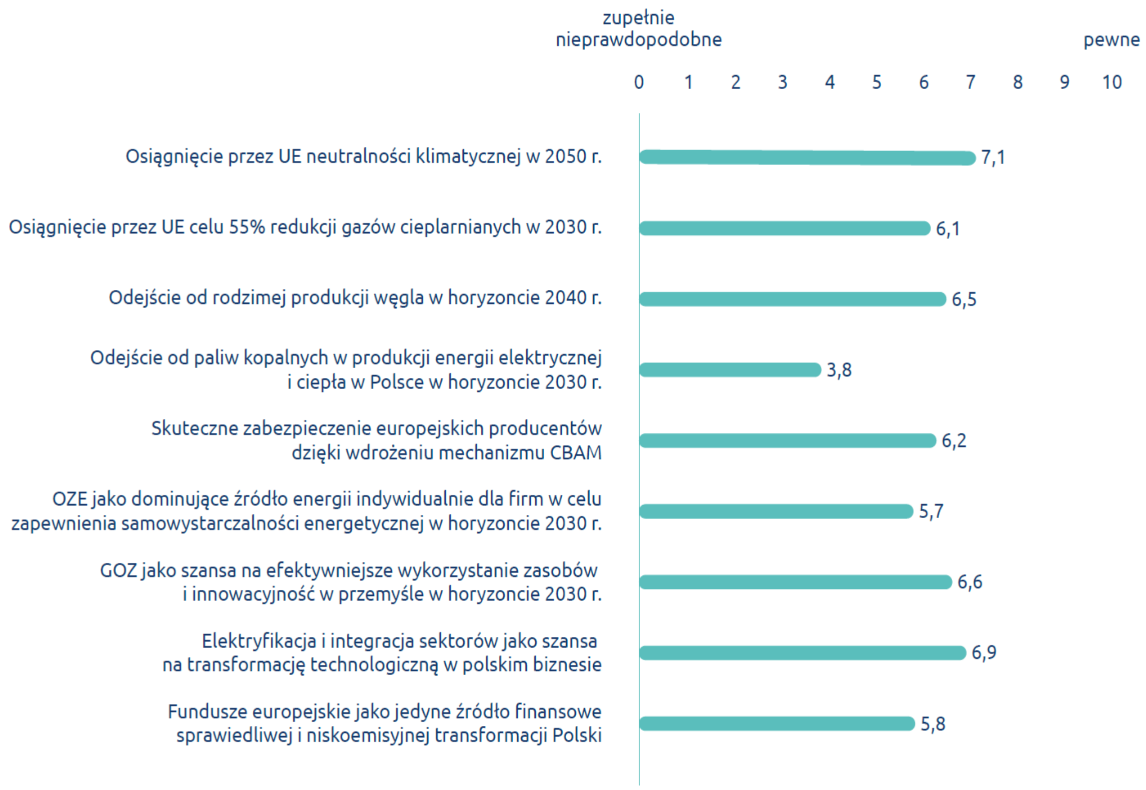

Figure 3. Assessment of the probability of achieving selected climate goals.

Source: Europejski Zielony Ład - ocena wiedzy i postaw przedstawicieli polskiego biznesu. Raport z badań ankietowych, p. 17.

Business representatives are not clear about the sources from which the fair and low-emission transformation will be financed. A significant part of them believe that in order to support entities in their efforts to become climate neutral, it will be necessary to involve national funds (public and private) outside EU funds. This has a special context in the era of events that took place on the eve of the European Council Summit in December 2020. The lack of European funds, e.g. from the Just Transition Fund, the Recovery and Resilience Facility and the new EU perspective 2021-2027 would force Polish companies to make significant and risky investments from private funds. Failure to carry them out would reduce the competitiveness of entities on the single market, and resignation from European funds will limit other pro-development activities (Europejski Zielony Ład…, 2021, p. 18).

3. Green Deal - Lubuskie voivodeship

As far as the Lubuskie voivodeship is concerned, there is a need to update the current development strategy, primarily the changes noticed by the local authorities, which are taking place in the socio-economic situation of both the region and the entire country and the world. Among all the defined problems, such as the aging of the population or dynamic technical and technological progress, the need to take action to protect the environment and respond to climate change were also mentioned (Strategia rozwoju …, 2021).

It is indicated that the Lubuskie voivodeship has quite good conditions for the production of energy from renewable sources, which applies in particular to the use of wind energy, and additionally installations based on biomass combustion or biogas production technology. Thus, it is emphasized that the region is located in a favourable area from the point of view of the operation of wind farms. The use of solar energy, both in terms of micro-installations and photovoltaic farms, is presented as an opportunity to strengthen renewable energy sources. Additionally, the voivodship is located in the area of a valuable heat flux, therefore it is worth undertaking analyses concerning the possibility of using regional thermal waters in economic or tourist projects.

It is added that the discussed region has quite large resources of lignite, even an opencast mine was planned, but it has been observed that in the world there are trends focused primarily on green energy sources that are friendly not only from the point of view of the environment, but also for human health. Such tendencies are also intensified by the current activity in the European Union.

Taking into account air pollution, in the Lubuskie voivodship the basic source of emissions is low emission, i.e. the one that comes from the household and municipal sector and includes individual sources of heat generation and smaller municipal heating plants. It is also possible to point to a visible increase in terms of transport emissions, in particular near the main roads and towns, in the vicinity of which there are larger transport junctions and thus a higher density of roads. It is therefore necessary to support initiatives focused on combating low emission sources and reducing carbon dioxide in the atmosphere. The region recognizes that environmental pollution and the crisis in natural resources are international difficulties.

In addition, the growing demand for raw materials and limited access to them result in increases in their prices, forcing rational political actions related to the use of raw materials.

Another issue is that the percentage of selective waste has increased in the region, but the mass per capita has definitely increased, thus in this respect the voivodship was ranked 3rd in the whole country. It is therefore necessary to popularize the circular economy and undertake promotional activities to introduce smart technological solutions that would be fully environmentally friendly. To sum up, in the Lubuskie voivodship in terms of green economy and sustainable development of natural resources, the following challenges can be identified, namely:

- consistent implementation of the circular economy,
- transition to a low-carbon economy,
- minimizing greenhouse gas emissions, which in particular concerns carbon dioxide, and which is to be one of the elements of pro-ecological restructuring of the local economy,
- increasing the efficiency of energy use,
- effective use of the existing potential in the field of renewable energy sources,
- sustainable use of natural resources,
- supporting development for sustainable consumption,
- undertaking promotional activities for innovative technological solutions that are friendly from the point of view of nature,
- increasing efficiency in the management of water and waste from industrial activities,
- development of package tourism, using both the potential and the location of the voivodeship in question.

In the voivodship, it is noticed that climate change and related negative weather phenomena, including heavy downpours and storms, which are dangerous to human life and health, as well as causing infrastructure damage, are becoming an important problem nowadays. Thus, the development of green and blue infrastructure, especially in urbanized areas, is becoming increasingly important. It is added that the improvement of the environment necessitates undertaking comprehensive educational activities and supporting biodiversity. In the course of work on the new strategy, the following challenges were identified, in particular:

- the need to modernize the water and sewage infrastructure, which applies in particular to rural areas,
- taking action to counteract the negative consequences of climate change and negative weather phenomena,
- development of pro-ecological infrastructure of urbanized areas,
- introduction of preventive measures in relation to drought and floods,
- ensuring effective protection of biodiversity,

- introducing measures to protect animals,
- undertaking educational initiatives and the possibility of shaping pro-environmental attitudes among the local community,
- proper management of rainwater (Strategia …, 2021).

As for the most important plans for the Lubuskie voivodeship, it is assumed that in 2030 it will be a green land of intelligent technologies, which will be characterized by high quality of functioning of local residents, which means above all:

- a region of innovative, green economy, to be achieved through the cooperation of business entities with the scientific community,
- a region coherent from a spatial point of view,
- a region located in the basin of the Odra and Warta Rivers, near lakes and forests, which responsibly uses all natural resources, thus guaranteeing ideal conditions for tourism and recreation and the possibility of producing healthy and fully safe food.

In order to meet all the challenges related to the crisis of natural resources and pollution of the natural environment, the Lubuskie voivodeship believes that it is necessary to introduce changes in the current way of managing the possessed resources. At the same time, the voivodeship in question sets itself one of the leading goals to guarantee the well-being of the inhabitants while maintaining the proper condition of nature, which is manifested in the transition to a green economy. The voivodship is aware that appropriate natural conditions, and additionally, the introduction of a low-emission economy and taking actions to introduce fully ecological solutions translate into the development of agriculture, in particular the ecological one, and may foster the competitiveness of agricultural production.

All undertakings that are to serve the development of both technical and transport infrastructure are to be carried out with the simultaneous consideration of the natural environment. This includes, but is not limited to, aspects such as:

- undertaking investments related to the modernization of energy and ICT systems,
- introducing activities to improve road transport, including modernization and construction of roads and bridges,
- improving railway communication, which includes, for example, increasing the number of connections, modernizing rolling stock stations,
- introduction of improvements in the field of water communication,
- increasing ICT accessibility.

It is indicated that improving both the standard and accessibility, and additionally minimizing the harmfulness of public transport from the point of view of the environment, or introducing investment tasks related to the expansion of bicycle routes are aimed at increasing the number of residents who will use such solutions, because it will translate into the possibility of achieving a measurable effect in the form of improving the general condition of the natural environment in the region. The demonstrated effect is to be additionally strengthened by planning the creation of pro-ecological attitudes of local citizens, ensuring the protection of biodiversity, carrying out protective measures for waters and the earth’s surface, and ensuring protection against excessive noise. Ensuring flood safety and minimizing the risks associated with the appearance of violent weather phenomena will also contribute to the possibility of guaranteeing a greater level of safety for residents.

In addition, it can be pointed out that in the field of environmental protection, including counteracting the negative consequences of climate change, the Lubuskie voivodeship has the following operational objectives, namely:

- maintaining the appropriate condition of surface and underground waters,
- ensuring access to clean water,
- modernization of sewage treatment plants,
- building sewage systems in areas that are outside the agglomeration,
- modernization of water supply networks and water treatment plants,
- supporting all activities undertaken for the management of municipal sewage sludge,
- implementation of system management in the field of municipal utilities in a supra-local system, which would be based on local municipal installations,
- implementation of further improvements in the functioning of the system of selective collection of municipal waste,
- introducing innovative technologies in relation to both recovery and disposal of waste,
- removal of any threats resulting from improper storage of waste, including liquidation of illegal landfills,
- rational use of soil resources,
- modernization of flood embankments,
- protection of areas particularly exposed to flooding,
- introduction of electronic systems and programs in the field of flood protection monitoring,
- dredging the bottom of rivers,
- construction of retention reservoirs,
- appropriate rainwater management,
- supporting initiatives related to drainage,
- promoting water storage,
- minimizing road noise emissions,
- implementation of measures to improve the acoustic climate, in particular close to industrial plants,
- minimizing the consequences of extreme weather events,
- shaping pro-ecological attitudes and supporting all actions taken to protect animals,
- development of the local landscape protection system (Strategia …, 2021).

The fundamental source of air pollutant emissions in the Lubuskie voivodeship is primarily the emission resulting from human activities. The emissions of a natural nature, i.e. those originating from various natural processes, such as soil erosion, weathering of rocks, and additionally volcanic eruptions and others, are of rather marginal importance and thus affect the quality of atmospheric air in the region in question to a rather minimal degree. Among the sources of air pollution of anthropogenic origin in the voivodship, the following should be mentioned:

- point sources, including but not limited to emissions from various industrial and power plants,
- surface sources, i.e. emissions from the municipal economy, in other words low emissions, coming from such places as, for example, regional boiler houses or individual home hearths,
- line sources, i.e. communication emission (Plan zagospodarowania ..., 2018).

At the same time, it should be noticed that the spatial distribution of pollutant emissions into the air in the Lubuskie voivodship is uneven. The largest amounts of pollutants are emitted in the areas of districts, especially those densely populated and industrialized, such as districts, including, above all, Żary, Międzyrzecz, and Zielona Góra, due to particulate pollution, and additionally districts, including Żary and Gorzów, and the city of Gorzów Wielkopolski and the city of Zielona Góra due to gas pollution.

Noise is also one of the quite serious environmental pollutants in the voivodeship. It is characterized by the prevalence of occurrence and the variety of sources. It is added that noise inseparably accompanies human activity and has a harmful impact on humans, especially with long-term impact. The fundamental anthropogenic sources of noise are, for example, the following aspects, namely:

- car, rail, tram and air transport,
- car parks, bus and tram depots,
- various industrial, craft or service establishments,
- public facilities, such as stadiums and clubs,
- construction sites.

Anthropogenic activity that is carried out in the catchment area is also reflected in the quality of surface waters. Fundamental threats to the quality of water in the Lubuskie voivodeship are related to the demand for water and thus excessive water intake for living and economic purposes, the discharge of pollutants resulting from human activity and the inflow of pollutants from various spatial sources, which include uncontrolled surface runoff of pollutants fertilisers, and additionally chemicals from agricultural land.

To sum up, it can be pointed out that the European Green Deal is a development strategy, based on the assumption of transforming the European Union into a climate-neutral area. Consequently, it is a response to the current climate crisis and to the strong procedures of the natural environment. However, it should be remembered that the implementation of all assumptions of this deal requires financial outlays (Pietruszewska, Kozłowski, 2022).

In addition, due to the scale of the assumed reforms, the European Green Deal is widely regarded as one of the largest initiatives in the history of the European Union.

The European Green Deal is intended both to stop negative climate change, but also to support the protection of biodiversity and lead to its restoration. However, from an economic and social perspective, this plan should help the transition to an innovative, energy-efficient and competitive global economy. This will entail various modifications in many areas, including social and industrial policy, and additionally in the labour market and investment financing. The implementation of changes related to the deal brings with it a number of various challenges, even those of a geopolitical nature, for example in the area of raw materials and energy policy of individual countries (Kucharczyk, 2021).

4. Conclusion

The key challenge for the implementation of the Green Deal are investments that require huge capital resources, as well as the costs of rising prices of energy and other goods and services. This process may slow down the increase in the standard of living, as well as the process of economic convergence between Central and Eastern Europe and Western Europe. The key concern in Poland is the threat of consolidating its semi-peripheral economic and political status. Over the last years of economic transformation and almost 20 years in the EU, we have not caught up with the modernization lag behind the West, and there is already a risk that it will recede (Wojtyło, Musiałek, 2022, p. 221). The fact that the EGD is not only a political strategy, but a fundamental change in thinking about economic activity and an opportunity for technological and social changes while maintaining competitiveness, is signalled by the member companies of the Lewiatan Confederation. According to the research report conducted by the Lewiatan Confederation, less than 30% of the surveyed entities believe that the EGD will not force any changes on their businesses in the next 5 years. This view was definitely more often formulated by smaller entities. Among the others, the prevailing concept is that changes are inevitable and will concern both the production technology (for every third company – 33%) and the product portfolio (27%). Reorienting the entire business (14%) or changing the target group (10%) are significantly less frequent (Europejski Zielony Ład – ocean…, 2021).

The Lubuskie voivodeship is a region known for its natural and landscape values, but sustainable economic development must be accompanied by environmental protection and prevention of its degradation. Such an approach requires new innovations and modern technologies. The saying: green land of modern technologies, in the context of the Lubuskie voivodeship, is a challenge for the entire region for the new decades. Smart green economy has currently been a trend already in force in Europe.

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MACROECONOMIC INSTABILITY AND DEVELOPMENT DISPARITIES OF PERIPHERAL AREAS IN REGIONS IN POLAND

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Purpose: The aim of the article is to indicate the macroeconomic factors and their potential impact on the economy in the conditions of crises in the regional system in Poland and in peripheral areas of the regions, based on the example of the Mazowieckie province.
Design/methodology/approach: The study includes theoretical research on the impact of macroeconomic phenomena on development processes and empirical research on changes in macroeconomic indicators in crisis conditions. The research covered 314 communes and 37 districts in Poland and in the Mazowieckie province. The analytical and descriptive method of the impact of changes on the socio-economic development was used.
Findings: Theoretical research proves that macroeconomic instability affects the course of economic processes. The increase in interest rates and inflation may limit investment activity and reduce the efficiency of management. This poses a threat to the company's and state's performance. Empirical research has shown that in Poland there has been a deterioration in the economic situation in the regions and in the peripheral areas of the regions.
Research limitations/implications: The broad context of economic and social changes resulting from many crisis phenomena is a difficult subject of research. There are serious difficulties in accessing reliable sources and the continuity of source data, which limits research opportunities.
Practical implications: Identification of changes in factors adversely affecting development and leads to the need to monitor the macroeconomic situation and current changes taking place in enterprises, and indirectly relates to social changes. Hence, it is necessary to conduct further research in a systemic perspective and to take appropriate remedial measures.
Social implications: The research revealed the influence of negative factors on the phenomena taking place in the economy. The effects are wide-ranging and there is a risk of worsening both nationally and globally. Specific changes in the social sphere, including lowering the standard of living, are a derivative of crisis phenomena. The social consequences are already visible, further effects may occur in the future.
Originality/value: (mandatory) The article raises the problems of economic development in the face of crisis phenomena. The instability of development in the conditions of significant macroeconomic changes requires detailed analyzes of conditions and effects in the long term.

Keywords: economic development, development stability, macroeconomic factors.

Category of the paper: Research paper.

1. Introduction

Socio-economic development is a complex process and is associated with the impact of many factors of a different nature. It is possible to indicate local and regional conditions and opportunities, which, under given conditions, may constitute the leading factors in shaping development. One cannot ignore macroeconomic factors, the impact of which, in the conditions of the occurrence of crisis phenomena, may have the most important and primary impact on development. The complexity of the aforementioned processes means that in relation to the economy of states and regions, as well as the local economy, the approach should always be individualized when it comes to studying the causes and effects of the impact of various conditions of economic and social development.

European regionalism, oriented at gradual elimination of disproportions and even equalization of the level of socio-economic development, plays an important role in development processes in the European Union. At the regional level, important new development impulses have emerged from the Union's regional policy. In the conditions of a market economy, development in the system of regions revealed the occurrence of inequalities in the development of individual areas (Szul, 2013). As a result of the operation of market mechanisms, there has been a diversification of areas in terms of economic development, and as a result of these processes also development in the social dimension. The market economy has revealed the importance of endogenous development factors and the diversification of development potentials. From the perspective, we can see that the differences in the level of socio-economic development in the system of regions, as well as intra-regional differences, have become permanent.

The processes of socio-economic development are conditioned by many factors. An important role is played by external (exogenous) factors, which always influence the processes of economic development taking place in private sector enterprises as well as public sector entities and organizational units. Crisis phenomena can significantly affect the processes of socio-economic development taking place in the economy. As a result, development is subject to conditions that affect the dynamics of change and affect the results of management in terms of quantity, value and quality (Korenik, 2012).

The aim of the article is to analyze changes in macroeconomic factors in the conditions of crises and to assess the potential impact on socio-economic phenomena occurring in the regional system in Poland and in peripheral areas of the regions on the example of the Mazowieckie province. In the context of the stated objective of the study, two research questions were distinguished: is there a direct impact of selected macroeconomic factors on the socio-economic processes taking place at the national and regional level, and whether negative macroeconomic changes may worsen the socio-economic situation in smaller administrative units, compared to the peripheral location in relation to the central areas of voivodships.

2. Literature review and methodology of empirical research

An important group are macroeconomic factors: the level and stability of the basic interest rates of the central bank, the level and changes in the level of inflation, the fiscal policy of the state, the credit policy of investment banks, changes in the level of costs in enterprises, including labor costs, legal and organizational factors, such as the possibility of unforeseen regulatory changes. It is necessary to pay attention to investments, both in the private sector, but also in the public sector. An important group of factors are local and regional conditions. The factors of this group include the organizational and legal stability of the economic environment, the level of threat from internal and external political factors, the degree of uncertainty in the implementation of development investment projects (D'Costa et al., 2013). Attention should be paid to the quality of human capital, which indirectly affects the ability to undertake tasks of increased difficulty and relatively high technical, technological and organizational advancement (Zimny, 2008). The development processes may be influenced by changes in the level of budget deficit, public debt, values characterizing the level of GDP, stability of the state budget and budgets of local government units (Leibfritz et al., 1994).

The above-mentioned factors do not complete many conditions that may have an impact on the implementation of development investments. In the regional and local system, there may be significant differences between communes, districts and self-governmental provinces depending on the existing socio-economic potential and the possibilities of resource allocation. The complexity of the issues justified undertaking research on the possibility of implementing development processes in the conditions of macroeconomic instability (Jarosiński, 2022) both in the regional system and in intra-regional relations (Ocampo, 2005).

At the regional and local level, there are established differences in Poland between individual local government units, at the level of provinces, districts and communes, which allows to recognize that the differences must result from the influence of various factors conditioning development processes (Smętkowski, 2013). Within the regions, significant differences in the level of development were observed between individual cities, rural areas and local government units located peripherally in relation to the central area of the region (Bański, 2013). Crisis phenomena may lead to the deepening of development differences. The consolidation of differences may, in turn, lead to a number of negative social phenomena, such as national migrations, emigration, and lowering the indicators of the level of social development. It is necessary to monitor crisis phenomena and their consequences against the risk of a negative impact of macroeconomic factors at the regional and local level. Therefore, it is about anticipating possible effects and determining a priori the strength and scope of the impact of these factors on the adopted development scenarios (Chirwa, Odhiambo, 2016). An important part of the process of planning and implementing development investments may be the preparation of a scenario analysis that would take into account risk categories resulting from unpredictable macroeconomic changes (Ulvedal, 2013). Limited macroeconomic stability may cause difficulties in the implementation of already started investment projects. Unforeseen changes in the economic environment of investment projects may lead to instability and lower investment efficiency and, as a result, worsen the conditions for development (Jarosiński, 2019).

In economic practice, the scope and strength of the impact of various macroeconomic factors may be determined by defining the level of risk associated with difficulties in achieving the planned results of investment development projects in the private sector, and in the public sector, despite the differences (Virlics, 2020; Tandberg, Allen, 2020; Milbourne et al., 2003). In addition to macroeconomic conditions, it is necessary to identify other risk factors in the investment environment, such as threats related to the competences of public administration, the degree of technical and technological complexity of the project, qualifications of teams implementing projects or the principles and methods of financing. (Bock, Trück, 2011; Davoodi et al., 2021).

As a result of the impact of negative factors and inequalities in development potentials, as well as deepening disproportions in socio-economic development in the system of regions, have led to the consolidation of differences and further deepening of development disproportions between countries. groups of countries, between regions, as well as in an intra-regional system (Ociepa-Kicińska, 2005; Woś, 2020). In the system of provinces in Poland, intra-regional differences appeared in two categories:

- in comparing the level of development in small and medium-sized cities, which are growth centers in a given region, and rural areas surrounding the above-mentioned growth centers,
- in comparing the level of development in peripheral areas of regions, areas bordering with neighboring provinces in relation to other areas of the province (Hauke, Konecka-Szydłowska, 2015; Kot, Kraska, 2018).

Development disproportions in intra-regional relations were noticed relatively early. Location in space may lead to differences in the level of economic development due to the weakening of many economic and social functions in the border areas of provinces (Churski et al., 2015) and in centers (Eliasson et al., 2021). Mitigating disproportions, also in the intra-regional dimension, was considered one of the goals in strategic documents developed in Poland (National Strategy, 2018; Buck, Zagórowska, 2016). Despite the efforts made to balance development in the regional system, both in the regions of the European Union and in Poland, the differences persist and even deepen. The effects of these actions are relatively weak and differ from the expectations that are placed on the regional policy of the European Union. In the system of regions, a consolidation of the differences in the level of development expressed by appropriate measures and indicators was observed (Majumder et al., 1995; McGowan, San Millán, 2019).

Based on the literature review, it was established that the regions may experience the phenomenon of peripherality in the development of communes and districts in relation to the central areas of the regions (Borkowicz et al., 2017). The level of socio-economic development in border areas of provinces is lower and differs from the average for a given province. Already in 2015, the results of the research conducted by the Central Statistical Office (GUS, 2015) confirmed the existence of differences in the level of development of communes and districts in the Mazowieckie province, based on the measures of the socio-economic situation, although the Mazowieckie province was characterized by many of the highest average indicators of socio-economic development in Poland.

The peripheral nature of areas in the regions is an identified problem and is characterized by high complexity. Administrative borders of provinces in Poland, as well as the borders of regions in the European Union, are often natural. Such conditions may affect the mutual relations of local communities living in neighboring regions. Natural barriers and organizational assignment of settlement units to different regions may lead to the weakening of economic and social relations in border areas (Demaniuk, Szymańska, 2016). There may also be opposing tendencies, where the relations in the interregional system become stronger than those inside the regions. In line with the adopted research concept for the peripheral areas of the Mazowieckie province, the research also took into account the situation in the following regions: Warmińsko-Mazurskie, Łódzkie, Świętokrzyskie, Lubelskie and Podlaskie.

In the course of the research, the method of critical analysis of the literature was used and the methods of empirical and descriptive research were used in relation to selected communities, gathered in accordance with the selected features adopted for the study. The study was therefore based on an analysis and assessment of changes in the macroeconomic situation in the conditions of crisis phenomena, and then it consisted in demonstrating the direct impact of such changes on the course of investment processes. Negative effects of such changes were common, and therefore also in peripheral areas, with the force of impact in units with weak potentials being usually much stronger than in areas with high development potentials. Hence, peripheral areas were much more at risk of slowing down development.

The collected individual data was subjected to the process of aggregation and analysis, which allowed for the presentation of quantitative data in a tabular form, and where the size of data sets made it impossible to present a numerical representation, the research results were presented in a graphical form in the form of charts and maps. During the analytical work, theoretical research was conducted on the impact of macroeconomic phenomena on development processes, empirical research was carried out on changes in macroeconomic indicators in crisis conditions, and empirical research was carried out on 314 communes and 37 districts in Mazowieckie province. The study used the method of analysis consisting in determining the most important factors which, when combined, may jointly affect the processes of socio-economic development.

The study took into account selected measures characterizing the situation in peripheral local government units at the commune level of the Mazowieckie province. The values have been aggregated and presented in the system of districts. On the border with the Warmińsko-Mazurskie province four districts have been indicated, two of which are entirely adjacent to the Warmińsko-Mazurskie province, while the other two are also neighboring dstricts with other provinces: Podlaskie (Ostrołęcki district) and Kujawsko-Pomorskie (Żuromin district). On the western side of the Mazowieckie province, five districts have been identified, three of which border on the entire length of their borders with the Łódzkie province, while two, Gostyński and Przysuski also partly border the Kujawsko-Pomorskie province in the first case and the Świętokrzyskie province in the second case. As far as the Świętokrzyskie province is concerned, in this section from the Mazowieckie region, four districts border with the neighboring provinces, two of which, the Przysuski and Lipski districs also border the neighboring provinces, in the first case with the Łódzkie province and in the second case with the Lubelskie province. When it comes to the Lubelskie province, we have six districts on the Mazowsze side, two of them, Lipski and Łosicki are also border districts with the Świętokrzyskie and Podlaskie provinces, respectively. In the north-eastern part, on the side of the Mazowieckie province, there are five border districts, of which two, the Łosicki and Ostrołęka districts are also districts bordering with the Lubelskie and Warmińsko-Mazurskie provinces, respectively. The study took into account the following macroeconomic measures, which are commonly used to assess changes in the macroeconomic situation:

- indexes of changes in the prices of goods and services (inflation),
- basic interest rates of the National Bank of Poland,
- gross domestic product (GDP) per capita,
- registered unemployment rate,
- total public debt in relation to GDP,
- general government deficit in relation to GDP,
- investment outlays in the economy and in the private sector by province,
- share of private investment in total investment.

The research on the developmental differences of peripheral areas included:

- registered unemployment rate in peripheral districts of the Mazowieckie province,
- small and medium-sized enterprises in peripheral districts of the Mazowieckie province,
- small and medium-sized enterprises (SMEs) in Mazowieckie province aggregated at the districts level and in size classes depending on the number of employees.

In the study, source unit data were obtained from available databases (Central Statistical Office, 2022; Ameco, 2022; Ministry of Finance, 2022; Eurostat, 2022) and appropriate calculations were performed, followed by aggregation of results. Due to the limited scope of the study, the text presents selected detailed results characterizing changes in the socio-economic situation as a result of crisis phenomena.

3. Results of empirical research and discussion

Changes in macroeconomic factors must have led to a slowdown in the pace of socio-economic development and posed a threat to maintaining the standard of living. A major threat was the surge in prices of goods and services, especially in terms of price changes in 2022 compared to 2021, as well as on a monthly and quarterly basis in 2022. According to the data of the Central Statistical Office, in October 2022 the price level in compared to October 2021, it was 17.9% higher. As a result, there was a significant reduction in real incomes. Selected macroeconomic indicators in Poland in 2009-2013 and 2019-2021 are presented in Table 1.

Table 1.
Selected macroeconomic indicators in Poland in 2009-2013 and 2019-2021

Specification	2009	2010	2011	2012	2013	2019	2020	2021
Consumer price index. in %	3.5	2.6	4.3	3.7	0.9	2.3	3.4	5.1
GDP per capita in thous. PLN	35 653	37 564	40 628	42 130	42 770	59 741	60 663	69 069
Registered unemployment rate, in%	12.1	12.4	12.5	13.4	13.4	5.2	6.3	5.4
Total public debt in relation to GDP, in%	48.8	51.7	52.1	51.8	53.6	43.2	47.8	43.8
General government deficit in relation to GDP, in %	-7.3	-7.4	-5.0	-3.8	-4.2	-0.7	-6.9	-1.8
Share of private investment in total investment, in %	59.6	56.5	55.1	57.9	61.7	66.3	63.8	-
Total enterprises	3742.7	3909.8	3869.9	3975.3	4070.3	4509.9	4663.4	4836.2
of which: SMEs in size classes according to the number of employees								
1-9	3548.4	3713.7	3675.0	3794.5	3890.7	4341.3	4497.1	4670.7
10-49	159.7	161.6	160.9	146.5	145.4	136.6	134.6	133.9
50-249	29.7	29.7	29.3	29.8	29.6	27.7	27.4	27.3

Source: own study based on: https://bdm.stat.gov.pl/, 15.10.2022, https://dashboard. tech.ec.europa.eu, 15.10.2022.

The level of basic interest rates in Poland in 2015-2022 was characterized by multidirectional changes. During this period, we dealt with stabilization and then, until 2021, a decrease in value. In the period from October 7, 2021 to September 8, 2022, there was a significant increase in basic interest rates. It was the central bank's response to the inflationary phenomena that occurred in the economy and was associated with an attempt to counteract further excessive price increases. In the conditions of the crisis, interest rate increases were a necessity and had an impact on development projects. The increase in interest rates (Figure 1), as well as the above-mentioned increase in inflation, had to reduce investment as a result of growing aversion to new investment projects.

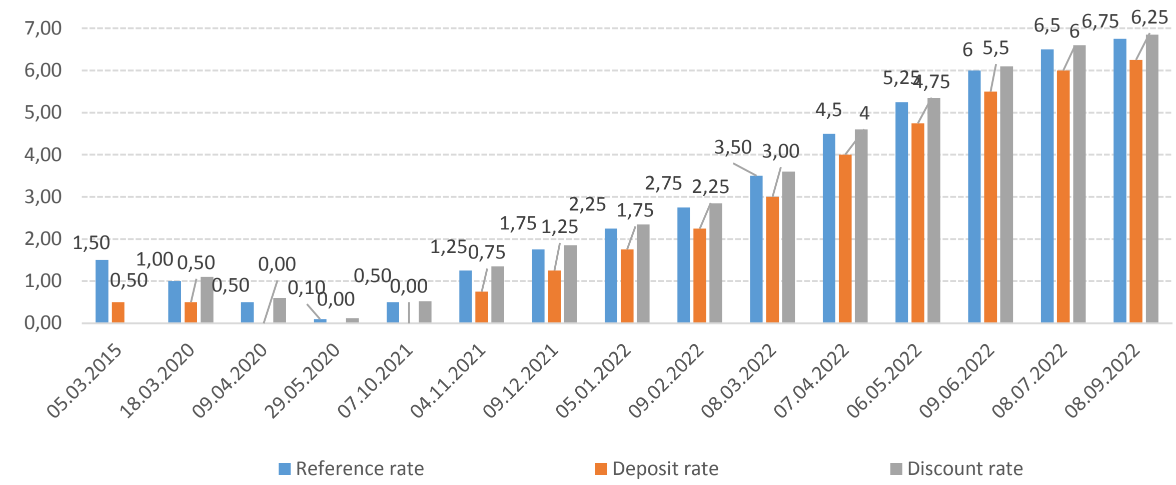

Figure 1. Basic NBP interest rates in 2015-2022 (in %).

Source: own study based on: https://www.nbp.pl/ home. aspx?f=/dzienne/ stopy_archiwum.htm, 28.09.2022.

Raising the level of interest rates always leads to an increase in the cost of investment money, which may limit planned investments due to the increase in the value of the discount factor used in the assessment of investment projects. Failure to invest or postpone investment may result in a slower growth rate or even a reduction in the value of gross domestic product. Investments are therefore one of the best measures of the assessment of the economic situation, they are a measure of the assessment of the economic situation and can be considered a synonym for economic development.

The article is limited to presenting the impact of macroeconomic factors on changes in the effectiveness of investment projects implemented in a dynamically changing macroeconomic environment. If we take into account the discounted cash flow methods when evaluating investment projects, we can easily see that changes in macroeconomic factors in the medium and long term significantly affect the effectiveness of investment projects over time in relation to the design assumptions of the initial period.

$$NPV = \sum_{t=0}^{n} \frac{NCF_t}{(1+r)^t} \tag{1}$$

where:

NPV – net present volume,

NCF – net cash flow,

r – discount rate,

n – project duration,

t = 0, 1, 2, 3, … n., subsequent years of the calculation period.

$\frac{1}{(1+r)^t}$ – discount factor.

If we take into account the entries contained in the numerator of the *NPV* equation, we can easily see that the *NCF* values constituting the difference between the sum of revenues in a given year and the sum of costs will be subject to adjustments. This will mean that in the numerator of individual components we will record lower values of net cash flows in relation to those planned at the stage of analysis and evaluation of the investment project. It should be emphasized that the discount rate is a derivative of the interest rate and may change as a result of macroeconomic factors. The structure of financing sources and the costs of obtaining capital, inflation and interest rates on loans, as well as income tax rates, profitability of alternative capital investments and other market factors should be taken into account.

Therefore, if the investment project was assessed under balanced macroeconomic conditions, assuming variable interest rates and stable annual cash flows for analysis, it may turn out that the aforementioned change in interest rates may lead to changes in the project and deterioration of its efficiency. There may be a situation where it will be necessary to verify the project based on the date of occurrence of the above-mentioned changes and re-analyse the entire project. Bearing in mind the factors influencing the discount rate, it can be assumed that in the conditions of the socio-economic crisis, the value of discount rates will increase as a result of changes in interest rates, inflation and investors' expectations regarding the amount of the risk premium. In this way, macroeconomic changes in the economy may lead to an increase in investment aversion in the private sector. In the public sector, investments are less susceptible to the impact of macroeconomic factors, although some of them may lead to a deterioration of project financing conditions.

Figures 2 and 3 show, respectively, the investment outlays of the private enterprise sector against the total outlays in Poland in 2009-2020 and the share of private investments in total investments in the national economy in Poland in 2009-2020.

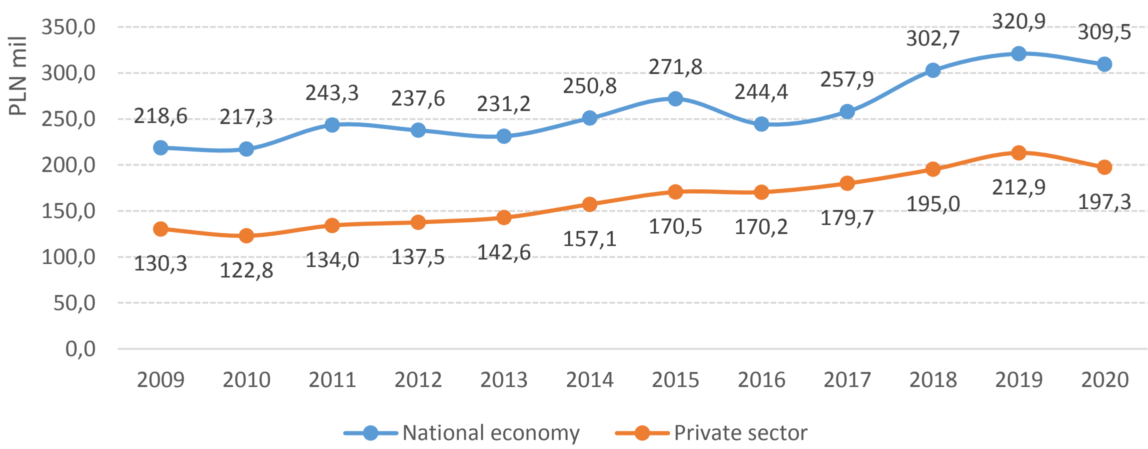

Figure 2. Investment outlays in the national economy and in the private sector in 2009-2020 (in PLN mil).

Source: own study based on https://bdm.stat.gov.pl/ access on 28.09.2022, https://dashboard.tech.ec.europa.eu, 28.09.2022.

As regards total investments and investments in the private sector, in the discussed period, a fairly stable and systematic increase in outlays was recorded. Crisis phenomena caused a reversal of the upward trend in terms of investment outlays, such a situation took place in 2009-2010 and in 2020-2021. Despite these differences, investments in 2020 were higher than in 2009 by 51.5%. Investment expenditures in the private sector in provinces in Poland were at a different level. The highest value of outlays was recorded in the Mazowieckie province, where in 2009-2020 the investment outlays doubled. The research results show that in these years the crisis phenomena led to an absolute reduction in investment outlays. The situation was slightly different when it comes to total investment outlays. Although in the conditions of the occurrence of crisis phenomena, a slight reduction in outlays was recorded. Also in the years 2015-2000 there was a decrease in total investment outlays, which could have been caused by changes in the level of investment outlays in the public sector.

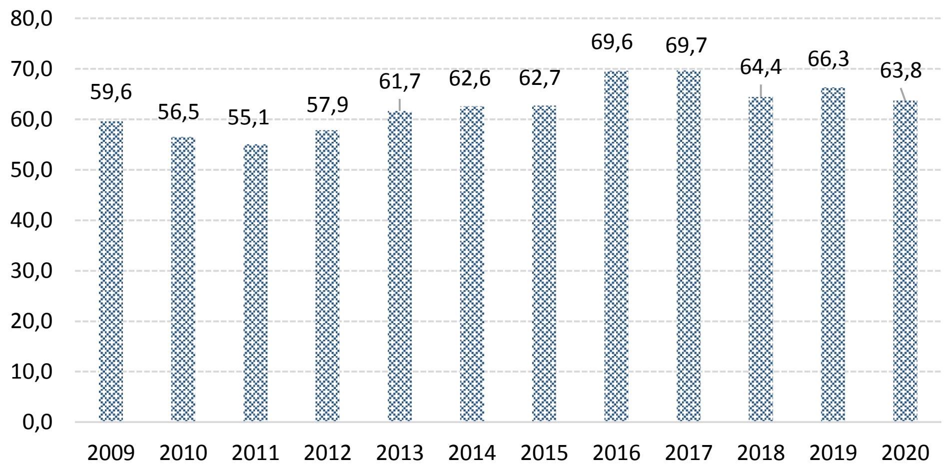

Figure 3. Share of private investments in investments in the total national economy in Poland in 2009-2020 (in %).

Source: Source: own study based on https://bdm.stat.gov.pl/, 28.09.2022, https://dashboard .tech.ec. europa.eu, 28.09.2022.

As shown in the graphic interpretation (Figure 3), in the years 2009-2020 the share of private investments in total investments was at a different level and was subject to changes caused by the occurrence of crisis phenomena. Such a situation took place in 2009-2011, when the share of private investment outlays decreased to the level of 55.1% and in 2020, when the first symptoms of the crisis and a decrease in the share of private investment in total investment were noted. It should be noted that the changes in the structure of total investment expenditure could have been influenced by phenomena in the public sector. As a rule, in such circumstances there is an increase in public expenditure, especially current expenditure, although this does not mean that public investment expenditure, which is less sensitive to changes in macroeconomic conditions and is subject to other conditions, is abandoned.

When it comes to capital expenditure in the private sector per capita, the lowest level was recorded in the Lubelskie province in 2009, PLN 2,078. then in the Warmińsko-Mazurskie province, PLN 2155 and in turn, in the following provinces: Podkarpackie, Zachodnio-pomorskie and Lubuskie, where the discussed outlays were at the level of PLN 2,310, 2,315 and 2,720 respectively. The above-mentioned regions were characterized by relatively lower development potentials and a lower level of economic development. In the years 2009-2020, an increase in investment outlays per capita was recorded, both in the country average and in individual provinces (Figure 4).

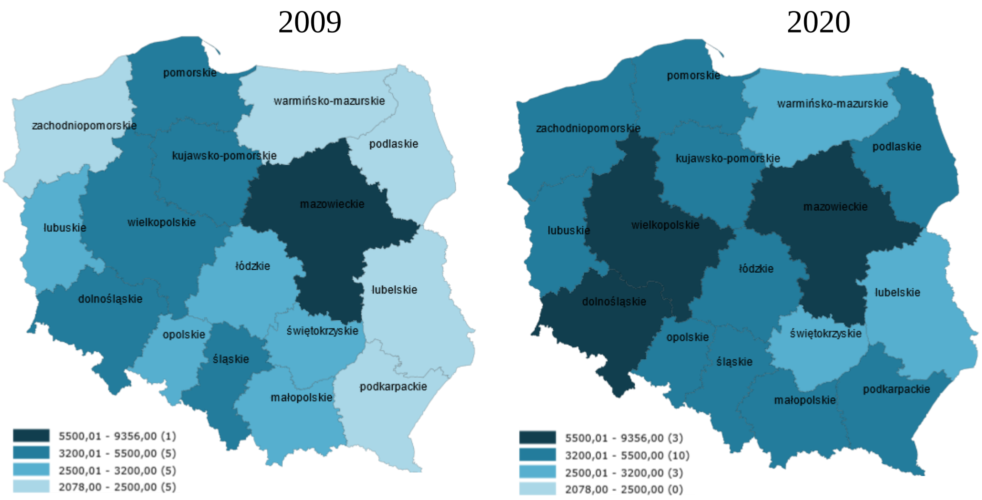

Figure 4. Investment outlays in the private sector per capita in 2009 and 2020 (in PLN).

Source: own map concept, presentation based on https://bdm.stat.gov.pl/, access on 15.10.2022, https://dashboard.tech.ec.europa.eu, access on 15.10.2022.

When examining the crisis phenomena in 2009-2012 and 2020-2022, the changes in the level of total investment outlays and investment outlays in the private sector were analysed by regions for 2009 and 2019, for 2009 and 2020, as well as for 2009 and 2010, and 2019 and 2020. This approach made it possible to indirectly take into account the impact of crisis phenomena on the value of investment outlays in the private sector, assuming that private investments responded most quickly to changes in the macroeconomic situation (Table 2).

Table 2.
Indicators of changes in investment outlays in the years 2019/2009, 2020/2009, 2010/2009 and 2020/2019 by provinces in%

Specification	Total		Private		Total		Private	
	2019/2009	2020/2009	2019/2009	2020/2009	2010/2009	2020/2019	2010/2009	2020/2019
Polska	45.9	40.8	62.4	50.7	-1.5	-3.5	-6.6	-7.2
Dolnośląskie	77.8	59.4	154.4	125.3	-5.6	-10.3	-13.0	-11.4
Kujawsko-pomorskie	8.8	16.6	-2.2	7.9	-5.8	7.2	-2.8	10.3
Lubelskie	64.4	65.1	38.9	36.6	3.4	0.4	-7.2	-1.7
Lubuskie	42.7	34.9	49.2	21.0	67.3	-5.5	75.8	-18.9
Łódzkie	41.6	32.6	61.6	38.0	2.5	-6.4	-14.7	-14.6
Małopolskie	57.2	56.3	64.6	61.6	6.3	-0.5	3.3	-1.8
Mazowieckie	54.5	48.5	70.7	64.1	-5.5	-3.9	-3.5	-3.9
Opolskie	80.5	54.0	94.4	49.7	4.1	-14.7	-3.6	-23.0

Cont. Table 2

Podkarpackie	66.7	53.0	80.5	43.9	19.0	-8.2	-3.1	-20.3
Podlaskie	83.9	84.9	61.1	48.2	7.8	0.5	-4.8	-8.0
Pomorskie	-7.2	-5.8	-1.2	-7.9	-27.2	1.5	-36.4	-6.7
Śląskie	34.0	20.5	60.6	36.2	-7.3	-10.1	-9.7	-15.2
Świętokrzyskie	2.8	1.4	-9.1	-10.6	8.0	-1.4	-5.8	-1.7
Warmińsko-mazurskie	43.4	42.7	65.8	42.6	9.8	-0.5	-5.5	-14.0
Wielkopolskie	58.1	47.0	62.7	53.8	1.8	-7.0	-5.4	-5.5
Zachodnio-pomorskie	33.0	75.2	59.3	95.7	-4.3	31.8	-12.5	22.9

Source: own study based on BDL data. Warszawa: GUS, 15.10.2022.

In 2009-2010, the value of investment outlays in the private sector per capita decreased in almost all regions. The exceptions were the changes concerning the Lubuskie province, where an increase in investment outlays by 75.8% was recorded. Investment outlays also decreased in 2020 compared to 2019. Investments in the private sector turned out to be sensitive to macroeconomic changes. The highest expenditure in 2020, compared to 2019, was recorded in the following regions: Podkarpackie, Opolskie, Śląskie and Warmińsko-Mazurskie. The decrease in the volume of investment outlays per capita in the private sector was relatively smaller in the following provinces: Lubelskie, Małopolskie, Mazowieckie, Świętokrzyskie and Wielkopolskie. It is difficult to clearly indicate one common reason for these changes, we are dealing here with the influence of a group of factors, however, provinces with a relatively low initial level of outlays and relatively weak dynamics of changes in terms of investment outlays showed a smaller slowdown in investment outlays in the following years.

As for the results of the research on the registered unemployment rate, in 2019-2021, the situation in four districts in the northern part of the Mazowieckie province should be indicated: Mławski, Ostrołęcki, Przasnyski, and also in the Żuromiński district. The lowest level of the indicator was recorded in Mławski district. The level of registered unemployment should be considered low considering that in the years 2020-2021 we had already dealt with the effects of the pandemic, which had negative effects on the side of enterprises and had an impact on the labor market. The situation was worse in Ostrołęcki and Przasnyski districts (Table 3).

Table 3.
Registered unemployment rate in peripheral districts of the Mazowieckie province in 2018-2021 (in %)

Specification		2019	2020	2021
Bordering provinces	**Selected districts**			
Warmińsko-Mazurskie	**mławski**	5.8	6.0	5.4
	ostrołęcki	9.0	9.7	9.0
	przasnyski	8.5	9.5	8.0
Podlaskie	**łosicki**	4.2	5.0	4.8
	ostrowski	8.0	9.4	8.3
	siedlecki	4.3	4.8	4.5
	sokołowski	5.4	6.0	5.1
Lubelskie	**garwoliński**	8.4	9.4	9.0
	kozienicki	10.0	10.9	9.8
	lipski	9.8	10.6	9.6
	zwoleński	9.7	11.9	10.8

Cont. Table 3.

Świętokrzyskie	**przysuski**	17.6	17.1	15.3
	radomski	16.5	17.6	15.4
	szydłowiecki	23.3	23.7	22.3
Łódzkie	**gostyniński**	12.0	13.7	12.0
	grójecki	1.9	2.7	2.1
	sochaczewski	4.6	4.7	3.8
	żyrardowski	9.5	10.6	9.3
Kujawsko-Pomorskie	**płocki**	10.2	11.4	10.5
	sierpecki	15.0	15.3	12.6
	żuromiński	14.5	14.2	13.1
Average value for the province		4.4	5.2	4.6

Source: own study based on BDL data. Warszawa: GUS, 31.08. 2022.

In the Ostrołęka district, the registered unemployment rate in the discussed period was between 9.0 and 10.1%, which meant that the Ostrołęka district, despite its relatively good spatial location, was characterized by relatively high unemployment rates. In the years 2019-2021, the average registered unemployment rate was close to 5%. And so, in 2019 it was 4.4%, followed by 5.2% and 4.6%. Despite the crisis phenomena, the registered unemployment rate in the Mazowieckie province was relatively low and showed resistance to crisis phenomena. Government support programs on a national scale, oriented at maintaining existing enterprises and jobs, were also important. A relatively low registered unemployment rate was recorded in peripheral districts bordering with Podlaskie province. A low level was recorded in the Łosicki district, where even in the years of crisis 2020-2021, the unemployment rate did not exceed 5%. A relatively high percentage of unemployment was recorded in the Ostrowski district, where in 2020 it was 9.4%. The indicators in the north-eastern part of the Mazowieckie province were at a relatively lower level. This was due to many internal reasons, and therefore to the local economy and local job creation potential.

temporarily in the Sierpc district and also relatively high in the Żuromiński district. In 2019-2021, the situation was slightly worse in the peripheral districts bordering with the Lubelskie province. In this part, the unemployment rate was around 10%. Attention should be paid to Zwoleński and Kozienicki districts, where the registered unemployment rate was relatively high. The unfavorable situation as regards the peripheral districts of Mazovia shaped the areas adjacent to the Świętokrzyskie province. And so, in 2019 the highest unemployment rate was recorded in the Szydłowiecki district, 23.3%, in the following years it was slightly lower. Research shows that in the Szydłowiecki district, almost every fourth person was unemployed. Districts: Przysuski and Radomski also had a significantly higher level of the unemployment rate compared to the remaining peripheral districts and in relation to the province average. A high registered unemployment rate was recorded in districts bordering with the Kujawsko-Pomorskie province. The highest level of unemployment occurred

Unemployment in the peripheral areas of the Mazowieckie province was characterized by a noticeable spatial differentiation. In the areas bordering with the Warmińsko-Mazurskie, Podlaskie and partly Lubelskie provinces, the unemployment situation was slightly better. The situation was worse on the border of Mazowieckie and Lubelskie as well as Mazowieckie and Świętokrzyskie provinces, as well as in the part bordering with the Kujawsko-Pomorskie province. In the peripheral areas of the Mazowieckie province, the registered unemployment level was higher than the average for the entire province area. Part of the area is agricultural land, which means that part of the population does not run economic activity in the form of enterprises, but in the form of farms, and this is reflected in the statistics on unemployment (Figure 5).

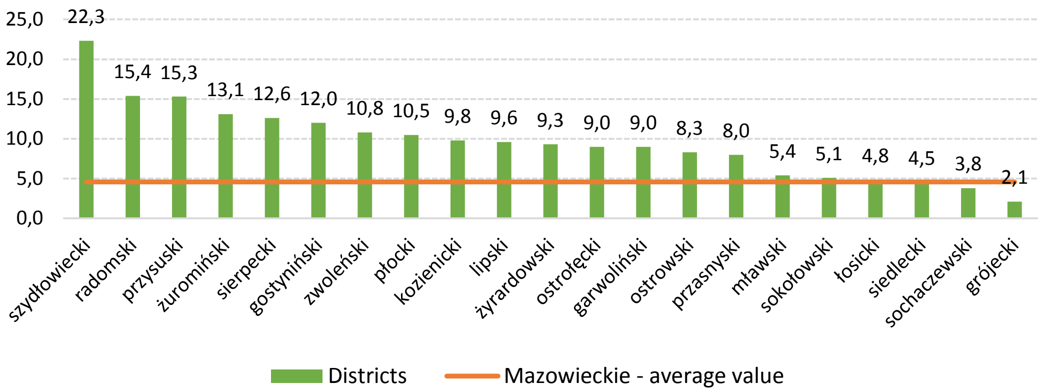

Figure 5. Registered unemployment rate in peripheral districts of the Mazowieckie province in 2021 (in %).

Source: own study based on BDL data. Warszawa: GUS, 15.10. 2022.

The registered unemployment rate in the districts of the Mazowieckie province was in most units above the province average. In three districts: Grójecki, Sochaczewski and Siedlecki was lower than the average value. Figure 5 shows the registered unemployment rate for the years 2012 and 2021. The selected years illustrate the situation that was associated with the crisis phenomena in 2008-2012 and 2020-2022.

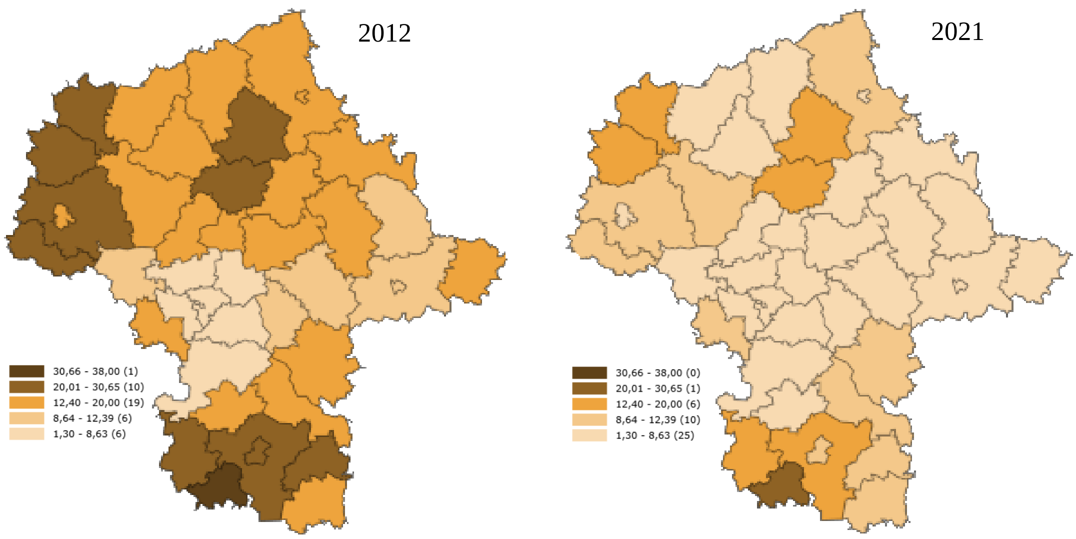

Figure 5. Registered unemployment rate by districts in Mazowieckie province in 2012 and 2021 (in%).

Source: own map concept, presentation based on https://bdm.stat.gov.pl/, 15.10.2022, https://dashboard.tech.ec.europa.eu, 15.10.2022.

An important measure of the assessment of entrepreneurship is the number of small and medium-sized enterprises (SMEs). In the years 2019-2021, the number of enterprises in the SMEs group was stable. Although there were changes in the number of economic entities, they were relatively small. Such a situation took place in the conditions of economic changes that appeared as a result of crisis phenomena. Interesting results were brought by a comparative study of the number of small and medium-sized enterprises in peripheral districts of the Mazowieckie province.

The numerical data (Table 4 table and a graphic illustration on the figure 6) prove that the share of small and medium-sized enterprises in the group of peripheral districts in relation to the total number of SMEs in the Mazowieckie province was low.

Table 4.
Characteristics of SMEs in peripheral districts of the Mazowieckie province in 2019-2021

Specification		Number of SMEs in the size class up to 9 employees			SME share [a] in %		
Bordering provinces	**Districts**	2019	2020	2021	0-9	10-49	50-249
Warmińsko-Mazurskie	**mławski**	5 483	5 672	5 893	0.66	0.85	0.87
	ostrołęcki	5 880	6 160	6 523	0.73	0.59	0.29
	przasnyski	3 625	3 719	3 866	0.43	0.55	0.46
Podlaskie	**łosicki**	2 327	2 344	2 383	0.27	0.35	0.19
	ostrowski	6 430	6 601	6 782	0.76	0.60	0.58
	siedlecki	5 837	6 108	6 363	0.71	0.78	0.37
	sokołowski	4 002	4 088	4 199	0.47	0.50	0.42
Lubelskie	**garwoliński**	7 827	8 091	8 382	0.93	1.29	1.00
	kozienicki	4 105	4 217	4 368	0.49	0.64	0.64
	lipski	2 593	2 662	2 777	0.31	0.35	0.23
	zwoleński	2 307	2 361	2 497	0.28	0.33	0.23
Świętokrzyskie	**przysuski**	2 830	2 967	3 032	0.34	0.40	0.19
	radomski	11 777	12 326	12 935	1.44	1.60	1.18
	szydłowiecki	3 365	3 577	3 707	0.41	0.40	0.33
Łódzkie	**gostyniński**	3 502	3 584	3 648	0.41	0.52	0.50
	grójecki	9 115	9 433	9 802	1.09	1.16	0.94
	sochaczewski	8 836	9 052	9 255	1.03	1.17	1.18
	żyrardowski	8 609	8 851	9 188	1.02	1.03	1.00
Kujawsko-Pomorskie	**płocki**	7 853	8 234	8 592	0.96	1.23	0.81
	sierpecki	3 466	3 640	3 802	0.42	0.55	0.64
	żuromiński	2 724	2 774	2 821	0.31	0.29	0.25
Mazowieckie – total		824 528	857 513	897 840	100.00	100.00	100.00

[a] The share of small and medium-sized enterprises from individual size classes (according to the number of employees) registered in peripheral districts in the total number of enterprises of a given size class in the Mazowieckie province in 2021.

Source: own study based on the Local Data Bank of the Central Statistical Office, 31.10.2022.

In the size class of enterprises with up to 9 employees, the lowest share was recorded in Zwoleński and Łosicki districts, as well as in Żuromiński district, where the values fluctuated around 0.31%. In the group of enterprises employing from 10 to 49 employees, the share of enterprises registered in peripheral districts of the Mazowieckie province was also at a relatively low level. A bad situation took place in the Łosicki district, as well as in the Lipski, Zwoleński and Żuromiński districts. In these administrative units, the share of the discussed group of enterprises in the total number of SME enterprises was below 0.3%. As for enterprises with 50-249 employees, the lowest level of the indicator was recorded in the Łosicki district, and then in the Ostrołęcki, Przysuski Lipski and Zwoleński districts, where the share in question was below 0.30%.

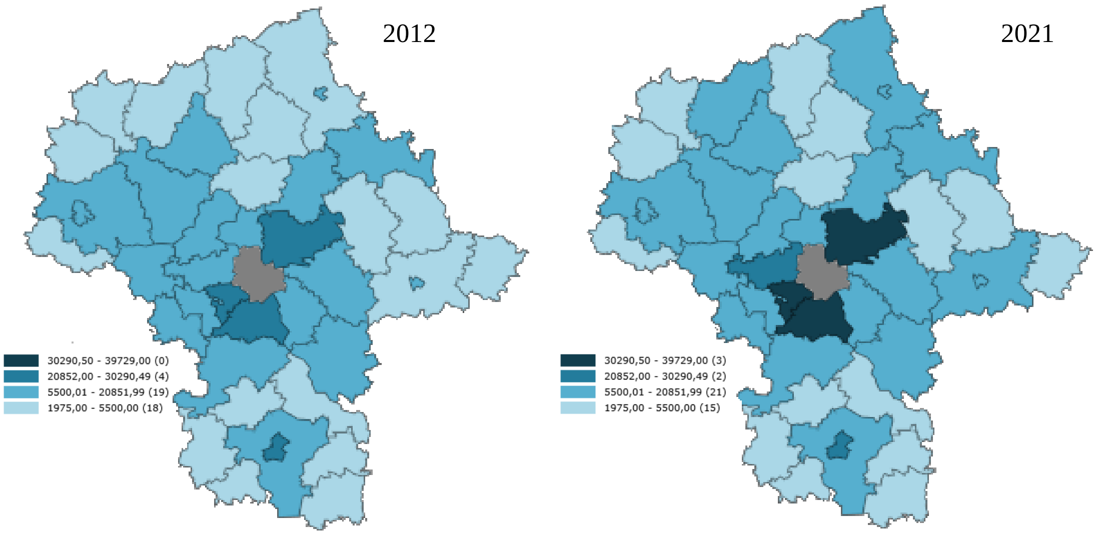

Figure 6. SMEs in the Mazowieckie province by districts in 2012 and 2021.

Source: own map concept, presentation based on source data of the Local Data Bank, Central Statistical Office, 8.10.2022.

In the years 2019-2020, there was initially an increase and then a decrease in the total number of SMEs. As for the causes of the poor situation in the field of entrepreneurship development, one of them is the peripheral nature of the areas of the Mazowieckie province, as well as the difficult administrative and economic links with the centres of economic growth. The border areas of the Mazowieckie province have difficult administrative links, which could constitute a form of support for the development of SMEs. Here it is necessary to point out again to the agricultural profile of part of the local economy. The development of entrepreneurship was also indirectly influenced by the effects of crisis phenomena, as well as the administrative restriction of economic activity. In the size class of enterprises employing up to 9 employees, in 2019-2021 a slow increase in the number of enterprises was recorded in all surveyed districts, which means that under the conditions of crisis phenomena, it was possible to maintain the number of existing enterprises in this group and even increase their number.

4. Summary

The analysis of the literature on the subject and empirical research have shown that in the face of crisis phenomena there were significant threats to the process of socio-economic development. Macroeconomic factors led to a change in the market situation in terms of opportunities to undertake new development projects. The comparative analysis showed the presence of internal differences in development in the Mazowieckie province in crisis conditions. Due to the presented mechanisms of the impact of macroeconomic factors within the implementation and undertaking of new investment projects, the peripheral areas of the region found themselves in a worse development situation due to less possibilities of using limited endogenous own resources.

A significant impact is exerted by factors that shape the basic values adopted in the investment profitability calculation using formulas that take into account changes in the value of money over time. The impact of macroeconomic factors therefore applies both to investments that are in the operational phase, as well as to investments that are at the stage of conducting feasibility studies. However, regardless of the degree of advancement of such projects, macroeconomic factors objectively change previous expectations regarding the achievement of a certain level of effectiveness through the mechanisms already indicated. This also applies to the peripheral areas of the Mazowieckie province. Where we are dealing with a relatively worse socio-economic situation, undertaking development investment projects may be difficult due to the limited possibilities of influencing such projects. This mechanism has a direct impact on the deterioration of the general situation in peripheral regions, which may be expressed in a slower GDP growth rate, higher unemployment and a number of other social factors.

On the basis of the collected empirical material, it was possible to confirm the existence of significant intra-regional differences, which intensified during the crises. The deteriorating macroeconomic situation additionally limited the already weak development impulses in the peripheral parts of the Mazowieckie province. Peripheral districts were characterized by a relatively low level of entrepreneurship development, although the number of SMEs in the group of companies employing up to 9 people in 2019-2021 slightly increased, as well as a higher level of unemployment. Research has shown that the Mazowieckie province is a diverse area in terms of development potential. This differentiation is present in comparisons of peripheral areas of the voivodship, distinguished in the study, and other areas of the region. It is necessary to strengthen the factors that would favour the diffusion of development impulses to peripheral areas. It is also justified to monitor peripheral areas and to use the available countermeasures to inhibit the deepening of development differences. Peripheral areas are at risk of widening development disparities, which can lead to more complex economic and social consequences. Currently, it is difficult to conduct in-depth research due to the rapid changes in source data in the conditions of the 2020-2022 crisis. For these reasons, research should be continued and extended to multi-criteria analysis, which in the current conditions was significantly limited or sometimes impossible. Therefore, the submitted text represents a broader study that will be conducted in the future.

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REENGINEERING OF THE TEACHING PROCESSES FOR MANAGERS OF INDUSTRY 4.0

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Purpose: The aim of this article is to indicate a direction of teaching conditions under the technology development related to industries 4.0, 5.0 and successive N.0. Another dimension of this phenomenon is the change of educational paradigm from teaching to constant self-education. Examples of such activities, carried out at the Wroclaw University of Economics and Business, will be presented in the article.
Design/methodology/approach: The main method are case studies of different types of classes at the Wroclaw University of Economics and Business. The scope of research paper includes three key elements. First, a description of modern technologies supporting the educational and work-related processes. Second, the imperative of teaching processes change determined by technology development as well as new scientific achievements in business and management. Finally, the combination of two mentioned elements in the context of demand for industry 4.0 managers.
Findings: The article advocates the paradigm shift in education. Following methods and directions of this change are discussed: Design Thinking framework; redefinition of the lecturer role; moving away from lectures towards other forms of classes (e.g. workshops, laboratories, exercises, seminars) and withdrawal from grading; courses reorganization; switch from single courses to modules, educational paths or cycles.
Practical implications: Case studies from the author's home academy, the Wroclaw University of Economics and Business. Those studies can be considered good practices and valuable benchmark for other organizations.
Social implications: Changing the thinking paradigm of management, teaching conditions, and the lecturer role has the crucial meaning in the information society.
Originality/value: The article presents the need of teaching paradigm change across the business higher education. The research paper also discusses the change in work processes due to the usage of newest technologies. In addition, the author believes that popular tools like Teams, Zoom, Slack, Miro, Mural etc., are already outdated, and the new generation of technologies based on augmented reality opens up new perspectives for the organization of work and teaching-related processes. The article is dedicated to academic staff as well as to students, graduates and managers.

Keywords: industry 4.0 managers education, teaching processes reengineering, work processes innovations in industry 4.0.

Category of paper: Point of view/Case studies.

1. Introduction

The modern world has been facing another change in the way of work since the Industrial Revolution. The indications are:

1) The usage of new technologies in remote work (it is better to call it "delocalized" though).
2) A different way of gaining knowledge required to work processes execution.
3) A new way of product design thinking and work organization.

There are probably more indications, however, only those three will be discussed in this article in relation to the three key determinants of 90s reengineering. Those days, computers were a breakthrough technology. Although they have existed since the 50s and have been used in industries since the 70s, the emergence of cheap and popular PCs and user-friendly software made them work essential tools. Computerization impacted the organization of activities, where processes have become the basis for working techniques analysis. This was related to the technological factor. The work automation is based on the algorithmizing actions in the form of a procedure or process, which can be translated into a programming language, essential for machines functioning.

A new approach to work organization (related to processes, not functions) required an innovative thinking and indeed a faith in the new working method and the changes in business operations.

The Business Process Reengineering (BPR) philosophy propounded by M. Hammer and J. Champy (2006) has become a reason for many business implementation failures, and consequently it has resulted in decline of reengineering as either management concept or the way of implementing changes in education.

The history of rise and fall of BPR concept is only a background that provides analogy to the current situation of revolutionary changes the business is facing. Again, this change is driven by new technology development which enables the further overcoming of physical barriers in work processes. Analogically to the BPR, it is not about the creation of new devices or software, but about the widespread usage of already existing technologies. Conceptual assumptions for the usage of VR (Virtual Reality) and AR (Augmented Reality) have existed for a long while now. Devices such as VR and AR goggles, 3D printers and Chat GPT holograms are in use now. The world is slowly adopting the common usage of these technologies. For this reason, the academic world should be well prepared for the upcoming revolution.

The aim of this article is to indicate a direction of teaching conditions under the technology development related to industries 4.0, 5.0 and successive N.0. The second aspect is the change of educational paradigm from teaching to constant self-education. The article will also feature the examples of such activities and processes being carried out at the Wroclaw University of Economics and Business.

2. Methodological issues

The radical nature of thesis regarding changes in education processes is manifested by a small number of research papers. As this articles is based rather on case studies, the literature review has not been significantly applied. Only the Scopus database was reviewed in terms of keywords: education ‘and’ industry.

The scope was limited to business articles published in English, German and Russian, resulted in 78 articles found. The initial selection to the most recent articles published in management journals in the 21st century, has narrowed the number articles to 42. The majority of analyzed articles focus on the business and higher education relationship (e.g. student entrepreneurship, knowledge synergies). Six out of forty-two articles are directly relating to the subject matter of this articles, and therefore were inspiration for the author:

1. Ehiobuche C., Okolie U.C., Nwali A.C., Igwe P.A. (2022) describe the areas of industry involvement in higher education – curriculum restructuring, renewed pedagogical approach, building connections between higher education and industries, including vocational trainings and mentoring sessions. The authors’ remarks are concurrent with the presented thesis.
2. Anttila J., Jussila K. (2018) present the challenges in expanding and strengthening the quality management practices at universities to meet the increased collaboration demand with other organizations for benefit of societies. They discuss the conceptual foundations, practical solutions and indications of the Forth Industrial Revolution and industry 4.0.
3. Rowland-Jones R. (2012) outlines the andragogical learning concept of problem solving and new knowledge development, as well as explores the conceptual basis of learning-by-doing method.
4. Laine K. (2008) discusses the e-collaboration which is something more than the technological replacement of traditional direct cooperation. The paper highlights the importance of balancing the electronic communication during e-collaboration (e.g. videoconferencing, e-mail, chat sessions, dispersed usage of group support system).
5. Durkee D., Brant S., Nevin P., Odell A., Williams G., Melomey D., Roberts H., Imafidon C., Perryman R., Lopes A. (2009) highlight the usage of e-learning and Web 2.0 in pedagogics (Facebook and Skype).
6. Rutkowski A.F., Vogel D.R., Van Genuchten M., Bemelmans T.M.A., Favier M. (2002) discuss the e-collaboration which they believe is more than the technological replacement of traditional direct collaboration. The paper highlights the importance of balancing the electronic communication during e-collaboration (e.g. videoconferencing, e-mail, chat sessions, dispersed usage of group support system). The authors present their experiences in supporting the effective virtual teaming in education and industry.

Interestingly, the latter three articles discuss the remote technology in the pre-pandemic era (published in 2002 and 2008 respectively). This affirms the author's views that the current tools used in remote work are old-fashioned originating from the beginning of the 21st century or even earlier. Other exploration strategies had also been adopted, however, without success.

The form was consciously reengineered in the articles. Instead of following today's convention of writing scientific articles, the author has returned to the roots where the substantive content mattered, not only its form. Therefore, the articles should not be considered research paper, but the study referring to the times of reflection, thought or idea, rather than the usage of sophisticated statistical methods to validate the abstract hypothesis or variables, which are usually highly aggregated in social sciences.

Of the same importance is sharing the experience of working with students – the case study from Wroclaw University of Economics and Business.

3. Technological potential

The COVID-19 pandemic has activated the methods and tools for remote work and learning. Overall, the asynchronous (e.g. Moodle) and synchronous (e.g. Teams, Zoom, Slack) solutions have become the most common. Moreover, worth mentioning are the tools enabling the virtual joint work, such as Miro, Mural, Forms. Remote learning in asynchronous format was practiced in pre-IT times in the form of letters, phone calls etc, while educational platforms have moved these capabilities from analogue to digital versions. However, the use of synchronous tools on massive scale was a sign of the times and changes. Earlier tools, such as chats and Skype, have been integrated and upgraded. This enabled a continuous learning despite imposed COVID-19 restrictions.

The massive usage of online working tools can be considered a certain quantitative breakthrough, yet not a qualitative revolution. These tools have popularized remote work, but did not significantly impacted its nature. It can be argued that despite some successes, like undisturbed working and learning online, the tools used for these purposes should be considered obsolete.

Moreover, the inadequacy and incapacities for effective and educational usage of these tools have decreased the effectiveness of educational processes. Passive participation or even going through the motions during synchronous classes is the sad reality of such education.

The usage of new generation of IT tools could significantly influence the educational processes. Following technologies should be paid special attention:

1. VR (Virtual Reality) – goggles, pads, gloves, suits.
2. AR (Augmented Reality) – goggles, smartphones.
3. 3D Printers.

4. 3D Hologram generators.
5. Artificial intelligence, machine learning, voice control.
6. Faster and more stable internet connections.

This technology has already been used in educational processes, but on a limited scale. It is worth to mention a pioneering project in Poland, which is the Business Process Simulation Center at the Wroclaw University of Economics and Business[1]. Classes are run there based on the process models designed in FlexSim environment. Students can create and run gamification-based business processes. During the simulation, they learn about the operating models and might apply changes in order to improve the operations. In addition, they have the opportunity to interact in the virtual environment in so-called VR boxes with the usages of Oculus goggles and pads.

4. The learning and working processes

As can be seen in the previous point, the technology has already been developed and enables a different approach to learning and working than it is currently implemented. Also, it has also been developed conceptually. Instead of Teams, Zoom, Slack meetings, it would be possible to move to a virtual space, a classroom for instance. Instead of motionless pinpoint symbolizing a meeting participant, one could meet in a avatars group in 3D virtual space. It is now possible thanks to the fast and stable data transfer. Even if the data transfer is not sufficient enough to handle the dynamic world, the architecture of such meetings with avatars would be achievable in a simplified version. One could follow the example of Second Life, a virtual world designed since 2003 by Linden Research Inc.

The usage of such solutions would significantly reduce the flaws of remote learning such as alienation, lack of social interactions, performing other tasks in the background etc.

Another technological factor impacting the teaching and working processes is the network development. The Internet has become a medium that greatly affects the users' behaviors. Therefore, the educational processes must be redesigned. The existing methods commonly used in schools and universities, such as teachers' assistance in transferring the knowledge (e.g. via lectures) are not very effective. Additionally, the basic assumption of such processes that "teacher knows better" is eroding. A widespread and unlimited access to information means that the skills and knowledge are rather conditioned on willingness, commitment, talent, time and luck, than the teaching methods. In addition, incompleteness and knowledge uncertainties should be taken into account as well. These factors lead to the reorientation of the teacher's role from a lecturer to a guide, facilitator or patron of his mentees.

[1] More information about CSPB is available on the website: https://www.ue.wroc.pl/biznes/24559/centrum_symulacji_procesow_biznesowych.html.

This change is part of the trend discussed by J. Rifkin in the 90s as the age of access (Rifkin, 2001). The access to goods is more important than possession, and this also applies to the knowledge resources. More valuable and creative is not “how to do it” but rather “how to find it” – having the access to knowledge and being able to explore it. The speed of learning rather than well-established knowledge.

The above-characterized change in working and learning methods proves a permanent nature. Even subject matter experts or specialists are forced to constantly improve themselves and benefit from external knowledge sources because the world and knowledge are changing dynamically. In given situation, it is extremely important for managers to quickly receive and use the best current knowledge in various fields to be able to manage complex projects.

Out of the author’s didactic experience, the change in thinking from “the teacher knows everything” through “the teacher does not know everything” to the desired stated of “teacher does not know everything, thank heavens!” is especially difficult to achieve among some… teachers. By the way, it should be highlighted how the language we use nowadays is old-fashioned. Archaic vocabulary emphasizes the importance of the old paradigm of education where the role of the “teacher” was just “teaching”.

If one person is unable to master a broader knowledge of reality, a technical in particular, under the conditions of its increasing complexity (entropy), then a different problem solving strategy should be undertaken. According to the followers of the Agile concept, the strength lies rather with the small teams and network than with the individual (Denning, 2028). Small teams achieve the synergy effect from joint effort in searching and generating knowledge. This is reinforced by the usage of distributed network resources which team member have access to.

The following concepts fit into the above characterized pattern:

1. The flipped classroom – a concept of student activation developed by J. Bergmann and A. Sams, based on assumption that students get familiar with the theoretical material at home (knowledge and understanding), so they join classes well-prepared and they run practical exercises to check and consolidate their knowledge (application, analysis and synthesis). What happens at schools is what students would have traditionally done alone at their homes (Bergmann, Sams, 2012).
2. The supporting control concept (Koziol, 2015, p. 27) – aimed primarily at identifying areas for improvement not in order to blame or punish subordinates, but rather to support and help them in these aspects. The term “evaluation” is increasingly used instead.
3. In his famous book, “The Age of Paradox”, published at the end of 20th century, Charles Handy describes such activities as reverse delegation. The idea behind this solution is to enable the support from stronger units in the organizational hierarchy to the weaker ones (Handy, 1996, p. 114).

The concepts quoted above assume an increased involvement of a subordinate (student, pupil). Unfortunately, this requires overcoming the resistance of the majority of students who were infected in the earlies stages of education with the passiveness syndrome, as their own initiative was most often strangled.

Therefore, the paradigm change in education requires breaking the thinking partners in many groups – teachers, students, parents, educational officers, Ministry of Education and Science etc. It is fair to say that we are only at the beginning of this paradigm shift, even though the flaws of Bismarck school model were noticed much earlier by such education reformers as:

1. Maria Montessori – who developed the education method based on which more non-public kindergartens and schools are set up (Guzik, 2010).
2. Rudolg Steiner – the author of Waldorf education (term derives from the first school using the alternative education methods founded in 1919 next to the Waldorf-Astoria cigarettes manufactory in Stuttgart).
3. Currently, the flipped classroom is being popularized assuming students get prepared to classes at homes and later they do practical tasks and consolidating and checking exercises (application, analysis and synthesis). So what happens at school is what students would have traditionally done at home. Teacher has the ability to supervise their activities, check if students are coping with the curriculum, and can also introduce more active forms of learning – in pairs, groups, discussions, projects. Teacher becomes more of a guide, moderator and mentor for students than a lecturer. Students have the opportunity to take control over gaining the knowledge, they can practice self-education and evaluate each other. The problem of not understanding the course material is reduced to minimum, while the well-prepared students are gaining the self-confidence which is necessary to actively participate in classes. Bergmann and Sams, the precursors of this concept (Bergmann, Sams, 2012) assumed the thesis that students need a teacher the most when they are unable to solve a task, and not when they have to listen to a lecture – and the students' needs should determine the teaching method (Olszewska, 2018).

The ideas behind these alternative methods are quite consistent:

1. No grades. This means that it is necessary to develop individual incentives and inform both children and their parents about their progress. The lack of grades is intended to develop children's inner motivation to study. Teacher together with children are founding a relationship based on trust and respect, which positively impacts the student's self-confidence and readiness to try new things, while teacher enables self-learning for the students.

2. The integrated education (Steiner) and thematic pathways (Montessori). Teaching is conducted in the form of so-called “cycles”. It means that for a few weeks (usually two to four) children focus on one subject only.
3. No student’s books – teaching materials are developed by teacher to meet the current needs of students.

These concepts were developed for students attending primary and secondary schools in mind, but the idea should also work out in higher education.

Fossilized forms, incompatible with today’s educational needs, such as lectures, written exams (tests in particular), grades system, curriculums, student’s books are doing… fine! They are in the teaching mainstream at universities and strongly rooted in the awareness of the organizers of didactic processes. Sometimes, organizers find it difficult to understand that, for instance, a lecture on IT tools used in process management does not make any sense. It resembles teaching programming by writing C++ commands on the chalkboard (as it used to be in the 80s). It also worth to mention that relatively few students show up at the lecture sessions. It happens regardless of the subject matter or the way it is taught. The reasons for this could be found in voluntary participation in the lecture, the length of the lecture (90 minutes), while the listeners maintain their attention for several minutes.

The reengineering of educational processes should be based on the new generation of technologies, but also on the change in thinking about teaching. This requires fundamental, radical, and dramatic changes in the perception of teacher’s role by the lectures themselves (another conceptual archaism applies).

1. Redefinition of the lecturer/teacher role – it is better to define him as the guide. Paradigm shift from teaching to supporting students’ self-learning/development processes. The role of the teacher is to unleash the students’ potential for their creative exploration, absorption, and creation of knowledge. The guide as a tutor, mentor, coach, facilitator. There is a slow but noticeable change in this field. Some universities have introduced tutoring and mentoring programs. In 2017, the BIPS (Individual Business Course Program) was founded at the Wroclaw University of Economics and Business where students can work with academic tutors and business practice mentors.
2. Walking away from lectures in favor of workshops, laboratories, exercises, seminars. At the same time, it is important to limit the size of student groups so they can work in small self-organized teams, once called brigades. On our own, we teach students about agile (Denning, 2018) or turquoise (Laloux, 2015) organizations based on self-foundation, lack of hierarchy etc. So why do we carry out it in an archaic way? Ex cathedra, to all anonymous students usually with the one-way message.

3. Moving away from the grading systems and assessment methods (tests, exams etc.). We ourselves teach students about the ineffectiveness of motivation with punishments and rewards. “The carrot and stick”, as A. Blikle termed it, is fundamentally ineffective because people are desperately trying to avoid punishment and will fight piteously for rewards. Moreover, any system will lose to human creativity in finding a way around it. Each superior will be outplayed by his subordinates, because there are simply more of them (Blikle 2018). Exactly the same rules apply to the teacher – student relationship, where the syllabus or the teacher himself will impose the game rules, e.g. the assessment criteria.
   We experience how “points and grants madness” and set pattern killed the authenticity and the joy of research scientific publications. Why are we so fond of applying these mechanisms to students? Why does the Polish Accreditation Committee also verify the obtainment of competences by students based on the results of formally documented exam? The oddness thing becomes a forced notes attachment from oral exams to student files. Projects led by students (tangible activities, events, movies, experiments, simulations, modelling, performances, presentations) could be used instead of grades and assessments. The result could be assessed by the quality of the project product or the success in the project implementation (then it is worth to set the criteria, measures and reference values in advance, defining the term “project success”).
   However, if the rating system is here to stay, the role of the facilitator could be redefine from a judge to trainer or coach. The task of the coach would be to lead as many students as possible to the highest achievable goals. Then, high grades could be given with satisfaction.
4. Resignation from conventional classes within the lessons schedule, from one isolated subject in top-down student groups with assigned rooms with a predominance of one-way communication from one facilitator to students sitting in desks. Currently, it is an increasingly common standard to present cliched Power Point presentations on projector both by teachers and students. Leaving the content with no comment, it is worth to focus on the form of presenting the slides. Unfortunately, these presentations are rather bringing anything but boredom than playing the interesting role during classes. Whom did the students learn such manners from?

Conducting classes in an unconventional way, alternative to the prevailing education paradigm is possible and desirable. The promising results are obtained with the usage of Design Thinking methodology to plan events, solve problems, design products and services. Whenever it is applicable to use this methodology during classes, e.g. in the management of projects, processes, innovations and logistics etc. it brings good results. The introduction of learning elements through play, being open to what is new and unexpected, is an immanent part of this methodology, in the empathizing, ideation and prototyping stages in particular.

In 2022, the Wroclaw University of Economics and Business held its first DTthon, a marathon of designing innovative solutions with the usage of Design Thinking methodology. It follows popular programming marathons. This two-day event has taken place thrice and its popularity is still growing both among students-participants and companies which provide challenges to the competition, offer support, and are eventually the recipients of generated solutions during the DTthon[2]. In 2014, the virtual student’s consulting firm “V-Student Consulting” was founded in the branch of Wroclaw University of Economics and Business in Jelenia Góra, where students are running projects for such companies as Auchan, Warsaw Stock Exchange, Jelenia Góra City Council, etc[3]. Other promising results are observed with the use of thinking tools proposed by E. Goldratt, such as conflict diagram, goal tree, current state, future state, etc. (Goldratt, 2008). Nevertheless, the question arises: how to enrich and change the teaching methods in such subjects as statistics, operational research, or accounting where it is difficult to imagine the application of Design Thinking methodology. In the case of typically tool-based subjects, such as statistics classes, starting with the real problem works well. To solve this problem, it is necessary to use the tool offered by statistics, as it was developed in response to practice demand. Then, students understand the sense of learning and using this tool. Unfortunately, subjects such as statistics are taught in the early studies years, and thus students are detached from the practical applications of these tools, which will be discussed at later stages. This usually discourages students as inserting numbers into formula, making calculations and presenting results with no wider interpretation are not exciting activities most often. Hence, statistics classes are usually not the favorite ones in students’ opinions. The views are changing when project or process management classes take place, where such statistical terms are applicable, like distribution function, expected value, variables, and are essential to perform the process simulation successfully. Only then, students realize that statistical tools make sense. Unfortunately, they often do not remember much from the statistics classes they had a year earlier.

Therefore, it is postulated to group classes rather around problematic issues than according to subjects. So that students could use their statistical knowledge, mathematical analysis, or accounting, while working on complex projects or case studies. This solution resembles the postulates of M. Montessori and R. Steiner regarding the issues grouping into thematic pathways or cycles.

All suggestions for the teaching process reengineering are aimed at the key problem of overcoming students’ resistance to be involved in the didactic processes. Stepping them outside their comfort zone where they settled in the earlier education stages.

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[2] More information about CSPB is available on the website: https://www.ue.wroc.pl/biznes/25521/dtthon_maraton_projektowania_innowacyjnych_rozwiazan.html.

[3] More information about CSPB is available on the website: https://jg.ue.wroc.pl/p/rozwoj/prezentacja_firmy_vsc.pdf.

5. The context of industry 4.0

This article formulates the recommendations for industry 4.0 managers as a specific form of production, based on the use of technical solutions, e.g. the Internet of Things or SOA (Service Oriented Architecture) systems, setting up smart factories (Schlechtendahl et al., 2015, p. 143). The proposals in this article are also applicable for the next generation of managers, the so-called industry 5.0 and probably the succeeding one – N.0. However, due to vague definition of industry 5.0 determinants, the title refers to the Forth Industrial Revolution which is the fact. Examples of its differentiators will be intelligent value chains based on dynamically self-organizing and optimizing sociotechnical and biotechnical systems known as smart economic units which create smart factories and will connect them with the needs of prosumers. This another civilization leap (Zarychta, 2018, p. 64) will probably be compatible with the development of the whole society in accordance with holistic behavior principle within integrated systems, etc. (Chen et al., 2018, pp. 1-13; De Jonge et al., 2012, pp. 169-188; Xu et al., 2021, pp. 530-535).

The combination of the two latter points i.e. the technology potential and the education paradigm shift (the ability to use these technological capabilities) results in synergy effect for the processes of future managers education. It's just that managers' work processes increasingly include an element of continuous learning. It is worth to pay attention to two antinomies, while educating the industry 4.0 managers. First, it is the paradox of specialization versus complexity. On the one hand, the specialization gives an advantage in efficiency and effectiveness of action, on the other hand, the comprehensiveness enables the skills combination and facilitates more holistic view which are necessary to solve complex problems.

This paradox could be overcome with the fast learning abilities with the usage of modern technologies. Each of us can use the Internet resources to quickly gain necessary skills. This makes possible to manage complex projects where each of the executive teams has the knowledge and experience advantage over the project manager. Anyone who has built a house in the economic system is aware of the difficulties in assessing and coordinating construction teams. During project management classes, students find out how quickly they can gain a necessary knowledge from Google and YouTube and use it in a mock construction project (case study).

The consequence of such working approach is the change of teacher perception from omniscient (an ancient educational paradigm) to the knowledge and competences limited individual. This is not a pejorative observation, it makes students aware of the everlasting rule that a person is unilaterally wise and multilaterally… unwise. This attitude is a norm that should be included in the work processes. There is no option to be wiser than all executive teams, and yet be in charge of such projects. Nowadays, the role of the teacher is the facilitation, mentoring, or coaching in order to bring out willingness, commitment to search for knowledge by students.

The second paradox is the asymmetrical relationship between technology and work processes. There is a noticeable use of modern technology in work processes, however, the working approach is changed less often to use the full potential technology. This phenomenon has already been noticed in the 90s by the authors of reengineering – M. Hammer and J. Champy. Technology has been developed at fast pace, while habits, routines, work organization processes are characterized by greater inertia.

This can be illustrated on the example of AR. The logic behind the augmented reality has been known for a long time. For instance, the usage of smartphones in car navigation, routes planning and optimization. Searching for solutions in the Internet or watching video tutorials on YouTube is nothing but supporting activities in the real world with additional information retrieved from the virtual reality. The usage of smart AR glasses products (Google Glass 2, Apple AR Glasses, Vuzix blade etc.) or holograms (e.g. Head Up Display) would be more convenient, however, the real revolution will happen only if the possibility of modern technologies usage is taken into account at the product design stage. The example is such product design that the end-user can manually configure, modify, maintain and repair. In order to make it possible with such product as a fridge, it would be necessary to design this product taking into account modularity, flexibility and user-friendly service etc. Let's take as the example the situation when a fridge malfunctions. In a current model, user has to call the service center which will repair faults (fees included or not) by using original spare parts. In the new customer service paradigm, user should be able to fix issues on his own. As a layman, unfamiliar with household appliances, a client should receive a tutorial on his AR glasses, e.g. in video-format which shows the step-by-step process of identifying the problem and solving it eventually. Such user becomes a prosumer, as A. Tofler defined clients who take over the production process (customer service in this point) (Tofler, 2021). The user is able to dismantle the product himself with the support of instructional materials. If he fails, the user can always rely on the online support. The expert will remotely guide the user as he sees the malfunctioned fridge through the AR glasses. If the fixing will require spare parts, the user will download a script from producer's website based on which the 3D printer will generate a replacement part. Then, with the help of instructional materials and the expert, the user will repair the fridge. To make this scenario happen, the change to product design is needed, so the products are repairable, the services is simple, and spare parts can be printed on 3D printers. Such direction of products development and work processes would fit into the current sustainable development requirements and zero waste, therefore, it would be in line with the idea of industry 5.0.

6. The Final Conclusions

The articles focuses on the three main drivers of change in teaching processes. Undoubtedly, the role of the technology development cannot be overestimated. However, technology itself will not be the catalyst for teaching or working processes change, since the currently used tools such as Teams, Zoom, Slack, Miro, Mural, etc., are already outdated. It is necessary to change the education paradigm from teaching to constant self-development. Only the combination of these two factors will enable the emergence of synergy effect in the form of pro-effective reengineering of educational and working processes. The author highlights the approaches of implementing these changes, illustrates them with examples of activities undertaken at the Wroclaw University of Economics and Business, as well as shows redesigned working processes on examples (prosumer reconfiguration of services and products produced by industry 4.0 or 5.0).

The effective methods of stimulating the creativity and students' involvement include the use of the Design Thinking methodology, redefinition of the lecturer/teacher roles, moving away from lectures and embracing other classes' forms (workshops, laboratories, seminars, exercises), resignation from grading, reorganization of classes – shift from individual subjects to modules, learning paths or cycles.

An interesting area for further research would be such challenges as:

- Students' ability to generate knowledge that does not exist – the new one, not imitative.
- The ability to design and conduct non-standard scientific research.
- The ability and openness to generate knowledge in other ways than the scientific method.

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CROSS-SECTOR PARTNERSHIP FROM THE PERSPECTIVE OF VARIOUS SCIENTIFIC THEORIES - TOWARDS CONSOLIDATING THE PHENOMENON IN MANAGEMENT SCIENCES

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Purpose: The cross-sector partnership (CSP) is an increasingly more frequently and widely described phenomenon presented in various areas and perspectives. This variety of approaches causes conceptual chaos, so it is worth creating a systematic review of scientific theories that categorize this phenomenon. This paper aims to synthesize knowledge about theories to describe CSP and to show their location in management sciences.
Design/methodology/approach: The article uses a systematic literature review based on the SCOPUS literature database. As a result of the terms and synonyms search, 8317 articles regarding the concept of CSP have been identified. After applying specific search restrictions, e.g., article type, year of publication, business, management, accounting, etc., 392 articles were identified. The above considerations indicate a significant, disordered research gap in this area. After reviewing the content, 194 referred to the CSP. After reviewing the content, 194 articles referred to the CSP, while the analysis of abstracts of mentioned 392 articles brought 194 which were strictly related to the CSP Then, in the course of the above analysis, the author noticed that 36 items in the database reference to scientific trends, of which 34 articles are widely available after analyzing the content of 34 available after analysing their content relating to the location of CSP within the selected theories. There is no clear indication of which theories describing the CSP phenomenon are the broadest and the most reliable, complete, appropriate, etc.
Findings: This article identifies the following conclusions. All authors in the analyzed articles agree that there is no one "universal" theory describing CSP. The next conclusion is most of the "applied" theories through the prism, which described the phenomenon, are in scope of the management science (MS) (28 articles out of 34 analysed) The most common theories cited by the authors are Resource based view theory, Agency theory, Resource-Based theory, Institutional theory, Effectuation theory, and Value Creation Theory. In the author's opinion, the scientific achievements in this area should be constantly monitored, as this may facilitate the description of the CSP phenomenon.

Originality/value: A systematic review of the literature and analysis of its content enabled the creation of a scientific trends review, using the phenomenon of CSP included. Moreover, the most common scientific trends are distinguished, and efforts have been made to consolidate these approaches in management sciences. These activities will probably allow the researchers to direct the perspectives of perceiving CSP phenomenon. They could also qualify for the identification/definition of one's approach, as well as organize/categorize the conceptual chaos.

Keywords: cross-sector partnership, scientific trends, management sciences.

Category of the paper: literature review.

1. Introduction

A cross-sector partnership is a partnership between institutions and organizations from various sectors, including public sector institutions (especially local government authorities) established to achieve common goals, usually social goals (Henry et al., 2022; van Tulder et al., 2016; van Zanten, van Tulder, 2018)**.**

For the course of considerations, it is essential to explain the concept of partnership as a platform for cooperation between the partners involved, which is built either to solve identified problems or organize initiatives aimed at socio-economic development and revival of the local community. A characteristic feature of the partnership is the undertaken activities bring mutual benefits to partners that could not achieve through the implementation of these activities on their own. Moreover, it assumes all partnership partners are equal, despite the lack of this equality outside its structures, which influences the level of their involvement. Partnership requires mutual acceptance and work in the conditions of various styles of action, different decision-making, and the pace of work. The developed principles of cooperation in partnership enable all parties to fulfill their mutual obligations, contribute to the implementation of undertaken projects and participate in making decisions necessary for the development of the local and regional community (Rama Murthy et al., 2021).

An explanation of the concepts closely influencing the shaping of the idea of partnership, which is cooperation, coordination, and collaboration, is essential for implementing the considerations undertaken in this article. These concepts underlie inter-organizational activities/relationships (IORs) such as alliances, buyer-supplier relationships, and cross-sector partnerships (Castañer, Oliveira, 2020; Galaskiewicz, 1985).

As a result of the definition analysis of these three concepts, it can conclude that the shaping process is influenced by two of the concepts presented: cooperation and collaboration. Organizational collaboration describes dynamic relationships involving coordinated activity based on mutual goals (Gray, 1989).

However, another approach describes the definition of collaboration as somewhat incoherent, elusive, and theoretical. In the face of abuse, cooperation has become a slogan for almost any kind of inter-organizational or interpersonal relations (Gajda, 2004). Collaboration is a mix of activities (e.g., information sharing) and procedures shared among organizations (e.g., joint performance measures); thus, it includes behavior and IOR infrastructure. Unfortunately, such defined cooperation does not emphasize the importance of defining the intersectoral partnership. It would be more appropriate to say that collaboration refers to both cognitive and psychological aspects (Gazley, 2017).

It sums up that the research on the etymology of these concepts referred to many levels (organizational and individual). Despite this, it was impossible to work out differences in defining these concepts or their mutual relations. As a result, this led to the conclusion that collaboration and cooperation can, in this case, be described as substitutable concepts, i.e., collaboration is cooperation (Castañer, Oliveira, 2020).

Based on the above analysis, the author of this study identified the need to define intersectoral cooperation, which, in the author's opinion, may assume the existence of mutual relations between the public authority sector and non-public entities. The tools of this cooperation may be social participation, social dialogue, civic dialogue, socialization, etc. Cooperation may be the initial stage on the way to partnership.

The above considerations show that the definition and description of the phenomenon of intersectoral partnership are ambiguous, disorderly, and not uniform. Moreover, it is not grounded in one dominant scientific theory. And it is known that the apparent truth is that theory is the means of understanding anything in science because it gives us a scientific way of answering the question "why?" in concluding that any goal of any science is, therefore, to develop a plausible theory (Zięba, Bieleń, Zając, 2015). Some authors even claim: *No single theoretical perspective provides an adequate foundation for a general theory of collaboration…* (Wood, Gray, 1991, p. 3); *Cross-sector partnership research is characterized by widely dispersed and multi-disciplinary theoretical as is the case with its methodological approaches employing a multitude and mixture of methods, which has resulted in a toolkit that has grown large and heavy to carry* (van Tulder et al., 2016, p. 2); *Theoretical lenses vary, somewhat predictably depending on whether the authors had set out to contribute to one of the three key themes in the literature: emergence (how cross-sector partnerships come into being), evolution (the unfolding and growth/decline of cross-sector partnerships) and governance (how resources are allocated and activities are coordinated and controlled within cross-sector partnerships* (Branzei, le Ber, 2014, p. 239).

The above considerations indicate a significant, disordered research gap in this area. It considers the above scientific gap, and it is essential to systematize theories describing the phenomenon of cross-sector partnership using a systematic review of the literature and, at a later stage, to consolidate this concept in ideas within MS. Therefore, the first research question is: How is the CSP phenomenon perceived in the literature on the subject? The second research question is: How is the CSP phenomenon described through the prism of scientific theories? And the third one is: How can the identified theories be consolidated/integrated in the MS?

The considerations in this article should be backed by a careful analysis of the etymology of the concept theory. It is vital because many authors (e.g., (Branzei, le Ber, 2014; Clarke, MacDonald, 2019; DiVito et al., 2021; Watson et al., 2020) whose papers will be analyzed using the term *theory* in the context of the phenomena, e.g., resource theory, institutional theory, network theory, resources dependence theory, institutional economics theory, corporate social performance theory, strategic management theory, social ecology theory, microeconomics theory, negotiated order theory, political theory, etc. The question arises whether the word theory is only a particular linguistic manner and concerns the words: current, paradigm, school, etc., or are these concepts treated synonymously, or are they different definitions? The differentiation of categories of the forms of scientific statements is most appropriate. However, observing the trends in the descriptions of intersectoral partnerships, one can notice that most authors (Babiak, 2009; Sotarauta, Heinonen, 2016; van Tulder et al., 2016; van Tulder, Keen, 2018) refer to the theory as a system of theorems with the highest level of completeness, certainty, and scientific maturity of a set of statements. The theory is thoroughly verified and falsified by the following sources: analytical research, empirical research, creating analysis (creative, heuristic), benchmarks, analogies, and mixed approaches. A theory usually formulates based on the applicable scientific doctrine, with given goals, limitations, and the context of conditions (Awal, Mollah, 2019; Surman, 2017; Witczak, 2014).

Another critical assumption of this article is the "transfer" of the known theories describing the cross-sector partnership phenomenon to the management sciences (MS) field. Achieving this assumption requires explanation for the theory-making process for MS and the conditioning factors (Hambrick, 2007). The creation, or rather the description of phenomena through the prism of theories that organize them, still dominates in MS. To summarize theories for MS are typically triggered by tensions that exist between what we know and what we observe. The next set of activities presented that facilitate the conceiving and constructing of theories involves developing the main characters (or constructs), constructing the context, or setting, and actively engaging the audience's imagination through the introduction of plots and themes. The management theorist needs to select the story elements that build the narrative arc of a theory, that is, justify and evaluate the theory (Awal, Mollah, 2019, p. 29; Byron, Thatcher, 2016).

2. Methods

This paper is based on systematic literature studies. The Author analyzed articles with the main use of such academic databases as Scopus.

In recent years, the practice based on scientific evidence (evidence-based practice) has gained popularity, which makes the card with ever better novelties and new, reliable methods of checking knowledge in the field of science (Whittemore et al., 2005). The participant has a large amount at his disposal, and each science is available to choose from, each set to the appropriate competencies of a given person, even in a narrower research study, and in them, an unambiguous answer to the research question. Such an answer can seek a solution in systematic literature reviews, i.e., they focus on a formulated research question and use thoroughly described scientific methods of identification, evaluation, and synthesis of all sources adequate to the research problem (Mazur et al., 2018). An up-to-date and adequately conducted systematic review fairly summarizes the current state of knowledge, informing about gaps in the literature and the need for new research. These features make systematic reviews useful in many sciences and practice areas, including medicine, education, psychology, management, and organization. At the same time, conducting a systematic review of the literature requires a lot of effort and knowledge about the specifics of this method (Arai, 2006; Mazur et al., 2018, pp. 235-236; Wright et al., 2007).

Following the procedure described in the literature for the creation of a systematic literature review, including the steps in writing a systematic review (research question, research protocol, literature search, data extraction, quality appraisal, data analysis and results, interpretation of results) (Wright et al., 2007), the author proposed the model for a systematic literature review (fig. 1).

The first step was the general recognition of the literature on the subject, articles, and books (about 200 items found in various databases), Scopus in the area of describing the CSP issue analysis. It is the first research question: How is the CSP phenomenon perceived in the literature on the subject?

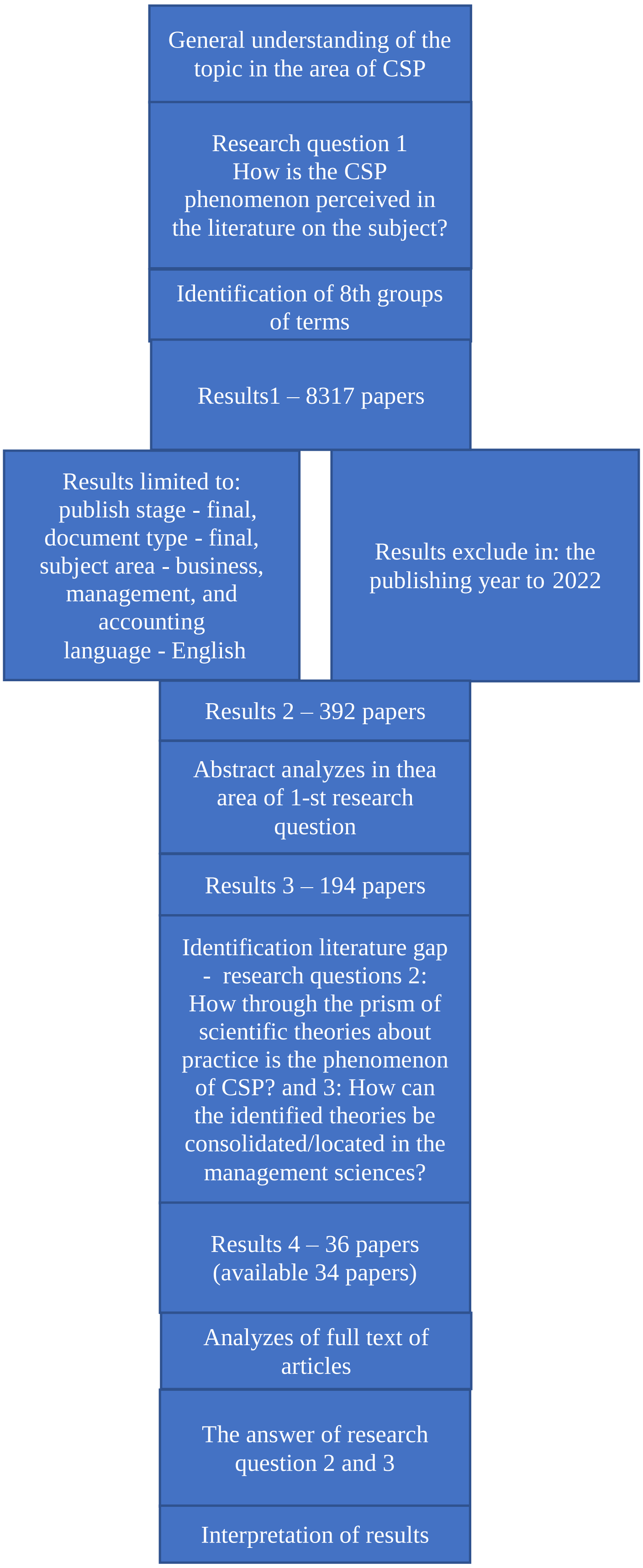

Figure 1. The steps in writing a systematic review.

Source: own source.

The analysis of the literature at this stage made it possible to distinguish the following terms: 1. cross-sector partnership, multi-sector partnership, inter-sector partnership, inter-sector partnership; 2. cross-sector relationship, multi-sector relationship, inter-sector relationship, intersector relationship; 3. cross-sector collaboration, multi-sector collaboration, inter-sector collaboration, intersector collaboration, 4. cross-sector cooperation, multi-sector cooperation intersector cooperation, inter-sector cooperation; 5. cross-sector initiative, multi-sector initiative, inter-sector initiative, inter-sector initiative; 6. cross-sector coalition, multi-sector coalition, inter-sector coalition, inter-sector coalition 7. cross-sector alliance, multi-sector alliance, inter-sector alliance, intersector alliance; 8. cross-sector network, multi-sector network, inter-sector network, intersector network. The literature search strategy was based on the area of Article title, Abstract, and Keywords. As a result of using the search in Scopus database, the result of 8317 documents was obtained. The following limit was applied to organize the search results:

- publish stage - final,
- document type - final,
- subject area - business, management, and accounting,
- language - English.

And exclude the publishing year to 2022. The second result of the analysis is 392 papers. After a successful analysis of the abstracts of these articles, and the result was 194 articles answering the first research question. During the analysis of abstracts, a research gap appeared. As a result, the Author formulated research question 2: How through the prism of scientific theories about practice is the phenomenon of CSP? And 3, How can the identified theories be consolidated/located in the management sciences? At the earlier stage of abstract analysis, 36 articles on the CSP phenomenon were distinguished through the prism of scientific theories. The study of their content brought the results presented in the next section of the article entitled results, shown in table 1. The interpretation of the results will be presented in the Discussion section.

3. Results and Discussion

The author has studied the CSP phenomenon for several years, both in the scientific and practical areas. Describing this phenomenon is very difficult in science, as many authors adopt increasingly different scientific theories to identify the specificity of CSP. Apart from the fact that there are various applications of scientific theories, the authors also use their unverified terminology of the theory (Branzei, le Ber, 2014). Browsing through the diversity of theories and methods is necessary, but not sufficient. There are a few precedents for theorizing relationality - critically (le Ber, Branzei, 2010) and communicatively (Koschmann et al., 2012), and with complexity (May Seitanidi, Crane, 2014). But none is sufficient. Each offers but a promising beginning for theory elaboration. But neither is enough. Each of them offers a promising start to theory development. Hence the considerations in this article are so important and, at the same time, difficult to carry out. After analyzing the identified scientific theories, the author attempted to propose applying one theory, O. Williamson, modified to meet the needs of explaining the CSP phenomenon. Perhaps this is an imperfect proposition and applicable only to a general description of the phenomenon. However, in the author's opinion, this proposal somehow puts the defined chaos in order.

As a result of the content analysis of 34 articles, the following results were obtained, presented in Table 1.

Table 1.
Theories describe of phenomenon CSP

No.	Authors	Title	Theory
1	Ordonez-Ponce E., Clarke A., MacDonald A.	Business contributions to the sustainable development goals through community sustainability partnerships	*Resources based view theory*
2	Clarke A., MacDonald A.	Outcomes to Partners in Multi-Stakeholder Cross-Sector Partnerships: A Resource-Based View	*Resources based view theory*
3	Quélin B.V., Kivleniece I., Lazzarini S.	Public-Private Collaboration, Hybridity and Social Value: Towards New Theoretical Perspectives	*Two theoretically complementary yet distinct dimensions: hybridity in governance and hybridity in organizational logics*
4	Weißmüller K.S., Vogel R.	Sector-Specific Associations, Trust, and Survival of PPPs: A Behavioral Experiment Based on the Centipede Game	*Combining classic theoretical concepts on the development of interorganizational trust and administrative behavior. Agency theory*
5	Babiak K.M.	Criteria of effectiveness in multiple cross-sectoral interorganizational relationships	*The Effectuation theory*
6	DiVito L., van Wijk J., Wakkee I.	Governing Collaborative Value Creation in the Context of Grand Challenges: A Case Study of a Cross-Sectoral Collaboration in the Textile Industry	*The Value Creation Theory*
7	Watson R., Wilson H.N., Macdonald E.K.	Business-nonprofit engagement in sustainability-oriented innovation: What works for whom and why?	*Agency theory, resource-based theory, institutional theory, institutional logic theory, theory relating*
8	Shimbo A., Javed A., Kohda Y.	The O-Bento Principle for Successful Multi-sector Collaboration: A Case Study of DMO Roppongi	*The Effectuation theory*
9	Pittz T.G., Intindola M.	Exploring absorptive capacity in cross-sector social partnerships	*Decision making theories*
10	Herlin H., Pazirandeh A.	Nonprofit organizations shaping the market of supplies	*Resource Dependency Theory*
11	Lin H.	Government–Business Partnership Formation for Environmental Improvements	*Resource Dependence Ttheory*

Cont. table 1.

12	Lenz T., Shier M.L.	Supporting Transformational Social Innovation through Nonprofit and Local Government Relations: A Scoping Literature Review	*Social innovation theories*
13	Nahi T.	Co-creation for sustainable development: The bounds of NGO contributions to inclusive business	*Practice theory*
14	Page S.B., Bryson J.M., Crosby B.C., Seo D., Stone M.M.	Ambidexterity in Cross-Sector Collaborations Involving Public Organizations	*Organizational ambidexterity, Advance theory*
15	Morse R.S.	Integrative public leadership: Catalyzing collaboration to create public value	*Public value theory*
16	Huybrechts B., Nicholls A., Edinger K.	Sacred alliance or pact with the devil? How and why social enterprises collaborate with mainstream businesses in the fair-trade sector	*Institutional theory*
17	Marano V., Tashman P.	MNE/NGO partnerships and the legitimacy of the firm	*Institutional theory and Transaction Cost Economics*
18	Oskam I., Bossink B., de Man A.-P.	Valuing Value in Innovation Ecosystems: How Cross-Sector Actors Overcome Tensions in Collaborative Sustainable Business Model Development	*Innovation ecosystems with sustainability goals often consist of cross-sector partners*
19	Wadham H., Warren R.	Inspiring action, building understanding: How cross-sector partnership engages business in addressing global challenges	*Habermas' theoretical ideas about communicative action and deliberative democracy*
20	Herlin H.	Better Safe Than Sorry: Nonprofit Organizational Legitimacy and Cross-Sector Partnerships	*Corporate Social Responsibility*
21	Ashraf N., Ahmadsimab A., Pinkse J.	From Animosity to Affinity: The Interplay of Competing Logics and Interdependence in Cross-Sector Partnerships	*Resource dependence theories*
22	Arslan A., Golgeci I., Khan Z., Al-Tabbaa O., Hurmelinna-Laukkanen P.	Adaptive learning in cross-sector collaboration during global emergency: conceptual insights in the context of COVID-19 pandemic	*Adaptive learning theory*
23	Barinaga E.	Coopted! Mission Drift in a Social Venture Engaged in a Cross-Sectoral Partnership	*Fligstein's and McAdam's theory of Strategic Action Fields (SAF)*
24	Vestergaard A., Murphy L., Morsing M., Langevang T.	Cross-Sector Partnerships as Capitalism's New Development Agents: Reconceiving Impact as Empowerment	*Empowerment theory*
25	Dentoni D., Pinkse J., Lubberink R.	Linking Sustainable Business Models to Socio-Ecological Resilience Through Cross-Sector Partnerships: A Complex Adaptive Systems View	*Sustainable business model/theory*
26	Persson E., Granberg M.	Implementation through collaborative crisis management and contingency planning: the case of dam failure in Sweden	*Collaborative public management (CPM) and crisis management (CM).*

Cont. table 1.

27	Hedberg L.M., Lounsbury M.	Not just small potatoes: Cultural entrepreneurship in the moralizing of markets	*Institutional theory*
28	Pittz T.G., Adler T.	An exemplar of open strategy: decision-making within multi-sector collaborations	*Stakeholder theory*
29	Dentoni D., Bitzer V., Schouten G.	Harnessing Wicked Problems in Multi-stakeholder Partnerships	*Theories of Change (ToCs) and Complex Adaptive System (CAS) theory*
30	Moshtari M., Vanpoucke E.	Building Successful NGO–Business Relationships: A Social Capital Perspective	*Social Capital theory*
31	Hahn T., Pinkse J.	Private Environmental Governance Through Cross-Sector Partnerships: Tensions Between Competition and Effectiveness	*Institutional theory, The Resource-Based View*
32	AbouAssi K., Bowman A.O.M., Johnston J.M., Bauer Z., Tran L.	Relations, resources, and costs: exploring cross-sectoral collaboration at the local level in a developing country	*Institutional theory, resource dependence, and transaction cost perspectives*
33	Wang Y., Guan L.	Mapping the structures of international communication organizations' networks and cross-sector relationships on social media and exploring their antecedents	*Alliance theory and the collective action theory*
34	Anwar N., Rahab	Inter-organizational collaboration to develop Batik Banyumas SMES competitiveness	*Resource-based theory*

Source: Own source based on - Arslan et al., 2021; Ashraf et al., 2017; Babiak, 2009; Barinaga, 2020; Clarke, MacDonald, 2019; Dentoni et al., 2018, 2021; DiVito et al., 2021; Hahn, Pinkse, 2014; Hedberg, Lounsbury, 2021; Herlin, 2015; Herlin, Pazirandeh, 2012; Huybrechts et al., 2017; Jones et al., 2018; Lenz, Shier, 2021a, 2021b; Lin, 2014; Marano, Tashman, 2012; Medel et al., 2020; Morse, 2010; Moshtari, Vanpoucke, 2020; Ordonez-Ponce et al., 2021; Oskam et al., 2021; Persson, Granberg, 2021; Pittz, Adler, 2016; Pittz, Intindola, 2015; Shimbo et al., 2021; van Tulder, Keen, 2018; Vestergaard et al., 2020; Wang, Guan, 2020; Watson et al., 2020; Weißmüller, Vogel, 2021.

The table above shows that the authors clearly define the perspective of the description of the CSP phenomenon concerning scientific theories. Six articles are not grounded in MS, and 28 refer to MS in their descriptions.

The following conclusion draws from a systematic review of the literature, the content of the article, and table 1:

1. The authors describe CSP through the prism of scientific theories. They do this through an in-depth analysis of the phenomena occurring in the CSP, with the help of which it is possible to get to the genesis, core, and essence of phenomena. With scientific theories, a specific "translation" of the principles of the organization's functioning takes place based on a challenging partnership to implement in a broad sense. It is the answer to the second research question.
2. The most common theories cited by the authors are Resource based view theory, Agency theory, Resource-Based theory, Institutional theory, The Effectuation theory, The Value Creation Theory.

3. The analysis of the content of the articles shows that in 28-th theories established in MS were used, 6th (Institutional theory, Transaction Cost) in other sciences, most often in Economic Sciences - this is the answer to the 3rd research question.
4. No single, proper scientific theory "explaining" the CSP phenomenon exists. The authors, describing them through the prism of scientific theories, analyze them in the context of functionality, situationally, human resources, etc. Only then does the author "locate" the CSP in scientific theories functionally and processively in time. Summing up, there is no one "correct" scientific theory. The actions, situations, people, etc. determine the "assignment" of the CSP description to a specific scientific theory.
5. Most authors use the notion of theory, few methods, system, no scientific idea, scientific current, or scientific paradigm.
6. Most identified theories are known and widely used, the so-called mainstream: *Resources based view theory, Agency theory, Resource-Based Theory, Institutional theory, The Effectuation Theory, The Value Creation Theory, etc.*; however, some authors use theories in their descriptions so far little or no described *Complex Adaptive System (CAS) Theory, Fligstein's and McAdam's theory of Strategic Action Fields (SAF), Organizational Ambidexterity.*
7. It is puzzling that the description of the CSP phenomenon based, in fact, on connections, and relations between entities from different sectors, i.e., networking, is described in only one case through the prism of the alliance theory.

In conclusion, in the connection with 1-st RQ: How is the CSP phenomenon perceived in the literature on the subject? Based on the analysis of the results of literature research, it can be concluded that CSP is described through the prism of other phenomena and/or in combination with them, most often such as sustainable development, CSR, eco-energy, global emergency, etc (e.g. Morse, 2010; Moshtari, Vanpoucke, 2020; Oskam et al., 2021; Vestergaard et al., 2020). Few authors consider CSP in the context of describing and explaining the essence of the phenomenon itself (e.g.Hahn, Pinkse, 2014; Marano, Tashman, 2012; Wood, Gray, 1991). The 2nd RQ How, through the prism of scientific theories in practice, describes the phenomenon of CSP. Authors describing CSP through various theories often "adopt" the application to the actions, activities, and operations in the CSP. The literature analysis shows that the authors explicitly state that it is impossible to describe the CSP concerning one scientific theory (Branzei, le Ber, 2014; van Tulder, Keen, 2018; Wood, Gray, 1991). And 3rd RQ How can the identified theories be consolidated/located in the management sciences? The literature analysis showed that most authors when describing CSP, place their considerations in theories derived from MS (28 articles from 34 analyzed papers) (e.g. Ashraf et al., 2017; Herlin, 2015; Lenz, Shier, 2021a).

Summarizing the content of this article regarding the author's discussion in the RQ areas, and in the author's opinion, when describing the essence, genesis, and philosophy of CSP functioning, it will be most appropriate to base it on the theory of O. Williamson's transaction costs. O.E. Williamson (Wiliamson, 1975) distinguishes markets and hierarchies as different types of co-management structures. According to O.E. Williamson the increase in transaction costs is, on the one hand, the result of the individual's limited cognitive abilities and, on the other, the growing complexity and uncertainty resulting from the tendency towards opportunistic behavior combined with a small number of potential exchange partners.

O.E. Williamson observes that market incentives are based on competition, whereas business incentives are based on administrative procedures and cooperation within which trust is essential.

The description of various structures of co-management (market vs. hierarchies) can thus be explained by a kind of a continuum, in which the analysis can be carried out starting from the total absence of correlations between individual market players (enterprises) and finishing with the existence of a hierarchically organized enterprise. Between these extremes, there are indirect forms of co-management structures (loose cooperation networks, cooperation agreements, joint ventures, etc.), the so-called organizational hybrids (Figure 2).

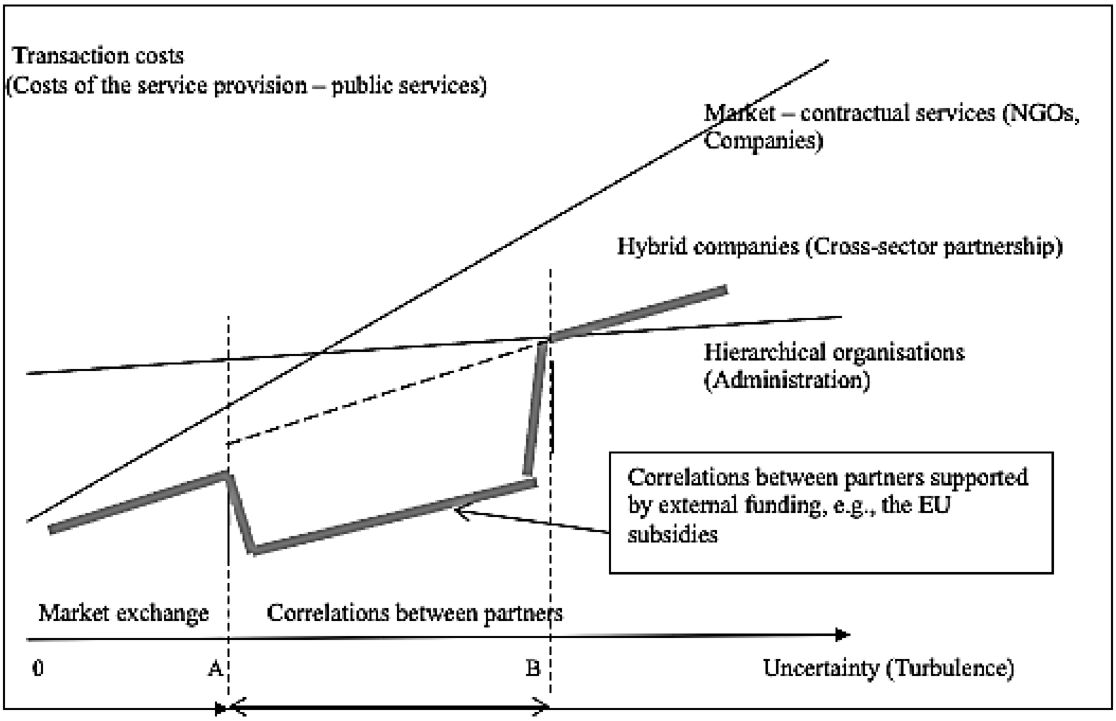

Figure 2. The theory of cross-sector partnerships establishment.

Source: Author's compilation based on: Koppelmann, 2000, p. 70.

The above figure presents the effectiveness of the functioning of such forms of organization as: an enterprise managed by a uniform management, trade and hybrid forms such as cross-sector partnerships, but also other such forms, such as supply chains, logistics networks, clusters, etc. The effectiveness of these organizations is measured here (axis of ordinates) by transaction costs as indicated by O.E. Williamson or the comparable costs of management in terms of hierarchical organizations such as companies or administration. Following this approach, in the case of partnerships, the costs of handling public services implemented within their framework can be defined as transaction costs. However, as turbulence and uncertainty increase in the environment, transaction costs are growing more dynamically in the organizations based on trade than in the ones managed top-down. Nevertheless, in some areas of this uncertainty (on the graph it is the area between points A and B), the highest efficiency, and thus the lowest transaction costs, or the costs of public services are recorded by hybrid forms – i.e., cross-sector partnerships based on specific forms of partner correlations. It is also of particular interest that in the case of establishing such partnerships external support in the form of subsidies from EU, EEA or national support programmes can be expected. This means that the efficiency of such hybrid organizations (including external support) may be definitely greater than other forms of cooperation organization (market, hierarchical organization). This is illustrated on Figure 2 by lowering the graph showing the hybrid forms between points A and B defining the minimum and maximum limits of uncertainty within which partnerships are formed.

4. Summary

The article aimed to synthesize knowledge about theories describing CSP and show their location in MS. The author, after a thorough analysis of 34 articles distinguished according to the above-described search strategy, describes CSP through the prism of scientific theories, resulting from complete scientific freedom, and with the lack of systematization of accurate theories to characterize the CSP. The authors use the same creative space in the terminology of the theories adopted for analysis. The author has attempted to organize this scientific "disorder" incl. by proposing the theory of O. Williamson, which, in the author's opinion, describes the general essence of the CSP most broadly and appropriately. It is only the author's opinion resulting from many years of literature review and practical experience in creating, shaping, and functioning the CSP.

The author encountered some difficulties while writing the article and literature review, mainly due to the ambiguity of concepts, challenges in accessing scientific studies, the changing approach of the authors to the phenomenon, to describe it through the prism of other phenomena and not as the central area of research. Hence, some directions arise, mainly concerning the attempt to organize theories describing CSP. Maybe in the form of joint articles by authors dealing with this area, the result of which would be to create a specific toolbox containing recommendations, postulates, and instructions facilitating "placing" CSP in specific theories

The author knows her considerations are one of many opinions regarding the area under consideration. However, any attempt to consider this area is valuable and worth trying to explain it.

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CONSUMER DIMENSION OF SMART HOME IN THE PERSPECTIVE OF SOCIETY 5.0 DEVELOPMENT

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Purpose: The aim of the article was to determine how intelligent solutions in the field of smart home are perceived by the consumers and to identify smart home systems considered to be the most valuable consumer solutions, for the user convenience and safety.
Design/methodology/approach: In order to achieve the aim of the article, a study was conducted on a sample of 741 respondents. The CAWI technique was used in this research and the measurement tool was electronic questionnaire.
Findings: In the light of the obtained results, very positive attitudes of consumers towards smart home solutions were revealed. The highest rated systems were multifunctional sensors, monitoring systems and heating or air conditioning control systems. The vast majority of the respondents confirmed their knowledge of smart home solutions, but not more than one in three respondents admitted to owning such systems. The perception of smart home solutions correlates negatively with the age of consumers and positively with the financial situation and place of residence, while the possession level correlates positively with the consumers' financial situation.
Research limitations/implications: A limitation of the study is the non-random sample, which makes it impossible to relate the results to the general population. Furthermore, the conducted study was carried out in accordance with the descriptive function of scientific research. Such a nature of the study enables the description and recording of the occurrence of a specific phenomenon. It is therefore worth undertaking in the future further research of an explanatory nature, the results of which would make it possible to draw conclusions about cause-and-effect relationships in the perception of smart home systems, taking into account the variables mediating and moderating the studied relationships.
Practical implications: The way of perceiving smart home systems correlates positively both with the degree of customers' knowledge and the state of ownership, and the correlation strength in both cases is at a comparable level. Therefore, the perception of smart home systems does not necessarily result from having personal experience with their use, but also can only be based on the customers' acquaintance. It can therefore be concluded that marketing communication strategies aimed at increasing the awareness of smart home systems will allow to gain recognition of their usefulness and, as a result, will be effective in increasing the smart home market.

Originality/value: The undertaken research attempts to fill the gap in determining the consumer's optics regarding the predilection of smart home systems. The user's perspective allows us to understand the cognitive component of buyers' attitudes towards smart homes, taking into account the local dimension of the study (opinions of Polish consumers).

Keywords: smart home, intelligent buildings, society 5.0.

Category of the paper: Research paper.

1. Introduction

The smart home is a human-centric intelligent living environment created by the convergence of IT to the residential environment. The smart home service is becoming an attractive market with high growth potential. Connectivity in the home already existed 10 years ago, but at a basic level and in the form of home automation. Thanks to the integration of smart devices with high-speed wired and wireless Internet, big data and cloud computing, it is now growing into a giant industry (Kim et al., 2017). To facilitate the implementation and adoption of smart home technology, it is important to explore the user perspective and current state of smart homes (Marikyan et al., 2019). Given the rapid pace of development in this field, there is a strong need to keep an eye on this industry. Against this background, the purpose of the article was formulated, which was to determine how intelligent solutions in the field of smart home are perceived by consumers. The goal implementation was based on both secondary and primary sources in the form of an empirical study conducted using the survey method on a sample of 741 units. The undertaken research were to fill the gap in the scope of determining the consumers' optics regarding the predilection of smart home systems, and in the long-term perspective - opportunities for the widespread commercialization of this technology.

As part of the implementation of the main goal, specific objectives were also taken into account, including determining which smart home systems are perceived as the most valuable, serving the user's comfort and safety, as well as identifying the degree of smart home solutions popularization. Taking into account the local dimension of the study (the opinion of Polish consumers) may also fill the research gap related to the differences in the smart home perception by consumers representing different countries (Balta-Ozkan et al., 2014; Straub et al., 1997).

The article is organized as follows: first an introduction is presented, then (in the second part) a systematic review of the literature on the smart home is made, establishing the theoretical basis of the research, presenting and discussing smart home solutions in the perspective of consumer utility and the specificity of society 5.0. These considerations formed the basis for the research questions development. The third section presents the proposed research methodology (context, sample and applied measures). The fourth section presents the results, followed by a discussion in the fifth section. The last section concludes by discussing research implications and limitations as well as future research directions.

2. Literature review

2.1. Systematic literature review on smart home

In order to identify the current state of knowledge and evaluate the existing literature, as well as to indicate further research directions, a systematic literature review was carried out, taking into account Scopus database. The analysis made it possible to identify over 9,800 full-text and peer-reviewed publications (the phrase "smart home" in the title, abstract, keywords, repeated publications were removed). At this stage the database wasn’t limited only to social sciences, but also included publications in the field of engineering and technical sciences, medicine, humanities, as well as environmental sciences.

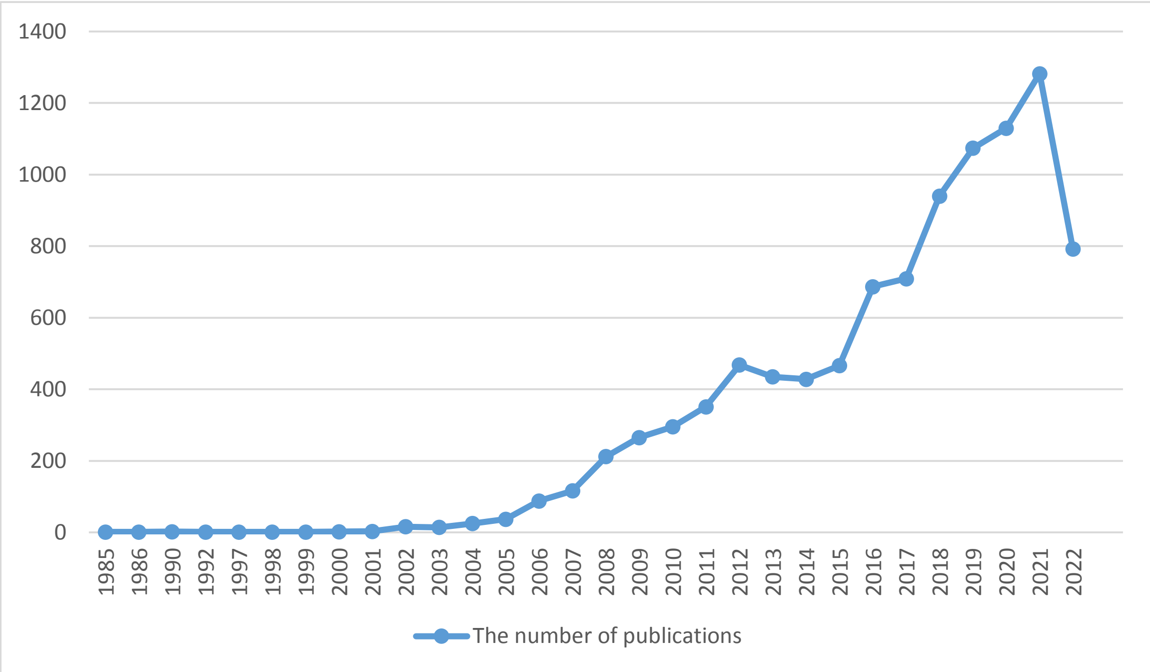

Figure 1. The number of publications on smart home from particular years.

Source: own elaboration based on Scopus database resources.

As part of the systematic literature review methodology, a number of publications from individual years were analyzed (figure 1). This made it possible to conclude that the issue of technology related to the smart home area is popular among researchers, and a rapid increase in interest has been observed especially since 2012 (data for 2022 should be considered incomplete as of the date of preparation of this publication, i.e. 14/09/2022). This seems fully justified due to the dynamic development of digital technologies observed in this period and the increasing possibilities of market implementation of solutions based on artificial intelligence. Taking into account, on the one hand, the indicated intensity of the observed changes and, on the other hand, the dynamics of the number of publications, further analyzes focused on the period of the last 10 years.

In the analyzed period, the list of disciplines that most often refer to the issues of smart home is wide. Most publications in this field are related to Computer Science (37.1%), Engineering (24.0%), Mathematics (8.6%), Energy (4.9%), Physics and Astronomy (4.4%). Decision Sciences (4.1%) and Social Sciences (3.4%).

The obtained publication database was analyzed using bibliometric techniques. An analysis of keyword frequency and research problems was carried out. Selected keywords related to smart home were subjected to quantitative analysis. The visualization of their frequency (keyword frequency analysis) was presented in the form of a "word cloud", where the frequency of occurrence was reflected in the size and thickness of the font (Figure 2).

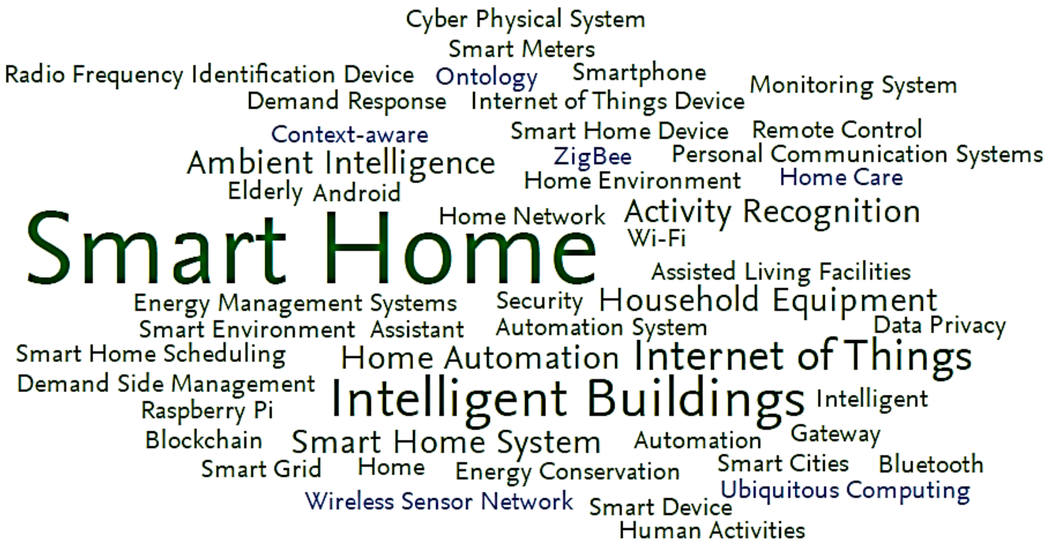

Figure 2. Keyword frequency analysis for smart home (2012-2021).

Source: own elaboration based on Scopus database resources.

The most frequently appearing keywords are *smart home* (the increase in the number of publications in the analyzed period by 180.2%), *intelligent buildings* (increase by 31.6%), *Internet of Things* (increase by 3,005.0%), *ambient intelligence* (increase by 854.5%), *household equipment* (increase by 215.4%), *home automation* (increase by 140.0%), *activity recognition* (increase by 91.7%).

Despite the fact that the issue of the smart home arouses interest of researchers all over the world, the analysis of the number of publications, taking into account individual countries, showed that the most active in this area are China, the United States, India, Great Britain and South Korea (figure 3). This does not seem to be surprising, considering the current position and strategy of these countries in the development of digital technologies and building their economic position in the world on this basis.

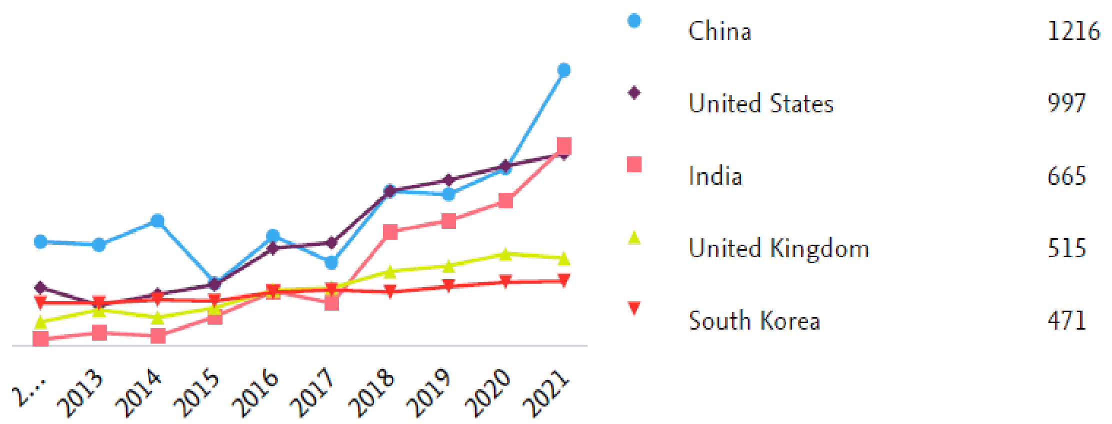

Figure 3. The most active countries in terms of the number of publications for the phrase smart home (2012-2021).

Source: own elaboration based on Scopus database resources.

The presence of the indicated countries at the forefront, those who actively research and shape the framework for a better understanding of the essence and application dimension of smart home technology, is also reflected in the publications of individual research centers. Among the five most active universities, according to the number of publications on smart home issues in the analyzed period, there were primarily American (*Washington State University Pullman*), Chinese (*Xidian University, Chinese Academy of Sciences*), British (*Ulster University*), Korean (*Electronics and Telecommunications Research Institute*), and Indian universities (*Vellore Institute of Technology, Anna University*).

Subsequently, the conducted analysis was limited to the areas related to the category Business, Management and Accounting, which is the area of consideration of this publication. This allowed the identification of key research perspectives and the identification of those areas of smart home issues that require further research.

The total number of publications in the field of smart home technologies in the Business, Management and Accounting category in the analyzed period amounted to 217 (figure 4). At the same time, in the area of Business, Management and Accounting, the Field-Weighted Citation Impact was at the level of 1.81, which means that publications in this field are cited slightly more often compared to the global average for similar publications in all disciplines combined (1.59).

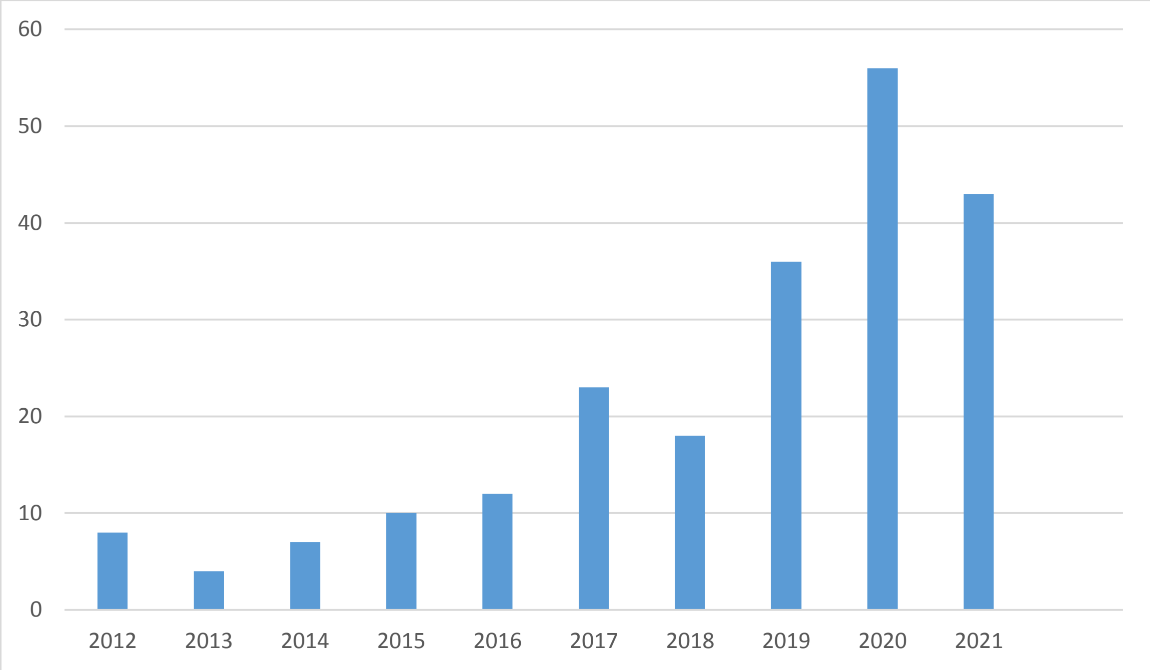

Figure 4. The number of publications in the Business, Management and Accounting category from particular years.

Source: own elaboration based on Scopus database resources.

The analysis of the keywords frequency related to the topic of smart home in the Business, Management and Accounting category and the results of quantitative analysis (presented in the form of a "word cloud" - Figure 5) showed that the most popular words includes keywords previously indicated also in other disciplines, but in the analyzed area, the increases in the number of publications are definitely more pronounced in the case of the following phrases: *smart home* (increase by 566.7%), *intelligent buildings* (350.0%), *home automation* (500.0%), *household equipment* (566.7%). In the case of the *Internet of Things* the increase in the number of publications in the analyzed period was 2,700.0%, and in the case of *smart home system* and *ambient intelligence* 400.0%. The analysis of other keywords showed that the number of publications concerning the words: *home care* and *energy conservation* remained constant, but in case of *energy management systems* there was a significant decrease in the number of publications (a decrease of 50%).

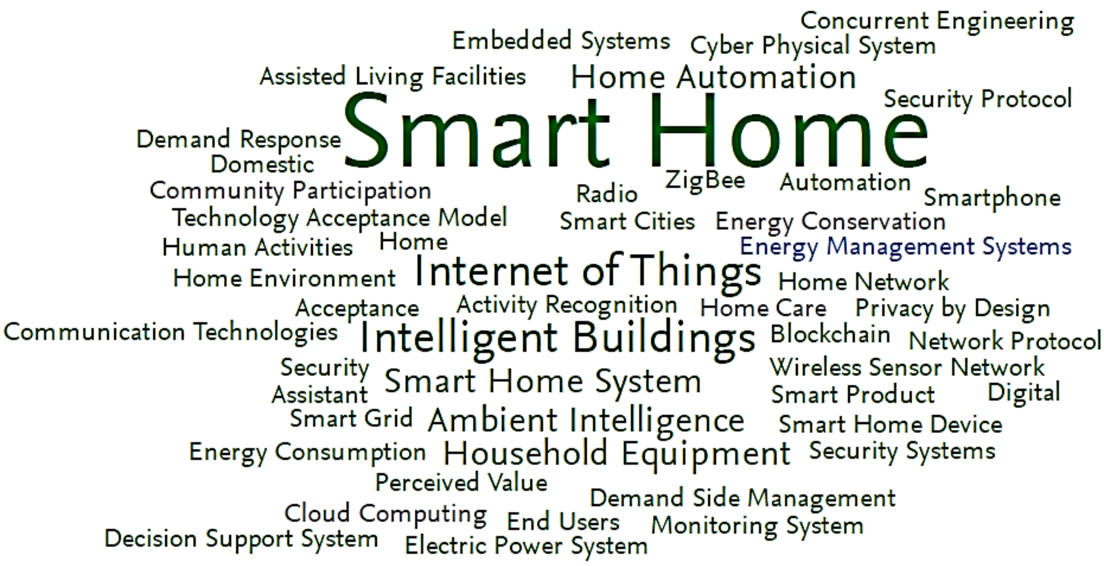

Figure 5. Keyword frequency analysis for smart home for the category Business, Management and Accounting (2012-2021).

Source: own elaboration based on Scopus database resources.

The results of the analysis of the number of smart home publications in the Business, Management and Accounting category, taking into account individual countries, showed that the most active in this area are India, China, the United States, Germany, Great Britain and South Korea. Research of this kind are an important interest area of among others *Nanjing Institute of Technology* oraz *Tsinghua University, Korea Advanced Institute of Science and Technology*, *Sungkyunkwan University, Anna University, Westfälische Wilhelms-Universität Münster*, *Technische Universität Berlin, University of South Florida* and *University of Nottingham*.

In accordance with the methodology of systematic literature review, in the next step, an analysis of citations was carried out, which made it possible to identify publications requiring further exploration (Table 1).

Table 1.
The most frequently cited publications dealing with the issues of smart home for the category Business, Management and Accounting

Authors	**Title**	**Year**	**Source title**	**Citation Count**
Risteska Stojkoska B.L., Trivodaliev K.V.	A review of Internet of Things for smart home: Challenges and solutions	2017	Journal of Cleaner Production	735
Marikyan D., Papagiannidis S., Alamanos E.	A systematic review of the smart home literature: A user perspective	2019	Technological Forecasting and Social Change	225
Paetz A.-G., Dütschke E., Fichtner W.	Smart Homes as a Means to Sustainable Energy Consumption: A Study of Consumer Perceptions	2012	Journal of Consumer Policy	182
Yang H., Lee H., Zo H.	User acceptance of smart home services: An extension of the theory of planned behavior	2017	Industrial Management and Data Systems	147

Cont. table 1.

Kim Y., Park Y., Choi J.	A study on the adoption of IoT smart home service: using Value-based Adoption Model	2017	Total Quality Management and Business Excellence	114
Shin J., Park Y., Lee D.	Who will be smart home users? An analysis of adoption and diffusion of smart homes	2018	Technological Forecasting and Social Change	105
Mocrii D., Chen Y., Musilek P.	IoT-based smart homes: A review of system architecture, software, communications, privacy and security	2018	Internet of Things (Netherlands)	103
Alaiad A., Zhou L.	Patients' adoption of WSN-Based smart home healthcare systems: An integrated model of facilitators and barriers	2017	IEEE Transactions on Professional Communication	82
Ehrenhard M., Kijl B., Nieuwenhuis L.	Market adoption barriers of multi-stakeholder technology: Smart homes for the aging population	2014	Technological Forecasting and Social Change	72
Balta-Ozkan N., Amerighi O., Boteler B.	A comparison of consumer perceptions towards smart homes in the UK, Germany and Italy: reflections for policy and future research	2014	Technology Analysis and Strategic Management	68
Shuhaiber A., Mashal I.	Understanding users' acceptance of smart homes	2019	Technology in Society	64
Hubert M., Blut M., Brock C., Zhang R.W., Koch V., Riedl R.	The influence of acceptance and adoption drivers on smart home usage	2019	European Journal of Marketing	59

Source: own elaboration based on Scopus database resources.

Among the most frequently cited publications for the smart home phrase in the Business, Management and Accounting category, there were largely publications dealing with the use of smart technology and IoT-based solutions in the field of smart home, especially in the areas of effectiveness and efficiency of system architecture, software, communication and smart home application. They pay particular attention to the aspects of automation, interoperability and mobility of the proposed solutions.

The conducted analysis showed that among the most frequently appearing issues related to the smart home technology, particularly two threads of consideration stand out - the first related to the broadly understood concept of sustainable consumption, and the second embedded in the context of the aging of the society. According to the first trend, smart homes are perceived as a way to sustainably use energy. The growing literature on the subject focuses on services related to energy consumption and management of solutions offered by smart homes perceived by the market's demand side representatives. The second trend focuses on showing the possibilities of a smart home in providing a much wider range of services related to supporting life, health and safety. These considerations focus in particular on the issue of implementing healthcare systems as part of solutions offered by smart homes, in response to the growing needs of an aging population. These topics were intensively undertaken by researchers, which allowed to achieve a high level of recognition of these research areas.

The raised issues also relate to the users understanding and acceptance of smart homes. This is reflected in the searching for a multi-faceted approach to the factors conditioning the smart home technology acceptance by users and determining the adoption and diffusion of smart home solutions. The analysis of the collected material clearly shows that research on issues related to the IoT technologies implementation in the smart home area is up-to-date. At the same time, research on the level of their social acceptance is still insufficient in the context of constantly enriching smart home devices with new functionalities resulting from the AI implementation, which justifies the need for further research in this area.

2.2. Smart home solutions in the context of consumer usability

A smart home is a place of residence equipped with a communication network, connecting sensors and home devices that can be remotely monitored, accessed or controlled, and which provides services that meet the inhabitants' needs (Chan et al., 2009; Reinisch et al., 2011). The smart home is built by solutions that use an IoT-based set-top box to monitor, control and manage a smart grid that connects all electronic devices that can be used in a home, such as a boiler, air conditioners, electric lights, sewage, heating devices, door lock, surveillance camera and other (Kim et al., 2017).

In smart home systems, the home network is the basis, in which all electronic devices used at home are connected through a wired or wireless two-way communication system (King, 2003). Integration and communication of various systems via the smart home network is enabled by sensors, i.e. devices used to detect the location of people and objects or to collect data on states (e.g. temperature, energy consumption, open windows). The smart home network therefore consists of two elements - a “physical connection” and a “communication protocol”. The physical element is responsible for connecting components within individual systems - most often a wired connection or a radio signal. Whereas, a “communication protocol” is a common language through which different components can communicate with each other and exchange information (Balta-Ozkan et al., 2014). In turn, Diegel et al. (2005) described the smart home system by indicating four integrated and cooperating intelligence levels, which create a living environment at the smart home: smart devices, smart controls, smart management and smart sensors. The existence of this home area network connecting and coordinating various technological components and information is what distinguishes a smart home. It is thanks to the connected network of devices and sensors that a smart home differs from a house that is only equipped with standalone highly advanced technological features, such as smart devices (Scott, 2007).

Smart home offers the opportunity to improve the quality of life of household members by offering new services (e.g. health monitoring) or more effective control and management of existing services (e.g. remote activation and deactivation of security systems). Smart homes should enable consumers to control and reduce their energy consumption more effectively, while increasing the comfort and convenience of various domestic activities, from space heating (by automatically adjusting thermostat settings to actual weather temperatures) to water heating (by detecting household behavior patterns and providing hot water about the required temperature in the right amount at the right time) and safety (e.g. through sensors detecting open windows in an uninhabited apartment and alerting the householder) (Balta-Ozkan et al., 2014).

The energy trilemma problem, encompassing concerns about energy security, the threat of climate change and the uncertainty of energy prices, has resulted in a rapid growth of interest in smart systems, with the growing literature on smart meters and demand-side schemes focusing on energy consumption services that offer smart homes (Balta-Ozkan et al., 2014). Efficient management of energy consumption and promotion of sustainability is possible through the integration of technological functions such as smart heating and smart meters (Scott, 2007). A smart home can offer various systems in this respect, such as detailed control of smart devices (heaters, air conditioners and other devices), the ability to remotely manage electrical devices, reporting data on energy consumption and related costs, and communication between any local microgenerators (e.g. solar panels on the roof) (Balta-Ozkan et al., 2014). As a result, smart meters placed between the household and the grid enhance utility and energy control, although their benefits are often unclear to homeowners (Pepermans, 2014).

2.3. Society 5.0 as consumers of smart home systems

The concept of the "smart home" as today's new living space, where various household support systems are interconnected and converged using ICT (information and communication technology) (Kim et al., 2017), meets the expectations of consumers representing society 5.0. Society 5.0 is otherwise an information society, ultra-intelligent, where everyone can lead a high-quality, comfortable life thanks to the combination of physical and cyberspace through the fully usage of the information and communication technologies (Mourtzis et al., 2022). Society 5.0 is an information society, constituted by universal access to ICT and the Internet, the ability to use them, developed and widespread IT knowledge and a positive assessment of these manifestations in society at the full user level (Nath, 2017). In such circumstances, positive relations between people and technology will ensure sustainable development in all social aspects (e.g. education, health, democracy, economy) (Ferreira, Serpa, 2018).

Thanks to the high degree of combining cyberspace with physical space society 5.0 is able to balance economic progress and social well-being, by providing goods and services that address various hidden needs (Deguchi et al., 2020), including consumer needs. Society 5.0 balances the best interests of society as a whole, which includes solving social problems, with the best interests of individuals, which proves human focus (Matsuoka, Hirai, 2020). What distinguishes the 5.0 society is therefore the fact that instead of realizing the desired utilities through separate systems operating in a limited scope (such as maintaining comfort in a room or optimal energy supply), this society will have systems that will work for the entire community in an integrated way. To ensure the happiness of all society members, comfort will be implemented in all aspects of life, including energy, transport, medical care, shopping, education, work and leisure. The basis for achieving this goal will be systems that collect diverse and extensive data from the real world in iterative cycles. These data will then be analyzed and processed by advanced IT systems, such as artificial intelligence, and the obtained information will be used in the real world, making the society members lives more happy and comfortable (Deguchi et al., 2020).

The smart home concept fits perfectly into this philosophy, carrying a number of utilitarian values for the users. Smart houses save time, which is a scarce commodity of the modern consumer, save money and energy, and in a more holistic approach help to increase the energy efficiency of the local community, bringing quantifiable results that translate into the well-being of the entire society, in which the self-interest of each of its members and the public interest are in balance.

3. Research Methodology

3.1. Research methods and sample characteristics

On the basis of the literature review conclusions and in the context of achieving the assumed article objective, a quantitative descriptive study was conducted. The CAWI (Computer Assisted Web Interview) technique was used in this research and the measurement tool was electronic questionnaire. The main advantage of the CAWI survey is to provide the respondents with the preferred pace to complete the questionnaire in their natural environment. In the case of the online survey, there is no direct contact with the interviewer so the respondents are more likely to feel more comfortable in providing answers. The data was collected from April to June 2022. The judgemental sampling method (Kaczmarczyk, 2011) was used. Assuming that representatives of society 5.0 are open to new technological solutions and prone to use them, the research was focused on people who regularly use the Internet (at least once a day). In addition, the research was focused on representatives of the younger generations, who have developed technical skills and everyday digital habits, i.e. using the Internet and mobile devices, than older generations, who show significant differences in the virtualization of individual aspects of their lives compared to the latter (Bennett et al., 2008). To ensure an optimal response rate, the respondents were guaranteed total anonymity. The study was conducted on a total of 741 respondents. The starting point for determining the non-random sample size was the range method, according to which the minimum sample for general marketing research is 500 people (Kaczmarczyk, 2011).

Based on the literature studies, a number of research questions were formulated:

- RQ1: How are smart home systems perceived in terms of their value to consumers?
- RQ2: Which of the smart home systems are perceived as the most valuable, i.e. consumer solutions serving the user's convenience and safety?
- RQ3: What is the smart home systems familiarity degree among the respondents?
- RQ4: What is the smart home systems dissemination degree among respondents?
- RQ5: Is there a relationship between consumers' perception of smart home systems and their ownership?
- RQ6: Is there a relationship between consumers' perception of smart home systems and their familiarity (awareness and knowledge about them)?
- RQ7: Is there a relationship between consumers' perception of smart home systems and their characteristics, i.e. age, education, place of residence and household's financial situation?

Of those who participated in the study, 63.8% were women and 36.2% were men. The average age of the respondents was M=31.14. 20.6% of the respondents declared a very good household financial situation, 44.3% - good household financial situation, 26.3% - an average household financial situation, 5.7% - bad household financial situation and 3.1% - a very bad household financial situation. Residents of big cities (with more than 500,000 inhabitants) accounted for 33.5%, inhabitants of cities from 200,000 to 500,000 accounted for 13.0%, inhabitants of cities from 50,000 to 200,000 accounted for 18.5%, inhabitants of cities up to 50 000 accounted for 14.4%, and 20.6% were respondents living in rural areas. Furthermore, respondents were people with a master’s degree (34.7%), while 35.90% had a bachelor-level education, 22.3% had a secondary-school education, 3.8% basic and 3.4% primary-school education.

3.2. Measures

The questions in the questionnaire concerned the perception of selected smart home systems (i.e. lighting control systems, heating/air-conditioning control systems, entrance/garage gate control systems, window/door closing systems, energy consumption control systems, monitoring systems, multifunctional sensors, e.g. smoke carbon monoxide, air humidity) as valuable consumer solutions (for consumer convenience and safety). Questions about the respondents' attitudes were based on a five-point Likert scale, where 1 = "strongly disagree" and 5 = "strongly agree", and questions describing the degree of smart home systems familiarity and ownership were based on a nominal dichotomous scale. Perception index (PEI), familiarity index (FMI) and possession index (POI) were created on the basis of the set of questions containing seven statements concerning each type of smart home systems. The indicators were calculated by summing up the test items, where PEI takes values from 7 to 35 points, and FMI and POI from 0 to 7 points.

When examining the interdependence for quantitative features, in the case of variables that were characterized by a linear relationship, the Pearson correlation coefficient (r) was used, while in the absence of a linear relationship and when analyzing the interdependence of ordinal variables, non-parametric statistics were used - Spearman's rank correlation coefficient (rho) (Wiktorowicz et al., 2020).

4. Results

The main cognitive objective of the study was to determine which of the smart home systems are, in the opinion of the respondents, most valuable consumer solutions, serving convenience and safety. In the light of the respondents' answers, the most important smart home systems include multifunctional sensors (e.g. smoke, carbon monoxide, air humidity), with an average mark of M = 4.57 out of five (SD = 0.85). These solutions were positively evaluated (the percentage of “strongly agree” and “agree” answers combined) by nine out of ten respondents (figure 6). The vast majority of respondents (95.4%) also admitted that they know such solutions (they have heard about such systems, know what they are used for and are aware of their availability on the market). At the same time, however, only every third of the respondents (33.7%) admitted that he had such solutions in his home. Over four out of five respondents also indicated that valuable consumer solutions are monitoring systems (M = 4.38; SD = 0.92), heating or air conditioning control systems (M = 4.37; SD = 0.89) and gate control systems (M = 4.35; SD = 0.91). Most of the respondents know this type of solution, but only one in four of them have it on average. In the case of gate control systems, knowledge was confirmed by 95.4% of respondents, and possession by 24.6%. In the case of heating/air conditioning control systems, it was 96.1% (knowledge) and 28.2% (possession), and in the case of monitoring systems 96.0% and 23.1% of respondents, respectively. It is somewhat surprising that highly rated energy consumption control systems (M = 4.34; SD = 0.92) are known to 86.5% of the respondents and owned by only 15.0% of them. This may mean a certain discrepancy between the declarations of respondents claiming such systems as definitely valuable consumer solutions, while the actual state of ownership, does not confirm these opinions.

The respondents' ratings were slightly lower for the other solutions. Window/door closing systems were indicated as valuable consumer solutions by just over three out of four respondents (M = 4.14; SD = 1.02), knowledge of them was confirmed by nine out of ten of them, but only every tenth respondent (10.5%) confirmed having them. On the other hand, lighting control systems with the lowest average rating (M = 4.13; SD = 1.03) are known to 95.6% of respondents, and nearly every fifth of them possess it (19.6%).

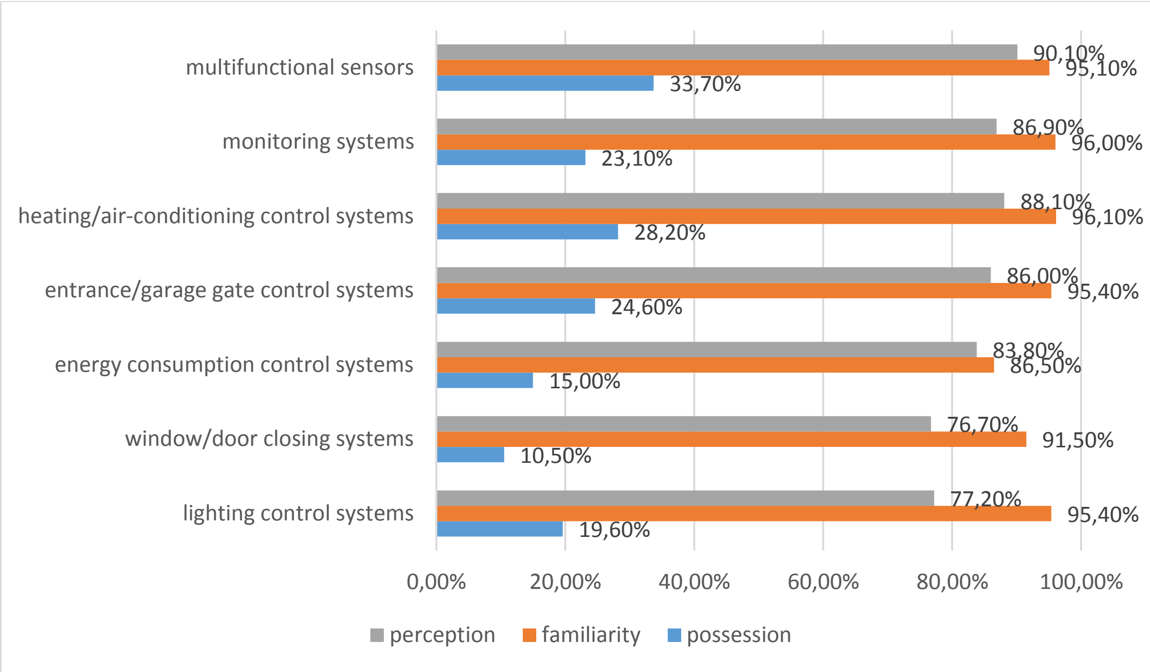

Figure 6. Smart home systems perception, familiarity and possession among respondents.

Source: empirical study

In the course of further analyses, the existence of the relationship between the perception of individual smart home systems and their possession, familiarity and the surveyed variables characterizing the respondents was verified. Variables which were indicated as potential correlates in the light of research results (Balta-Ozkan et al., 2014; Shin et al., 2018), such as age, household financial situation, place of residence (due to differences in infrastructure) and education were also taken into account. The results of the analysis are presented in Table 2.

Table 2.
Smart home systems perception, familiarity and possession and respondents' characteristics – correlational statistics (n=741)

Zmienne badane	1.	2.	3.	4.	5.	6.	7.
1. PEI	1						
2. FMI	0.286**	1					
3. POI	0.223**	0.156***	1				
4. age	-0.094*	-0.162****	0.012	1			
5. household's financial situation	0.123**	0.151***	0.164***	-0.025	1		
6. place of residence	0.120**	0.032	-0.029	0.072	0.071	1	
7. education	0.019	0.046	0.054	0.226**	0.077*	0.221**	1

Note. Correlation significant at the level: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Source: empirical study.

The conducted statistical analyzes showed the existence of a number of dependencies between the perception, familiarity, possession of smart home systems and respondents' characteristics. There were also statistically significant relationships between the respondents' education level and other metric variables (i.e. age, household financial situation and place of residence), but the strength of the correlation between these variables was low and their collinearity was not observed.

In the light of the obtained results, the existence of a relationship with a similar strength of correlation was demonstrated both between PEI and FMI ($r = 0.286$, $p < 0.01$), as well as between PEI and POI ($r = 0.223$, $p < 0.01$). In both cases, the values of the correlation coefficients are positive, which means that the examined variables increase in the same direction - people who confirmed knowing or having smart home systems more often express definitely positive opinions about this type of solutions.

There was also a relationship between the PEI and age ($r = -0.094$, $p < 0.05$), household financial situation ($rho = 0.123$, $p < 0.01$) and place of residence of the respondents ($rho = 0.120$, $p < 0.01$). PEI is negatively correlated with age, which means that younger people more often perceive smart home solutions positively than older people, but the strength of the correlation is weak. However, in the case of the material situation and place of residence, the correlation is slightly stronger and positive, which means that more positive opinions about the smart home are more often expressed by wealthier people living in larger urban centers.

It was also noted that the FMI is negatively correlated with age ($r = -0.162$, $p < 0.001$) and positively correlated with the household financial situation ($rho = 0.151$, $p < 0.001$). Knowledge of smart home systems is therefore more often confirmed by younger and better off people. The latter also more often declare having smart home solutions, because a positive correlation has been shown with POI ($rho = 0.164$, $p < 0.001$).

5. Discussion

The home is the householder identity expression (Davidoff et al., 2006) where the residents meet a variety of needs, from security to entertainment and comfort. These needs should be the focus of attention in the context of understanding consumer attitudes and smart home perception. The consumer knowledge area is always related to understanding the buyers' preferences and the reasons for their behavior and opinions that may affect their attitude towards products or services (Gregor, Kalińska-Kula, 2016).

The perception of smart home systems, as in the case of new ICT technologies (Lin et al., 2012; Venkatesh et al., 2012; Modliński et al., 2022), in a positive dimension is determined by the perceived benefits, and reduced the perceived risks (including privacy concerns and resistance to innovation) (Kim et al., 2017), but the decisive aspect is smart home utilitarian value for the consumer. Smart technologies make it possible to monitor, control and support residents, which can improve the quality of their lives (Marikyan et al., 2019). Among the variety of smart home systems, one can indicate those that are particularly valuable consumer solutions, serving the convenience and safety of users.

The conducted study allowed to indicate several interesting conclusions. In the light of the obtained results, the very positive attitudes of the respondents towards smart home solutions were clearly visible, and this did not necessarily apply only to those solutions already possessed by the respondents. The vast majority of respondents also confirmed familiarity of smart home systems - such opinions were expressed by an average of nine out of ten respondents, but definitely less possess such systems – only every third, fourth and even every tenth of them. Respondents considered the examined solutions, such as lighting control systems, heating/air conditioning systems, as well as energy consumption control systems, to be very valuable consumer solutions, serving the well-being and security of users. These observations are consistent with the perspective of Reinisch et al. (2011) and Scott (2007), according to which the main service provided by the smart home is the effective management of energy consumption and the promotion of sustainable development.

Monitoring systems and multifunctional sensors were also rated very positively. This seems to confirm the observations of Marikyan et al. (2019) that smart sensors, integrated into an intelligent system, offer management, monitoring, support and response services as well as a number of benefits, not only economic, but also social, related to health, emotions, sustainable development and safety. In the last mentioned aspect, the systems for controlling the entrance gate and closing windows or doors, appreciated by the respondents, play an important role. The smart home, by allowing users to control these systems remotely, reduces the household members burden with daily household activities, supporting a peaceful and safe lifestyle (Chan et al., 2009; Amiribesheli et al., 2015).

The perception of smart home solutions, as well as their knowledge, are negatively correlated with the consumers' age and positively with their financial situation. These observations in terms of age are consistent with the results of studies according to which a similar relationship exists for other information and communication technology (ICT) services/products (Bennett et al., 2008; Hsu, Lin, 2016), but they are also in opposition to the results research by Shin et al. (2018), according to which older consumers are more likely to buy smart home systems than younger consumers, who currently generate less market demand. The perception of smart home solutions is also positively correlated with the respondents' place of residence, but the level of possession correlates (positively) only with the household financial situation. This observation is consistent with the results of research by Shin et al. (2018), according to which the effects of the income variable indicate that the propensity to adopt and purchase smart home technology will be greater for respondents with higher incomes.

The perception of smart home systems correlates positively with both the degree of their familiarity and the possession. People who have confirmed knowledge or possession of more smart home systems more often express definitely positive opinions about this type of solutions. Importantly, the strength of correlation in both cases is at a comparable level. It can therefore be concluded that the perception of the value of smart home systems is not necessarily related to having personal experience with their use, but may well be based on the familiarity of these systems and consumers' general knowledge about them. The cognitive component, i.e. the belief about what the attitude object is, which is one of the three components of buyers' attitudes (next to the artifactual and behavioral components) may arise both as a result of experience and knowledge (Falkowski, Tyszka, 2009). The results obtained therefore suggest that marketing communication strategies aimed at increasing the awareness of smart home services can lead to the recognition of their usefulness and, as a result, will be effective in disseminating this type of systems and increasing the smart home market.

6. Summary

Society 5.0 fills the gap between cybernetic and physical space, providing a balanced environment for the functioning of an individual, taking into account their economic and social needs (Srinivasa et al., 2022). The convergence of ICT to the residential environment increases the comfort, well-being and security of residents in an intelligent living environment. The smart home creates a home environment that has ambient intelligence and automatic control, which allows it to respond to the residents behavior and provide them with various amenities (de Silva et al., 2012). A key challenge for the smart home market is to communicate clearly the offered benefits, whether they are the financial benefits (e.g. by reducing energy demand) or services that meet the need for security. The user's perspective allows us to understand the convictions that are the basic component of buyers' attitudes towards smart homes, and this perspective was the focus of the considerations of this work and the purpose of the research conducted for its needs.

The limitation of this study is the non-random nature of the sample, which makes it impossible to refer the obtained results to the general population. It should also be remembered that the conducted study was carried out in accordance with the descriptive function of scientific research, the implementation of which was to describe and record the occurrence of a specific phenomenon without giving its cause. After that the next step can proceed, which is an attempt to explain the reasons for its occurrence. It is therefore worth undertaking further research of an explanatory nature, the results of which would make it possible to draw conclusions about cause-and-effect relationships in the field of consumer attitudes towards smart home systems, taking into account the mediating variables and variables moderating the examined relationships.

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ENTERING THE LABOUR MARKET: AN EMPIRICAL ANALYSIS IN POLAND AND GEORGIA

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Purpose: The purpose of this paper is to observe and describe undergraduates entering the labour market in Poland and in Georgia and fill the gaps in the literature.
Design/methodology/approach: The study uses a structured and self-administered online questionnaire. The population of the Bydgoszcz University of Science and Technology, in Poland was 900 active students, and the students of the Tbilisi State University – 4460. Cramér's V was used to check the association between different variables. The questionnaire is in line with the International Labour Organization and the National Statistics Office of Georgia methodology.
Findings: The study shows us that the results of two different countries are not as far apart as it would have to be supposed, but Georgian and Polish education system differ toward connection to the labour market.
Research limitations/implications: The study uses a short period to collect the data and a small sample. Another limitation of the study is the non-coincidence of the Education System in Poland and Georgia. Moreover, the limitation that may arise is the use of Email surveys that have several limitations, primarily being that they can appear dry and uninteresting.
Practical implications: The study can be used by regulators, researchers, scientists, public institutions, and Governments.
Originality/value: This is one of the first attempts to analyse data from Poland and Georgia and focuses on undergraduates. The article aims to determine whether there is an association between specific variables. The authors believe that this paper will gain some attention from policymakers and can allow Governments to take action.

Keywords: labour market, employment, students, Poland, Georgia.

Category of the paper: Research paper.

1. Introduction

Combining studies with employment is a dilemma that has existed for a while. However, there hasn't been a consensus on whether the problem should be approached as a contemporary phenomenon that needs to be reported or a challenge that must be resolved until now. Universities measure their success based on student attendance, persistence, and graduation rather than what students learn (Janio et al., 2022). Examining students' perspectives on the matter would be important to provide a full response to this topic. In the discussion over higher education in Poland, student employment has been disregarded. Graduate employability is the main topic of discussion when it comes to the connection between a university degree and the labour market (Zając, 2020). People combining tertiary education with lucrative work are becoming more prevalent in Poland. According to a Polish survey, full-time students' primary motivation for taking on employment was to earn money (Ostoj, 2016).

The factors influencing students' decisions to work while they are at the University have not received much attention in the literature, and differentiating between academic fields has received even less attention (Lessky, Unger, 2022). If their studies do not last more than a specific amount of time, EU citizens are exempt from paying tuition fees at public colleges. Domestic students who can show that they have supported themselves for at least four years through a gainful job or whose parents' income is insufficient to support them may be eligible for a study stipend (Lessky, Unger, 2022). Poland's labour market has seen a significant transformation. Therefore, students accept the job that is offered to them in the hopes that the professional experience they have gained will help them find work that is appropriate for their field of study (Lenart, 2014). As a result of the research carried out by the Centre for Social Sciences, it was found that for 15% of the participants of the research, obtaining a higher education was the main motivation (without particular interest), 14% considered the advice of family members, and according to 13%, the chosen bachelor program would provide a better opportunity (Amashukeli, Lezhava, Chitashvili, 2022). As we can see from the 2013 report, while deciding about receiving higher education in Georgia, three factors are mainly considered: the prestige of the institution, the prestige of the speciality and personal inclination/interest. It is interesting that less than 5% of candidates for admission to higher education consider employment chances as an important factor (Andguladze, Bregvadze, Apkhazava, 2013). In Georgia labour market has less regular influence on the education market due to the small number of working places for graduates (Durglishvili, 2017). The main problem in Georgia associated with higher education is the high unemployment rate among university students and graduates (Narmania, et al., 2022). The study found that, depending on their subject of study, 5th-year students' personal employment income varied greatly in Poland. Students started working in their final year of studies around a dozen years ago (Jarecki, 2010). In Poland, visiting the nearest recruitment office after graduation is insufficient to secure an intriguing job offer. According to the survey, job offers for economics and management graduates are rarely offered to people who are interested through employment offices. Apprenticeships, internships, and part-time work are excellent recruitment and candidate selection tools (Jakubiak, 2012). Such a society would be made possible by a strong educational system designed to guarantee that everyone has an honest chance to reach their potential and continuously advance their knowledge and abilities throughout their lives (Charekishvili, 2015).

Because the education system is constantly evolving, and data is becoming outdated, new research is needed. The article aims to determine whether there is an association between specific variables when it comes to the employment of students with active status. Therefore, the article fills the gap in the literature in this direction.

The analysis was restricted to the active status students at Polish and Georgian universities, and the survey was based on literature and data collected through the author's survey. These countries differ in size, per capita income levels, tuition fees, and culture, but we are able to compare student employment and correlate specific variables. Empirical research was carried out at the Faculty of Management at the Bydgoszcz University of Science and Technology in Poland and at the Faculty of Economics and Business at the Tbilisi State University, Georgia. The article is divided into four sections. The first part provides a review of the literature on the reasons for and effects of combining education with employment, as well as questions and concerns that might justify a slightly different research focus from previous studies. The second part describes higher education in Poland and in Georgia. The third part discusses the survey and the gathered data, and the fourth and final part provides the research methodology, calculations, and results. The examination of the study's findings and conclusions comes to a finish in the article.

2. Literature review

This section of the article briefly summarizes the most recent research on balancing work and university, emphasizing the phenomenon's growing prevalence, the reasons why students choose to find employment, and the good and negative repercussions of those decisions.

Higher education in Poland

In Poland, all institutions of higher learning operate under the law that came into effect on July 20, 2018; – Law on Higher Education and Science (Dz.U. poz. 1668) and it states that academic programs at universities are based on curricula, documents outlining course, programme, and institutional levels with specific outcomes (Janio et al., 2022). Higher education in Poland is organized under the Bologna process (Ostoj, 2019).

Two education profiles can be distinguished in Poland – general academic and practical profile; therefore Polish education is divided into academic and vocational universities (Art. 67, ust. 4 Ustawy z dnia 20 lipca 2018 r. Prawo o szkolnictwie wyższym i nauce, poz. 1668).

As of 31st of December 2021, over 1,218.2 thousand students were educated at universities in Poland, by 2.9 thousand more compared to the previous year. In the academic year 2020/21, 297.4 thousand students received a diploma of graduation, by 3.9 thousand more than in the academic year 2019/20. Based on the POL-on register, 362 universities operated in Poland in the 2021/22 academic year (Główny Urząd Statystyczny, 2022).

In the last decade in Poland, along with the growing demand for higher education, the process of educating students from countries across the eastern border deepened at universities (Thieme, 2009). The change of temporary place of residence in connection with taking up studies also concerned Polish youth who left for other European Union countries.

Against the backdrop of the intensification of migration processes in higher education, there are many changes in the sphere of the education process itself, e.g. distance learning methods and techniques, universities open branches, off-campus departments in other voivodeships and abroad, double diploma programs are implemented.

There are also non-public universities that live solely on student tuition fees, they are profit-oriented, and most of them operate as a company (Mazur, 2020).

The emergence of numerous public and private universities has created considerable competition in the field of higher education. Most universities have lowered their eligibility requirements and tuition fees to make them more attractive and accessible to new students. The lowering of the requirements has particularly weakened the ability to differentiate the social degree and ceased to be something exceptional. The large supply of students with academic titles has lowered the quality of the titles issued and the attractiveness of students according to employers as potential candidates on the labour market, and graduation from a university is not as prestigious as it used to be (Almog, J., Almog, O., 2020).

Higher education in Georgia

In Georgia, for almost the last twenty years, the main pillar of the reforms carried out in the higher education system were the changes implemented by the "Bologna process", regardless of whether it actually reflected the main ideas and spirit of the Bologna process. A separate issue for research and discussion within the Bologna process is what a student should know after graduating from a higher education institution to be able to adapt to a rapidly changing environment, professional growth, mobility/transfer in different fields and establishment in a new profession (Amashukeli, Lezhava, Chitashvili, 2022). Like in Poland, students in Georgia can receive education in both state and private universities. The amount of tuition fees in state universities has not changed for more than a decade, despite sharp inflation. Although studying in Poland is free, in Georgia, even without a grant, the amount of fees is not expensive compared to other training courses. In Georgia, the national grant program operates in the higher education system, both in private and state higher education institutions. According to the National Statistics Office of Georgia (Geostat), there are 64 higher educational institutions in Georgia for the 2021-2022 academic year. In Georgia, the number of students in the population aged 17-23 for the 2021/2022 academic year is 43.1 percent. However, when it comes to private universities, due to the diversity of their programs, tuition fees are much higher than public universities. Accordingly, the number of students also varies between universities. State universities attract more students due to the relatively low cost of tuition. This is confirmed by statistical data. According to Geostat, for the 2021/2022 school year 63.6 percent of student study in public, and 36.4 percent study in private universities. Social sciences, business and law programs lead the way in the admission of students in Georgia, which amounted to 45.4 percent of the total number of students admitted in all institutions.

The weakness of higher education in Georgia is that it is built on social factors instead of the labour market. The education system is directly related to the election cycle, and we see this not only at the secondary but also at the higher education level. The changes are absolutely politicized, tied to the election cycle. The strategy of education and science is tied to specific individuals, and when ministers change, there are fluctuations, and trust in the system is shaken (Amashukeli, Lezhava, Chitashvili, 2022). Social pressure on the education system is very high in Georgia. Taking drastic decisions that will worsen the condition of middle- and lower-class students by increasing fees, is not done for political reasons. Given that the output from higher education institutions is much higher than the number of jobs by programs, it makes a logical assumption that the number of public university graduates should be reduced and adjusted to the demands of the labour market. Given that political and social pressures are high, it is difficult for the state to decide to reduce student enrolment. Thus, to the small number of working places for graduates, labour market in Georgia has less regular influence on the education market (Durglishvili, 2017).

Empirical studies of researchers

In a study conducted in 2017 at the Faculty of Economics and Sociology of the University of Łódź, over 61% of non-employed students and 39% of employed students. The studies found a significantly higher average level of fatigue among non-working students, as well as lower satisfaction with studies and lecturers than among working students (Kutyło, Łaska-Formejster, Ober-Domagalska, 2019).

Research conducted in 2018 on a group of 100 students of the Białystok University of Technology showed that when choosing a job, they expect high earnings, opportunities for personal development and great promotion/career opportunities. The least valued among the respondents in terms of choosing a job were: good commuting, good atmosphere at work, flexible working hours, stability, and security of employment (Nikonowicz, Panasewicz, Połocka, 2019).

Also, research conducted at the University of Rzeszów has shown that apart from earning money, which was previously the main motive for taking up work by students, now the most important is the motive of gaining work experience facilitating employment after graduation. Already in the research carried out as part of the "Eurostudent Project" in 2008-2011, it indicated that students in Europe spend more time earning money than studying. Polish students found themselves at the forefront of Europe in this respect. Reconciliation of work and studies often takes place at the expense of studies, which is indicated by numerous absences from classes, the use of individual organization of classes during studies, poor preparation and passivity during classes, low grades in colloquiums and exams, resignation from working in student clubs scientific etc. (Lenart, 2014).

Research on consumer and economic attitudes conducted in 2015 among approximately 1,600 students of various faculties in the Visegrad Group countries – in Poland, Slovakia, the Czech Republic, and Hungary, showed that a large proportion of students work independently or with more or less family help. There were 61% of such students in Poland, 81% in the Czech Republic, 56% in Slovakia, and 78% in Hungary, which indicates a high level of economic awareness of the studied group. Taking up work during studies is becoming an increasingly popular practice, and it results from the desire to gain at least partial financial independence, the need to gain professional experience, the willingness to save funds to start an independent existence after graduation (Żak, 2020).

On the other hand, research conducted on a group of 540 students from the Wielkopolska region revealed that their readiness to start a business is limited by insufficient knowledge in the field of running their own business. The main factor stimulating the decision-making about own business activity is the desire to obtain high income. The possibility of self-employment and the impact on the organization of time and lifestyle are also important stimulants for making decisions about starting a business (Gano, Łuczka, 2020). Building human capital and employability were motivations that significantly contributed to the alignment of work with the field of study. The ability to acquire skills and competencies valued in the labour market (Ostoj, 2019).

These findings support the need for more in-depth investigation into why students choose to work while still in university as well as the outcomes of such choices.

Research hypotheses

We introduced hypotheses in order to show how the field of education is associatively connected with the labour market in Georgia and Poland. After reviewing the literature, we formulated the hypotheses surrounding the study as follows:

H1. Activity field relation to education and working hours between countries is not different.

H2. Activity field relation to education and remuneration between countries is not different.

H3. Hours worked toward remuneration between countries is not different.

3. Survey and Research Data

Our target audience was students with an active status. Data were collected using an online questionnaire that is in line with the International Labour Organization and the National Statistical Office methodology. The questionnaire was modified, compiled in Google forms, and provided in two languages: Georgian and Polish. An online questionnaire was sent via e-mail to 900 active students of the Faculty of Management of the Bydgoszcz University of Science and Technology. The questionnaire was open for the next 2 weeks from June 24, 2022. As a result, we received 318 fully completed online questionnaires. Accordingly, the response rate was 35.3 percent, which can be considered as good because online surveys typically have a low response rate (Malhotra, Nunan, and Birks, 2017). The same questionnaire, in the Georgian language, was sent to 4460 active students at the Faculty of Economics and Business at Tbilisi State University by e-mail. The questionnaire was active for 2 weeks from July 1, 2022. In this case, we received 538 fully completed questionnaires, which gave us a response rate of 12.1 percent, which is a typical rate for an online questionnaire. We preferred to send a questionnaire to the entire population than to make a sample, since response rate is the major problem, and this fact ensured us a considerable number of responses.

For the purposes of our study, students with an active status were interviewed and asked if they had done any work for even one hour in the past 12 months. They were asked questions about whether they were employed for wages, whether they had their own business or business, or whether they systematically participated in family farming to produce agricultural products. In case of a positive answer to one of the questions, we would consider this person as employed. Data by country are summarized in Table 1.

Table 1.
Data characteristics

Data	Poland	Georgia
research frame	900 active students	4460 active students
method	online (email)	online (email)
response rate	35.3%	12.1%
period	June-July, 2022	June-July, 2022
significance, α	0.05	0.05

Source: own study.

Figure 1 shows the responses of the respondents to the Polish and Georgian students of activity to field relation and working hours.

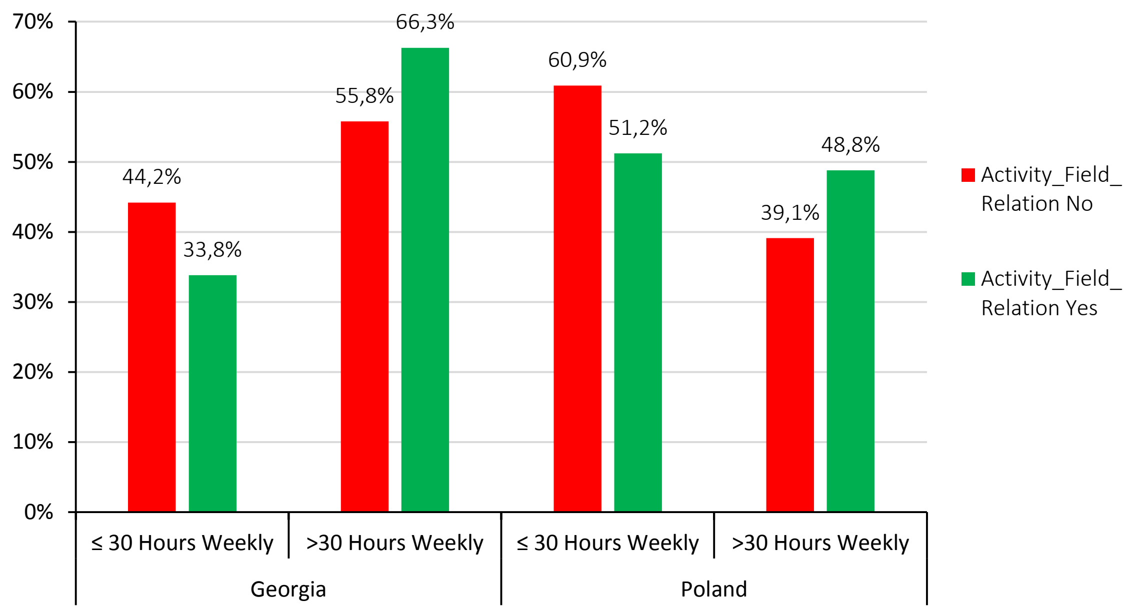

Figure 1. Activity to field relation and working hours between countries.

Source: own study.

To compare the relationship of weekly hours worked and main activity connection with the field of education in Poland and Georgia, we linked the two variables based on the hypothesis (Figure 2).

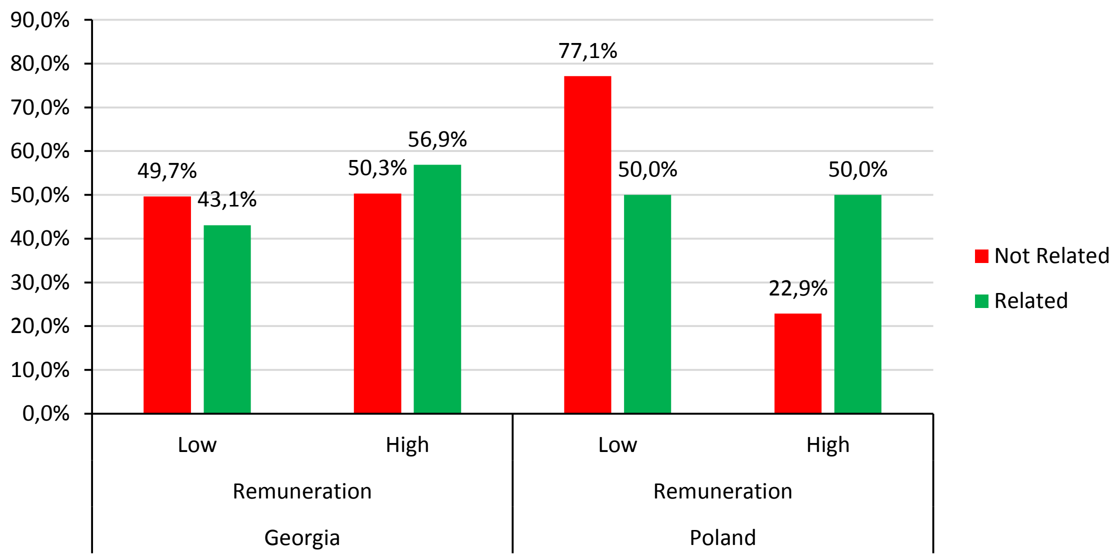

Figure 2. Remuneration and connection of main activity to field of education.

Source: own study.

According to our research, to test the hypothesis, we grouped the salaries by country and divided them into two parts. Within the country, the wages of the lowest categories were marked as low remuneration and accordingly, high categories as high remuneration.

The Figure 2 shows that where the field of work was not related to education, in the case of Georgia, the share of low-paid jobs is equal to the share of high-paid jobs. In the case of Poland, where the work field is not related to education, the share of low-paid jobs is 77.1%. This allows us to assume that in Poland the activities that are not related to education are low-paid to a greater extent. Whereas, in Georgia, where employment is not related to education, is equally paid. From these graphs, we can conclude that activities that are not related to education mean a low salary category, while the trend in Georgia is not like that.

The Figure 3 shows that where the working hours are longer, in the case of Poland 79.3% of employed students have a high wage, and 20.7% have a low wage. While in the same case, in Georgia, 66% have a high wage, and 34% have a low wage.

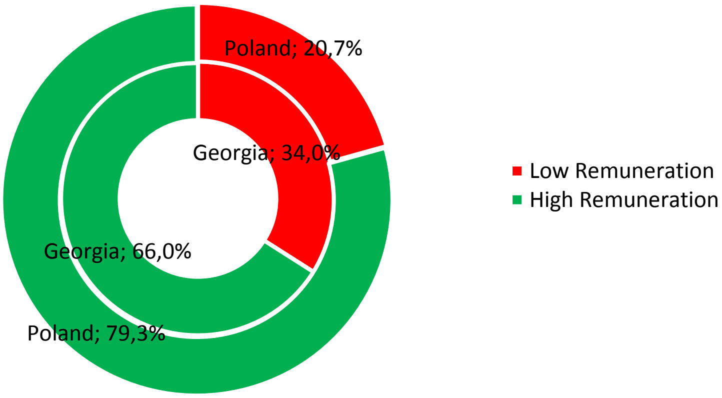

Figure 3. Worked >30 Hours and remuneration.

Source: own study.

This shows that while working hours are more than 30 students with relatively lower wage is more common in Georgia than in Poland, in other words students who work many hours in Georgia are relatively less highly paid, compared to Poland.

Among the people who work more than 30 hours, low-paid category is 20.7% in the case of Poland and 34.0% in Georgia (Figure 4). In other words, the share of low-wage employees in the category who work long hours is higher in Georgia compared to Poland. If we judge the connection between the education system and the labour market, it follows that those students who work more hours, have lower alternative cost in Georgia than in Poland.

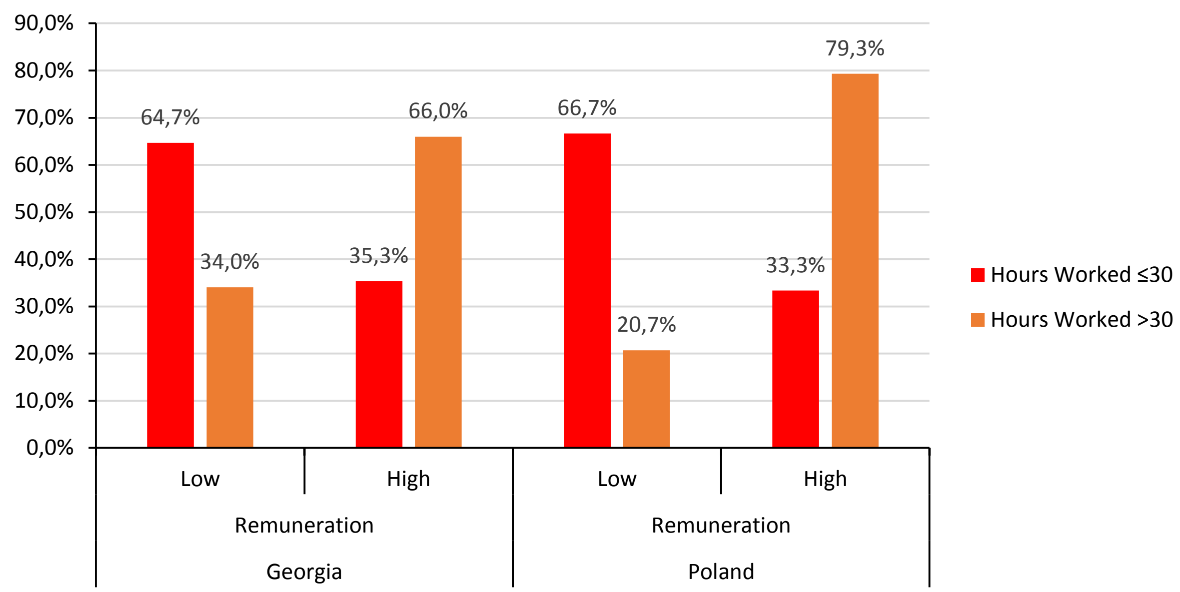

Figure 4. Hours Worked and Remuneration Between Countries.

Source: own study.

We can assume that long-term work in the case of Georgia is not so productive in terms of pay than in Poland. The solution could be to provide students with the necessary resources, in the case of Georgia, so that they do not have to work for a long time. A second solution could be to have the optimal number of students accepted by higher education institutions because students who are unable to study with long hours of work have time to choose between studying and working.

4. Methodology and Results

The assumption of our study was that whether or not students work in their profession does not affect the number of hours they work between countries. It was also assumed that whether students work in their profession or not does not impact their wages between countries. The assumption was further made that whether working time was longer or shorter did not influence remuneration between countries. Whether these three assumptions are valid or not, we will analyse how the education system is related to the labour market in Georgia and Poland.

Then the data was analysed according to both countries. There is insufficient statistical evidence to reject the null hypothesis at the 5% level of significance based on the H test statistic. Cramér's V coefficient to determine the association between variables was used (1).

$$V = \sqrt{\frac{\chi^2 / n}{\min(r-1)_{,}(c-1)}} \tag{1}$$

where:
n – total sample size,
r – number of rows,
c – number of columns.

The adjustment is such that V will range from 0 to 1. A large value of V merely indicates a high degree of association. It does not indicate how the variables are associated (Malhotra, Nunan, Birks, 2017). The calculations are presented and summarized in the Table 2.

Table 2.
The results of the analysis of the association between the variables

	Georgia	**Poland**	**Georgia**	**Poland**	**Georgia**	**Poland**
Hypothesis	Null hypothesis	Null hypothesis	Cramér's V	Cramér's V	Sig.	Sig.
H1	Rejected	Accepted	0.106	0.093	0.036	0.45
H2	Accepted	Rejected	0.065	0.283	0.200	0.023
H3	Rejected	Rejected	0.299	0.458	0.000	0.000

Source: own study.

H1 hypothesis was rejected in Georgian case and accepted in Poland case. This means that working hours and activity field in relation to education is significant in Georgia and not in Poland. In the case of Georgia, the relationship between education and work has a significant effect on hours worked, while in Poland this relationship is weak. From the labour market's perspective, this means that Georgia has a positive trend compared to Poland in terms of hours worked because there is a direct relationship between hours worked and educational activities in connection to work (Cramer's V = 0.106 in Georgian case compared to Poland – 0.093).

H2 Hypothesis was confirmed for Georgia, but not for Poland case. This means that for Georgia there is no connection between activity field in relation to education and remuneration, while for Poland it is associatively connected. (Cramer's V = 0.065 for Georgia and 0.283 for Poland). This trend shows that in terms of remuneration, the education system is more closely related to the labour market in Poland than in Georgia.

H3 Weak association was found also between hours worked and remuneration. In the case of both countries, the hypothesis was rejected, which means that hours worked and wages differ. However, in the case of Poland, the connection is stronger (Cramer's V = 0.458), which means that long-term workers are paid relatively more than in Georgia (Cramer's V = 0.299).

5. Conclusions

The purpose of our article was to show how Georgian and Polish education system differ toward connection to the labour market.

In recent two-decade major reforms carried out in the higher education system in Georgia, but the factors causing these changes should be looked for more in political decisions rather than changes in the labour market. In Georgia social pressure stays high in the public education system, thus labour market in Georgia has less regular influence on the education market.

Poland has growing demand for higher education, but as well as in Georgia the large supply of students with academic titles has lowered the quality and the attractiveness according to employers.

In Poland, most universities have lowered their eligibility requirements and tuition fees to make them more attractive and accessible to new students. General price increases in Georgia, while university fees have not been raised in two decades, have had the same effect.

Leaving aside the socio-political content, the attitude of the labour market to the education system was evaluated by us. For this, we show the main results and introduce 3 hypotheses.

From our survey hypotheses showed that working hours and activity field relation to education is significant in Georgia and not in Poland. The second hypothesis was confirmed for Georgia, but not for Poland. This means that for Georgia there is no connection between activity field in relation to education and remuneration, while for Poland it is associatively connected. Third hypothesis was rejected, which means that connection between hours worked, and wages are statistically important in both countries.

It is necessary to deepen the relationship between universities and the labour market and introduce platforms that will be more convenient for building modern skills for modern challenges. A university should not be a monolithic organization but should vary based on general market principles. All this allows it to maintain and develop an attitude in society. University is the main factor in providing qualified personnel concerning the labour market. The monolithic system may survive for some time, but due to the rapid pace of modern development, it may lead to a revolution within the university as an institution. Otherwise, university education may become a time-consuming system.

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MODELLING OF E-COMMERCE PACKING LINE IN THE WAREHOUSE – CASE STUDY

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Purpose: The purpose of this paper is to create a simulation model of a packing line in an e-commerce activity from the perspective of a logistics operator, along with identifying recommendations for further model improvement as part of digital transformation.
Design/methodology/approach: This paper uses results obtained by simulation analysis of a computer model of a process built in BPMN 2.0 notation. Data for the model was collected from process analysis, analysis of data obtained from WMS and sensors on the packaging line and from participant observation in the process.
Findings: Based on the analysis, it can be concluded that the logistics operator is able to create a simulation model of the process and optimise its operations using the simulation results. The model presented can also be the basis for building a Digital Twin in the distribution network for e-commerce flows.
Practical implications: The logistics operator can extend its package of services to include the construction of simulation models and, in future, can also take on the task of creating value for the network on the basis of the Digital Twin created.
Originality/value: The paper presents a real-life case study related to the first phase of Digital Twin implementation, namely the creation of a simulation model to create value in the flows and improve the logistics processes involved in serving the e-commerce market.

Keywords: logistics service provider, third-party logistics, e-commerce, simulation model, BPMN 2.0.

Category of the paper: case study.

1. Introduction

The decision to use 3PL operators is often justified by strategic considerations, where a company recognises that one or more elements of its business need to change (Murphy, Wood, 2011). It is driven by, for example, a desire to focus on core activities, a desire to increase responsiveness to changes in the environment, a desire to increase customer satisfaction, improve quality or reduce investment in logistics. Savings, knowledge diffusion, emphasis on areas of core competence and increasing IT sophistication are also factors driving the choice of a logistics operator. However, when considering whether to enter into cooperation with an operator based on outsourcing, it is also necessary to bear in mind the risks of using such services, which may include the following (Grabowska, 2012): lack of control over distribution, less contact with customers and disruptions to information flows. These risks can be reduced, for example, by a properly established relationship with the outsourcing provider. Outsourcing a range of services to operators gives manufacturers the opportunity to continuously improve their products and their quality. A logistics operator is defined as a contractual service provider that is focused on maximising the use of its assets and improving its operational activities (Skowron-Grabowska, 2011). It is a logistics service provider that delivers different types of logistics activities on behalf of a manufacturer or larger retailer. An important role during the selection of a logistics operator can be played by (Kramarz, Kramarz, 2013): the execution time of the different activities and process, the need for technical and human resources, as well as the way in which the process is carried out and its total cost. The struggle of operators in today's market is mainly carried out by offering not only the lowest price anymore, but by ensuring visibility in the supply chain, reliability and a positive approach to innovation (Cichosz, 2018).

One trend in the logistics services industry is the increase in the comprehensiveness of services and the demand for so-called logistics service packages (Zelkowski et al., 2018), which are often also referred to as bundled services. This trend also applies to one of the basic services performed by operators, i.e. transport and forwarding services, which are encapsulated by numerous different accompanying activities (Witkowski, Kiba-Janiak, 2012). Companies in networks are increasingly going beyond limiting themselves to contracting single activities and are looking for companies that provide multiple services. It can therefore be concluded that logistics operators can be more competitive not only by offering logistics-related services, but also on the basis of multiple complementary services, to which product demand forecasting could also come down. According to the author, a factor that deserves special attention within logistics outsourcing is the development of information systems and digitalisation.

The development of IT has shaped the basis for the creation and use of information systems, which are based on computer-based techniques for developing and transmitting data (Rut, Kulińska, 2015). Modern distribution is an area of activity where the use of such developing IT solutions is essential. This is due to the fact of increasing globalisation and the needs for fast processing and synchronisation of large amounts of data (Kauf, Pisz, 2017). Appropriate IT systems allow for: the modernisation of distribution networks, as well as the development of technologies directly or indirectly related to distribution (Drożdż, 2018). The development of logistics systems is closely linked to IT technologies. Some of the main developments include: the use of IT systems to define logistics strategies, IT-integrated business management, computer-assisted management of external transport, paperless picking of shipments, the creation of data warehouses to improve agility in supply and demand projects, as well as the computerisation of retail outlets and the implementation of EDI (Electronic Data

Interchange) (Kauf, Pisz, 2017). Currently, around 50-70% of companies' logistics activities are outsourced (Cichosz et al., 2020), so this provides an opportunity to look for digitisation solutions dedicated typically to logistics service providers.

The purpose of this paper is to create a simulation model of a packing line in an e-commerce activity from the perspective of a logistics operator, together with the identification of recommendations to further improve the model as part of digital transformation. Based on a case study, the paper will consider two research hypotheses. Logistics service providers will be referred to interchangeably with logistics operators and 3PLs (third-party logistics) in the paper.

2. Theoretical background

2.1. E-commerce logistics in today's market

One of the biggest trends of recent times, not only in the logistics industry, is the rapidly growing e-commerce. The last few years have seen the development of e-commerce, during which market players have emerged who, it would seem, have dominated the market (Cao et al., 2021). However, the pandemic situation related to the restrictions caused by the COVID- 19 virus, among others, pushed some of the companies to shape their online sales channels more quickly (Jiang et al., 2021).

E-commerce therefore dominates the business models of companies (Yu et al., 2016), including companies directly involved in the implementation of e-commerce operations. E-commerce channels, in relation to the logistics industry, are strictly market-oriented, so logistics operators and other logistics companies face challenges in providing reliable and personalised solutions in the online sales market (Yu et al., 2020), as well as diversifying demand and increasing the flexibility of operations. The specificity of orders being fulfilled has changed. From the fulfilment of large batches to specific pick-up points to the fulfilment of small batches, but in very geographically dispersed areas (Yu et al., 2020). A comparison between traditional logistics and e-commerce logistics can be found in Table 1.

Table 1.
E-commerce vs traditional logistics

Factors	Traditional	E-commerce
Size of consignments	Large	Small
Type of consignment	Homogeneous	Heterogeneous
Number of consignments	Large	Small
Number of destination points	One or more	Plenty
Delivery errors	Some	Plenty
Frequency of deliveries	Low	High
Delivery time sensitivity	Low	Large

Cont. table 1.

Number of means of transport required	Low	High
Size of means of transport	Large	Small
Costs per consignment	Low	High

Source: Xing et al., 2011.

According to the main tenets of e-commerce, modern logistics should improve the efficiency of flows, reduce logistics costs, and ensure that even small shipments are handled (Yu et al., 2016). E-commerce consolidates current and potential logistics resources to perform activities related to the delivery of products to end customers (Li, Huang, 2019). It is most often identified with B2C trade and traditional distribution with B2B trade (Yu et al., 2016). Of course, B2B trade can also refer to e-commerce activities (Xing et al., 2011). It is acknowledged that 3PLs are predisposed as being among the best companies to perform high-quality e-commerce flow management functions (Cao et al., 2021; Delfman et al., 2002; Kou, 2015). This is mainly due to the mindset of such companies to add value in flows. Some authors explicitly emphasise that it is the 3PL activities that are essential in the implementation of e-commerce activities (Yan et al., 2006). E-commerce has caused, among other things, a change in customer behaviour (Jiang et al., 2021) and a reconfiguration of supply chains (Xing et al., 2011). There are studies related to the demonstration of a positive correlation between the level of synchronisation of the different distribution channels and the logistics costs that accompany the implemented flows (Yu et al., 2020). It is also noted that the quality of logistics services provided influences customer loyalty and loyalty in the e-commerce industry (Cao et al., 2021).

Many types of e-commerce can be distinguished such as insourcing logistics, dropshipping, fulfilment service and one stop e-commerce (Kawa, 2017). However, regardless of the form, among the main functions of logistics (considered in the literature), last mile delivery can be mentioned (Jiang et al., 2021); however, this is not the only activity to be performed on the logistics side. E-commerce support activities can also include warehousing, transportation and value-creating processes, among others (Zhong et al., 2019). Five main orientations of logistics activities in the e-commerce area can be sought (Zhong et al., 2020):

- Orientation geared to satisfying marketing activities (e.g. flexible response to promotions).
- Demand orientation aimed at predicting future demand volumes and organising activities to meet them.
- Orientation focused on reducing the resource constraints associated with the implementation of e-commerce activities.
- Orientation focused on building relationships and partner networks in supply chains.
- Orientation geared towards regulations and matching activities to them.

Many times, the use of e-commerce-based distribution channels is associated with negative effects, e.g. in the area of demand fluctuations, which disrupt the operations of traditional distribution channels. Sometimes, companies also seek to rationalise online sales in order to reduce their negative effect (Qin et al., 2020). Challenges faced by an enterprise when creating e-commerce channels most often include: the negative effects of using outdated IT architecture, unoptimised data acquisition models, lack of optimisation in resource planning and unstructured automation solutions (Kong et al., 2020). There are several approaches related to flow synchronisation that can reduce the mentioned negative effects of e-commerce. Among the most important, some authors mention (Yu et al., 2020): synchronisation already in the production area and synchronisation through distribution centres that try to align their flow management activities and synchronise different channels. The development of channels towards omnichannel and digitalisation can also be found among such solutions. Undoubtedly, it can be stated that e-commerce is one of the main drivers for the transformation of logistics (Yu et al., 2016) and, on the other hand, effective ecommerce is impossible to achieve without a properly functioning logistics system (Babu et al., 2020). Thus, it can be concluded that there is a mutual relationship here.

2.2. Processes digitalization in logistics

It is possible for operators to play a large role in the configuration of entire distribution networks. They are considered by some authors to be able to take a leadership role in supply chains. They may undertake management activities, related, for example, to the management of transport, distribution, customer service and warehousing, and other activities, related, for example, to the continuous improvement and reconfiguration of distribution networks and supply chains (so as to meet customer requirements). In addition, it is recognised that the growth of logistics operators is one of the determinants of the development of entire supply chains, and within them distribution networks. Customers are striving for increasingly sophisticated services that are offered by operators and operators are capable of reconfiguring distribution networks. Inherent in the activities of logistics operators in today's market is the possession by them of an adequate IT infrastructure. The use of IT systems is recognised as one of the main elements driving the operation of companies in networks by, among other things, standardising areas related to logistics, such as distribution, production, as well as procurement and inventory management (Kisielnicki, 2015). Information systems, the development and implementation of existing concepts such as EDI, as well as new trends such as the use of artificial intelligence, for example, are extremely important in many areas of companies (Calza, Passaro, 1997). The implementation of modern IT solutions is recognised as one of the key elements in the development of innovation in logistics (Rai et al., 2018). Value creation, one of the core functions of logistics operators, is identified as one of the starting elements of digital transformation (Cichosz et al., 2020), with many authors emphasising that customer service is significantly influenced by the digitalisation of activities performed at the service provider (Moldabelkova et al., 2021).

Digitalisation is considered one of the most important factors that provide advantage in today's market. Digitalisation is pushing companies to redefine their business models towards the implementation of cross- and omnichannel solutions (Rai et al., 2018) (including the exposure of e-commerce-enabled solutions) and towards broadly understood innovation-based business models (Gruchmann et al., 2020). Digitalisation in logistics is growing at a high rate and, according to estimates, the trend of rapid development will continue at least until 2025 (Cichosz et al., 2020; Rythramati, Sivakumar, 2022). Digitalisation also provides an opportunity for more sustainable development (Gruchmann et al., 2020) and is most often associated with Industry 4.0 (Abideen et al., 2021; Moldabelkova et al., 2021). When considering digitalisation in the current market realities, it is impossible not to mention one particular type of digitalisation, namely the Digital Twin.

The Digital Twin is a virtual representation of a physical object or system used to understand and predict potential issues across its lifecycle (Lee, Lee, 2021). The Digital Twin supports solutions related to IoT (Internet of Things) (Guo et al., 2021) and is considered one of the most important solutions for Logistics 4.0 (Zander and Lange, 2021). The Digital Twin should also have the characteristics of a decision support system. Thus, it should have knowledge of the current state, knowledge of a possible future state, the ability to identify disruptions and the ability to generate different situation scenarios (Korth et al., 2018). The Digital Twin allows real-time visualisation of object behaviour, performance monitoring, and process simulation and optimisation (Lee, Lee, 2021). It therefore seems reasonable to implement Digital Twin also in e-commerce operations. The Digital Twin improves the accuracy of managerial decision-making and on predicting disruptions and detecting process disruptions in real time (Park et al., 2020). It consists of physical objects, virtual objects and the connections between them (Lee, Lee, 2021). It should include at least a basic model, metadata and model run logic (Park et al., 2020), where many authors consider simulation models to be an essential component (Abideen et al., 2021).

3. Methods

The focus of this paper is to create a simulation model of the packing process on a line serving B2B (Business To Business) and B2C (Business to Customer) sales channels, where the B2C channel is a channel entirely reserved for e-commerce operations. The packing line is operated by a 3PL (third-party logisitcs) company and is located in a warehouse owned by the company. This line handles shipments to more than 50 POS (points of sales) in B2B trade and an average of 1,200 cartons per day in B2C trade. The main steps in the analysis are presented in figure 1.

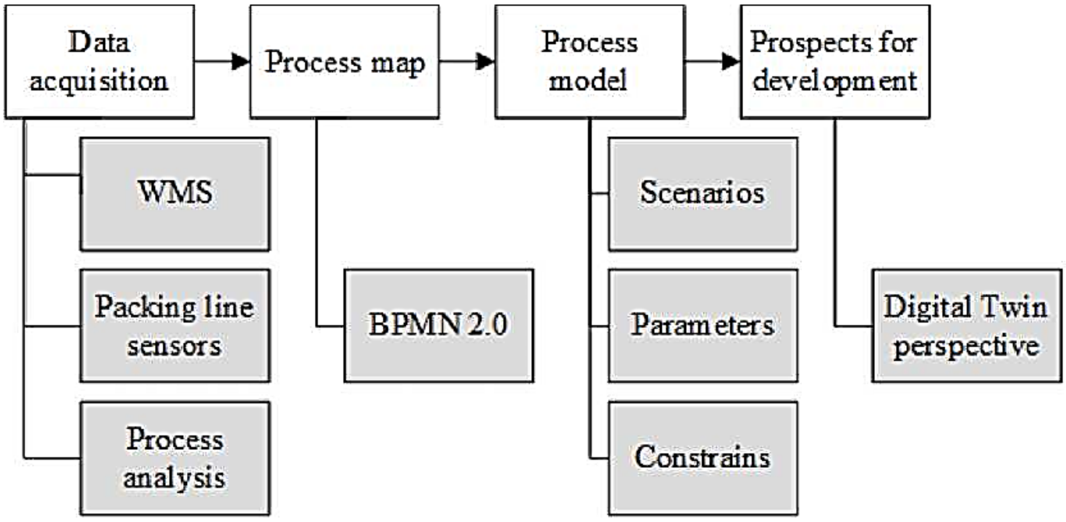

Figure 1. Main research steps.

Data acquisition was based on the analysis of line performance recorded in the WMS (Warehouse Management System) and recorded by the sensors and scanners with which the line is equipped. The range of data thus acquired for analysis covered a 6-month history and mainly concerned the number of cartons in the input flow and information on how B2B and B2C pallets were formed in the output flow. In addition, data extracted for the process mapping was collected through participant observation of the process and analysis of process documentation and process documentation of the line operation. Participant observation was carried out for one month of line operation.

In the next step, a process map related to the packaging of orders for POS and e-commerce was created. The process map was created in the standard notation BPMN 2.0 (Business Process Modelling and Notation 2.0). The process map was the basis for the creation of a computer model of the process, in which the simulation scenario and the parameters of the individual model elements were developed based on the process analysis and the analysis of the data obtained according to the initial stage. Finally, opportunities for development were presented, mainly related to the development of the presented model within the Digital Twin concept.

The paper poses two research questions:

RQ.1: Is the logistics operator, through its value-adding activities in logistics flows, able to optimise the performance of the packing line?

RQ.2: What are the benefits of applying the Digital Twin concept within an e-commerce logistics operation?

The first question is related to the current activities of the operator who provides the outsourcing services. The main function of operators is to create added value for logistics flows, including e-commerce flows. The question is related to the operator's ability to create simulation models and draw conclusions from the simulations carried out in the area of process improvement and added value.

The second question is to isolate the benefits of fully integrating simulation models with data captured in logistics flows within the Digital Twin concept for operator e-commerce activities. Based on the research questions posed in this way, two research hypotheses were created, which the conducted case study was intended to verify. The hypotheses are as follows:

H.1: The logistics operator is able to improve the packing line based on the simulation model.

H.2: Access to data collected from packing line activities and a simulation model provide the basis for the operator to develop a Digital Twin in the e-commerce industry.

The first research hypothesis relates to the possibility of improving the packing process in the e-commerce industry (in a distribution network operating a multichannel for B2B and B2C shipments) by means of a simulation model based on analysis and process data obtained from the perspective of a logistics operator. The second hypothesis concerns the possibility for a 3PL to initiate the initial step in building a Digital Twin in an e-commerce industry connected in a multichannel with B2B commerce.

4. Results

On the basis of the process analysis, data from the Warehouse Management System (WMS) and sensor data from the individual packaging line locations, a process model in BPMN 2.0 notation was created. Due to the complexity of the process, the multitude of specified and mapped elements and the desire to simplify the perception of the process, in this paper the author has only included a general process diagram consisting of a few key elements in the form of aggregated activities (figure 2**).**

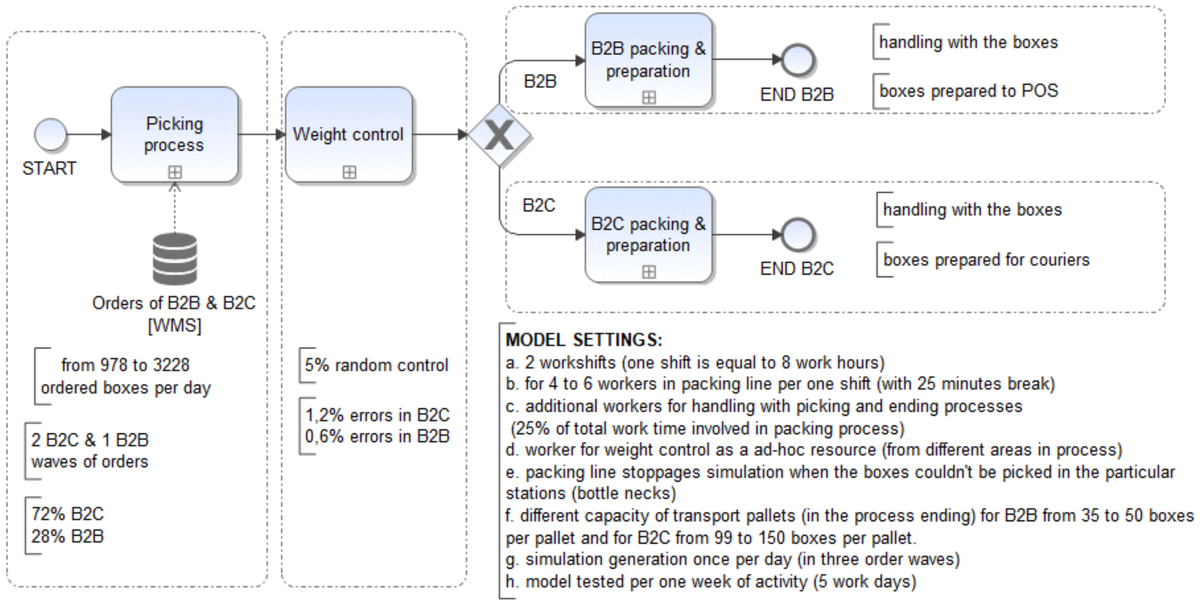

Figure 2. General model of the process performed within a packaging line.

The simulation model tested the behaviour of a semi-automated packing line. Where elements related to the flow of cartons on the line and elements related to weight control and carton closing are automated. The line simulates the daily handling of orders to POS (Point of Sales) for B2B - 28% of all orders generated for the line - and 72% of orders to individual customers, where orders are placed online (B2C). The number of cartons arriving on the line was calculated based on picking data from the WMS (the data analysed was for the last 6 months of activity), where the upper limit of the number of cartons ordered refers to the average value plus the standard deviation value for the data analysed, and the lower limit as the average value minus the standard deviation. The number of cartons at each generation of the simulation was therefore randomised from 978 to 3228 (the randomisation was based on a normal distribution), where orders came in three waves per day (at varying hours). The model was tested for a standard week of activity with two work shifts with a defined number of workers assigned to the model (from 4 to 6 with constraints of break time averaging 25 minutes per day per worker and with a forklift worker manipulating pallets on completion at a process commitment level of 75%) - worker rotation between B2B and B2C activity and a weighting control is allowed. A weight check is generated for 5% of random cartons and for cartons whose weight does not agree with the weight set according to the system (weight errors occur for 1.2% of B2C carton cases and for 0.6% of B2B cases). The times of the individual activities in the model were determined according to the following formula:

$$t_{min} = \frac{\sum t}{n} - \sigma$$

$$t_{max} = \frac{\sum t}{n} + \sigma$$

where:

t_{min} - minimum activity time,

t_{max} - maximum activity time,

$\sum t$ - sum of times for a 6-month activity history for a given activity,

n - number of measurements taken for a given activity in a 6-month activity,

σ - the standard deviation calculated in the dataset for a given activity,

The time taken into account in the simulation when a particular activity occurred was each time randomised from a range of $[t_{min}; t_{max}]$ based on a normal distribution. The main limitations of the model are the static data acquisition (historical data, once imported into the simulation model), the lack of differentiation into handling different types of cartons (a limitation due to incomplete data acquired automatically by the IT systems in the warehouse and on the line) and the small research sample of only one case study. Based on the model created, the flow of cartons per working week was simulated (Table 2). Based on the simulation assumptions, the simulator took about 10,000 cartons as orders that were to be fulfilled within the packing line activity (about 75% of the orders were related to the ecommerce channel).

Table 2.
Results of basic simulation - one work week

Simulation parameter	Result
Total boxes to processing	10 276 boxes
Quantity of boxes in B2B	2,543 boxes
Quantity of boxes in B2C	7,733 boxes
Quantity of boxes in weight control	80 boxes
Quantity of boxes in weight control in B2B	1 box
Quantity of boxes in weight control in B2C	79 boxes
Quantity of processed boxes in B2B	1 271 boxes (49.98%)
Quantity of process boxes in B2C	7 733 boxes (100.00%)
Quantity of created pallets in B2B	29 pallets
Quantity of created pallets in B2C	68 pallets

As can be seen from the table presented, the packing line was able to process all B2C orders, but was not able to process all B2B orders. At first glance, this may seem paradoxical, as there are far fewer B2B orders, but upon deeper analysis of the issue, the problem is created by the bottleneck of having to process many e-commerce orders. This is due to the structure of the packing line, where the B2B order handling zone occurs first and the B2C zone is located behind it (every B2C carton has to pass through the B2B zone). This suspicion was confirmed by interviewing the employees performing the work on the analysed packing line and by an additional analysis of the resources used in the simulation carried out (figure 3).

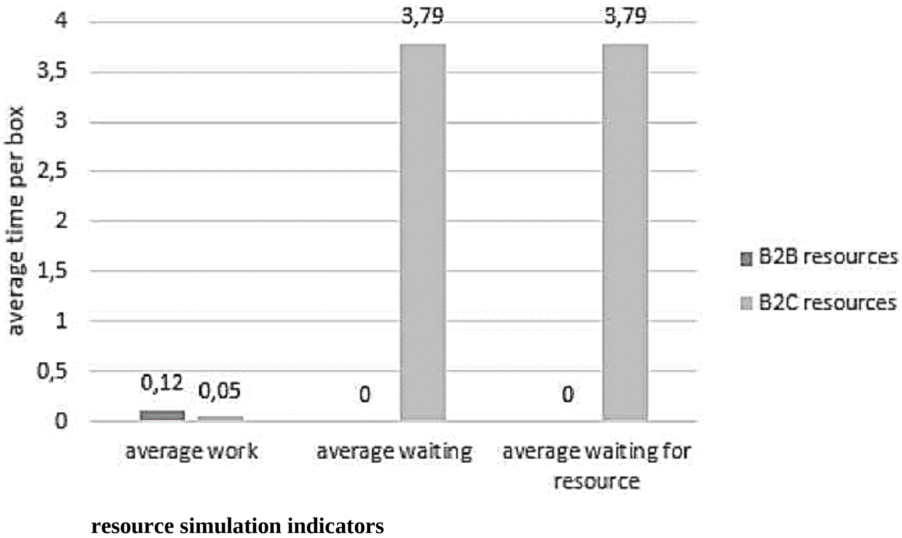

Figure 3. Resource parameters results - basic simulation.

As can be seen from the graph shown, resources (employees) spend an average of 0.12 minutes on activities directly related to B2B cartons and 0.05 minutes on activities related to B2C cartons (these times only take into account when resources are involved in activities directly on cartons that have not yet been classified as ready-to-ship cartons). Employees in the B2C area spend less time in their activities per carton due to the relatively high degree of automation of the activities involved in packing these cartons (for example: automated liding or wrapping machines). However, these uncertainties are most emphasised by the high waiting time for a free resource in the case of B2C cartons. This means that, in the simulation model, there are frequent and long resource requests in the B2C area - in other words, cartons block the packing line waiting for the capacity to be released, i.e. for the moment when a worker is able to retrieve them. The average waiting time of one carton for a free worker is more than three minutes. These volumes depend on the timing of the line's operation in the schedule and increase as the input values increase in the form of further B2C orders.

Analysing the line under consideration on the basis of a simulation model, the author outlined three scenarios that could serve to improve the efficiency and capacity of such a line. The scenarios mentioned are:

- Scenario 1. Separation of physical B2B lines from B2C lines.
  This involves separating the B2B and B2C flows in the packaging line, which will break the interlocking relationship of the B2B flow at a time of increased demand for B2C. In this scenario, the assignment of employees within the areas concerned is also considered, with no change to their base number.
- Scenario 2. Re-ordering of areas on the line.
  This scenario involves relocating the B2C area with the B2B location, so that the cartons relating to e-commerce orders are processed first and the area for handling orders to the POS is second (relocation of the bottleneck in the process sequence). The use and handling of resources remains unchanged.
- Scenario 3. Replicate the B2C area in the sequence currently occurring.
  The scenario consists of adding a twin B2C area after the current B2B area with an increase in the number of employees involved in the process (doubling the number of employees for B2C).

The results of the simulation carried out are shown in Table 3.

Table 3.
Results of different simulation scenarios - one work week

Simulation parameter	Basic	Scenario 1	Scenario 2	Scenario 3
Total boxes to processing	10276	9004	9084	10263
Quantity of boxes in B2B	2543	2543	2544	2530
Quantity of boxes in B2C	7733	6461	6540	7733
Quantity of boxes in weight control	80	80	80	80
Quantity of boxes in weight control in B2B	1	1	1	1
Quantity of boxes in weight control in B2C	79	79	79	79
Quantity of processed boxes in B2B	1271	2543	2544	2530
Quantity of process boxes in B2C	7733	6461	6540	7733
Quantity of created pallets in B2B	29	59	59	58
Quantity of created pallets in B2C	68	56	58	67

In the individual simulations, varying input volumes mapping order quantities in B2B and B2C channels were taken into account - this was generated according to the initial model assumptions, which did not change for the individual scenarios. The changes in the models only concerned the changes specified in the description of the individual scenarios. Based on the simulation, it can be concluded that for all, modified, simulation scenarios, full realisation was achieved in terms of packed and prepared cartons in both channels (B2B and B2C) - this is also shown in figure 4.

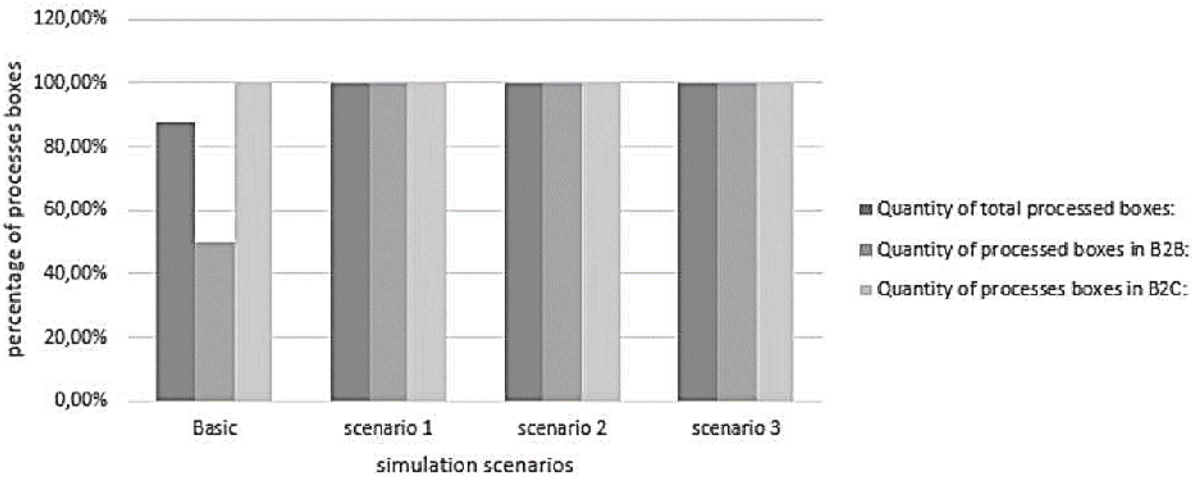

Figure 4. Simulation results in different scenarios.

As can be seen from the figure, the modified simulation models succeeded in eliminating the process bottleneck associated with too many B2C orders blocking order processing in the B2B area. The scenarios presented can be seen as a starting point for implementing improvements to the process performed on the packaging line. The benefits of this can be to increase the line's efficiency and provide a better quality of service to the end customer within the POS and online retail channels, which in turn translates into the performance of the entire distribution network. A prerequisite for validating the proposed operating scenarios, however, is additional consideration of the cost intensity of the various solutions - both in terms of the implementation of the solution itself and its subsequent use. The simulation models shown can also be used as a basis for reflecting the logistics process data within the framework of digital reflection in the Digital Twin concept. The data provided from the WMS and the data provided in real time from the sensors on the packaging line in combination with the simulation model shown can give the possibility to build the Digital Twin in the future, which confirms the second hypothesis.

5. Discussion

Packing line simulation model

Some authors propose a complete redesign of the business processes of logistics operators in order to adapt them to e-commerce activities (e.g. based on BPR - Business Process Reengineering) (Yan et al., 2006) - in the author's opinion this is too radical an approach, because in most cases the adaptation of 3PLs to e-commerce is possible through an evolutionary change of processes and through the introduction of computer simulation methods into process analysis. Process analysis is currently being performed in 3PL companies and it is geared towards increasing the value of the processes implemented in outsourcing services. As shown during the analysis, the logistics operator is capable of creating a simulation model and optimising the process using simulation scenario analysis. However, as already noted by some authors, the use of only historical data for any kind of process analysis is already starting to be considered a relic (Abideen et al., 2021). An extremely important issue is the need to obtain selected real-time data to support the operation of the simulation model. Such an assumption can be encountered in works that consider so-called simulation-based Digital Twins (Gyuali, Bergman, 2020), which allow the use of extended and reality-adapted simulation models.

Supporting the simulation model with predictive data

Demand planning system is an enabling tool in the field of e-commerce. Strategies based on VMI (Vendor Management Invetory) are most often cited as the most effective (Babu et al., 2020), but analyses can also be made under more distorted conditions (e.g. in B2C or B2B where VMI is not possible), e.g. based on product demand forecasts. According to existing knowledge, a logistics operator is able to forecast demand in the network (Kramarz, Kmiecik, 2022) and perform logistics coordination actions (Kmiecik, 2022). The forecasting tool could also be an interesting complement to simulation models, which could be supported by predictive data. This could improve operational work by, for example, being able to simulate the behaviour of a process with specific predicted quantities (figure 5).

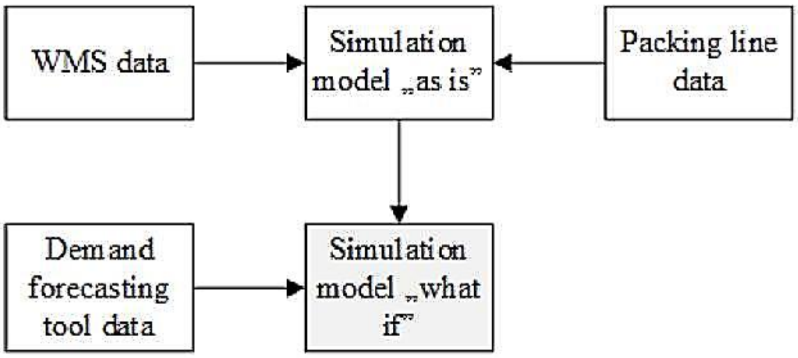

Figure 5. The general concept of supporting the simulation model by a demand forecasting tool

The What-if scenarios can be used to optimise the management of work on the packing line (e.g. scheduling resources to serve the line in advance or preventing negative effects of release picks). The Digital Twin (Abideen et al., 2021) can also be used to build The What-if scenarios, where the use of predictive data is also proposed to build such models.

Simulation model as a basis for building the Digital Twin.

The literature highlights the fact that centralised or semi-centralised decision models are best for handling e-commerce in the form of developed omni-channels (Zhong et al., 2020). Such a management model, according to the author, can be supported by the Digital Twin supported by a simulation model (figure 6).

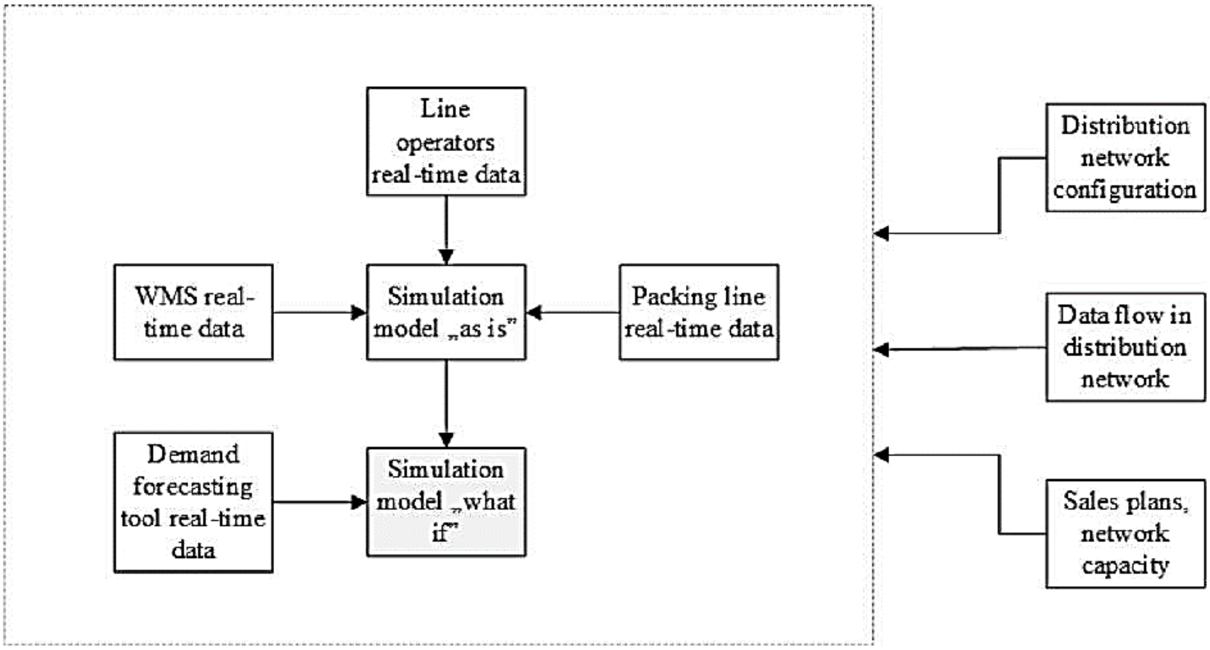

Figure 6. The general concept of supporting the distribution network by the Digital Twin simulation model.

Such a centralised system would also require the exchange of information in the distribution network, its appropriate configuration and additional elements that collect data in the process and transmit them to the simulation model to the different stages of the process. An interesting solution to support the collection of data from logistics operations is one related to equipping not only the infrastructure used in logistics processes with sensors, but also the process participants themselves (Kong et al., 2020). The aforementioned concepts are ideas that require further research to verify their validity, therefore, according to the author, future research in the topics presented in the paper should focus on:

- Exploring the possibility of creating the Digital Twin within the distribution network, which would be overseen by a 3PL company.
- Exploring the possibilities associated with the use of modern methods and techniques of information exchange for the collection and delivery of real-time data to the simulation model.
- Exploring the distribution network's willingness for a 3PL to take over as master coordinator of logistics processes, whose activities would be based on digitalisation and the Digital Twin.

In summary, the paper met the stated objective and the research hypotheses set were verified correctly.

Acknowledgements

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THE VIEWS OF UNIVERSITY STUDENTS ON DEVELOPING COMPETENCES AND ENTREPRENEURIAL ATTITUDES AMONG STUDENTS OF SECONDARY SCHOOLS IN POLAND

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Purpose: The aim of the article is to analyse the conditions and possibilities of using entrepreneurship education in secondary schools in the context of stimulating the development of entrepreneurial skills and competences among students. What is more, the researchers examined the impact of entrepreneurship education provided at school to create the potential and acquire the skills required to create a new business venture and company management by university students.
Design/methodology/approach: To achieve this goal, a quantitative method was used, based on a survey conducted with the participation of 542 students admitted to the first year of studies in the academic year 2021/2022 at the Bydgoszcz University of Science and Technology.
Findings: The results of the conducted research prove that every fourth graduate, regardless of whether they graduated from a Technical College or a General High School, assesses the education in the field of entrepreneurship, its potential to strengthen their predispositions and acquiring the skills required to lead own company, as average.
Research limitations/implications: The research included only first-year students of the university, which does not constitute the basis for generalizing the obtained results for students studying in other academic centres. Formulating conclusions should be limited to the test sample only.
Practical implications: The results of the study may be of interest to scientists and practitioners, examining the assessment and development of entrepreneurial competences among students of high schools and universities. In addition, this study can be helpful to employers who want to find out more about entrepreneurial attitudes of university graduates.
Originality/value: This study may contribute to the debate on the role of education in shaping entrepreneurial attitudes and intentions among secondary school students.

Keywords: education system, entrepreneurship education, entrepreneurial competences, entrepreneurial attitudes, youth entrepreneurship.

Category of the paper: research paper.

1. Introduction

Assessing the development of students' entrepreneurial competences, skills and intentions, and the relationship between basic entrepreneurial competences that must be developed in an educational context is currently becoming an increasingly important subject of interest, highlighted by many scientists and researchers around the world (Solesvik, 2019; Pesha, Shavrovskaya, Caha, 2021; Mazurkiewicz, 2020; Soomro, Memon, Shah, 2020; Bretones, Radrigán, 2019; Zhou, Xu, 2012; RezaeiZadeh et al., 2017; Gano, Łuczka, 2020; Czyżewska, 2018; Czyżewska, Kozioł, 2020; Gürol, Atsan, 2006; Arranz, Arroyabe, Fdez. de Arroyabe, 2019; Boldureanu et al., 2020; Hasan, Guampe, Maruf, 2019; Al Mamun, Nawi, Shamsudin, 2016; Kulawiak, 2021; Borgiasz-Stepaniuk, 2019; Kowalewski, 2018; Piecuch, Szczygieł, Lozinsky, 2019; Ismail, Zain, 2015; Nowak, 2018). In addition, there is a large number of studies relating to the assessment of the effectiveness of entrepreneurship education programs and publications presenting the results of research on the impact of entrepreneurship education on strengthening entrepreneurial attitudes, competences and intentions among students. These issues have been addressed, in addition to those previously mentioned, by authors such as Din, Anuar and Usman (2016), Sánchez (2011), Alharbi, Almahdi and Mosbah (2018), Vodă and Florea (2019), Hattab (2014), Iqbal et al. (2022), Remeikiene, Startiene and Dumciuviene (2013), Fragoso, Rocha-Junior and Xavier (2020), Izquierdo and Deschoolmeester (2010).

Entrepreneurship education is an emerging direction for the development of the entrepreneurial mindset around the world (Iqbal et al., 2022). It is a key factor in the development of a favourable approach to undertaking new ventures. Entrepreneurship education influences the entrepreneurial attitudes and behaviours of individuals, and "is known as a crucial predictor of students' entrepreneurial intention (EI)" (Soomro, Memon, Shah, 2020, p. 1). It can be defined as a form of education aimed at attracting people capable of setting up a new business (Vodă and Florea, 2019). Entrepreneurial education is treated as "shaping attitudes and skills as well as transferring knowledge in the field of entrepreneurship in order to develop human resources and their entrepreneurial activities both on the labour market and in everyday life" (Wronowska, 2020, p. 15). Entrepreneurship education should be geared towards creativity, multi-disciplinary process-oriented approaches, and theory-based practical application. (Plumly et al., 2008, p. 19). The primary goal of entrepreneurship education in European universities is "to develop entrepreneurial capacities and mindsets that support everyone in day-to-day life at home and in society and provide a foundation for entrepreneurs establishing a social or commercial activity" (Zhou, Xu, 2012, p. 83). Entrepreneurial education can have the impact on personality entrepreneurial traits through: (1) Self-efficiency, (2) Risk taking, (3) Proactiveness or the propensity to act, (4) Behavioural control, (5) Need for achievement, (6) Internal locus of control, (7) Attitude towards business (Remeikiene, Startiene, Dumciuviene, 2013, pp. 302-303).

As rightly emphasized by Din, Anuar and Usman (2016), Borgiasz-Stepaniuk (2019), and Urbaniec (2016), entrepreneurial education and shaping entrepreneurial attitudes is a complex process that should be implemented at every stage of education, starting from primary school. The basics of entrepreneurship should be introduced to get students interested in this field from a very young age. In addition, motivation and stimulating young people to act, by creating specific conditions, especially within the education system, will develop their entrepreneurial qualities and behaviour (Mazurkiewicz, 2020). Similar education should be continued at the secondary school level and at the higher education level, where the learning process will include the acquisition of knowledge and skills that can be used by entrepreneurial graduates in practice to start a business. The entrepreneurial intention of university students refers to “a conscious awareness and conviction by an individual that they intend to set up a new business venture and plan to do so” (Arranz, Arroyabe, Fdez. de Arroyabe, 2019, p. 2015). One of the most important effects of education in the field of entrepreneurship is "increasing the level of entrepreneurial intentions of the young generation, understood as the desire to start and run their own business" (Kaliszczak, Sieradzka, 2020, p. 100).

2. Entrepreneurial Competencies

Entrepreneurial competencies are seen as crucial for business development and success, and understanding the nature and role of these competencies can be important in practice (Al Mamun, Nawi, Shamsudin, 2016). The development of entrepreneurial competences is increasingly perceived as important for supporting entrepreneurship (RezaeiZadeh et al., 2017). In relation to entrepreneurship, the competences are defined as knowledge, skills, attitudes, and behaviours that affect the willingness and ability to create new value as part of the business activity (Urbaniec, 2016; Hasan, Guampe, Maruf, 2019). “The competency approach applied to an entrepreneurial context can be a baseline standard for creating a new venture” (Fragoso, Rocha-Junior, Xavier, 2020, p. 3). Iqbal et al. (2022) defined entrepreneurial competencies as “the set of behavioural predispositions that influence students’ abilities to succeed in an entrepreneurial venture” (Iqbal et al., 2022). Entrepreneurial competencies is "the overall capability of the entrepreneur to execute a job role successfully" (Al Mamun, Nawi, Shamsudin, 2016). Entrepreneurial competences have also been identified as a specific group of skills that is important for the successful development of entrepreneurship (Al Mamun, Nawi, Shamsudin, 2016). Mitchelmore and Rowley classified entrepreneurial competences, dividing them into three main areas: Personality, Behavioural and Managerial (Czyżewska, Kozioł, 2020, p. 48). (Table 1).

Table 1.
Entrepreneur competence classification

Entrepreneur competence		
Personality (social)	**Behavioural (personal)**	**Managerial**
- confidence - a sense of locus of control - dealing with difficulties - tolerance - care for high quality - self-presentation skills - self-assessment skills	- assertiveness - willingness to take risks - initiative - creativity - the need for autonomy - the ability to seek and seize opportunities - the ability to take risks - vitality and energy - will to success - persistence	- interpersonal communication - the ability to formulate goals - ability to communicate - persuasiveness - the ability to search for information - ability to solve problems - systematic planning skills - technical know-how

Source: Czyżewska, Kozioł, 2020, p. 48.

In turn, other authors maintain that "entrepreneurial competencies have been understood in three broad ways, by reference to: (1) personal attributes/traits, that is, a distinguishing quality or feature regarded as a characteristic or inherent part of someone; (2) skills/abilities, that is, the ability and expertise to do something well; and (3) knowledge/experience, including, facts, information, and talent acquired through education; practical contact with and observation of facts/events; the theoretical or practical understanding of a subject" (RezaeiZadeh et al., 2017, p. 37).

The literature describes different types of entrepreneurial competences that can be strengthened through entrepreneurship curricula at different stages of education. Previous studies have highlighted different entrepreneurial competences in the context of different sectors, regions and countries (RezaeiZadeh et al., 2017). Each of these competencies is important for fostering an entrepreneurial mindset among pupils and students, but with regard to the issue of classifying entrepreneurial competencies as the basis for their development and assessment during studies, there is still no well-established and widely accepted list of competencies (Pesha, Shavrovskaya, Caha, 2021). However, as RezaeiZadeh et al. (2017) points out, there is also a lack of consensus regarding the perceived importance of core entrepreneurial competences and their interdependence among students, academics and entrepreneurs.

3. Methodology of empirical research

The aim of the study was to assess students' opinion on activities undertaken by secondary schools, including Technical Colleges, in the field of education and development of skills and competences in various areas related to their interests as well as competences which may become useful in the future in improvement and professional development plans. In addition, it was particularly important to obtain students' views on high school and Technical Colleges' initiatives regarding stimulating the development of entrepreneurial attitudes and competences. An assessment was also made of the impact of education in the field of entrepreneurship carried out in secondary school on the development of predispositions and the acquisition of skills necessary to run one's own business in the future by university students.

The study was conducted from October to November 2021 at the University of Technology and Life Sciences in Bydgoszcz among a total of 542 the first year students. The research instrument was a questionnaire and data was collected by means of an online survey, conducted electronically, using the Google Forms tool.

The article presents selected aspects of the conducted research, which, among others, contain answers to the following research questions: (1) what role does the entrepreneurship curriculum play on developing entrepreneurial competences and intentions of high school students, and (2) to what extent did education in the field of entrepreneurship implemented at the secondary school influence the development of students' skills and competences in the following areas: (1) choosing a profession, (2) taking up a job, (3) self-employment - setting up your own business, (4) communicating in a foreign language, (5) ICT skills, (6) developing passions and interests, (7) teamwork, (8) self-presentation and public speaking, (9) supporting others, (10) performing various social roles. Basically, it was important to know what entrepreneurial competences and skills the respondents acquired during their secondary school education, and to assess specific predispositions in terms of skills and features necessary to run their own business.

4. Research results

The subject of the study was a group of students who enrolled on the first year of study in the academic year 2021/2022 at the University of Technology and Life Sciences. 542 students participated directly in the study, including 308 women (56.8%) and 234 men (43.2%).

The next question, included in the data section, was aimed at determining the type of upper secondary school completed by the respondents. The vast majority of the respondents are Technical College graduates. This type of school was completed by 328 people, which is 60.5% of all respondents. The next group are people who graduated from General Secondary School (209 respondents, 38.6%), and only 5 students (0.9%) participating in the study are graduates of a different type of secondary school. From the analysis of the surveyed group, however, one can observe a difference in the type of school completed, due to the gender of the respondents. Among the surveyed women, half (50.6%) graduated from General Secondary School, and 48.4% are graduates of Technical Colleges. In the case of men, the vast majority graduated from a Technical College (76.5%) and every fifth male is a graduate of a General

Secondary School (22.6%). The smallest group, both among women and men, is represented by people who graduated from a different type of secondary school (Figure 1).

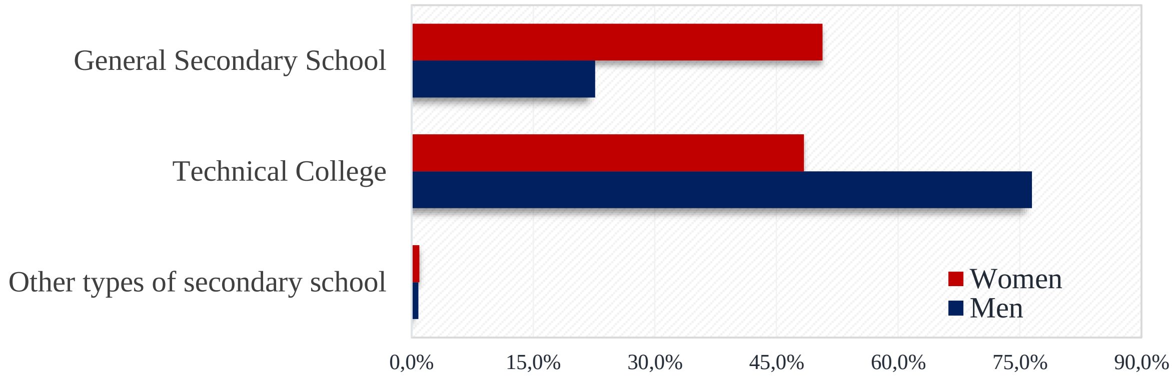

Figure 1. Secondary school type the respondents graduated from and their gender [%].

Source: own research and study.

The next question allowed to determine the place of residence of the respondents. Half of the women participating in the study (52.6%) live in rural areas. Nearly 23.0% of female students who enrolled on the first year of studies in the academic year 2021/2022 at the University of Technology and Life Sciences live in towns with over 200,000 inhabitants. What regards the men, the dominant group are also those who live in rural areas (38.9%) or in cities with the population of more than 200,000 inhabitants (36.8%). On the other hand, more than one in ten women (12.7%) and men (14.5%) live in cities with up to 50,000 residents (Figure 2).

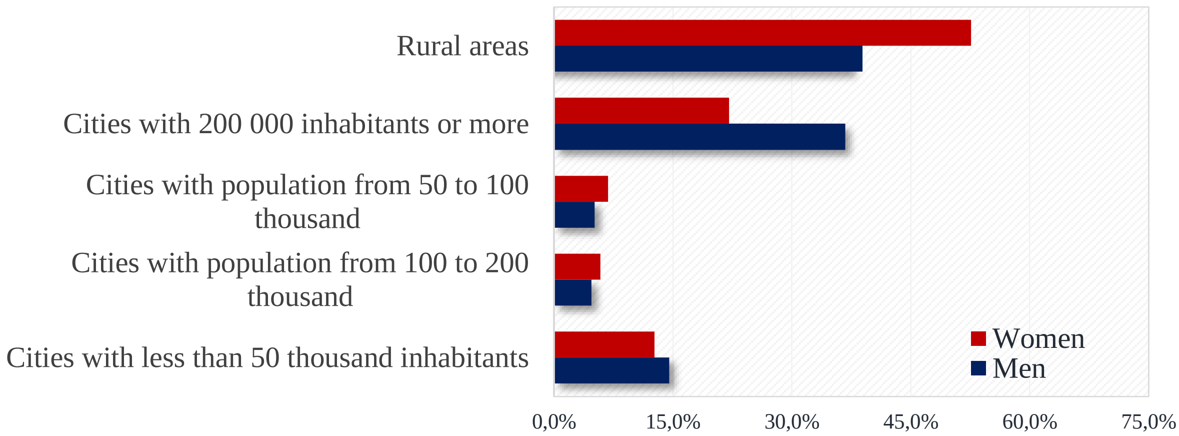

Figure 2. Place of residence of respondents broken down by gender [%].

Source: own research and study.

The analysis of the answers according to the gender structure shows that the majority of men who took part in the study were first-year students of the Faculty of Telecommunications, Computer Science and Electrical Engineering (97 males, 41.5%). Almost every fifth male student is a student of the Faculty of Civil Engineering, Architecture and Environmental Engineering (41 students, 17.5%) or the Faculty of Mechanical Engineering (41 students, 17.5%). In turn, the dominant Faculty, where nearly 30.0% of women study at the University of Technology and Life Sciences, is the Faculty of Animal Breeding and Biology. Other faculties, relatively often chosen by females participating in the survey, are the Faculty of Civil Engineering, Architecture and Environmental Engineering (69 women, 22.4%) and the Faculty of Management (69 women, 18.8%) (Table 2).

Table 2.
List of departments the respondents enrolled on in the academic year 2021/2022 broken down by their gender[N][%]

No.	Name of Faculty	Gender			
		Female		Male	
		N	[%]	N	[%]
1.	Construction, Architecture and Civil Engineering	69	22.4%	41	17.5%
2.	Construction, Architecture and Civil Engineering; Mechanical Engineering	0	0.0%	1	0.4%
3.	Construction, Architecture and Civil Engineering; Management	1	0.3%	1	0.4%
4.	Animal Breeding and Biology	84	27.3%	12	5.1%
5.	Animal Breeding and Biology; Construction, Architecture and Civil Engineering	2	0.6%	0	0.0%
6.	Animal Breeding and Biology; Construction, Architecture and Civil Engineering; Management	1	0.3%	0	0.0%
7.	Animal Breeding and Biology; Mechanical Engineering	0	0.0%	1	0.4%
8.	Animal Breeding and Biology; Management	2	0.6%	0	0.0%
9.	Mechanical Engineering	32	10.4%	41	17.5%
10.	Mechanical Engineering; Management	0	0.0%	1	0.4%
11.	Agriculture and Biotechnology	20	6.5%	8	3.4%
12.	Chemical Engineering	20	6.5%	8	3.4%
13.	Computer Science and Electrical Engineering	19	6.2%	97	41.5%
14.	Computer Science and Electrical Engineering; Mechanical Engineering	0	0.0%	1	0.4%
15.	Management	58	18.8%	22	9.4%
Total		**308**	**100.0%**	**234**	**100.0%**

Source: own research and study.

The first question the respondents were asked allowed to assess the level of competences in selected areas of students' interests and plans. On one hand, the first-year students highly regarded the activities undertaken by the secondary schools or Technical Colleges they attended in terms of obtaining the following qualifications: supporting other people (43.4%), teamwork (38.2%) and communicating in a foreign language (37.3%). On the other hand, the same students assess the following activities as low or very low in terms of developing their competences in the following areas of self-employment: setting up their own business (56.3%), skills in the field of information and - communication (50.9%) and self-presentation and public speaking (47.0%). According to more than one in four of secondary school graduates (29.0%), secondary schools perform only an average job preparing them for the ability to perform various social roles. It happens sometimes that secondary school students are taught and develop other important competences and skills such as: planning and accounting, working in difficult conditions or being resourceful and independent but these are only individual cases, indicated by a small percentage of respondents (2.8%). The structure of the answers given by all respondents in total is shown in Table 3.

Table 3.
The value and levels of secondary school education for achieving respondents' competences and goals [%]

Category	Very high	High	Average	Low	Very low
Choosing a job	10.1%	20.3%	30.4%	18.5%	20.7%
Starting work	9.6%	19.7%	30.1%	19.7%	20.8%
Self-employment & starting own business	7.4%	10.1%	26.2%	24.5%	31.7%
Communication in a foreign language	13.1%	24.2%	37.5%	14.9%	10.3%
ICT skills	5.5%	8.9%	34.7%	21.8%	29.2%
Pursuing hobbies and interests	11.8%	17.2%	25.1%	21.2%	24.7%
Teamwork	10.9%	27.3%	31.0%	17.5%	13.3%
Self-presentation and public address	9.0%	13.8%	30.1%	22.3%	24.7%
Supporting others	16.1%	27.3%	28.6%	12.0%	16.1%
Performing different social functions	11.3%	21.6%	29.0%	18.3%	19.9%
Others (specify which)	1.5%	1.3%	0.0%	0.0%	0.0%

Source: own research and study (N = 542).

Further analysis of the research results indicates that the level of education provided by the secondary school in terms of competences for selected areas of students' interests and plans differs significantly among secondary schools. Graduates of General Secondary Schools highly valued preparation in the field of communication in a foreign language. Such an answer was given by 45.0% of the respondents. Secondly, the participants also recognized the education of their competences necessary to support other people as high (41.1%). The third, best rated area is the preparation of secondary school to work in a team (35.4%). On the other hand, areas with low to the lowest scores are activities undertaken by the secondary school in the field of vocational preparation in the following areas: self-employment - setting up your own business (69.9%), (61.2%), taking up a job (57.4%), and developing passions and interests (54.5%). (Figure 3).

Graduates of Technical Colleges, on the other hand, evaluate the education of skills in supporting others as the highest (44.2%). Furthermore, they point to very good preparation by the school for the profession of their choice (42.1%), acquisition of teamwork skills (39.9%) and those necessary to take up a job in the future (39.0%). Unlike students who graduated from secondary schools; most graduates agree that a General Secondary School does not allow them to acquire a sufficient and satisfactory degree of competence in choosing a profession or taking up a job. Every second respondent, who graduated from a Technical College, evaluates the activities undertaken by secondary school as very low or low in terms of developing their skills in self-presentation and public speaking. Nearly half of the graduates of technical upper secondary schools also poorly assess the activities undertaken by the school in the field of professional preparation in the following areas: self-employment - setting up own business (47.6%), and ICT skills (46.6%). (Figure 4).

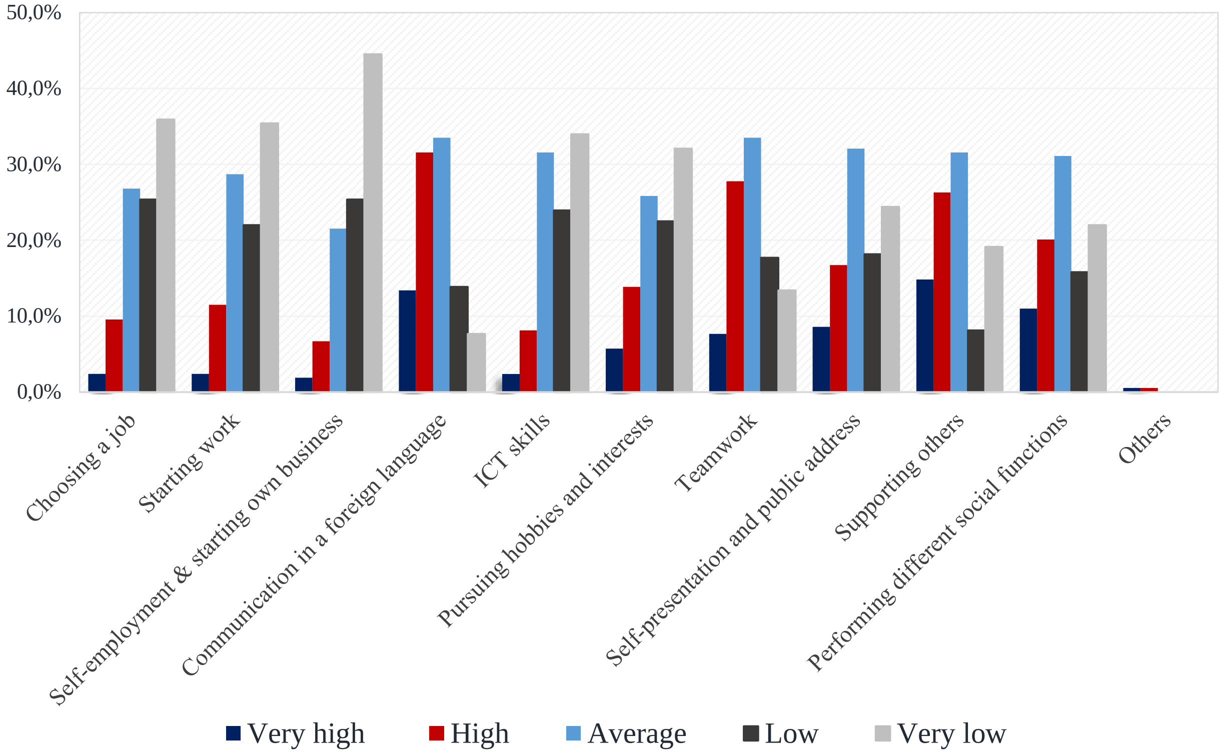

Figure 3. Competences and skills provided by secondary schools, and their role in achieving life goals according to first-year students who graduated from General Secondary Schools [%].

Source: own research and study.

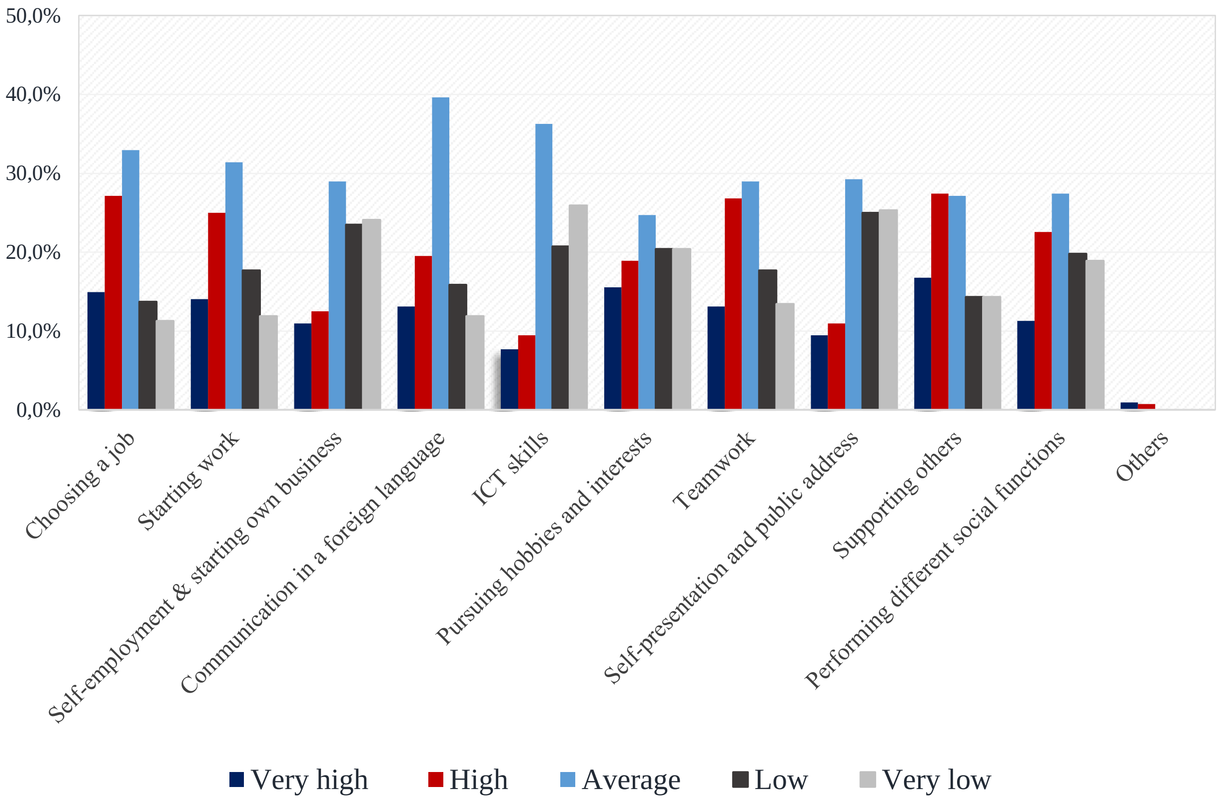

Figure 4. Competences and skills provided by secondary schools, and their role in achieving life goals according to first-year students who graduated from Technical College [%].

Source: own research and study.

Taking into account the degree of predispositions, features and skills necessary to run one's own business taught by the secondary school, the analysis of the research results shows that, according to more than one in four respondents, a General Secondary School, technical school or other school helped them to a very good degree develop features such as: diligence/accuracy (27.5%) and the ability to work under time pressure (27.1%). Every fifth respondent appreciated the efforts of the secondary school in enabling the acquisition of other predispositions, features and skills that may be conducive to running your own business in the future, including: openness to new experiences, independence in decision-making, creativity, ingenuity and communicativeness. On the other hand, nearly 25.0% of all respondents believe that secondary school allowed the development of features and predispositions, such as courage, self-confidence, and the ability to negotiate or positive thinking to a small or very small degree. It is worth pointing out that out of a group of five hundred and forty-two respondents, more than every tenth first-year student declares that he has not acquired as many as eight out of twelve predispositions in terms of skills and features necessary to run his own business, listed in the cafeteria of answers: courage, self-confidence, creativity, negotiation skills, team management skills, independence in decision-making, lack of fear of taking risks, determination, as well as openness to new experiences. The structure of the answers given by all respondents in total is presented in Table 4.

Table 4.
Competences and skills provided by secondary schools, and their role in running own business according to all respondents [%]

Category	Very good	Good	Average	Poor	Very poor	Not gained
Courage	10.7%	19.4%	26.2%	13.8%	12.2%	17.7%
Self-confidence	10.7%	22.3%	25.6%	14.6%	10.3%	16.4%
Being approachable	20.1%	27.3%	22.7%	12.0%	8.1%	9.8%
Creativity	20.7%	26.6%	23.2%	11.3%	7.4%	10.9%
Negotiating skills	13.7%	21.6%	24.2%	16.1%	10.0%	14.6%
Team management skills	15.3%	25.1%	21.4%	13.8%	10.7%	13.7%
Ability to make own decisions	22.9%	27.9%	23.4%	8.5%	7.2%	10.1%
Low anxiety levels when taking risk	10.3%	20.1%	27.5%	15.1%	11.3%	15.7%
Determination (positive thinking)	15.9%	25.1%	20.5%	12.4%	11.6%	14.6%
Being open to new experiences	21.6%	25.5%	21.2%	12.0%	9.0%	10.7%
Attention to detail	27.5%	25.5%	20.3%	11.8%	6.1%	8.9%
Working under stress	27.1%	27.1%	18.6%	13.1%	6.1%	7.9%
Other	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: own research and study (N = 542).

A thorough analysis of the collected data shows that the degree of predispositions, features and skills necessary to run one's own company as taught by the secondary school, differentiates to a large extent according to the type of school completed by the respondents. The research shows that Technical College graduates better assess all predispositions, features and skills needed to run their own business, as compared to respondents who graduated from General Secondary Schools. Every second first-year student who graduated from a Technical College evaluates the school’s potential and possibility of developing their entrepreneurial skills and competences such as: working under time pressure (56.4%), diligence/accuracy (55.8%), independence in making decisions (54.6%), openness to new experiences (54.3%), creativity/ingenuity (51.8%), and communicativeness (49.1%) as good or very good. The same entrepreneurial skills and competences acquired at the stage of secondary school education are rarely rated so highly by graduates of General Secondary Schools. For example, 35.9% of General Secondary School graduates assess the development of openness to new experiences at the stage of education in secondary school as very good or good, which is nearly 19.0% less than Technical College graduates. It is similar in the case of such a feature as creativity/ingenuity, as 12.1% fewer graduates of General Secondary Schools rate its development so highly, compared to graduates of Technical Colleges. The highest percentage of General Secondary School graduates assesses the degree of education of their entrepreneurial skills and competences as the lowest, i.e. self-confidence (30.1%) and courage (29.2%), and over 20.0% declare that they have not acquired these features at all, during their time as secondary school. Less frequently, the same aspects of entrepreneurship are assessed so poorly by graduates of Technical Colleges. Nearly 40.0% of them evaluate the activities of the school in building their self-confidence as very good or good, and 36.0% appreciate their role in strengthening courage. On the other hand, in the case of respondents who graduated from a Technical College, every fourth of them assesses poorly or very poorly the degree of preparation by the school to run their own business venture, in terms of acquiring such characteristics and predispositions as: lack of fear of taking risks (25.6 %) and negotiation skills (25.0%). It should be emphasized, however, that according to nearly every fourth graduate, regardless of whether they graduated from a Technical College or a general high school, secondary schools enable the acquisition of predispositions in terms of skills and features necessary to run one's own business only to an average degree. The skills in question are: (1) courage, (2) self-confidence, (3) communicativeness, (4) creativity, ingenuity, (5) negotiation skills, (6) team management skills, (7) independence in decision-making, (8) lack of fear of taking risks, (9) determination (positive thinking), (10) openness to new experiences, (11) diligence/ accuracy, (12) working under time pressure. The structure of respondents' answers broken down by type of school is presented in Figure 5 and Figure 6.

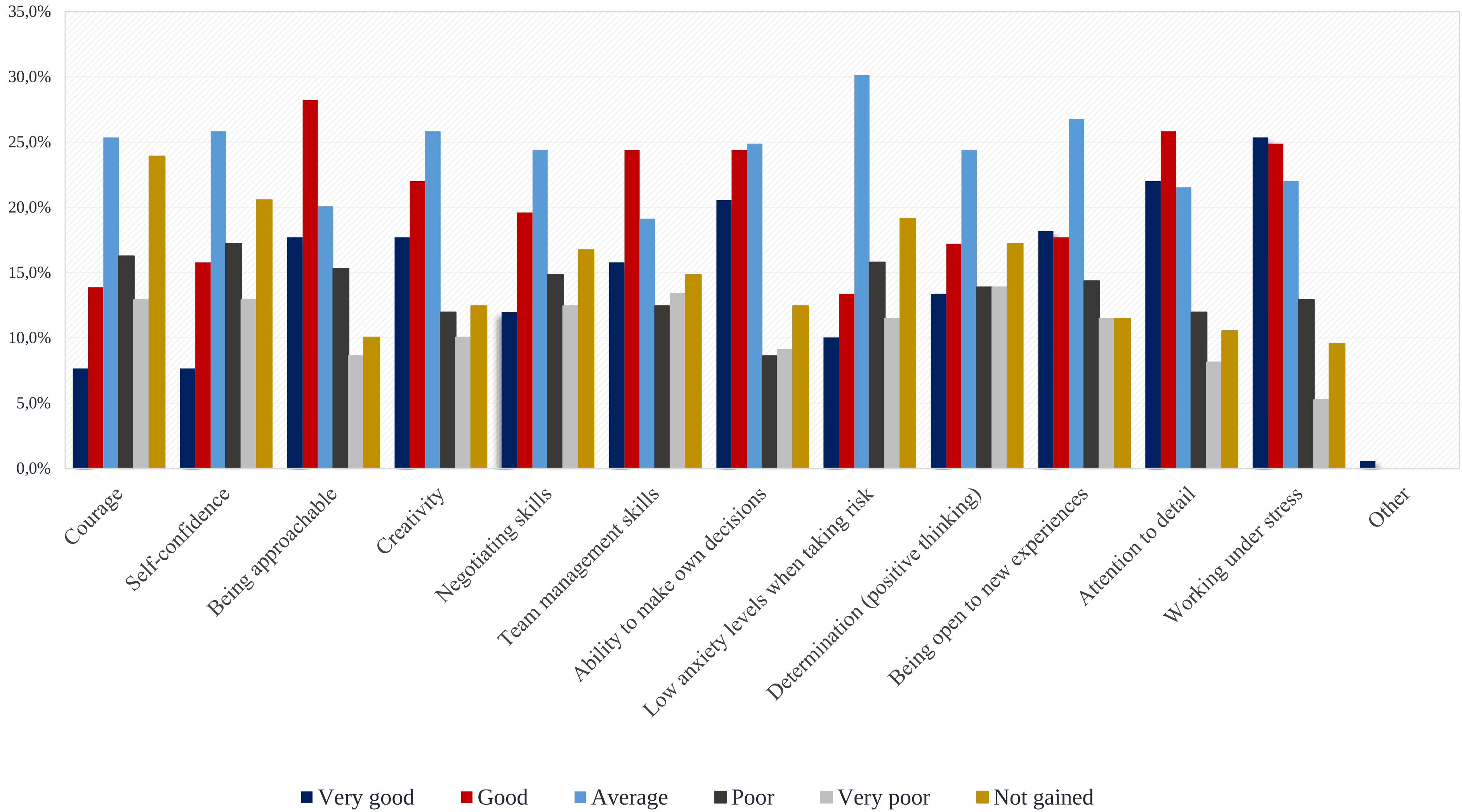

Figure 5. Competences and skills provided by General Secondary School, and their role in running own business according to first-year students who graduated from General Secondary Schools [%].

Source: own research and study.

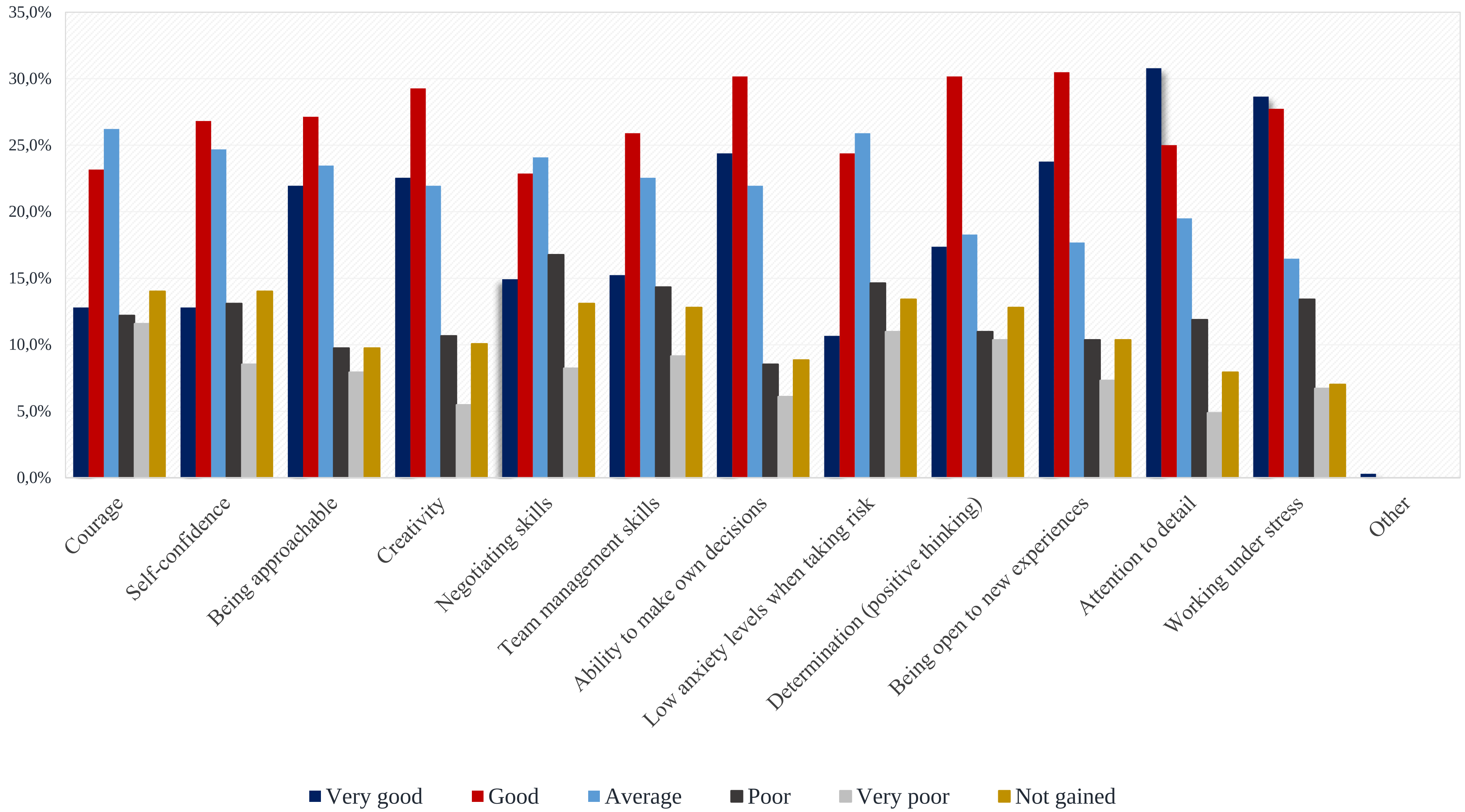

Figure 6. Competences and skills provided by General Secondary School, and their role in running own business according to first-year students who graduated from Technical Colleges [%].

Source: own research and study.

Summary

In the summary of this article, the main purpose of which was to analyse the conditions and possibilities of using entrepreneurship education in secondary schools, in the context of stimulating the development of skills and entrepreneurial competences among university students, the following conclusions can be drawn:

1. Every fourth graduate, regardless of whether they graduated from a Technical College or a General High School, evaluates their education only as average in the field of entrepreneurship, in terms of strengthening his predispositions, and acquiring skills required to run their own business.
2. Secondary schools, in the opinion of more than every fourth of their graduates, prepare them to perform various social roles to an average degree (29.0%).
3. Most of the first-year students highly or very highly evaluate the following activities and competences taught and undertaken by the secondary school they attended: supporting others (43.4%), teamwork (38.2%) and communicating in a foreign language (37.3%).
4. Nearly 60.0% of the first-year students evaluate entrepreneurship education at the secondary school level as very low or low, in terms of developing their competences in the area of self-employment.
5. Every second respondent assesses their skills in the field of information and communication technologies (50.9%) and self-presentation and public speaking (47.0%) as very low or low, which may indicate the low effectiveness of the entrepreneurship education program implemented in secondary schools in this regard.
6. Every second first-year student who graduated from a Technical College, evaluates the possibility of developing their entrepreneurial skills and competences at the stage of education in secondary school, such as: work under time pressure, diligence/accuracy, independence in making decisions, openness to new experiences, creativity/ingenuity, and communicativeness as good or very good. The same entrepreneurial skills and competences acquired at the stage of secondary school education are rarely rated so highly by graduates of General Secondary Schools.
7. The highest percentage of General Secondary School graduates assess the development of the following aspects of entrepreneurship as the lowest: self-confidence (30.1%) and courage (29.2%), and over 20.0% declare that they did not acquire these features at all at the level of their education in high school.
8. Every fourth respondent who graduated from a Technical College evaluates the degree of implementation of the entrepreneurship curriculum in secondary school as poor or very poor, in terms of acquiring the following features and predispositions: no fear of taking risks and negotiation skills; conducive to entrepreneurial activities.

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PARTNERSHIP RELATIONSHIPS IN CREATING STAKEHOLDER VALUE IN TODAY'S MARKETPLACE

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Purpose: The purpose of the article is to present, based on literature sources, the essence of the concept of building partner relationships and their importance in creating stakeholder value, which can be a kind of antidote to the uncertainty and turbulence of the globalized modern market. It is assumed that the skillful formation of relationships with stakeholders promotes the obtaining of value for the parties involved in the relationship.
Design/methodology/approach: The purpose of the study was realized based on the analysis of selected literature sources.
Findings: A significant role in shaping company-stakeholder relations is played by the knowledge of building relationships with them. Thus, the creation and development of partnerships with stakeholders, given the operation of companies in an uncertain and turbulent modern market environment, is an important role in shaping their value and can become an important contributor to building competitive advantage.
Practical implications: The article can be a source of valuable inspiration for companies interested in deliberately shaping relationships with the business environment, particularly contributing to the creation of stakeholder value.
Originality/value: The author draws attention to current and important issues occurring in the process of building relationships with stakeholders, especially the creation of stakeholder value and the importance of relationship building for the operation of enterprises in the turbulent modern market.

Keywords: relationships, stakeholders, value, stakeholder value.

Category of the paper: Theoretical article.

1. Introduction

In the environment of any enterprise, there are many entities that have an interest (hence the name stakeholders) in how and with what effect the enterprise operates. These stakeholders interact with the enterprise, as well as with each other, and can have a real impact on what decisions are made within the enterprise (Friedman, Miles, 2002). Relationships are not only the foundation of personal life, but also play an important role in business. Creating, developing, "nurturing" relationships with stakeholders is becoming an intrinsic feature of organizations doing business in today's market, where doing business is increasingly difficult. This applies not only to businesses, but also to other organizations, including those classified as public sector or NGOs. All entities establish and form relationships with a wide and diverse group of stakeholders, often with different needs, expectations, preferences, requirements and even sometimes conflicting interests, recognizing the undoubted benefits but also the importance in creating stakeholder value. In addition, in many companies, they are the basis for the development of the business model. In this aspect, it is worth emphasizing that building positive relations with stakeholders should be based primarily on ethical PR, which should comply with the following code of ethics:

1. Public relations communicates only truthful information. A public relations specialist (PR specialist) is obliged to disseminate information that, to the best of his knowledge and experience, is true, accurate and not misleading to the recipient. If there is any doubt about the reliability of the information, it is the PR specialist's duty to verify it.
2. In order to exercise special care, integrity and honesty, a PR specialist is required to report the facts in their proper context, without distortion or manipulation.
3. Public relations must not, under any circumstances, serve disinformation. In the event of becoming aware of unconscious or unintentional misinformation, it is the PR specialist's duty to immediately correct the misinformation and make it known to all those who may have been affected by the misinformation.
4. The media are an immanent part of the public relations ecosystem, and journalists are an integral partner of PR specialists in the professional performance of their profession. It is the duty of agencies and PR teams of companies and institutions to respect the principles by which the media shape their cooperation with public relations entities, and PR specialists are obliged to respect journalistic independence and freedom of interpretation of the content they provide to journalists.
5. A PR specialist may not represent conflicting or competing interests unless the parties involved, after all the facts have been presented to them, agree to do so.
6. A PR specialist is obliged to protect the privacy, honor and personal dignity of his clients and colleagues, as well as to respect the personal rights of the addressees of his actions.
7. The PR specialist is obliged to protect the confidentiality of current and former clients and employers and must not take steps to disclose confidential contents of which he is the holder, unless the persons to whom the secrets relate or who have entrusted them give their consent or when required by law.
8. A PR specialist must not engage in any activity that seeks to corrupt the mass media. Information provided to the mass media should be provided for publication and use without payment or hidden financial or personal benefits offered to journalists.

9. If it is necessary to maintain the initiative and control of information dissemination, the PR agency or PR team of the company or institution has the right to buy space or broadcast time, in accordance with applicable laws relating to advertising and sponsorship activities and in accordance with publicly available information on the rules of cooperation with individual media outlets.
10. A public relations agency or a company's or institution's PR team must not enter into any contract in which it guarantees a result that depends on the autonomous decisions of other entities, such as the media, public institutions, etc.
11. PR professionals must not unfairly compete with other public relations professionals and the organizations they represent and damage their reputations (Barlik, Hope, Olędzki, 2022).

The principles of the above code form the basis of communication with stakeholders and should be strictly adhered to.

2. The essence and types of partnerships

In colloquial terms, relatio (Latin relatio - to relate, to state a case), means an eyewitness account of the course of an event, or indicates a relationship occurring between people or social groups (Bańko, 2005, p. 1078). The term was first used after 1985 by B.B. Jackson to describe the reciprocal relationship between organizations (Jackson, 1985, p. 125). In contrast, according to Ph. Kotler and K.L. Keller, relationship marketing aims to build mutually satisfying, long-term relationships with key members in order to gain and retain their business (Kotler, Keller, 2009, p. 20). Relationships between individuals or organizations are the basis for the operation and development of any enterprise. Business entities, by virtue of their interaction with each other, initiate various types of relationships, the most common of which are those between: an enterprise and a customer, an enterprise and another enterprise, an enterprise and government entities (Danielak, 2012).

According to A. Werr, J. Blomberg and J. Löwstedt, the interorganizational relationships in which companies enter can be grouped into the following five categories:

1. Vertical relationships, including suppliers, intermediaries (distributors) and customers.
2. Horizontal relationships, including competitors, cooperators and various associations/networks.
3. Hierarchical relationships (headquarters and subsidiaries).
4. Personal relationships (referring to interpersonal ties unrelated to economic interests, e.g., family, collegial, friendship relationships).
5. Relationships with experts i.e. consultants, specialists (Werr, Blomberg, Löwstedt, 2009, p. 451).

According to T.L. Powers and W.R. Reagan, there are five basic stages of relationship development, consisting of:

1. Partner selection.
2. Defining the goals of the relationship.
3. Defining the boundaries of the relationship.
4. Creating value.
5. Maintaining the relationship (Powers, Reagan, 2007, p. 123).

Relationships can be both short- and long-term, more or less valuable, also there can be casual relationships and sporadic relationships limited to single transactions. Relationships are usually unique to the people, places and businesses in which they are formed. Their multidimensional form is seen to have many benefits related to, for example, access to valuable resources, as well as diffusion or absorption of knowledge aimed at finding innovative solutions. Also the potential dangers associated with the loss of value of relationships due to their weakening, gradual disappearance or termination.

In business practice, the implementation of the goals set by enterprises involves the need to establish various types of relationships with internal and external stakeholders. Relationships are built in a process of sequential, gradual development over an extended period of time, within the following stages:

1. Initiating: a) initiating the concept and procedure for initiating the relationship, b) presentation of the offer, marketing activities.
2. Formalization: develop a procedure for formalizing internal and external relationships (through contractual and non-contractual arrangements. Contractual settlements are one of the factors that influence the building of trust that is the basis for relationship building).
3. Relationship development: a) analyzing the quality and value of relationships, b) identifying changes, c) investing in development.
4. Evaluation: periodic evaluation of the quality and value of relationships, communication procedures, interaction.
5. Improvement: improving quality and value from interactions (management and employee involvement plays a key role).
6. Termination: a) develop a procedure for ending the relationship, b) evaluate the benefits and costs (Chomiak-Orsa, 2013).

Given the above process of relationship building, it is not hard to disagree with the statement that each relationship is unique in terms of its dynamics, development and realization of expectations (Skrzypek, 2015). Each stakeholder makes specific contributions and expects specific values. The specific results obtained should foster efforts to develop and consolidate relationships with stakeholders. The reasons for the termination of the relationship may also relate to independent variables existing in the environment, which are usually not directly influenced by the parties to the relationship.

It is also worth noting, although relationships do not have a physical form, they can be managed. However, in order for the management process to be effective, it is necessary to plan, organize and motivate the employees responsible for shaping the relationship, and the relationship must be controlled.

The disappearance of the relationship may be influenced by the weakening capabilities of the partners, inactivity of the client, opportunistic attitudes or loss of trust. On the other hand, the termination of existing relationships can occur with the expiration of the period for which they were concluded, also due to the resignation of one of the parties, but also due to the negative impact of external factors. Relationships can be considered terminated in the absence of ties between the parties involved.

3. The concept and types of stakeholders

The term "stakeholder" was first used in 1963 in a Stanford Research Institute document to describe groups of stakeholders to whom the owners of a business should be accountable and without whose support the organization would cease to exist (Freeman, 2010, p. 31). R.E. Freeman defines stakeholders as any individual or group that can influence or be influenced by an organization in pursuit of its goals (Freeman, 2010, p. 33).

In the cited definition, attention is drawn to the so-called feedback of stakeholders and the organization, since their relationship can be diverse in nature; moreover, both stakeholders can influence a specific organization, and the organization can influence its stakeholders.

According to T. Donaldson and L. Preston, stakeholders are individuals or groups that have direct or indirect contracts with an organization (Donaldson, Preston, 1995, pp. 65-91).

Enterprises operating in the modern market are increasingly dependent on the environment, which on the one hand influences a change in the patterns of action of managers managing them, and on the other hand implies the creation of business models based on the creation and development of partnership relations with stakeholders.

The classic division of stakeholders distinguishes two basic groups, namely:

1. Internal stakeholders: employees, shareholders, boards of directors.
2. External stakeholders: exert influence operate in the organization's environment. These include: customers, suppliers, competitors, state authorities, state institutions, special interest groups, the media, trade unions, other stakeholder groups.

In the broadest classification of interest groups influencing a company's operations, primary and secondary social and non-social stakeholders are distinguished (Table 1).

Table 1.
Interest groups

Interest groups	Social	Non-social
Primary	- local, national, international communities - suppliers and business partners - customers - investors - employees - management - lenders (banks, bondholders, etc.).	- environment - other species - future generations
Swcondary	- government - the public market - regulators and supervisors - trade organizations - competitors - social pressure groups - trade unions - media and commentators - opinion leaders - research and academic centers - non-governmental institutions - environmental organizations	- environmental pressure groups - animal rights activists

Source: own elaboration based on Wheeler, Sillanpää, 1997; Hund, Engel-Cox, 2002, p. 219.

A different but relevant division of stakeholders in terms of their value to a given organisation is proposed by M.A. Rodriguez and J.E. Ricart, who distinguish the following types of stakeholders:

1. Substitute stakeholders - the company cannot function without them. These include employees and owners.
2. Contractual stakeholders - associated with the enterprise on the basis of a formal or informal contract. These include customers, suppliers, competitors, financial institutions.
3. Contextual stakeholders - play a crucial role in achieving the enterprise's reputation and public trust for its business. These include local, regional and national administrations and the media (Rodrigez, Ricart, 2002, pp. 26-33).

4. The essence of stakeholder value and its measurement

Values vary from one to another. Value responding to customers' needs and expectations arises from the appropriate allocation and configuration of capabilities and resources. Good relationships are not always fixed. They are the result of a combination of individual attributes such as honesty, integrity, respect, dedication, trust, confidence, as well as employee commitment and company reputation (Lau, Rowlinson, 2011, pp. 633-659).

Just as not all relationships contribute to value creation, not all relationships provide opportunities for development. Indeed, in the value system, it is important to develop stable, strong and long-lasting relationships based on trust and cooperation.

An important element of relationship development is the goals and expectations of the parties to the relationship, which change as the relationship develops. As the relationship develops and commitment increases, uncertainty is reduced and trust increases.

Valuable relationships provide satisfactory added value for the company's stakeholders. In order to measure the effectiveness of forming collaborative relationships, with respect to individual stakeholders and their needs, appropriate evaluation criteria and metrics should be defined. Examples of metrics that can be used include:

1. For owners: total shareholder return (TSR) or relative TSR.
2. For directors: average remuneration or average remuneration as a percentage of the average remuneration of directors of companies in the comparator group, percentage of company shares held.
3. For employees: average salary in the company compared to the average salary in the country.
4. For creditors: liquidity and solvency ratios, ratings assigned by independent agencies.
5. For customers: market share ratio, percentage of returns (complaints), percentage of repeat customers, average delivery time, etc.
6. For government: amount of taxes paid.
7. For the local community: the amount of employment, the amount of investment in municipal infrastructure, the amount of funds donated to social activities.

Companies should conduct an analysis of their interest groups in order to know their expectations, relationships and how to achieve their objectives. In principle, all stakeholder groups should be interested in increasing the value of the enterprise, given that they not only participate in the creation of this value, but also benefit from it.

5. Summary

Relationships are formed as a result of interactions between individuals who are pursuing certain goals. Relationships are extremely important, due to the fact that it is through them that it is possible to realize the goals of individuals but also of organizations. This is because they allow access to external resources and capabilities, including specialists in various fields. Moreover, they are an important source of value for the individuals and entities involved in the relationship.

Businesses operating in today's market should focus primarily on the processes of creating and then developing and maintaining partnerships with various stakeholder groups. Relationships play a key role in the value creation process, especially in terms of building valuable relationships with stakeholder groups that are important to the company.

In conclusion, it should be emphasized that the skillful formation of relations with stakeholders is gaining importance due to the changes occurring in today's dynamic market environment forcing flexibility of action in the ability to solve problems and make decisions with the involvement of the competencies and capabilities of internal and external stakeholders. It is worth bearing in mind that the formation of relationships with individual stakeholders very often requires an individual approach, due to their contribution, role, competencies and also the expected value from the relationship.

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ORGANIZATION AND MANAGEMENT SERIES NO. 173

A BOUTIQUE COOPERATIVE BANK – IS IT POSSIBLE?

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Purpose: The purpose of the research was to collect customers' opinions about the need and possibility of the operation of a boutique cooperative bank. While reviewing examples of the operation of boutique financial institutions, which served as an inspiration for developing the model of a boutique cooperative bank, an attempt was made to answer the question of whether there is space for a boutique cooperative bank as an alternative to consolidation in the cooperative banking sector.
Design/methodology/approach: The research was conducted on a group of anonymous and randomly selected 100 people who were customers of cooperative banks. The research tool used in the paper was a survey questionnaire.
Findings: The concept of building a hybrid structure of small, specialised banks has been confirmed by the literature and the research conducted. It has been confirmed that unless small cooperative banks find a new business model and take advantage of market niches, they will face inevitable consolidation. The findings have confirmed that direct relationships with customers that cooperative banks can leverage constitute one of key capabilities in building a boutique bank. Further, it has been confirmed that for a certain group of customers, there is space for banks providing *consierge* services.
Practical implications: application of gathered knowledge and experience in creation of the boutique model of a cooperative bank.
Originality/value: presentation of solutions in the area of the operation of boutique banks and highlighting the significance of the new model of a cooperative bank as a counterbalance to the processes of consolidation in cooperative banking.

Keywords: boutique, boutique bank, cooperative bank, banking, customers' opinions.

Category of the paper: research paper.

1. Introduction

Cooperative banking in Poland, much the same as across Europe, is undergoing constant changes. It is safe to say that since the financial and economic crisis that started in 2008 these changes have for many reasons been much faster, with the cooperative banking sector and individual cooperative banks forced to redefine their position and direction they are headed towards.

The market of financial services in Poland is characterised by a wide range of offers and strong competition. Traditional cooperative banking has value that stood the test of time. However, in the current environment, it will only be able to survive the period of "banking transformation" if it is managed in an appropriate and wise manner. On top of these conditions, we can see a dynamically increasing regulatory trend and increasing technological advancement. The rise of innovative fintechs, often combined with the "stubbornness" of the cooperative banking industry and its failure to appreciate the need for changes, have put the future of Polish cooperative banks at risk. Moreover, pressure from the Polish Financial Supervision Authority on banks to increase equity, along with the decreased profitability of cooperative banks as a result of reduced interest rates, e.g. during the pandemic, have resulted in the lack of interest in the stares of cooperative banks among new stakeholders (potential members). As a consequence, moving away from the idea of cooperativeness towards the models followed by commercial banks has become the dominant trend among cooperative banks and the main concept of their growth (Kura, 2021).

Cooperative banks – given their changing business environment – should redefine their business model. One of the alternatives to the consolidation processes among cooperative banks is a hybrid concept of the cooperative banking model based on symbiosis of boutique banks. It is important to note at this point that cooperative banks in Poland, even the major ones, not to mention the medium or small ones, are very small entities in terms of independence on the financial market, to the point of being negligible. An independent cooperative bank, even the largest one, is unlikely to be perceived by the public as a bank of nation-wide importance and standing (Kura, 2021).

2. Material and the research method

The concept and idea of a boutique bank has been adopted in the existing financial institutions, however in the domain of cooperative banking it has yet to be embraced. All over the world, including in Poland, we can find successful banking institutions that have chosen the boutique model of operation. However, the mindset of cooperative banks' decision makers, confirmed by their previous activity or failure to act, excludes the development of a growth strategy based on the model of a small specialised financial institution. Managers of small cooperative banks are concerned about the changes occurring on the banking market and within the cooperative banking structure, but they often refrain from taking effective initiatives to counteract the trend of mergers and consolidation in the banking sector.

This approach, resulting in failure to implement bold changes and pursue self-improvement, has led the authors of the paper to a decision to examine customers' opinions on one possible concept of growth for a small cooperative bank as an alternative to consolidation processes in the cooperative banking sector. The research was conducted on a group of anonymous and randomly selected 100 people who were customers of cooperative banks. The research participants came from the region of Upper Silesia and varied in terms of social backgrounds and jobs. A negative criterion in the research process was fulfilment of a managerial role in a financial institution or a job in a banking institution. This was to prevent lack of objectivity that can be expected from participants of a study concerned with assessment of their environment.

The purpose of the research was to collect customers' opinions on the need and possibility of the operation of a boutique cooperative bank. These opinions provided responses to the following questions: Does the concept of a boutique cooperative bank make sense? Have the respondents encountered, or are familiar with, the concept of a boutique bank? Would they be interested in banks of this type? and Can they see a future for such banks?

The research tool used in the paper was a questionnaire survey titled "A boutique bank – propensity to change". It consisted of 15 questions in total. The questions contained in the questionnaire addressed issues related to, among other things, customers' contact with the bank, the feeling of being a "special customer", decisions to change the bank and the factors impacting such decisions, familiarity with the concept of a boutique bank and aspects related to the operation of banks in the future. The questions contained in the questionnaire were close-ended. An overwhelming majority of them had obligatory character, meaning that the respondent was not allowed to omit the question by providing no answer to it. For close-ended questions, a set of responses to select from was provided, with their number depending on the type (content) of the question. The research was conducted in 2021.

3. Characteristics of cooperative banking

Cooperative banks or credit unions exist in almost all the European Union states. In many countries, such institutions boast a long history dating back to the second half of the 19th century or the early 20th century. All cooperative banks are rooted in the idea of rural Raiffeisen bank (Sadowska, 2019) or urban popular Schulze-Delitzch bank (Rolski, 2019) and quickly evolved to become an integral and well-established component of the banking system of the countries that now comprise the EU. Although they have common roots and respect fundamental cooperative values, as they evolved, their business models started to differ significantly, not only across Europe but also within the different countries (Lepczyński, 2017). Nonetheless, all cooperative banks are universal banks that enable their customers to access financial services both via traditional channels (i.e. brick and mortal offices) and modern ones, i.e. Internet and mobile banking (Rolski, 2010). Cooperative banks today – unlike in their early days when they supported the fight against exploitation and market exclusion of economically weaker social groups (Rosa, 2019) – show little difference from commercial banks in terms of how they operate. These are mostly small, yet very vibrant, financial entities with a huge ability to adapt to the quickly changing environment and exert a stabilising impact on the banking services market during financial crises (Gostomski, 2019a). An important advantage of cooperative banks is an extensive network of branch offices located near the customers' workplaces or places of residence as well as a good customer service (Sadurski, 2015).

Cooperative banks have a large and stable deposits base; they grant loans mainly to small and medium-sized businesses when large banks show temporary lack of trust in them as a result of, among other things, the situation on the international financial markets or liquidity and reputation problems. According to Migliorella (2020), after commercial banks had lost their reputation in the aftermath of the economic and financial crisis (Łukaszuk, 2018), cooperative banks discovered their major advantage differentiating them from traditional commercial banks, i.e. membership and local impact. Since then, cooperative banks have been filling in this gap, acting as a stabiliser in domestic economies of many EU countries (Belaisch et al., 2001; Fitch, 2003).

For several dozens of years, the cooperative banking sector in Europe has been undergoing consolidation processes resulting in a decreased number of independent cooperative banks (Alińska, 2002). The biggest decrease was recorded in Germany and France (Zuba, 2013; Kata, 2016; Gostomski, 2019a). A steady and progressive decrease in cooperative banks has also been noted in Poland. At the beginning of the transformation in Poland, there were 1 662 such banks operating; in 2000, there were only 680 cooperative banks, and in 2022 their number decreased to only 498 (KNF, 2022). The consolidation processes also extended to associating banks. For instance, the number of banks associating cooperative banks in Germany decreased from 3 to 1, whereas in Poland it fell from 11 (in 2001) to 3, and then, in September 2011, to 2 (BPS, 2022). Moreover, bank outlets are closing down and self-service terminals are opening. At the same time, we see standardisation of the services and automation of *back office* operations (ISBnews, 2022). These activities aim to reduce the costs of banking activity, sparked by a decrease in interest margin as a result of the long-lasting low interest rates and increased competition on the banking services market (Szustak et al., 2022). A negative aspect of mergers is that they increase distance between the cooperative bank’s headquarters and, in many cases, its branch office, which poses the risk of loosening of the bonds with the bank’s members and the other customers (Gostomski 2019a).

In recent years, cooperative banks in Europe have been implementing one of three development strategies, i.e. development strategy based on the domestic market, expansion into foreign markets or international cooperation. The first type of strategy is focused on increasing the domestic customer base and increasing average revenues generated by one customer.

However, due to a fierce competition on the banking services market across Europe, cooperative banks, unless they take over other banks, have small chances of growing faster than other commercial banks. In the case of the strategy of expansion into foreign markets, the main aim is to gain additional sources of revenues on foreign markets and take advantage of the economy of scale. However, successes on foreign markets are mainly reserved to banks with a strong capital base, attractive product offer and international experience, especially in taking over foreign banks. A promising strategy is boosting the growth of cooperative banks through international cooperation. The aim of this strategy is to improve the performance of cooperative banks by combining domestic and foreign financial resources and *know how*. However, while the largest cooperative banking groups are searching for alternative business models, cooperative banks in Poland are too weak to be able to go beyond the national borders. It seems that they need to look for a model that will allow them to establish their position on the domestic market.

4. The concept of a boutique bank

The concept of a boutique originates from the French language (*boutique*). A boutique is usually defined as a small shop selling fashionable or exclusive clothes or haberdashery (SJP, 2022). In general, boutiques are small establishments offering personalised attention (service). The term boutique is also used to describe various business enterprises that choose a small form and size of business while maintaining the highest quality.

The term "boutique bank" is already in use. However, there is no clear definition of a typical boutique bank. A boutique bank refers to a relatively small bank with quite a flat organisational structure and very high individual standards (Adra et al., 2020), which provides services to a specified group of customers, defined by an individual bank, who value – depending on the form of the bank – luxury, have certain refined needs (for a traditional "old-style" bank or highly innovative, sectoral or investment bank) and are willing to pay more for the services than what "common" banks charge their customers (Kura, 2021).

Currently, there are highly specialised boutique banks with a specific profile operating on the market. Examples of such banks are investment banks (JP Morgan, Bank of America, Goldman Sachs, among others), including those specialising in financial services for a specific industry (e.g. Cain Brothers specialising in health care) (Cain Brother, 2022). Boutique banks can also include automotive banks (e.g. Volkswagen Bank, Toyota Bank, Fiat Bank, Renault Credit International Bank), which are focused on providing services to a certain type of customers, mainly offering car loans, and car and motor insurance. Other types of specialised boutique banks are mortgage banks whose aim is to finance the property market (e.g. PKO Bank Hipoteczny, Pekao Bank Hipoteczny S.A., mBank Hipoteczny, ING Bank Hipoteczny).

Although mortgage banks usually belong to the same capital groups as commercial banks, they differ significantly from the latter in terms of how they operate. Mortgage banks do not offer accounts or capital deposits, nor provide payment cards or short-term loans. Also, they do not handle small deals, and the number of contracts they conclude is many times smaller than in the case of commercial banks. However, the value of such contracts is usually much higher (sometimes it even amounts to hundreds of millions of Polish zlotys). Another example of a boutique bank is a bank connected with mobile telephony (e.g. Plus Bank).

Attempts to extend the concept of a boutique bank to cooperative banks have already been made in real world. Examples of operating boutique financial institutions are becoming an inspiration for building a model of a boutique cooperative bank. A practical example of the boutique model of a cooperative bank is a church cooperative bank. In Germany, there are 10 church banks. All church cooperative banks are members of the National Association of German Cooperative Banks. These are niche banks specialising in servicing pastors, parishes, episcopal curias, and charity organisations. Seven banks from this group are entities much bigger than an average German cooperative bank. Church banks, as modern financial institutions, offer their customers not only classical financial products but also, in cooperation with specialised companies operating in the cooperative banking sector, leasing and insurance services, and real estate agency services. The business prospects for Evangelical banks are positive and mainly based on the good growth prospects for the German economy, which translates into an increased demand for banking services offered by both institutional and private players (Gostomski, 2019b).

5. A boutique cooperative bank as perceived by customers

Banks are doing their best to make their customers feel special. However, their efforts, despite many years of the political transformation and employment of the best marketing and social engineering practices, have not resulted in customer satisfaction in terms of the feeling of being special, which is one of the main assets of a boutique bank. Standardisation always prevents customers from having the feeling of being special, the very thing that provides a chance for building a boutique bank. When responding to the question: "Do you feel you are a 'special customer' for your bank?", over 50% of those surveyed replied either that they definitely did not feel so or rather did not feel so. Meanwhile, 30% were unable to give their opinion. The responses from the survey confirmed that banks' attempts to make their customers feel special had not brought the results they had expected. Only 18% of those surveyed responded that they rather felt they were a special customer, and only 1% definitely felt like a special customer (Fig. 1).

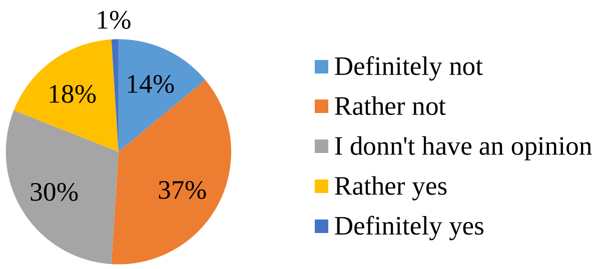

Figure 1. The feeling of being special among bank customers according to respondents' opinions.

Source: own work based on the research.

The next research question verified the assumption as to whether those surveyed would like to feel like special customers and at the same time incur additional costs for that feeling. The word "special" was deliberately not defined to let the respondents rely on their own definition and meaning of this concept. The aim of this study was to gain understanding of how the respondent developed the feeling of being "special" as a result of their overall previous experiences when engaging with the bank. Almost 80% of those surveyed declared that they definitely would not pay or would rather not pay for the "special customer" status. The result of this study clearly demonstrated that commercial banks focused on standardisation of services and growth based on the number of customers had not decided to embrace the concept of boutique institutions. Instead, they had established separate structures for special customers and provide *consierge* services to a few per cent of their customers. However, it should be noted that 7% of those surveyed would be willing to pay more for the feeling of "being special" (Fig. 2). The conclusions from this analysis are not positive for cooperative banks, which are not taking advantage of the market niche in this segment and thus lose it to commercial banks.

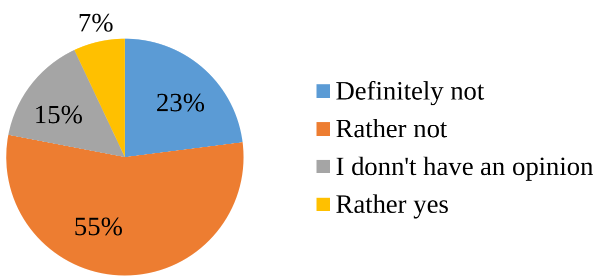

Figure 2. Respondents' willingness to pay higher bank charges for the feeling of being a "special customer" (in %).

Source: own work based on the research.

Since the start of the Covid-19 pandemic, the prices of banking services have significantly increased. What also contributed to the present situation was the step taken by the Monetary Policy Council who significantly decreased interest rates, bringing banks' main source of income, i.e. interest margin, to minimum. A substantial increase in the prices of banking services should cause an exodus of bank customers. In the research process, the price of services in the context of a more expensive boutique bank was of considerable importance. For that reason, the following question was posed: "Have you changed your bank over the last three years?" Of all those surveyed, as much as 97% replied that they had not changed their bank over that period. Only 3 out of 100 respondents had changed their bank. The significant increase in financial burdens as a result of the dynamic "spike in prices" of banking services did not cause customers to change their primary bank. This is an interesting finding, as in the previous question, an overwhelming majority of the respondents declared that they were not willing to pay higher bank charges for the feeling of being special. In reality, however, they accepted the price rises. Arranging these questions in precisely this order was deliberate and the aim was to demonstrate, based on the research sample, that price is not the determinant of the willingness to change the bank. Although people often declare that they will stop using the services of a given entity due to the price, in reality this is not the most common reason for ending the relationship, which has been confirmed by the research.

In fact, changing the bank is a very rare phenomenon. The respondents indicated that better Internet and mobile banking (27% of those surveyed) were key arguments in favour of shifting to services offered by another bank. Second most frequently cited factor was lower costs of services and products – this response was given by over 20% of those surveyed (Fig. 3). The bank's individual approach to customer, its proximity and better security all accounted for almost 50% of the respondents' responses. As expected, it was found out that despite the dynamic development of mobile and Internet banking, the values with which the customer identified had not changed for half the respondents. Security, individual approach and proximity of the bank – a bank offer that provides all of that is likely to be successful.

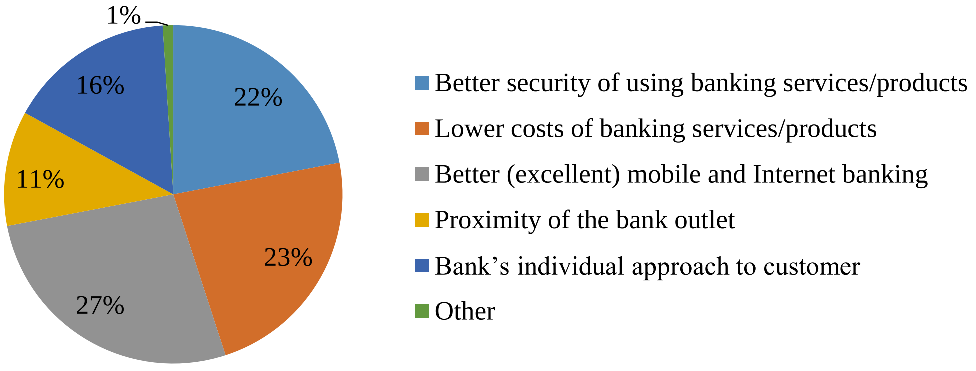

Figure 3. Reasons for changing the bank in the future according to respondents' opinions (in %).
Source: own work based on the research.

As expected, only 8% of the respondents asked whether they were familiar with the concept of a "boutique bank" responded that they had already encountered such a term. Meanwhile, for 9% of those surveyed, this term was completely new. The research findings offered an important insight – a boutique bank may be an interesting marketing term around which the bank choosing such a business model can build its advertising and promotional strategies.

Following the question about familiarity with the term "boutique bank," the respondents were asked whether they used the services of a boutique bank. The research findings confirmed that such banks had a small share in the financial market, as none of those surveyed declared being a customer of a boutique bank.

Given the lack of familiarity with the concept and purpose of a boutique bank among a relatively large group of respondents, it is not clear whether the respondents realised that they might have had a contact with such a bank. The next question, which explained what a boutique bank is, attempted to clarify these doubts. In it, it was stated that a boutique bank is a high standard bank specialising in a specified range of services and offering special terms of customer service (e.g. Premium account, prestige payment cards, personal assistant/adviser, etc.). Next, examples (kinds) of a boutique bank were provided and the respondents were asked whether they would open an account in such a bank if such a possibility/need arose. What is interesting, the most people (i.e. 33 respondents) chose a bank focused on a direct, traditional-style contact with the customer. Although 31 people chose a bank specialising in new information technologies, 30 opted for a bank with *consierge* services, which is a bank focused on direct relationships with the customer (Fig. 4). The received responses led to very interesting conclusions – although banking services rely heavily on dynamically developing technologies, a lot of customers miss genuine relations. Large banks are unable to build such relationships with their customers due to organisational and cost-related reasons. For a small specialised bank, however, this is an interesting alternative, as almost 70% of those surveyed expressed willingness to open an account with a bank that prioritises a close relationship with its customers.

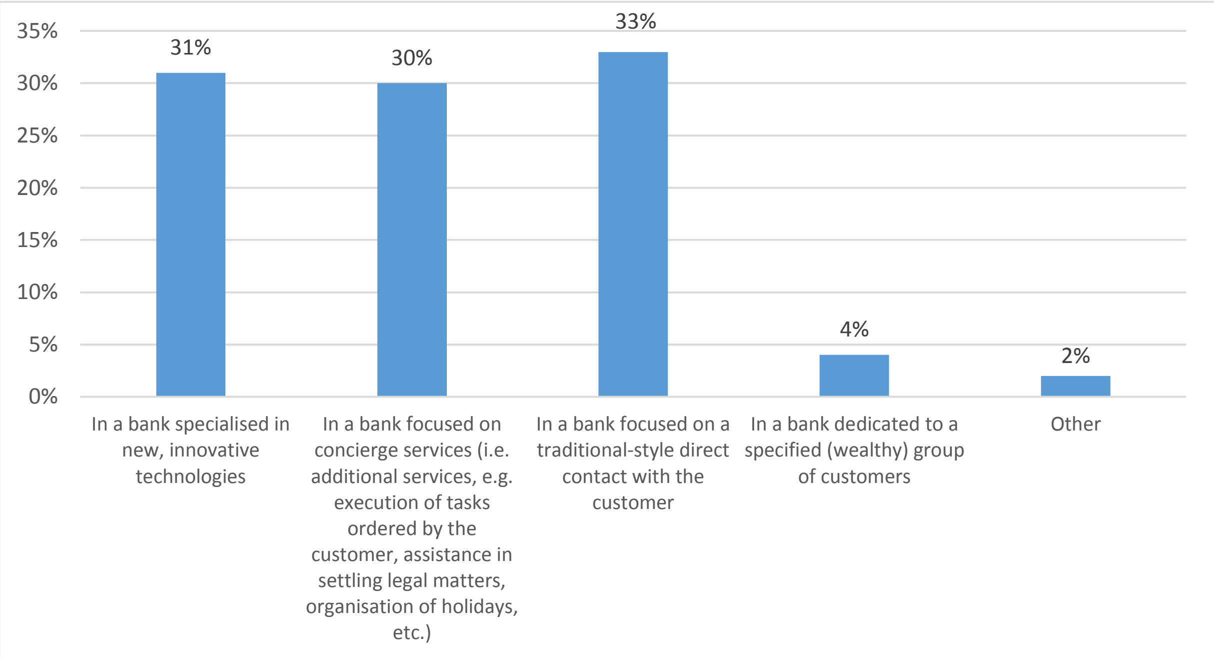

Figure 4. Respondents' preferences regarding their choice of a boutique bank (in %).

Source: own work based on the research.

Next, the respondents were asked what they associated using a boutique bank services with. In this question, the respondents could indicate three responses. Customer affluence and wealth, high costs of services and individual approach to customers were cited the most. They were followed by prestige, private banking and individual financial care (Fig. 5). The results of the survey demonstrate that in the question asking to explain the concept of a boutique bank, the respondents, with a little guidance, managed to figure out its characteristics. Simultaneously, only a small percentage of them associated a boutique bank with security. This means that boutique cooperative banks will face the challenge of educating their customers in order to instil a sense of security in them.

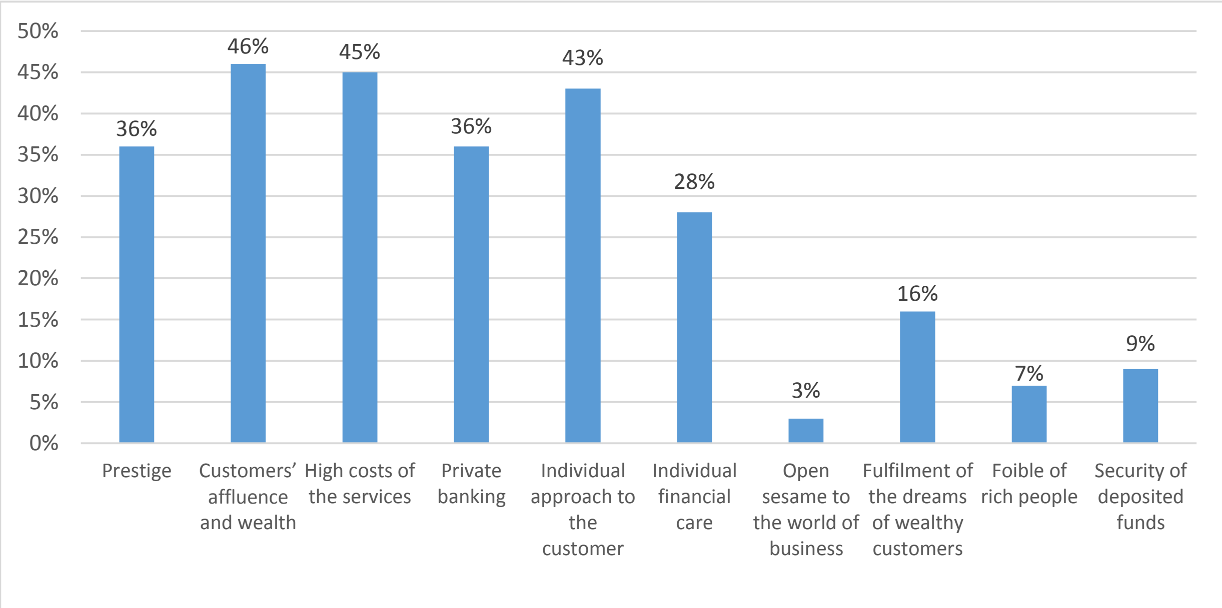

Figure 5. Respondents' associations with the concept of a boutique bank (in persons).

Source: own work based on the research.

As the conclusion of the research, the respondents were asked a question about their choices concerning financial institutions over the next 10 years. Over 30% of the respondents declared that in 10 years' time they would be customers of traditional commercial banks. Internet banks were chosen by 25% of those surveyed. Almost 20% of the respondents declared that they would use the services of traditional cooperative banks in the future. Only 5% of the respondents indicated a fintech company as the financial institution they would turn to in the future to handle their banking transactions. A similar percentage of the respondents indicated a boutique bank (Fig. 6).

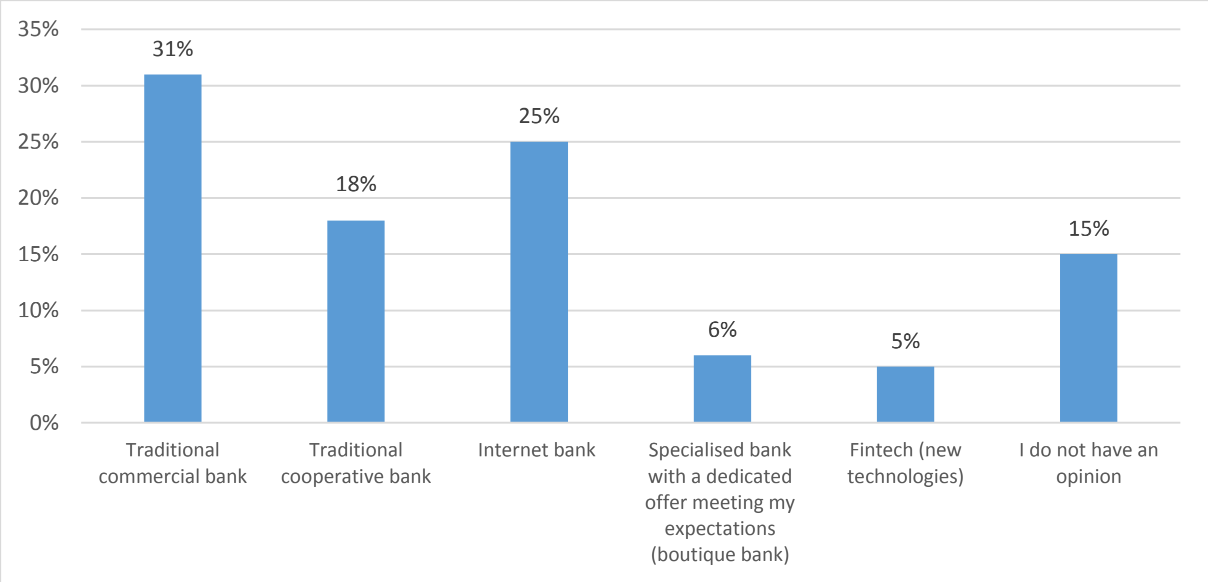

Figure 6. Respondents' choices of financial institutions over the period of 10 years (in %).

Source: own work based on the research.

A boutique bank is not a widely known and well-defined concept. The research, conducted on an anonymous group of 100 people, demonstrated that a boutique bank can be an interesting solution for cooperative banks that need to find a new business model. The research found that several percent of the population are interested in the offer of a boutique bank. It also clearly demonstrated that there is a large demand and space for a bank focused on direct relationships with the customer. Such an approach is not possible in the case of commercial banks due to their scale of operations. However, for a boutique cooperative bank, this type of relations with the customer can be an alternative to consolidation processes.

6. Conclusion

Cooperative banking has reached quite a difficult point in its development. The current macro-economic and political conditions, and above all technological advancement, require that cooperative banks as a group and individual entities redefine their previous business model. Over the last years, the situation of the cooperative banking sector relative to commercial banks has gradually deteriorated. The cooperative sector itself has no idea how to reverse this trend. The concept of building a hybrid structure of small, specialised banks as opposed to consolidation processes has been confirmed in the literature and the present research. It has also been confirmed that unless small cooperative banks find a new business model and take advantage of the market niches, they will inevitably face consolidation.

The research findings confirmed that the relationships that cooperative banks are able to build with their customers still remain in demand. They also demonstrated that for a certain group of customers, there is space for banks providing *consierge* services. Cooperative banks do not take advantage of this market niche. As a result, they are easily losing their customers to competitors.

The paper has pointed out that a boutique bank is not a widely known concept and customers do not know how such a bank should operate. At the same time, in the research process, the respondents expressed conviction that there was a future for cooperative banks. However, what is concerning for cooperative banks is that the research found that only the group of elderly people saw a future for cooperative banks over the next 10 years. On the other hand, younger people, who will co-create this future, want restoration of relationships-based customer service as opposed to banks whose strategy only relies on the Internet and mobile services. This result is certainly the consequence of the Covid-19 pandemic, which, while driving mobility in many areas and domains of life, has also exposed a huge deficit in human relationships. Banking has always been connected with the sentiment of the community it serviced. Understanding the needs for relationships offers a chance for cooperative banks, and consequently the concept of a boutique cooperative bank.

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SELECTED ASPECTS OF THE *SHARING ECONOMY'S* IMPACT ON LOCAL DEVELOPMENT, IN THE CONTEXT OF SOCIAL BENEFITS

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Purpose: The purpose of the article is to assess the sharing economy's potential to impact local development, in the context of strengthening community ties and stakeholder value creation.
Methodology: The article employs the methods of critical analysis of the subject literature and a case study.
Findings: The authors have demonstrated that sharing economy contributes to the achievement of social, environmental and economic goals on a local scale, creating value for internal stakeholders. Sharing economy activities integrate local communities around common goals as well as strengthen the sense of local communality. Trust, collaborative consumption, local communality, and concern for the environment become the leading values, replacing approaches focused on such categories as possession or money.
Practical implications: The presented examples of sharing economy indicate the necessity to involve local authorities through diagnosing the residents' needs, spreading awareness of the availability of collaborative consumption in given territory, support of local leaders' initiatives and initiation of own sharing economy projects. Authorities should take advantage of proven solutions recognized as paradigmatic, an example of which is Milan, whose undertakings have been recognized by the awarding of the prestigious "Earthshot Prize", the so-called "Green Nobel Prize".
Social implications: The analysis shows the multidirectional benefits for the local community, emphasizes the importance of social ties, in the context of counteracting social exclusion protecting the natural environment.
Originality: The Authors attempted to identify the sharing economy through the prism of social benefits for the local community, which can inspire local communities, including the local leaders and local authority representatives in particular.

Keywords: sharing economy, local community, ecology, relations.

Article category: general overview, case study.

1. Introduction

One of the problems modern society has been increasingly facing is excessive consumption. The pursuit of possession, accumulation or use of goods to the exclusion of other values poses a threat not only to the environment, but to society as a whole. The social, environmental and individual costs incurred as a result are felt both globally and locally.

One alternative way of meeting consumer needs is the sharing economy, conventionally understood as a long-term change in the behavior of modern consumers, entailing abandonment of excessive possession of goods, in favor of renting or sharing. In consequence, this not only leads to the improvement in the quality of life of the individuals directly involved, but also protects the environment and serves to create qualitatively new social relations within a given environment. This new model of consumption has been gaining an increasing number of supporters also in Poland, which is reflected in such activities as resale and exchange of used goods, sharing of the items owned and donating those no longer needed, or short-term rental of necessary products, instead of purchasing.

The interest in the sharing economy[1] primarily results from the change in consumers' mentality and lifestyle, facilitated by the development of communication and information technologies. The ecological and economic aspects, which, due to the deteriorating economic standing of Polish households can become a leading factor determining the development of the sharing economy in the coming years, play an important role here as well.

The subject of sharing economy has been taken up with increasing frequency in the world literature. The concept first emerged in 1978 in an article by American professors Felson and Spaeth (1978). Leading publications contributing to the development of the sharing economy category include publications by such authors: Chen (2009), Botsman, Rogers (2010), Belk (2010), Graham (2010), Bardhi, Eckhardt (2012).

In subsequent years, the scope of publications on sharing economy has expanded steadily, with a large intensification in 2017-2018 (Hossain, 2020). The wave of academic publications has been accompanied by an increase in practical sharing-economy solutions.

PricewaterhouseCoopers estimated that the value of sharing economy will grow from \$15 billion in 2014 to \$335 billion in 2025 (Hossain, 2020).

Also in Polish literature, a noticeable increase in publications on sharing economy has been observed. In the context of a new consumer trend, the subject matter has been presented by, inter alia, Wardak, Zalega (2013), Burgiel (2015), or Rudawska (2016). The theoretical approaches have been enriched by methodological aspects involoving sharing economy measurement, as presented in the works by Małecka and Mitręga (2015) or Szymańska (2019).

[1] The literature uses many interchangeable terms for the concept of sharing economy (collaborative consumption: shared consumption, shared economy, peer to peer economy). The study presented uses the category: sharing economy.

Sharing economy constitutes an important stimulus for the development of enterprises' innovation activity, which can manifest in various areas. Małecka and Mitręga highlight the links between the sharing economy and product/process innovation (Małecka, Mitręga, 2015), while Niezgoda and Markiewicz (2018) present the context of social innovation, relating their analysis to the tourism market.

The subject literature review shows that the issue of sharing economy is considered through various approaches, in relation to manifold business models and diverse stakeholder groups. Against the background of the ongoing considerations, the reference to sharing economy's importance for local development, constituting the subject of this study, should be considered as a distinct research gap.

The study aims to assess the potential sharing economy's impact on local development, in the context of strengthening the community relations and stakeholder value creation. The Authors adopted a thesis stating that sharing economy contributes to the achievement of social, environmental and economic goals locally as well as builds and strengthens the local communality, creating value for stakeholders.

The article is of a review nature, employing the method of critical analysis of the relevant subject literature and a case study.

2. Features and forms of *sharing economy* vs. local community benefits

Botsman and Rogers (2010) identify four key determinants contributing to the development of sharing economy, i.e.: environment equilibrium, the importance of community and authenticity, peer-to-peer technologies, and financial benefits. B. Schor (2011) describes the development of collaborative consumption as a social innovation, driven by the ethos of lasting, sustainable development as well as by the development of new information and communication technologies and network communities.

The subject literature pinpoints that the sharing economy blends into the idea of social entrepreneurship, which refers to activities undertaken for specific social benefits. The social benefit aspect of collaborative consumption has been presented by Niezgoda and Markiewicz (2018), who presented their considerations in relation to the development of the tourism function. The authors cited have indicated the common features of the sharing consumption and social innovation concepts. In both cases, activities are undertaken for social benefit and serve to solve social problems. Indeed, social innovation can be associated with new organizations as well as strategies, concepts and ideas aimed at meeting social needs (Romanowski, 2019). To this end, as Daszkiewicz (2015) emphasizes, it is necessary to identify the social problems in detail, and dedicate the programs developed to those issues, allowing for changes of a sustainable nature.

The features of social innovation, including its novelty, efficiency as well as the fulfillment of social needs and improvement of the society's capacity to act in particular, are also noticeable in sharing economy ventures. It should be emphasized, however, that owing to online platforms, the process can entail the sharing of consumption with strangers, persons from outside the social networks which usually encompass family members, neighbors or friends and acquaintances.

The advantage of collaborative consumption entails the matching, via an online platform, of free resources with the demand, which leads to a reduction in costs, owing to the elimination of intermediaries in favor of direct exchange of goods and services between parties. Moreover, in tourism, as Niezgoda and Markiewicz (2018) underline, the individual consumer approach as well as the convenience and speed of transactions enhance service satisfaction, while the creation of new jobs becomes an important instrument in the fight against poverty and social exclusion, resulting in increased social satisfaction and greater social cohesion.

The community context plays a very large role within the framework of collaborative consumption, as consumers seek opportunities to establish sincere interpersonal relationships. Mutual engagement *should be built on a sense of belonging and shared purpose* (Govers, 2013, p. 74). As Botsman and Rogers (2010) point out, a currency other than money is used here – 'trust,' which, from the perspective of local community creation, is of major significance.

Szymanska's research on sharing consumption shows that respondents value selflessness, like to give socially or act for the benefit of others by creating grassroots initiatives, and derive much joy and satisfaction from cooperating with others, thus confirming their desire for belonging to a particular community (Szymanska, 2018).

The determinants of sharing economy development can most broadly be divided into external (i.e., economic, environmental, demographic, social and cultural, etc.), internal (psychological), and marketing factors, including product or service information in particular.

With regard to the latter group of factors, the basic prerequisite for taking advantage of the services offered in the sharing economy entails the awareness of the availability thereof. Consumers need to be aware of the existence of alternative ways to meet their needs, in order to even consider whether they wish to make use of those or not. While access to information is not a problem for young, mobile consumers, an information barrier does exist for older loners who do not have access to the Internet. As Burgiel (2015) emphasizes, the digitally excluded, i.e., those who cannot and/or do not know how to use information technology (ICT), not only are unaware of the many sharing economy activities, but also are not able to take advantage of many of such initiatives. The lack of access to ICT can pertain to both those who cannot afford the necessary equipment and services, as well as the elderly, disabled, sick, under-educated, who are thus largely socially excluded. These individuals are left to take advantage of those forms of sharing economy which are available locally. The problem lies in the question of how to raise their awareness of such solutions. This therefore poses a challenge for local authorities and other entities involved in the process of countering social exclusion.

One important feature of the sharing economy entails the respect for the principles of sustainable development. In addition to economic and social rationality, its positive impact on the environment, and therefore its compatibility with ecological goals is also assumed. It is recognized that co-consumption is environmentally friendly, as it reduces the demand for new products. The concern for the environment, expressed in the surveyed consumers' specific pro-environmental behaviors, is manifested through the sharing of surplus food with others, refraining from purchasing food products in environmentally unfriendly packaging, or non-consumption of products (e.g., meat) the manufacture or transportation of which poses a threat to the environment.

Achievement of social, economic or environmental goals is only possible with the involvement and support of local governments. This problem has been indicated by, inter alia, Ganapati, Reddick (2018), who have presented the public economy challenges, including the sharing economy opportunities and challenges for the public sector in general and digital administration in particular. The authors have highlighted that the sharing economy enables the reuse of existing assets, in which public entities can play a facilitating role, by working with service-providing platforms (e.g., transit services), to improve residents' access to public services. This could include, for example, access to information on the scale of demand for specific services or access to infrastructure.

The benefits to specific territorial entities flowing from the sharing economy also include waste reduction, as well as the use of surplus resources, including labor. Surplus assets can be flexibly leased to the interested local online platform users. The reuse of those assets and resources potentially reduces the pressure for natural resources (Ganapati, Reddick, 2018).

Shared economy is reflected in many areas of exchange of both tangible and intangible nature.

Botsman and Rogers (2010) have distinguished three main categories of co-consumption: product service systems, redistribution markets, and collaborative lifestyles, which involve specific forms of exchange and interaction. Each of these forms affects the local market to a greater or lesser extent, bringing specific benefits to the local community.

From a local market perspective, provision of affordable city bicycles, which brings benefits not only of an individual nature, i.e., improvement of physical fitness, but of a group nature as well, by contributing to the reduction of traffic jams or exhaust fumes, which also benefits the environment, can be an example of such a system of product services. More and more cities are now investing in solutions based on the idea of bike sharing. It is worth noting that in recent years, the availability of scooter rentals by the hour, which requires registration with an appropriate app, while an embedded chip emits a signal to a database signaling the location of available scooters, has been gaining in popularity.

With regard to redistribution markets, in which interested parties transfer used items to one another, its important, from the perspective of social exclusion counteracting, to emphasize the social role thereof. Depending on the item (e.g., furniture or clothing), transactions can be free of charge or against payment. This extends the life cycle of products, which reduces the number of the resources needed for the production thereof as well as the amount of waste, thus contributing to environmental protection. The increasingly popular, especially in large cities, foodsharing public fridges, where community members can leave food that is still fit for consumption but for various reasons is no longer need or is in excess, are one example of support for those with the lowest income. This solution helps avoid food waste and, at the same time, provides valuable support, especially in light of the increasingly high prices of food products, for those who cannot afford to buy food. In many Polish cities, after the outbreak of war in Ukraine, community stores were set up, offering essential products for refugees, where the entire assortment (mainly footwear and clothing) brought by the local community is offered to refugees from Ukraine at zero price.

The third category of co-consumption identified by Botsman and Rogers (2010) is collaborative lifestyle, which entails a specific lifestyle. In this case, we are dealing with such intangible benefits as time, skills or space. This can be exemplified by the so-called time banks, which contribute to the creation and strengthening of local ties and usually operate as informal institutions of mutual assistance, service exchange between members of a specific community, or online services. The exchange is cashless, meaning one receives a service for a service, and the currency of the exchange is time, i.e., one receives 1 hour of someone else's time for 1 hour devoted to a particular person (group of people). Time bank users declare what services they can offer at a certain time and date. One particularly valuable variety of such institutions can be time banks, which involve the integration of young people with older people, allowing intergenerational sharing of skills and experience as well as the passing on of local traditions, etc. In exchange for unique, valuable lessons in history or old traditions, young people educate the older generation in computer skills, for example. It should be noted that this type of 'time banks' have already began to function in territorial units (e.g., within the emerging social service centers), generating invaluable value for the internal stakeholders.

Another example in this category, which consolidates local ties, can be carpooling, i.e., the sharing of car rides for a fee, to reduce the cost of commute to a given destination. In practice, this often refers to arranged work or college commute carpools for people living in particular, often suburban locations. In addition to the contacts made, a valuable effect of such co-consumption entails the reduction of exhaust fumes, which in the long term contributes to environmental protection.

In the category of reaping the benefits of 'place', in turn, couchsurfing, i.e., a platform through which people from all over the world can be offered free accommodation, can serve as an example collaborative lifestyle. This provides the people traveling to a given destination with opportunities to get acquainted with its culture, traditions or local crafts, as well as allows them to enter into relations with internal stakeholders forming the community of a that territory. External stakeholders are treated as partners, who are not just mere recipients of the offer, but active, involved participants in communication. They co-create the value of the place and participate in the creation of its brand. Stakeholders, as informed participants, become sources of information and ambassadors of the territory (Kuźniar, Kawa, 2018; Kuźniar, 2021). The process, at the same time, requires not only dialogue and commitment on both sides, but also motivation and mutual trust (Rebelo et al., 2020). After the outbreak of war in Ukraine in February 2022, housing provision took a new form of selfless, unilateral assistance to refugees.

In light of the presented examples of shared economy activity, it should be stated that its effects, consisting in the derival of such intangible benefits as time, skills or space, in addition to the material benefits directed especially to the disadvantaged, are largely noticeable locally. This supports the fight against social exclusion, allows the creation of new relationships and formation of social ties, including the building and strengthening of local communities.

3. Foodsharing as an expected direction of shared economy development – case study

According to the data published in a report developed by the environmental organization Feedback EU, European Union countries waste 153 tons of million food every year, which is higher than all 2021 food imports in EU countries. The European Union imported nearly 138 million food items (No Time to Waste, 2022). In Poland, according to the results of the research project *Opracowanie systemu monitorowania marnowanej żywności i efektywnego programu racjonalizacji strat i ograniczania marnotrawstwa żywności* [Development of wasted food monitoring system and an effective food loss rationalization and food waste reduction program], carried out by the Instytut Ochrony Środowiska [Environmental Protection Institute], nearly 5 million tons of food are wasted annually, more than half of which (60%) comes from households directly (NIK, 2022).

One effective way to solve the problem of food waste, bringing tangible social and environmental benefits, is foodsharing, which allows individual users, as well as group entities (producers, restaurateurs, traders), to share excess food, through the operation of foodsharing facilities. Such facilities, e.g., refrigerators, cabinets, shelves, allowing specific food products to be stored in accordance with instructions, are used for free exchange of food between users. In addition to the food provided by individual community members, foodsharing institutions also have a network of contacts with markets, bakeries, local bars, caterers, where they pick up the surplus unsold food, which then goes to community refrigerators. In Cracow, for instance, a total of several dozen kilograms of food goes to three such fridges each day (Urban, 2022).

It should be emphasized that, by design, foodsharing is not an aid institution; anyone can use it to take or exchange a product, owing to which ecological goals of reducing consumption attitudes are achieved. When the poorest community members take advantage of the offer, additional social goals are realized. Special applications facilitating the use of and access to free or cheap products, an example of which is the Danish app Too Good To Go operating in more than a dozen European countries, including Poland as of recently, play an important role in the development of foodsharing.

There are about 150 foodsharing facilities in Poland, covering more than 30 cities. The largest number of such facilities (a dozen or so each) operate in Warsaw and Wrocław, a few in Cracow, Szczecin and Toruń, as well as in Bielsko-Biała, Sosnowiec and Łódź, while the others are scattered throughout the country (Foodsharing Poland, 2022). Some of them signal the function of collaborative consumption via their name, e.g., the Wspólna spiżarnia [Shared Pantry] in Bydgoszcz, Lodówki pełne dobra [Refrigerators full of goodness] in Cracow, Lodówka dla głodnych [Fridge for the hungry] in Leszno, Dla ludzi i jedzenia [For people and food] in Wrocław, or the outlet of the Fundacja Sercem Przyprawione [Seasoned with heart] in Konin. The essence of the involved foodsharing entities' activities has been aptly reflected in the mission of the NGO Foodsharing Warsaw: *We save food from going to waste. We encourage all to share food with everyone. We build a sense of responsibility for reducing food waste.*

A model example of food waste reduction can be Milan, whose representatives aim to halve the amount of the food going to waste in the city by 2030 (Borejza, 2022). Restaurants, schools and stores have been involved in the project. The project began in 2014 with research to understand where the most food could be most easily saved. This was followed by consultations with the people of key significance in this matter (including restaurateurs), and a pioneering program with simple yet effective principles was developed. Eight years after the project was initiated, the city has managed to make use of hundreds of tons of food each year. Instead of ending up in the trash, the food goes to the needy suffering from malnutrition, significantly improving their diets. In consequence, it inhibits the development of many diseases, thus reducing the cost of medical care. Achievement of the goals intended was possible owing to the proactive attitude of the city government and the launch of measures to facilitate collaborative consumption, through:

1. Financial incentive for businesses - in 2018, a rule was introduced, according to which entities participating in the city's anti-food waste program received a 20 percent discount on garbage collection fees. In return, they were to pledge donation of food still fit for consumption but destined for disposal.
2. Involvement of school cafeterias in the project by 'connecting' them with food banks. Owing to a network system enabling the flow of information, the unused fit-to-eat canteen food goes to an assigned bank, and from there - to the needy. Moreover, based on a diagnosis of the students' eating habits, certain tendencies have been changed, and access to take out containers was provided so that the not eaten at school could be taken home. This was accompanied by environmental education activities.

3. Food exchange centers - places were set up to collect surplus food and distribute it to those in need. These places are very popular (the first two centers established in the city have been collecting and distributing nearly 20 tons of food per month, the equivalent of about 40 000 meals). The third and newest center has been established with the aim to help the youngest residents, where they can get clothes or toys in addition to food.
4. The network system links school cafeterias with local farmers, owing to which students get wholesome local products. This creates commercial outlets for farmers, while the reduction of the need to transport food over very long distances brings positive environmental effects.

The active efforts of the Milan authorities to reduce the waste of several hundreds of tons of food per year have been recognized – the city has been awarded the 'Earthshot Prize' or the so-called 'Green Nobel Prize.' It has become a 'role model' in the field of sharing economy and is currently setting directions for other territorial units. Through ongoing initiatives, social, economic and ecological goals are being realized and the local community is strengthened consistently.

4. Conclusion

The development of alternative forms of consumption, observed over several years in Western countries, which are inscribed in the idea of sharing economy, has been finding increasing application also in Poland. This is noticeable both on the theoretical level as well as in practical activities. The study of the literature on the subject, as well as the analysis of practical activities, allows confirmation of the thesis stating that sharing economy contributes to the achievement of social, environmental and economic goals on a local scale as well as builds and strengthens the local community, creating value for stakeholders. Some of the sharing economy activities are only possible locally, bringing specific benefits to internal stakeholders, including to the poorest groups of the local community. Collaborative consumption enables reduction of individual consumption, encouraging extension of the life cycle of products, thus eliminating product wastage, reducing waste, or limiting the use of transportation and production raw materials. The departure from consumerism toward product sharing with other community members consolidates social ties and strengthens the sense of local community. Trust, sharing, and concern for the environment become key words, replacing the approaches focused on such categories as money or possession.

From the perspective of local community formation, the integration of different groups of residents, the ability to realize one's passions without the need to purchase products, and, above all, the satisfaction of basic physiological needs by those in a difficult life situation have become quite important tasks.

It should be emphasized that at a local level, sharing economy activities sensitize to the needs of the poorest, who, in view of the deteriorating economic situation of households, will steadily increase in number. This raises the question of whether local authorities are able to take advantage of the potential of the residents in their territory and create the right conditions for resource sharing. The example of Milan shows that a thorough analysis of needs, formulation of ambitious plans and consistent implementation thereof can bring the expected social, economic and environmental results.

This example should become an inspiration for Polish territorial units, which have already gained positive experience in creating favorable conditions for the implementation of various forms of sharing economy. The scale of the initiatives undertaken is still insufficient, however, especially in the context of the deteriorating economic situation of many households, or the influx of refugees from Ukraine. What is more, the unstable political situation, intensifying economic restrictions or the still trailing pandemic are becoming a threat to the sharing economy.

In conclusion, the development of the sharing economy creates both new opportunities and new challenges for local government units, whose task should be to diagnose the needs of residents, spread awareness of the shared consumption availability in the territory, support local leaders' initiatives, as well as initiate their own projects in the field of sharing economy.

Educational activities, emphasizing the fact that sharing economy does not only entail the aiding of the poorest groups and the saving of financial resources, but also the strengthening of closed-loop economy, which is based on the principle of the longest possible product use waste minimization, need to be widely undertaken.

The sense of shared responsibility contributes to the consolidation of social ties and builds local communities, which consequently leads to the reduction of social exclusion and increases individual creativity.

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A DECADE OF RESEARCH ON CREATING SHARED VALUE CONCEPTION: A STRUCTURED SYSTEMATIC REVIEW AND FUTURE RESEARCH AVENUES

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Purpose: Contemporary company management is not only about maximizing profits, but also considering the needs of individual interest groups—a situation that invites special attention to the problems of sustainable consumption. Initiatives like Corporate Social Responsibility (CSR) and Creating Shared Value (CSV) are an opportunity for companies to help specific groups in need. A decade ago, criticisms of CSR motivated the creation of a new concept (CSV) that assumes a co-creation of value between companies and customers. However, the discussion around this concept has been fragmented; thus, this paper aims to conduct a comprehensive review of the literature around the CSV concept.
Design/methodology/approach: Bibliometric analysis and TCCM (Theory, Characteristics, Context and Methodologies) analysis were applied to 46 thematic works.
Findings: This analysis revealed some questions about CSV that merit further research. Basing on 46 articles we can state that most of the research around CSV concerns highly developed countries, whose economic stability may shape how often people decide to help others. For instance, we found no research that examines strongly supportive communities and how they behave to generate community wealth.
Research limitations/implications: We limited the search to publications in English, we did not consider other potentially relevant articles published in other languages. Moreover the analyzed articles came from one data source (Web of Sciences bibliographic database).
Originality/value: The analysis of the literature on the subject is of unique value; moreover, it helps to define the direction of the CSV concept. Furthermore, based on the analysis of the TCCM, it is worth exploring the consumer side of the shared value creation process in the future. Gaining more complete knowledge of all participants in the process may serve in the future to build long-term relationships affecting the overall wellbeing and development of the region, in which the co-operative process takes place.

Keywords: Creating Shared Value, systematic review, sustainable development, TCCM.

Category of the paper: Systematic review.

Introduction

Modern management models emphasize the need to build lasting relationships between market participants, particularly between producers and customers. However, companies need to also develop their image with stakeholders in order to extend their longevity. A major part of the image-building effort involves adopting pro-environmental and pro-social initiatives (Blenkhorn, MacKenzie, 2017; Doney, Cannon, 1997), which align with the notion of sustainable development. To this end, new management models emphasize pro-environmental and pro-social initiatives Kotler and Pfoertsch (2007) defined image as an individual's belief, idea and impression towards a certain object. To build positive image, companies can use various marketing communication tools, but what ultimately matters is the information imparted and its value. According to Jin (2018), consumers' positive perception of a company can generate increased trust that leads to greater loyalty, which is important to long-term success.

For the last decade, research on social entrepreneurship has focused on companies' role in enabling social value creation and stimulating social change, particularly within the emerging economic context (Del Giudice et al., 2018; Rao-Nicholson et al., 2017). The traditional approach to creating relationships recognizes price, on-time delivery, and technical quality as key factors in a company's success. However, in the modern world, cognitive and emotional factors are also gaining traction, given their influence over purchase decisions (Han et al., 2017). According to Porter (Porter, Kramer, 2011) and Kramer (2011), a company's social commitment is a source of value when building a competitive advantage. Thus, more and more companies are getting involved in activities related to sustainable development, which encompasses three factors: economic, social and environmental (FAO, 2002; Ren et al., 2013). According to Munasinghe and Cruz (1994) and Cruz (1994), all three elements must be given balanced consideration in order to achieve the best results. The literature on this subject (Munasinghe, Cruz, 1994) perceives the social concept of sustainability as people-oriented, split between internal organizational members and outside interest groups. The environmental view, meanwhile, focuses on reducing the degradation of natural resources and preventing the destruction of the natural environment. Lastly, the economic aspect emphasizes the allocation and usage of scarce resources (Romanowski, 2016).

In this vein, one recognized method of building a good company image revolves around the issue of Creating Shared Value (CSV). Ten years ago, Porter (Porter, Kramer, 2011) and Kramer (2011) initiated this new concept, which is consistent with sustainable development and represents a real opportunity for both small and large companies to collectively address social problems. Since then, CSV has attracted the attention of practitioners and academics who desire a viable, pro-social alternative to Corporate Social Responsibility (CSR). However, in order to see the value of CSV, there is a need to evaluate current research and determine the concept's distinguishing features.

On this point, we observe that the field lacks a comprehensive literature review about CSV; most scholars have dedicated their attention to CSR (Latapí Agudelo et al., 2019; Lee, 2008). Undoubtedly, the concept of CSV is less recognizable than CSR, driven in part by a belief among skeptics that CSV is merely an extension of CSR (Crane et al., 2014). In fairness, the similarities between the two have created confusion for the business community. The progenitors of the CSV concept, Porter and Kramer, intended it as a new way to implement the principles of sustainable economy and address complaints about CSR regarding financing sources. In any case, systematizing the knowledge about CSV would have a positive effect on differentiating the two and thereby help both science and business. Thus, the purpose of this article is to present a detailed analysis of all previous CSV applications and thereby derive directions for future research. This research adopted a Systematic Literature Review (SLR) and evaluated 10 years of academic English publications focused on the CSV topic.

Theoretical framework

Because the concept of CSV an outgrowth of Corporate Social Responsibility (CSR), it is important to first delineate the doctrines and assumptions that define the concept of CSR. One such definition of CSR, provided by the Green Book of the European Commission of 18 July 2001, is "a concept according to which enterprises voluntarily include social and environmental aspects in their commercial activities and in contacts with its stakeholders. Corporate social responsibility is a process through which enterprises manage relationships with various stakeholders who may have a real impact on allowing their activities [...] (Green Paper, 2001). Given the company's involvement in social and environmental problems, CSR is often associated with the concept of sustainable development (Baumgartner, 2014). Porter and Kramer (2002) emphasized the aspect of corporate philanthropy that is realized through the implementation of CSR assumptions. However, CSR is not only about the social aspect: It also relates to a balance between maintaining the natural environment and utilizing the resources necessary for the enterprise’s functioning (European Commission, 2011). In discussions of CSR, some authors (Carroll, 2016; Lee, 2008) have emphasized the need for a broader presentation and formulation of the company’s main goals, including its social and economic activities and the long-term construction of a two-way dialogue with its customers (Lewicka-Strzalecka, 2006). Indeed, to remain successful, companies increasingly need to view profit as not merely a financial issue, but a consequence of their social responsibility (Zuzek, 2012). This approach aligns with the idea of business ethics, or the so-called "Triple E": ethics, economy, efficiency, which are dependent on one another and constitute a coherent whole (Latapí Agudelo et al., 2019).

The rise of business ethics is in some ways a repudiatin of Friedman (2002), who argued that a company’s only social responsibility is to its bottom line. In this paradigm, any corporate efforts to help society will be paid by someone else (the customers, generally, but sometimes employees, and in rare cases, the owners). However, the rise of CSR – and by extension, CSV – offers an alternative approach to ethical incentives. CSV was introduced as an alternative that could offer real opportunities and serious strategic targets for genuine business decisions (Crane et al., 2014).

The concept of creating shared value, characterized for the first time a decade ago, was a response to the criticism of the CSR concept. The developers of this new doctrine, Michael Porter and Mark Kramer, formulated their principle assumptions around the three main criticisms against CSR. First, CSR for a socially active company entails costs rather than real income. Second, the generated profits that result from improving the company's image through CSR benefit owners and shareholders, but not other worthy stakeholders. With CSR, the company's executives decide on the allowance amount; with CSV, helping stakeholders is a question of pro-social activity on the demand side. The third objection to CSR is the choice of who to finance, with the company often choosing a beneficiary who would be valuable for the company's image.

Of course, these elements do not affirm whether CSV is a truly separate conception or just a continuation of CSR. On this point, Porter and Kramer (2011) and Kramer (2011) provided more arguments regarding the distinction between CSV and CSR. For one, CSR focuses on reallocating profits that have already been made, while CSV focuses on maximizing overall economic and social value. The evolution of demand-side thinking stems from the work of many social scientists (Porter, Kramer, 2006, 2011; Awale, Rowlinson, 2014). With their concept of CSV, Porter and Kramer sought to reimagine profit much more broadly— as a reflection of shared value, which enables a society to progress and, by extension, a company to develop faster. In this regard, profitable companies are those that adopt principles and practices that improve their competitiveness while accounting for the socio-economic conditions of relevant communities. Following this line of thought, Awale and Rowlinson (2014) argued that CSV is a framework for stakeholders to establish a competitive advantage in the long-run and benefit society in the process. By adopting this innovative conception, firms can tailor their business activities to better respond to social, environmental, and market needs (Romanowski, Jasiczak, 2021). There are three specific mechanisms by which companies can create shared value in communities: (1) reformulate products to meet customers' demands, (2) redefine productivity in the value chain, (3) and enable local cluster development (Yoo, Kim, 2019).

Evidently, both conceptions (CSR and CSV) have the same purpose, which is “doing good by doing well”. However, CSR emphasizes the idea of being responsible (i.e., creating a moral code for enterprises), while CSV seeks to create new values for all participating entities. According to Awale and Rowlinson (2014), CSR is also focused on achieving project efficiency and client satisfaction, but it doesn't generate the firm's business success or future growth. Thus, CSV is a great opportunity for the company to help various interest groups without sacrificing its profitability. Such considerations are increasingly necessary in the wake of consumers realigning their general value system and making more sophisticated purchase decisions (Porter, Kramer, 2011). With CSV, there are three winning sides: the company (generating profits by helping), the beneficiary (receiving the aid), and the client (who gains a sense of accomplishment through their involvement in aid activities) (Porter, Kramer, 2011). This win-win-win strategy represents a new form of value in today's market.

Methods

By systematically reviewing the literature through two methods—TCCM and bibliometric—we uncovered 80 articles concerning CSV. This sample was then refined down to 46 articles. Figure 1 shows the seven-step methodology (SSM) that was developed to execute the research objectives.

The review encompassed scientific articles published in journals. In order to accumulate high-quality research, we applied various search criteria across several stages. The key resource was the Web of Sciences bibliographic database. The articles within were systematically searched and referenced using explicit and reproducible criteria (search equation), followed by a complementary random search for keywords in different web browsers. In order to achieve our objectives, we structured our literature review according to the scheme in figure 1.

Because of our interest in CSV, we began our search in 2011 (when the CSV conception appeared) and considered articles up until 20 January 2021. The study included synonymous terms referring directly to the basic construct. The selection was based on a review of the list of the most common words in the abstract and keywords: "Creating Shared Value (CSV)" and "sustainable development". We limited our search to articles published in English.

Based on the initial parameters, the database reported 80 articles related to Creating Shared Value (CSV) and Value Creation. However, the ideological similarity between CSR issues and CSV led us to a large number of articles that were not specifically related to the latter. Thus, we manually reviewed the abstracts, titles, keywords and texts in order to determine which ones conformed to the CSV topic. We thoroughly reviewed the text and citations of 12 articles that seemed especially questionable. Ultimately, we decided to exclude 34 articles that were deemed insufficiently relevant, leaving us with 46 articles.

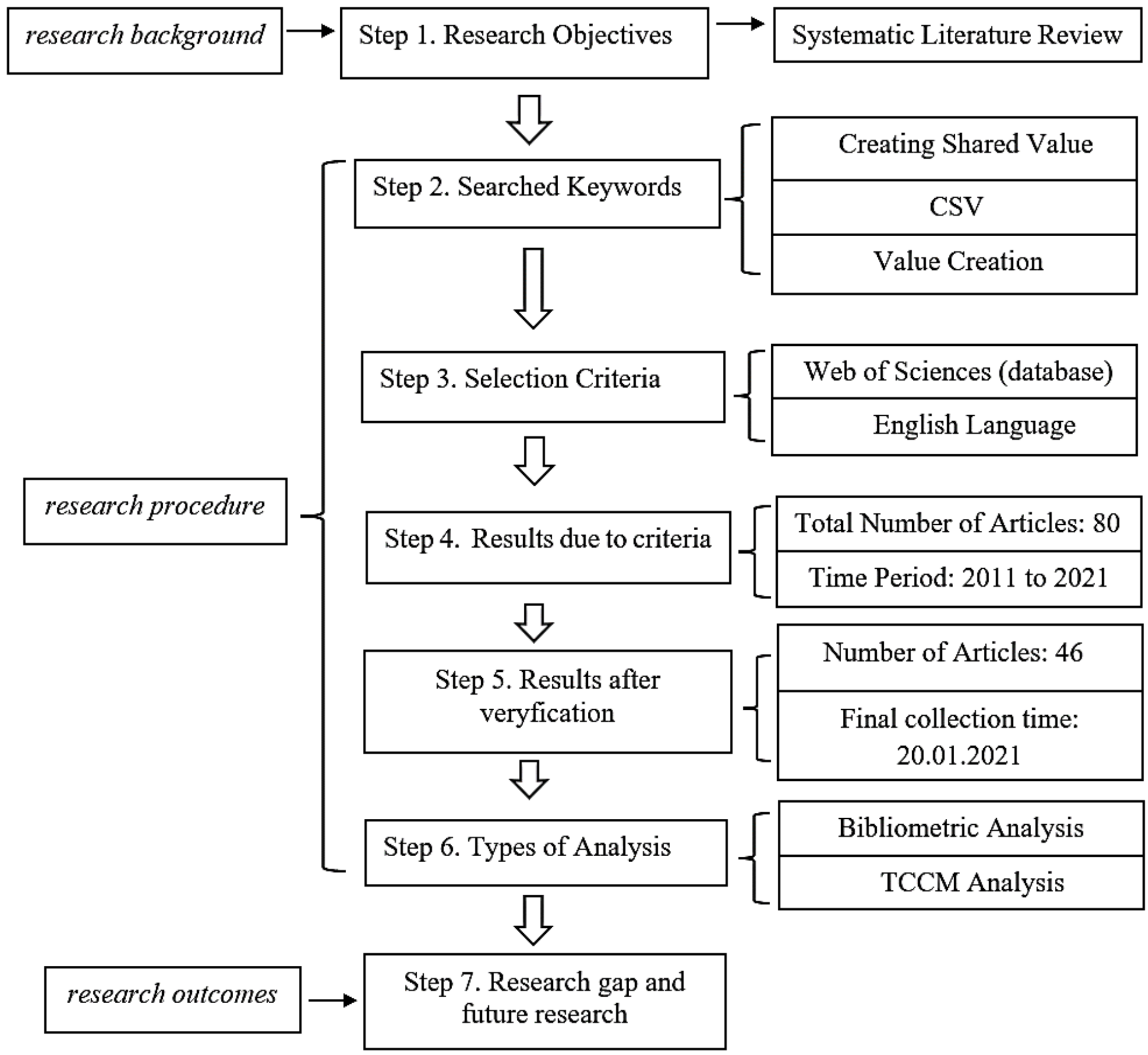

Figure 1. Structure review procedure.

Source: Own elaboration based on the study.

With these articles in hand, we first conducted an analysis of bibliometric data. This kind of analysis is useful for synthesizing previous research in order to uncover publication patterns. In the second step, we analyzed the full texts of all 46 articles using the TCCM framework (Singh, Dhir, 2019). The TCCM works to highlight the current gaps in the literature and suggest future research by analyzing the following component parts: theory development, context, characteristics, and methodology.

In the final step, we defined the research gap and directions for future research. Although this paper organizes the available knowledge about CSV, the selected articles make clear that academics and practitioners still lack a clear idea of its assumptions relative to those of CSR.

Bibliometric analysis

Bibliometric analysis is one tool for illustrating the degree of research into a phenomenon. Indeed, this technique is often used to gain a systematic, transparent and holistic view of the existing literature. By assessing chronological publication patterns (Punjani et al., 2019; Saha et al., 2020), such an analysis can also help with identifying significant authors, institutions, countries, sources and keywords in a particular area of science (Singh, Dhir, 2019). This section summarizes the quantitative results of this analysis.

Figure 2 shows the number of publications per year. By covering all the available documents, countries and time period since CSV's introduction, this analysis illuminates the development of Porter and Kramer's (2011) novel concept.

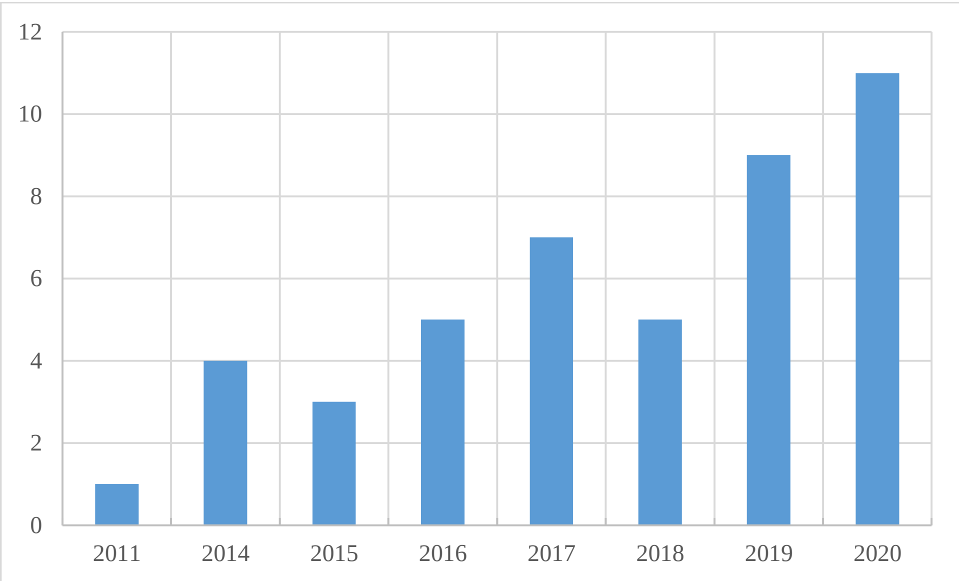

Figure 2. Publication trends and numbers.

Source: Own elaboration based on the study.

Obviously, the graph begins in 2011 with Porter and Kramer's seminal article, published in Harvard Business Journal. Since then, CSV-related research has been published in 27 journals (Table 1), the most prominent being Sustainability (9), Corporate Social Responsibility and Environmental Management (6) and Journal of Business Ethics (5), all of which feature a scope that directly maps to the subject. In other cases, CSV served as the research context for the selected topic (Table 1). Examining the source impact, only five journals exceeded the H-factor above 1: Corporate Social Responsibility and Environmental Management (4), Journal of Business Ethics (4), California Management Review (2), Extractive Industries and Society-An International Journal (2) and Sustainability (2).

When considering individual articles, the number of total citations signals the importance of the research within the scientific community (Table 1). Expectedly, the most cited article was Porter and Kramer's landmark paper detailing the new concept. In the second-most popular article, the authors criticized Porter and Kramer's concept by highlighting the strengths and weaknesses of CSV (Crane et al., 2014). In the third-most popular article, the authors highlighted the contribution of Scandinavian researchers to the notion that stakeholders are integral to creating common value (Strand, Freeman, 2013). The fourth-most popular article concerned the tourism industry and the cooperation of several parties of interest in creating social value (Font et al., 2016). The remaining articles had fewer than 70 citations; given the relatively low impact, we refrained from describing them in detail.

Table 1.
Number of citations

Paper	DOI	Total Citations
Porter M, 2011, Harvard Bus Rev,	NA	1886
Crane A, 2014, Calif Manage Rev,	10.1525/cmr.2014.56.2.130	247
Strand R, 2015, J Bus Ethics,	10.1007/s10551-014-2224-6	77
Font X, 2016, Tourism Manage,	10.1016/j.tourman.2015.10.007	73
Harvey B, 2014, Impact Assess Proj A,	10.1080/14615517.2014.950123	43
Pavlovich K, 2014, J Bus Ethics,	10.1007/s10551-013-1726-y	32
De Los Reyes G, 2017, Calif Manage Rev,	10.1177/0008125617695286	28
Hsiao T, 2016, Asia Pac J Tour Res,	10.1080/10941665.2015.1068194	20
Corazza L, 2017, Corp Soc Resp Env Ma,	10.1002/csr.1417	15

Source: Own elaboration based on the study.

The next step involved transforming the conducted content analysis into a thematic map through keyword (Figure 3) network analysis and clustering. The map graphically represents the main clusters of perspectives used to analyze CSV. The size of the circle refers to the number of articles, and the affiliation in a two-dimensional space indicates whether it belongs to 1 of 4 themes: highly developed and isolated themes (upper-left quadrant), emerging or declining themes (lower-left quadrant), motor theses (upper-right quadrant), basic and trans universal themes (lower-left quadrant) (Cobo et al., 2011). The most important research for the field concerned CSV analysis in the context of CSR, business, performance, and finance and management. Our analysis of these studies' citations reveal that the areas in this square are not sufficiently developed and universal (Cobo et al., 2011). The second important directions are themes classified as motor themes, i.e., related to a new business model, innovation, social entrepreneurship, and sustainability. These topics are well developed, but also important for the structuring of a research field (Cobo et al., 2011).

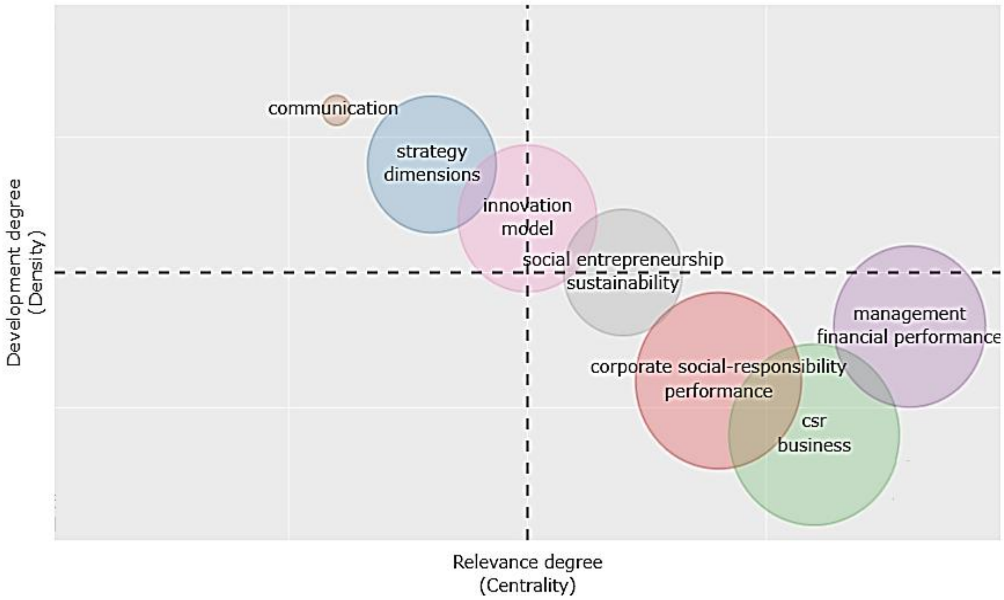

Figure 3. CSV thematic map through keyword
Source: Own elaboration based on the study

TCCM analysis

The TCCM analysis opens room for exploring uncovered or less attended areas. This analysis seeks to derive conclusions about the following components: theory, characteristics, context, and methodology (Singh, Dhir, 2019). Furthermore, it enables the development of theoretical models from the perspective of less explored countries and industries, which can bolster the generalizability of the research. The following analysis summarizes the gaps in the previous literature and outlines the future research agenda for further developing the CSV concept (Gilal et al., 2020).

Theory

The sampled articles demonstrate a significantly improving awareness of the theoretical underpinnings of CSV. As a concept, CSV's main assumptions relate to sustainable development. In this regard, Porter and Kramer (2011) accounted for the symbiotic nature of the relationship between the company, customers and beneficiaries. Due to the concept's orientation toward human welfare, the authors who described CSV often used the social theory component of TCCM (Corazza et al., 2017; Corner, Pavlovich, 2014; Harvey, Bice, 2014; Pavlovich, Corner, 2014). This theory is especially important as it highlights which groups (clients, companies, and beneficiaries) are the focus of attention. Many authors also adopted resource-based theory to explain how companies implement CSV (Fernández-Gámez et al., 2020; Hsiao, Chuang, 2015, 2016; Jones et al., 2016; Kelley et al., 2019), with the financial aspect being considered within the scope of possible benefits.

The papers presenting the company's perspective were by far the largest part of the sample. Articles that considered the customer's perspective were often supported by behavioral theory (Lee et al., 2016; Park, 2020), which helps to illuminate purchasing behavior in the context of CSV. The common theoretical threads in all these CSV studies are the business ethics theory (Nam, Hwang, 2019) and value-chain theory (Giuliani et al., 2020). Many authors mentioned that ethics underpin the key principles of CSV, while underlining that the value chain is important to the process of creating new value for all CSV actors. Occasionally, the analyzed articles incorporated other theories such as: organizational theory (Campos-Climent, Sanchis-Palacio, 2017), growth-based theory (Jones et al., 2016), reputation-building theory (Rubio-Andrés et al., 2019), human rights theory (Giuliani et al., 2020), educational theory (Sadick et al., 2019) and some others, depending on the broader context of considerations.

Characteristics

The bulk of the sampled literature concentrated most on characteristics that support relationship-building research, and that have also served as antecedents or outcomes in various disciplines. In the analyzed articles, the authors often included information about the territorial range of the phenomenon under study (Bergquist, Lindmark, 2016; Chen et al., 2020). These studies encompassed whole countries (e.g., Korea; Choi et al., 2018), regions (e.g., Rajasthan region in India; Bowe, der Horst, 2015), Malaga in Spain (Fernández-Gámez et al., 2019), Apulia in Italy (Semeraro et al., 2020) or smaller territories like local clusters (Giuliani et al., 2020). Despite the geographical emphasis, most articles highlighted the common goal and interdependence of CSV actors in creating new value. That said, CSV activities are most often carried out in highly developed countries due to greater customer awareness about social problems and a higher degree of business maturity needed to address them.

Regarding company size (Saenz, 2019), the articles most often analyzed small- and medium-sized enterprises (Rubio-Andrés et al., 2019), but sometimes broadened to large companies (Jones et al., 2016). Most authors see the CSV concept as a way for companies—even those with low funds to help segments of society. Whereas CSR requires the involvement of more financial resources, and thereby lowers the participation of less wealthy enterprises, CSV can be used by both big (Nam, Hwang, 2019) and small companies (Park, Seo, 2018).

With regard to the analyzed industry (Gong et al., 2019), the authors often do not specify the industry in which the described enterprise operates, although a few studies focus on a specific industry, e.g., tourism (Hsiao, Chuang, 2015; Serra et al., 2017) or food (Ham et al., 2020; Lee et al., 2014). This suggests that CSV is applicable to many areas of modern economics.

Context

The context of CSV can be delineated into three interest groups. Specifically, we divided the articles into three interest groups: companies, customers and beneficiaries. Companies (Park, 2020; Pavlovich, Corner, 2013; Saenz, 2019) initiate the CSV campaign and select the target group to be assisted. Companies generally see higher sales for products involved in CSV campaigns. There are several types of cooperation in this regard: The employer can take care of employees (Park, 2020), or more traditionally, provide aid to external beneficiaries (Kim et al., 2020; Serra et al., 2017). The second group, customers (Jin, 2018; Kang, Na, 2020), includes those who decide to purchase a product that is part of a CSV campaign. This group benefits from being able to help others by simply purchasing everyday products. The third group comprises beneficiaries (Sadick et al., 2019; Wu et al., 2020) who receive aid generated jointly by the company and its customers. Defining research on these terms can help to systematize knowledge about CSV going forward.

Methodologies

Among the selected articles, five methodologies appeared most frequently. Many papers were based on quantitative research through questionnaires (Campos-Climent, Sanchis-Palacio, 2017; Kim et al., 2020). This method allows authors to show detailed numbers and figures while analyzing both entrepreneurs and clients. Survey methods can bypass qualitative aspects and focus on collecting representative data. In these cases, the authors often chose SEM (Rubio-Andrés et al., 2019) and ANOVA (Lee et al., 2016) to analyze and interpret the results. Many of the articles also leveraged secondary data (Saenz, 2019; Strand et al., 2014) to thoroughly discuss and describe the CSV concept. Interviews (Fernández-Gámez et al., 2020; Gong et al., 2019) with both customers and practitioners were very common, as well. Such interviews illuminated the motives behind CSV involvement and how individual actors chose to respond. The fourth method was the case study, which was generally used to highlight a company's CSV activities (Kwon, Park, 2019; Lee et al., 2014). Finally, the least popular method was the Delphi method (Hsiao, Chuang, 2016; Kang, Na, 2020), in which authors present the assessments and statements of specialists from specific industries to verify the effectiveness of the company's CSV activities.

Conclusion, future research and limitations

The present study evaluated relevant journals, keywords and publishing trends in order to summarize the fragmented literature on CSV. In doing so, we consolidate various perspectives and keywords that can be used to better understand the structure and dynamics of CSV conception Our hope is that the results will help to identify research gaps and stimulate future research in this domain.

There are several issues related to CSV that need to be resolved. For instance, can CSV activities be implemented in countries with a different degree of development, or are they only likely to occur in highly developed countries? Meanwhile, should CSV be used by large companies (such as international corporations) or should it be dedicated to small- and medium-sized enterprises within a smaller territorial range? Should the costs of aid be passed to consumers? Should a company engaging in CSV only be the initiator or also the majority aid participant? Additionally, does CSV need to encompass awareness-raising about societal problems in order to be truly valuable? Ultimately, our comprehensive analysis of the literature exposed a need to incorporate behavioral research and explore the incentives that drive consumers to become engaged with CSV actions. Indeed, a better grasp of consumer psychology is necessary to understand how individuals evaluate products or services.

One viable avenue for addressing these topics is to incorporate behavioral economics, which studies the factors that influence the decision-making progress. At its core, behavioral economics is interested in the question of „what" makes a person behave a certain way. The Adam's Smith assumption that the human is rational, seeking to achieve his or her own objectives, he is doing everything to maximize gains, to aim the gain this human being needs to select optimum (find the perfect option from market offer), this statement is a preludium to today's behavioral economy. Nowadays behavioral economics concept is interested in the individual human's being behavior. It asks question "what" makes a person behave in a certain way. It investigates common problem (economical and psychological). The behavioral economics is a concern studies of some specific factors influencing the decision-making process (psychological, cognitive, emotional, cultural and social) (Minton et al., 2013). When considering the CSV phenomenon, one should also take into account the understanding of the concept of value. By abandoning the perception of value through book value (Friedman, 2002), it can be viewed subjectively in relation to the opinion of the demand side.

Most of the analyzed articles focus on the role of the company in CSV. In the future, it would be worth exploring the other two sides involved in creating shared value (clients and beneficiaries). For instance, there is a need for experiments that examine consumers' reactions to information about a company's involvement in CSV. Moreover, there is a lack of research on the beneficiary's perspective; thus, future research should consider how the aid is received by its intended target groups. Enterprises looking for sources of competitive advantage may be particularly interested in understanding the motivation for engaging the demand side (customers) in CSV. Many studies have shown that the quality and desirability of a product or service are not the only factors that influence consumers' evaluations; there are other relevant factors that could underpin the implementation of CSV.

The analysis also revealed the incorrect naming of aid programs. Due to the low popularity of CSV, the business world classifies many activities as CSR. Thus, future scholars should work to establish clear boundaries between CSR and CSV, and from there, determine the desirability of CSV in the market and its real impact on society. We also believe there would be value in investigating CSV using Construal Level Theory (CLT). This approach explains how psychological distance influences individuals' thoughts and behavior when evaluating a product or service. The theory posits three components that significantly impact the decision-making process: marketing strategy, psychological distance and construal level. Thorough analyses can provide some hints about future changes in consumer behavior.

Lastly, scholars need to uncover how communities realize CSV actions. Most of the research around CSV concerns highly developed countries, whose economic stability may shape how often people decide to help others. For instance, we found no research that examines strongly supportive communities and how they behave to generate community wealth.

Naturally, this study features some limitations. First, the analyzed articles came from one data source (Web of Sciences bibliographic database). Moreover, the choice of the final sample for in-depth analysis may be seen as too subjective. However, the use of the TCCM analysis helped to eliminate articles that were not sufficiently related to the issue of Creating Shared Value. Finally, because we limited the search to publications in English, we did not consider other potentially relevant articles published in other languages.

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CSV REVOLUTION OR EVOLUTION OF THE CSR CONCEPT

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Purpose: The concept of value is not limited to the financial criterion alone. Value in modern economics is gaining prominence as a multifaceted concept because of the possibility of interpreting it from the customers' point of view. In order to meet market expectations of the demand side, the concept of value co-creation is evolving. The aim of the article is to indicate the systemic differences between CSR and CSV, paying particular attention to the aspect of considering the concept of value. As an example of good practice, the author chose to present the activities of a company implementing a CSV strategy.

Design/methodology/approach: Businesses are learning from their mistakes and, abandoning unfair greenwashing practices, are choosing to pursue goals that fit into the concept of Shared Value Creation (Porter, Kramer, 2011). Based on a case study, this article will present the evolution of the CSV concept and the effects of its application in business practice. The activities carried out by the 'Inne Beczki' brewery, were classified as implementation of the concept of creating shared value. Research metods is critical review (comparison of CSR and CSV) and case study based on 'Inne Beczki' brewery.

Findings: Creating Shared Value is an opportunity for smaller businesses to provide relational support and influence improved social wellbeing without having to sacrifice the financial benefits of the business. The example presented here is evidence of the CSV strategy in the market space. Thus, through this work it is possible to grasp the differences, in the context of the concept of value, between CSR and CSV.

Research limitations/implications: In line with the case study approach, the author focused on one company that operates in a specific segment (FMCG) and in a specific territorial area (Polish market).

Originality/value: The unique value of this article is presenting the concept of Creating Shared Value, which is not often described with an example from the business space. The author's aim is to present, by means of a case study, actions initiated by a business which, by carrying out an action for a shelter, became part of the concept of creating shared value. In addition, by releasing a limited series of bottles, it increased public awareness of the problem of animal homelessness, as evidenced by the increased adoption of the animals presented on the labels. Due to the greater popularity of CSR, all activities of companies that merely have the appearance of additional pro-social activity are incorrectly referred to as CSR. By making a comparison and presenting a concrete example, the author shows that the topic of segmenting activities and attributing them to more specific categories needs to be deepened and can be a direction for future research.

Social implications: The author believes that this article will influence the popularisation of similar business practices. She sees the presented case study as an example of good practice and the realisation of some of the programme assumptions of the CSV concept.

Keywords: Creating Shared Value, sustainable development, case study, Corporate Social Responsibility.

Category of the paper: Research paper.

Introduction

Modern management models pay special attention to building lasting relationships between market participants. Much attention is paid to the producer-customer relationship. One of the important areas of management is the care for creating a positive image of the company for internal and external stakeholders. Moreover, the new management model appreciates the pro-ecological and pro-social initiatives (Blenkhorn, MacKenzie, 2017; Doney, Cannon, 1997). According to Jin (2018), a friendly perception of a company by its consumers can generate more trust, which leads to greater loyalty. The phenomenon of sharing profits in the economy is not something new (Krukowska, 2012), it is worth emphasizing that over the course of history attitudes that are the foundation of today's responsible business face have been shaped.

In the second half of the 20th century, there was a change in the business development paradigm that assumed conducting business activities taking into account environmental and social aspects (Romanowski, 2016). Today's consumer has access to full information about substitute products, differences in offerings and company practices. Profit maximisation per se is no longer the main objective of a company, but is an important part of it. The demand side is increasingly demanding that businesses take responsibility and share the profits generated with internal and external stakeholders (customers, suppliers, owners and the local community).

Due to the growing popularity of the concept of CSR and the increasing implementation of the issue in the business space, a research gap has been recognised in the form of blurring the boundaries between the well-known CSR and the less recognised CSV. This article aims to present the basic systemic differences between CSR and CSV. Using the example of the implementation of a CSV strategy by the polish brewery “Inne Beczki”, the author wanted to highlight the company's ability to reformulate its resources to generate new value for all stakeholders. The analysis of the literature focused primarily on the interpretation of the concept of value, which is crucial when comparing CSR and CSV.

Theoretical background

According to Porter and Kramer (2011), a valuable issue leading to building a competitive advantage is the company's social commitment, but not only consisting in the transfer of funds. More and more companies are involved in activities in the field of sustainable development. The concept of sustainable development is based on the coexistence of three factors: economic, social, and environmental (Ren et al., 2013). The subject literature (Munasinghe, Cruz, 1994) views the social concept of sustainable development as being people-oriented, those who are in the organization, and interest groups outside the organization. The next step is to look at the environment, where the main focus is on reducing the degradation of natural resources and preventing environmental damage. The latter factor places particular emphasis on the economic aspect, which focuses on the allocation and use of scarce resources.

Nowadays, it is allowed to understand value in a material context, expressing it in money or other means of payment. This is how value is identified with price. However, it is possible to view values subjectively as the set of features inherent in a thing by which it meets someone's needs. One more way of perceiving value can be distinguished, using the number of units in a given physical quantity. The value proposed by Porter and Kramer (2011) cannot be limited to monetary measures only. To create, according to the Cambridge Conceptual Dictionary, is to do something new, invent something. Creating a new quality does not mean creating something from scratch, it can mean changing existing products and services to adapt them to the needs of a noble idea. Creating shared value provides for a different approach to the issue of value from an accountant. To understand what type of value was meant by Porter and Kramer (2011), one should follow a subjective approach to the concept of value. Monetarists perceive book value as value, expressed in numbers as being money. Proponents of perceiving sources of value on the supply side also defend the position that "money is a necessary form of the appearance of value (and capital) in the sense that prices are the only form of the appearance of value for goods" (Milios et al., 2018). The value must be considered on the basis of determining its drivers. Due to the existing distinguishing features, it can be divided into three main trends in economic theory: the classical school, the Austrian school and the neoclassical school. The above schools perceive three different sources of value generation, these are the following approaches: objective, subjective and mixed (Nadolna, 2011).

The discourse on the understanding of values appears in the Austrian school, taking into account not only the point of view of the enterprise, but also taking into account the perspective of the demand side. The founders of the Austrian school emphatically emphasized that they do not refer to total utility, but to marginal utility. The development by C. Menger of the principle of marginal utility was a strong negation of the classical approach and, above all, a critique of the perception of value through the prism of total utility (Menger, 2013). The juxtaposition of two different perspectives (supply and demand) triggers a discussion regarding the new definition of value. Speaking about the Austrian school, one should emphasize the contribution of C. Menger, who defended the position that goods have value due to the way a person perceives them (gives them meaning). C. Menger's theory of value was the sum of the economic point of view with the psychological perceptions of the demand side related to the need to satisfy their needs” (Landreth, Colander, 1998). The subjectively perceived value represents the economic good and its value, not as a sum of costs arising in the production process, but as any consumer's assessment. An example of such an approach to the valuation of goods may be works of art, assessed based on subjective aesthetic opinions (Giza, 2016).

The new concept presented by Porter and Kramer is based on other, than expressed in money, understanding of value. The whole process is accompanied by a process of people-centered and environment-oriented re-creation. Yet the creators of shared value do not give up on profits. By creating shared value, they are guided by the interests of other people (Romanowski, Wieja, 2021). Profit expressed in book value is not the overriding goal, but is communicated from the very beginning. Even the best idea can be used for unethical practice. It is worth emphasizing that the CSR program framework was aimed at influencing entrepreneurs to make responsible business decisions that would not harm society and the environment. The approval of the demand side, which was gained by the concept of responsible business, began to lose its credibility as a result of entrepreneurs' willingness to multiply profits. It sublimes the idea through unethical practices of enterprises, what can finish as losing its credibility and efficiency in the eyes of consumers. While observing the history of responsible business, Waynnye Visser distinguished several epochs. Ages that do not follow each other, but coexist. The era of greed, philanthropy, marketing (understood more as promotion), and the era of management.

The changes in the general value system of the customers are beginning to promulgate in the current market, what leads to more and more sophisticated purchase decisions (Porter, Kramer, 2011). The Creating Shared Value concept aims to enhance a firm's competitiveness by advancing their business and social conditions simultaneously. Applying this innovative conception can help companies to better respond to social, environmental, and market needs as well as business activities. Speaking of Creating Shared Value Conception, three different mechanisms should be mentioned there, by which companies can create shared value in communities: (1) reformulate products to meet customers' demands, (2) redefine productivity in the value chain (3) and enable local cluster development (Yoo, 2019). The emergence of a new direction (CSV) was caused by the criticism of the practices used so far by enterprises and called CSR. Friedman (2008) based his criticism of CSR on questionable sources of funding for philanthropy. Skepticism is not dictated by a general criticism of the idea of sharing with those in need, but rather by pointing out that if someone receives welfare, the other person must sacrifice for a higher purpose (Levitt, 1958).

Contrary to the traditional approach to management, CSV cares about all factors. There are three winning sides: the company - generating profits from helping, the beneficiary - receiving the aid and the client who, through involvement in aid activities, gains a sense of accomplishment (Porter, Kramer, 2011). This win-win-win strategy is giving a new value for today's market. Moreover, as we can assume, both conceptions (CSR and CSV) have the same purpose, which is "doing good by doing well". CSR focuses on the idea of being responsible (creates a moral code for enterprises), while CSV offers the creation of new values for all participating entities. On the other hand, according to Awale and Rowlinson (2014), CSR is focused on achieving project efficiency and client satisfaction, but it doesn't generate the business success or future growth and development of the firm.

Research method

The use of the case stage method in this article is intended to make clear the good practices applied by the brewery "Other Barrels". The author believes that by presenting an example of the application of CSV assumptions, it will be possible to make these unique elements visible. Case study research is well suited to understanding the interactions between information technology-related innovations and organizational contexts (Darke et al., 1998). These can be observations, participant observations, interviews, questionnaires, documentation of the studied organization, press sources, Internet sources, available databases, etc. On the basis of the collected information, the case study method makes it possible to perform an in-depth analysis of the studied problem, to present its specifics, interaction with other elements of the organization or its environment (Kostera, 2011). Case study research can be used to achieve various research aims: to provide descriptions of phenomena, develop theory, and test theory (Cavaye, 1996).

Systematic literature review (SLR) is a process that allowed to collect relevant evidence on the given topic (Mengist et al., 2020). In this case, the literature analysis aimed to find distinct elements in CSR and CSV strategies. The main research question is whether CSV is a continuation of CSR or whether the new strategy proposed by Porter and Kramer (2011) is different enough to be perceived as a separate concept. The comparative analysis focuses not only on the systemic differences of the two concepts but also on the interpretation of the concept of value. The research hypothesis was that CSV differs from CSR in its interpretation of the concept of value. In order to better illustrate the programme assumptions of CSV and to make real programme differences visible, the author additionally used the case study method.

Results - literature comparison and analysis

Both concepts are based on the assumption of supporting the beneficiaries. Unfortunately, the abuses used by companies have damaged the image of the entire concept of corporate social responsibility. However, it is worth paying attention to the new provisions contained in the CSV. There are so far unclear issues resolved, such as financing, or the allegation that a company is not honest in using CSR to multiply its profit. The new doctrine (CSV) deals fairly with the topic of transferring funds to beneficiaries. The company using CSV is the initiator of the aid action, thus it communicates that by helping it does not give up its profits. What is more, it allows consumers to choose, by choosing a CSV-labeled product, you donate the part of the sum specified by the manufacturer to charity (the exact collection target). Due to the moment of transferring the funds to the selected needy group, which is due after the end of the action, the problem of ambiguities as to financing is solved.

Table 1.
Corporate social responsibility vs creating shared value

	CSR	CSV
Value	Charity	Economic and social advantage
Orientation	Pro-social, philanthropy	Joint work of the company and society
Type of actions	Detached and under pressure	Related to market development
Profits	It does not directly influence profit maximization	Directly related to profit maximization
Goal	Variable, dictated by your preferences	Permanent, consistent with the company's strengths and its specifications
Source of financing	The dedicated budget limit for CSR	Scaled with the operation of the company
Example	The NIVEA action regarding the founding of new playgrounds, the decision on the construction site was made on the basis of an online plebiscite	Polish brewery "Inne Beczki" - a campaign where part of the proceeds from the sale of a special series of beers is allocated to a shelter for homeless animals

Source: Own elaboration based on Porter, Kramer, 2011.

Table 1 is a comparison of main assumptions describing both concepts. In economic practice, CSV exists for a relatively short time, therefore it is subject to constant evolution. It should be emphasized that the boundaries included were drawn up by the creators of CSV, Porter and Kramer, therefore they are not the final framework for the functioning of the concept. According Porter and Kramer (2011), altruistic help is a feature of CSR. The CSV concept assumes mutual economic and social benefits, with the calculation of available tools necessary to achieve the chosen goal. Corporate social responsibility offers help without involving the public, the costs of operations fall on the enterprise and involve internal structures. Creating common value is entirely based on the cooperation of the company and society, it is, in a way, a joint contribution to a good cause. There are also differences when considering the type of activities. Philanthropy, characteristic of CSR, is accompanied by a sense of the obligation to distribute the aid evenly and fairly, which is why the target groups change and are not related to the company's business profile (Romanowski, 2016). The choice of general partners is the result of external pressure or the personal feelings of the people responsible for the implementation of aid activities.

The choice of general partners is the result of external pressure or the personal feelings of the people responsible for the implementation of aid activities. The concept of CSV is often implemented by smaller companies due to their more geographically limited spectrum of operation. It is easier to offer help to specific target groups, if you know the specifics of the market. Moreover, acting in favor of the welfare of potential customers not only results in a better image, but also may later trigger the principle of reciprocity. In the CSV concept, identifying the right target group is a very important element. Given the need to reformulate the product (give it new elements), the whole process is accompanied by strategic planning similar to the placemaking of a new product in the market space. In terms of funding, corporate social responsibility is characterised by a predetermined limit to the dedicated budget; in the case of shared value creation, funding for outreach activities scales with the company's activities and customer involvement.

The examples in the table above reflect the nature of the company's commitment. A brewery that organizes a fundraiser for an animal shelter, adjusts its products, so that they are associated with the campaign. Thus, it gives the consumer a choice, the message is clear: "dear customer, if you choose a beer with a special label, you will contribute to the improvement of animal conditions in a particular shelter, but if you are not interested in the action, choose another beer". This information is a good example of CSV activities. The case of the high-profile playground building campaign sponsored by NIVEA can serve as an example of the implementation of CSR ideas. The company offers a cosmetic assortment, and a large part of the target customer group are women and children, therefore, to warm the image and gain a share in the hearts of consumers, the manufacturer decided to donate playgrounds to the public. To involve the interested circles, the decision on the construction site was made based on an internet poll, and the location that received the highest number of votes won. This action met with public approval and its success was the result of the transfer of considerable financial resources entirely from NIVEA.

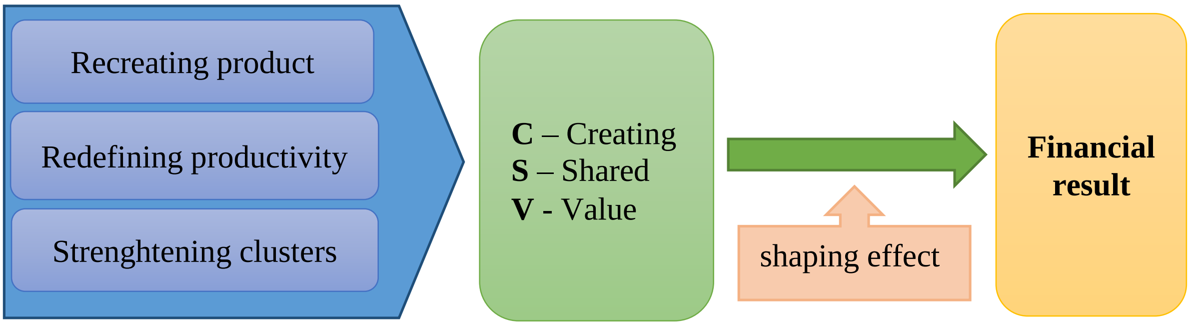

Figure 1. Creating shared value process.

Source: Own elaboration based on Frenandez-Gamez, Gutierrez Ruiz, BecerraVicario, Ruiz-Palomo, 2019.

Creating Shared Value is perceived as a process consisting of several factors. The input effect, triggering the process of creating value for the company and other stakeholders, may be distinguished into three activities. They are: re-creating products, redefining productivity, and strengthening clusters (Frenandez-Gamez et al., 2019). The presented model is a reflection of the existing connections of many structures and includes relationships between different structures. The first row is constituted by the "input factors", the creation of shared value is the result of a synergy effect and is called the second-order construct. The shaping effect is understood as the sum of many factors influencing the financial result, they can be variables such as size, market segment, group membership, etc. The output effect of the presented model is the financial results generated by creating a common value and determined by the shaping effect.

There are a lot of similarities between the two concepts of CSV and CSR, but when looking at the program assumptions, it is important to note the difference occurring in the question of values. A typological division of values according to Eduard Spranger, noted that the concept of value can be divided into six separate types. The German philosopher proposed to analyze the concept by understanding its minor meanings (Bachnik et al., 2022):

- Theoretical: an interest in the discovery of truth, a cognitive approach.
- Economic: Greater interest in marketing, production, or use of resources.
- Aesthetic: Interest in an artistic approach to life. Perceiving experience in terms of grace, symmetry, or harmony.
- Social: Altruistic and philanthropic aspect of life. Social people tend to be systematic and selfless (the integration of values with the concept of CSR is evident here).
- Political: Power-oriented - seeking power, recognition, and influence.
- Religious: They tend towards the highest and most satisfying values.

This classification makes it possible to determine the affiliation of CSVs and also to show the differences between the concept in question and related CSR. By reaching a description of the social type of values, the CSR concept, which has become firmly established in the strategies of many companies, can be considered a viable practice. By the same token, it is worth noting that CSV, unlike CSR, is not intended to be a tool to make altruistic or philanthropic corporate goals a reality. Shared Value Creation is intended to reformulate an already existing value (hitherto used to generate profits for the manufacturer itself) into one that will have a much wider social scope (improve conditions, all stakeholders involved in the process). The delineation of value types allows us to better represent the concept of CSV, as it is a fusion of social and economic value types. Indeed, the Creation of Shared Value is intended to generate economic value. It is not an exclusive activity to improve the living conditions of specific interest groups or to combat a social or environmental problem chosen by a narrow group of company authorities. At the core of CSV is the creation of new value, which is generated through the agreement of all parties involved (the initiator - the enterprise, the customers - the intermediary funder, and the beneficiary - the direct or indirect recipient of the aid).

'Inne Beczki' brewery case study

The "Inne Beczki" company, which organized an action that fits in with the CSV concept in 2019, offered its customers to participate in helping homeless animals. The action involves creating a series of beers with labels depicting images of dogs up for adoption from a shelter. The brewery's CEO, Jakub Szulczewski, reveals details of the campaign. The beers have been available in restaurants, stores, and retail chains across Poland since the fall of 2019. In connection with the action launched by the brewery, 22,000 bottles of beer were produced. The aim of the campaign was to engage the brewery's customers socially, which is why each 1 zloty from every bottle sold went to the Przytulisko u Wandy in Przyborówko and Rusiec. What's more, the organizers of the initiative wanted consumers reaching for beer from "Inne Beczki" to think for a moment about the situation of dogs in shelters. Perhaps the result of such action will be that a customer buying beer will decide to adopt a homeless dog. Mr. Szulczewski, talking about the action, points out its local character, but ideologically the whole concept is supposed to carry a message of nationwide scope. Describing the whole undertaking, the CEO says: "maybe our customers won't take in a dog from the label, but maybe they will adopt another one from a shelter closer to them" (Lemańczyk, Wilgos, 2020).

It can be seen that the CSV activity resulted not only in an economic effect (direct financial support). An additional positive goal realized was the dissemination of photos of the neediest dogs, which so far have not attracted the interest of potential adoptive families. The campaign carried out can be assessed as successful, evidence to support this statement is the fact that 10 of the 25 shelter charges presented on the labels have found new homes. The brewery is a good example for smaller companies, the actions carried out by the presented company received a lot of attention from the Internet media, and probably made it into the memory of many beer drinkers. What's more, this is not the end of the helping adventure, as Inne Beczki announces the creation of another batch of beer that will focus on more groups in need of help.

The charity event was attended by Warsaw venues that distribute beer from the Inne Beczki brewery, these included: Cuda na Kiju - a multitap bar, Kulturalna, Plan B, Klub Komediowy, Barka Wisława, and Oleandrów 3. The distribution network is not limited to catering outlets, the brewery was able to reach a large number of customers as part of the doggies initiative, thanks to cooperation with almost a hundred contractors. Of these, eleven units are wholesalers who are distributors of a special series of beers to more outlets. Another four outlets for beers with unconventional labels turned out to be four large retail chains: Shell gas stations, Makro, Intermarche, and the Duży Ben liquor store.

This is how the Polish brewery, giving up part of the profit from sales, donated more than 20 thousand zlotys to homeless dogs. A definite advantage of the whole venture was the fact that the manufacturer did not impose on consumers to participate in the campaign. It left the demand side with a choice. The customer can purchase a beer with a "doggy" label, on which the details of the action are explained, or, if they don't want to take part in the action, they still have the option of buying a beer from the regular collection.

The organized action did not just have a philanthropic rationale. The creators of the new labels, given the size of the company and limited financial resources, decided to create shared value. Each of the parties involved benefited from participating in the process. The beneficiaries (homeless animals) received the financial assistance they needed to survive. The initiators/ organizers (the brewery) gained income from sales, made possible by the volume of bottles sold. Customers here not only act as conscious funders of aid but can also be considered recipients of a bundle of additional benefits from consumption. By purchasing a limited-edition bottle, they receive the promise that they are improving the well-being of stakeholders. What's more, they can join in the action by purchasing a beer they like.

Conclusions, Limitations and future research

There is an ongoing discussion about the importance of creating a new direction and not improving the CSR already rooted in the world of science and business. When opting for innovation or its lack in CSV, it is worth referring to the designated program differences of both concepts. CSR focuses on the reallocation of already achieved profits, while CSV is based on the maximization of the overall economic and social value assuming, inter alia, the creation of a new good or modification of an existing one. The evolution of thinking from the point of view of the demand side is derived from works on sociology (Porter, Kramer, 2006; 2011; Awale, Rowlinson, 2014). Profit is understood similarly to value in subjective terms. Brought to life "common value" enables society to progress, and thus, faster development of the company.

Both concepts are similar to the causative power of CSR and CSV. Referring to the purely theoretical program assumptions, both strategies are designed to make the world better by running a responsible business. According to the author, today it is difficult to make a complete comparison of the two concepts due to the great fame of CSR and the still poor knowledge of CSV by the business community. For a detailed comparison, verification of the completed tasks under both concepts is needed, the verification process is difficult due to the still low popularity of CSV. The dissemination of the new doctrine by Porter and Kramer (2011) gives hope for the growing popularization of CSV in the business environment. The aim of the article was to identify the systemic differences between CSR and CSV, with a particular focus on the aspect of considering the concept of value. By conducting a comparative analysis, the author identified the main points of difference between CSR and CSV. However, in the future, it is worth presenting further examples of the application of the CSV concept, for the precise determination of its development directions. The author trusts that with the increasing number of examples of the use of CSV, the concept will be subject to evolution and thus it will be possible to make a full comparison between CSR and CSV. However, a summary of the similarities and programmatic differences of CSR and CSV, provided arguments in support of the research hypothesis, which was that CSV differs from CSR in its interpretation of the concept of value. CSV can be seen as a disconnected concept from CSR due to its value dualism. It was noted that CSV is a fusion of social and economic value types.

The presented example is a proof that the concept of Shared Value Creation (regardless of interpretation) can and is implied by the market. In the case analyzed, the approach to the value approach is important. While a new label is being created, dedicated to aid action, a bottle of regular product gains a new value in the eyes of the customer. Undoubtedly, we are talking about tangible categories and individual perceptions of the product. In carrying out the campaign, the brewery, combined the philanthropic criterion of value with an economic one. The initiators of the aid did not give up profit but invited customers to co-create value. Throughout the campaign, the goal was communicated, as well as the profits flowing from its implementation (for all parties). With joint efforts, there was an opportunity to make a real difference, which further resulted in favorable public opinion of the company.

In future consideration of the concept of Shared Value Creation, interpretation of the concept of value should not be overlooked. Guided solely by program assumptions, many doubts remain, if only when classifying business practices into specific theories. This article was based on one example of the CSV application in the market space, it is worth emphasizing that this phenomenon can have different (from the presented ones) manifestations.

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INFORMATION AND MESSAGE IN ARCHITECTURE AS A FORM OF SOCIAL COMMUNICATION

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Purpose: To analyse the role of architecture and façade graphics in social communication. A few questions need to be answered. Can the message and form of the graphics on a glass façade be used in shaping social consciousness and creating social identification? One of the aims is to examine the marketing potential of the message in an image on glass, and the potential to use it in building a region's brand.
Design/methodology/approach: The study included 40 buildings in which façade graphics were used with the aim of conveying a social message. These were examined, and then useful aspects were selected for further analysis, divided into the following categories: demonstration of the city's pro-environmental policy, demonstration of the city's pro-innovation policy, historical references, emphasising the importance of local tradition and heritage, emphasising the multicultural nature of the building. The article presents two examples for each of these issues.
Findings: Thematic groups of façade graphics have been established, which may be used for social integration and regional marketing.
Research limitations/implications: This is a preliminary study that can subsequently be broadened to include other aspects, such as seeking means of expression or image composition, which are linked to the effectiveness of the message being created.
Practical implications: The article shows the opportunities offered by façade graphics in creating social messages; it could provide some direction for decision-makers, investors, architects, and artists. The expected result is a more frequent use of messages in façade graphics.
Social implications: The article discusses the issues of the social role of façade graphics and art in architecture. It examines the effect of a message contained in an image on the questions of social identification and building connections.
Originality/value: The research points to a considerable reach of the impact that façade graphics can have, and the possibility of using them in regional marketing; it presents their form, scope, and means.

Keywords: contemporary architecture; façade; theory of architecture; communication in architecture.

Category of the paper: Research paper.

1. Introduction

The purpose of the study was to determine the importance and reach of messages included in façade graphics. This is a preliminary analysis. Based on examples of architectural projects, an analysis was conducted of the aspects that can be used to determine the significance of architecture-related art. Each of the buildings was analysed in terms of its usefulness in shaping awareness and social integration associated with creating a profile and building the brand of a region.

The study included 40 buildings with façades in which graphics were used to convey a message. These were examined, and then several aspects were selected for further analysis. These aspects were divided into the following categories: demonstration of the city's pro-environmental policy, demonstration of innovative solutions, historical references, emphasising the importance of local tradition and heritage, emphasising the multicultural nature of the building. The article presents two examples for each of these issues.

Selection criteria for the buildings analysed in the paper:

- The image discusses one of the six categories.
- In situ: the majority of the buildings were examined on site; the research material includes evidence in the form of photographs, drawings, sketches, measurements, analyses, charts.
- The façade is stylistically varied, and made using graphic techniques.
- Needs to be a public utility building.
- Built in the past three decades (1999-2021).
- The research was focused on buildings situated in Europe.

The investigated aspects are connected with creation of messages in architecture. It has been noticed that messages in facades covered with graphics are not made directly, but instead in a metaphorical way (Lipowicz-Budzyńska, 2022). A message is created using the relationship between the façade graphics and the form and function of the building. This relationship creates a message that is being conveyed within a municipal landscape, having as its background the city itself, or one of its districts, as well as the architecture. Façade graphics, apart from their aesthetic value, also serve social functions: they convey a message; they highlight the social status of the building; thematically refer to the latest innovative and sustainable trends; and emphasise the unique history or cultural heritage of the place.

In each of the referenced buildings, the dominant factors that participate in creating the information were analysed:

- Those referring to the building's form: shape, function, scale.
- Those referring to the graphics: form, size, composition, meaning, colour.

2. The façade in the social and environmental context

Any image on glass, owing to its scale and properties, is viewed in three different contexts: urban, against the background of the façade, and from the inside of the building (Lipowicz-Budzyńska, 2019). Because of the powerful visual effect of such graphics and their direct contact with the viewer, they are an excellent medium to convey messages. Directed at the users and surroundings of the building, the messages can be used to build or strengthen social identity. Ultimately, they can serve marketing purposes.

The message in façade graphics is created with the use of metaphors. These graphics require engagement from the viewer, and often communicate several parallel meanings, leaving a margin for interpretation (Lipowicz-Budzyńska, 2022).

The referenced buildings and the projects discussed below show the variety of styles and forms. The principles, links with the surroundings, ways for communicating the message, and artistic means used are different in each of the examples given; and they can be applied in marketing, e.g. to build the image and brand of an organisation, town, or region.

2.1. Demonstration of the city’s pro-environmental policy

One of the methods used in regional marketing is to present progressive policy of the city with regard to strategic areas. Examples of such buildings are the town hall in Alphen aan den Rijn in the Netherlands and the Spine building in Liverpool, United Kingdom.

The town hall in the Dutch town of Alphen aan den Rijn (Erick van Egeraat; completed in 2002; graphics area: no data available; screen printing) has been decorated with façade graphics. The entire elevation is covered with floral motifs in the form of bits and pieces of overscaled deciduous trees. The image is composed of numerous frames linked together that have varying scales (Richards, 2006). Putting organic motifs on the town hall’s elevation is a reference to the environmentally-friendly policies of the municipal authorities (Zabrocka, 2015). The modern body of the building as well as its innovative solutions are a marketing tool being used for creating an image for the authorities and also act as a showpiece for the town (Lipowicz-Budzyńska, 2017). The authorities stress in this way how seriously they approach the natural environment, sustainability, and building an environmentally-friendly society; with this message being conveyed through the shape of the authorities’ main building and the graphics that are on it. The façade points to a key aspect of the town’s and region’s direction of development.

The Spine building (AHR; completed in 2021; graphics area: 9,400 m^2; digital print) (Kucharek, 2022) is considered to be a landmark of Liverpool. This is due not only to its height, but also unique graphic design that separates it from other high-rise buildings in the Liverpool’s Knowledge Quarter. The building follows the popular trend of wellness, focused on health and wellbeing of the users (Laube, Widrig, 2016, pp. 124). The graphics on the glazing are based on the Voronoi diagrams (Lipowicz-Budzyńska, 2019). The majority of the 1,500 argon-filled, double-glazed 4.2x1.5m panels have been covered with a Voronoi pattern, composed of 23 million polygons. The glazing protects against sunlight and excessive heat in the rooms, thus positively affecting users' comfort. The assumed coating of the façade is 25% on the northern side, 32% to the east and west, and 39% on the building's southern wall. The reference in the graphics to nature is symbolic, and it points to the building's purpose that forms part of the town's and region's sustainable policy.

Figure 1. The façade contains quotes from nature and is a demonstration of the pro-environmental policy of the local authorities; A – Alphen aan den Rijn Town Hall (Erick van Egeraat, 2002), the Netherlands; B, C – The Spine building (AHR, 2021), Liverpool, UK.

Source: photos by author.

2.2. Demonstration of innovative solutions

The *Sensor City* building in Liverpool, UK (IBI Group; completed in 2017; graphics area: 825 m^2; screen printing, laminated glass) is a technology hub supporting the innovation companies community. The significance of this building is emphasised by the glass façade in which geometric patterns are used that resemble electronic circuits – they represent advanced technologies and data transfer. The geometric façade uses three colours: white and black combined with yellow that is associated with gold, a metal commonly applied in electronics. The glass has been designed to enable viewing both during the day and night, resulting in the façade changing its appearance depending on the time of day and position of the viewer – whether they are inside or outside the building. The building is one of the most popular in the city of Liverpool (Sensor City, Liverpool, 2022). Its aesthetics are dominated by decorative graphics.

Figure 2. A building demonstrating the city's pro-innovation policy; A – The Sensor City building (IBI Group, 2017), Liverpool, UK; B – Glazing detail.

Source: photos by author.

CityLabs 2.0 (Sheppard Robson Bruntwood in partnership with Manchester Science Partnerships, Central Manchester Foundation Trust; completed in 2021; graphics area: 3500 m^2; digital print; laminated glass (CityLabs 2.0, Manchester, with digitally printed glass façade, 2022) is a new building in Manchester that is being used by Qiagen, a life sciences company. The building provides class A office space and modern lab facilities. It is an investment that helps biomedical companies develop and work with the academic community to create new health products. The façade glass units are made up of heat-treated and laminated glazing, an SN 70/35 HT solar protection layer and a digital print. The composition of the glass unit ensures thermal comfort, energy savings and high efficiency. The modern and repetitive motif is composed of 8 similar round elements that are digitally printed on glass, and is excellently suited to the scientific environment and the purpose of this building. The round shape is a reference to the structural features of a nearby chapel (CityLabs in Manchester, 2020). The design also works as a part of solar protection that helps prevent excessive heat. The CityLabs 2.0 is the second building in this complex. The previous building, CityLabs 1.0, was completed in 2015. The next stages will see CityLabs 3.0 and 4.0 being built. The CityLabs campus is going to be the world’s leading centre for innovation in health and precision medicine.

Figure 3. A building demonstrating the city's pro-innovation policy; A – CityLabs 2.0 building (Sheppard Robson Bruntwood, Manchester Science Partnerships and Central Manchester Foundation Trust, 2021), Manchester, UK; B – Glazing detail.

Source: photos by author.

2.3. Historical references

Emphasising the sense of common history is important for creating identity and social identification. The article references two buildings: the first one is linked to recent history, and the other contains two contemporary features as well as historical information. One of the examples of a reference to recent history is the Netherlands Institute for Sound and Vision (Artist: Merkx + Girod, Neutelings Riedijk Architects; completed in 2006; graphics area: 4362 m^2; relief glass, enamelled), which serves exhibiting, museum, and archival functions. The building is in the shape of cuboid with a 54x54 m base, and is 26 metres high (Netherlands Institute for Sound and Vision in Hilversum, 2016). The interior has been divided into two parts: the five-storey eastern part – where the museum is located; and the eight-storey western part – the administration area. Between them, an elegant multi-purpose area can be found that goes through all of the storeys. Already at the design stage, the exterior finish had been planned as a colourful layer that would cover the façade in its entirety (Figure 4a). The composition utilises archival photographs – 750 images (Murray, 2009) from the institute's archive are displayed on the façade. The imprinted images show scenes from Dutch movies and television programmes, and the system applied here is: one scene on two adjacent glass panels (Figure 4b). The project incorporates an innovative solution that combines enamel firing and glass forming. The glass mosaic of scenes taken from past Dutch television programmes has a symbolic meaning and is a reference to the building's purpose; the layer serves aesthetic, identification, and symbolic functions. It is linked to the recent history of the region and country. The history shown on the façade boosts the sense of belonging to the community, and at the same time acts as a marketing tool.

The Street Bridge Link (Artist: Martin Donlin; Stephenson Bell Architects, 1999; graphics area: 39.6 m^2; enamelled tempered glass) is another example. The bridge links two sides of Tib Street, and is a landmark in northern Manchester, during the day as well as at night. The image displayed on glass is a reference to both the past and the present of the street; it is a decorative feature that this place can also be identified by.

Figure 4. A façade evoking scenes from the recent history and heritage of the Netherlands; the building of the Netherlands Institute for Sound and Image (Neutelings Riedijk Architects, 2006), Hilversum, the Netherlands: A – View of the building's body; B – Close-up view.

Source: photos by author.

Figure 5. Tib Street Bridge Link (Martin Donlin; Stephenson Bell Architects, 1999), Manchester, UK; A – View with the street background; B – Façade detail.

Source: photos by author.

2.4. Emphasising the importance of local tradition and heritage

The shopping centre building is located in the high street of Zakopane – *Krupówki*. The four-storey building is glazed with reflective glass. The façade is enriched with spatial shapes that refer to features visually linked to the region. In the corner of the building, decorative steel elements have been placed, inspired by local embroidery. The buildings has stirred up a lot of controversy – the body clashes with the excessive exposure of reflective glass. However, one has to appreciate the placement in the façade of features that evoke local traditions. The combination of traditional wooden architecture with modern detail solutions of the glass banister, decorated with the imagery of the *Podhale* region, has a different quality.

Figure 6. Reference to heritage and tradition; A – Shopping centre, Zakopane, Poland; B – Façade detail, Zakopane, Poland.

Source: photos by author.

2.5. Emphasising the multicultural nature of the building

The main function of façade graphics is to inform, which is linked to the building's purpose. The façade can, however, contain other types of content as well, such challenging or encouraging statements directed to a specific social group. One example is the façade of the university library in Cottbus (Herzog & de Meuron Architects; completed in 2004; graphics area: 5,800 m², screen printing). The building is glazed in its entirety. The façade is composed of two layers (Edwards, 2011) of glass, with a space between them, on which lettering graphics are placed. The shape of the graphics comes from the outline of overlapping alphabetic systems that belong to different language groups (Laube, Widrig, 2016). The letters, when put together, create abstract shapes arranged linearly. The graphics constitute a contemporary interpretation of lettering images. The shape of the imagery is linked to the shape of the building itself. The image is a distinctive graphic feature by which a building can be identified, and is linked to the function of the building and also expresses the openness of the scientific world to international connections. It informs about the international nature of the book collection inside the library, and extends an invitation to the global community. Emphasising the international nature of a building elevates the area and makes it an important spot on the map of the region and the whole of Europe.


a

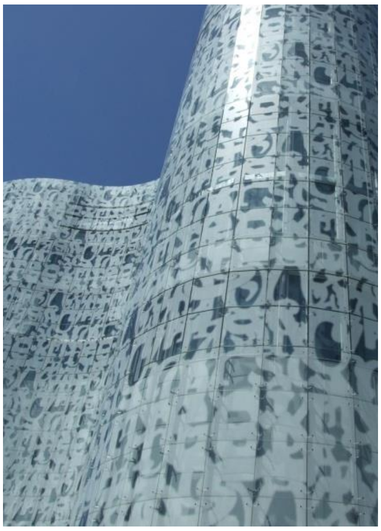
b

Figure 7. The Cottbus Technical University Library, Germany (Herzog, de Meuron, 2004); A – building view from a distance; B – façade seen from 5 meters away.

Source: photos by author.

Table 1.
Features affecting how the message is created in the analysed works

item	building	building attributes			facade graphics				
		form	function	scale	form	size	compos.	meaning	colour
1	Town Hall, Alphen aan den Rijn, the Netherlands	x	x		x	x		x	
2	The Spine, Liverpool, UK		x	x	x		x	x	
3	Sensor City, Liverpool, UK		x		x		x	x	x
4	CityLabs 2.0, Manchester, UK		x		x		x		
5	Netherlands Institute for Sound and Image, Hilversum, the Netherlands	x	x		x	x		x	x
6	Pedestrian link, Manchester, UK	x	x	x	x	x	x	x	x
7	Shopping Centre, Zakopane, Poland	x			x	x	x	x	
8	Cottbus Technical University Library, Germany	x	x	x	x	x	x	x	

Note. Here you should explain the abbreviations used in the table and provide additional information that is important to the reader, e.g. data source, symbols, marks.

Source: own study.

3. Summary

The collected research material confirms the usefulness of façade graphics for regional marketing purposes.

The analysis shows that important factors in creating an image include the form, composition, and the metaphors used in the image with regard to the function and form of a given building.

Due to high visual impact and direct contact of the viewer with the graphics, a glass façade is an excellent medium to convey messages, and can be used in creating and strengthening social identity.

In large cities, whole districts are developed that become that city’s and its surrounding area’s showpiece, and can then be utilised in developing the brand of the region. These areas are boosted by the visual factor, such as incorporation of façade graphics and using state-of-the-art technology.

In the research material referenced in the article, various strategies can be seen for using façade graphics to create regional marketing. It has been noted that the façade can be used as a medium to communicate content that supports achieving or improving social integration. Information contained in a façade or an indirect message conveyed with the use of a metaphor discuss the following groups of topics:

- Emphasising the pro-environmental policies of the town or region in the façade is of very high significance as far as marketing is concerned. It creates an image for the region that references the latest trends related to caring for the natural environment and openness to environmentally-friendly solutions and technologies.
- Demonstrating innovative solutions has a great potential with regard to integration and marketing.
- Historical references build and boost social integration, as well as support social awareness; they may be used in creating a brand for the region.
- Emphasising the significance of regional traditions and heritage is very important for region’s policies and creating social identification.
- Emphasising the multicultural nature of the building indicates the openness of the place and the whole region to international connections, and may encourage people to build new relations in different sectors of economy, as well as to be open to global markets.

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SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2023
ORGANISATION AND MANAGEMENT SERIES NO. 173

THE USE OF INFLUENCER MARKETING IN MARKETING COMMUNICATION OF PLACES

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Purpose: The purpose of this article is to identify the use of influencer marketing in place communication.
Design/methodology/approach: For this purpose, a systematic literature review was conducted using Scopus and Web of Science databases.
Findings: A total of 28 articles were identified. Finally, after rejecting duplicates and publications that did not meet the established criteria, the content of 9 articles was analysed. The main thematic threads and research methods were presented and leading journals and countries addressing the analysed issues were identified.
Research limitations/implications: The analysis only considers publications in English, which has the effect of limiting the number of publications analysed.
Practical implications: The results show a small number of publications dedicated to this topic. The phenomenon of influencer marketing is relatively new and some of the social media platforms have been established over the last few years. This makes it clear that, despite the great popularity of influencers as brand ambassadors or creators worth including in building marketing communications, the topic still needs to be analysed, both on a practical and research basis.
Originality/value: This is the first literature review focused on the issues of place marketing and influencer marketing as activities that can have a mutually beneficial impact on promoted tourism destinations. The results of the conducted analysis may be of interest to both researchers of the analysed issue and practitioners, including in particular governmental and local governmental organisations responsible for the promotion of places.

Keywords: influencer marketing, destinations marketing, promotion of places, literature review.

Category of the paper: Literature review.

1. Introduction

The marketing of tourist destinations, which for the purpose of this article will be defined broadly as place marketing, has experienced significant adversity over the last few years. The main source of problems in the tourism industry has been the months-long restrictive lockdown policy caused by the emergence of the Covid-19 pandemic. This has caused many restrictions and hindrances in the area of tourism. These were due to top-down restrictions imposed by individual countries on movement options. An additional factor influencing the restriction of tourism was the attitudes of consumers, among whom there was fear for their own and their loved ones' health and lives, fear of infection and long-term exclusion from work. The pandemic period fostered the transfer of a significant amount of activity to the internet space and triggered more intensive communication in the social media space directed at sharing private experiences and building connections and relationships. Tourist destinations began to incorporate in their communication strategy the activities conducted in the internet space on a much larger scale and also to increasingly mark and promote their presence in the social media space.

At the same time, consumers, increasingly familiar with technology and with access to ever more interesting and engaging tools and forms of communication through social media, are increasingly willing to make their purchasing decisions based on the recommendations of people known to them only or mainly from their activity on social media. These people can be called online creators, celebrities or influencers. It is based on the involvement of these personalities influencing their followers that the concept of influencer marketing was developed. Influencer marketing is defined as a strategy in which online influencers are engaged by businesses and organisations to promote specific products to their observing audiences on social media, seeking to use their unique assets to promote their offerings (Leung et al., 2020). They are therefore personalities whose influence on the decisions of others stems from their authority, knowledge and position in the community and also the quality of the relationships that connect community members. The combination of both areas, i.e. place marketing and influencer marketing, prompted an attempt to identify if and for what purpose various tourism-oriented destinations popularise their presence and promote the values associated with the promoted places within the framework of place marketing using this relatively new concept of influencer marketing.

While there are a number of publications on the use of social media in the promotion of places referring to the strategy of DMOs (Destination Management Organisations), the cognitive, affective and behavioural aspects of place promotion as well as issues related to user-generated content (Tran, Rudolf, 2022), there is a lack of review articles combining both ideas of influencer marketing and destination branding and promotion. The aim of this article is therefore to identify the current state of knowledge in the area of using the concept of influencer marketing in destination promotion and to evaluate the existing literature addressing this issue. Based on the analysis, research gaps will be identified and directions for further research will be proposed.

The literature review conducted has important implications for marketing research and practice. Firstly, an overview of publications up to the time of the analysis is provided and the key issues raised by the authors are grouped together. This is also, to the author's knowledge, the first summary of existing research linking influencer marketing issues to the idea of place promotion. In addition, based on existing research in this area, the author identifies potential directions for further research that can provide a starting point for both practitioners and academic researchers.

2. Methods

In order to identify international literature addressing the issues of place communication and influencer marketing, a systematic literature review was conducted using leading academic databases: Web of Science and SCOPUS. The guideline PRISMA - Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Page et al., 2021) was used in the conducted systematic literature review.

A systematic literature review was conducted in 2022 and the enquiry considered both areas, i.e. place brands and influencer marketing. Place brands were defined at the level of country brands, cities, regions, villages and places in general. The query referring to Influencer marketing included the terms influencer marketing and social media influencer, as well as the names of social media platforms (see Table 1). Keywords were searched in the sections: title, abstract, keywords defined in the article.

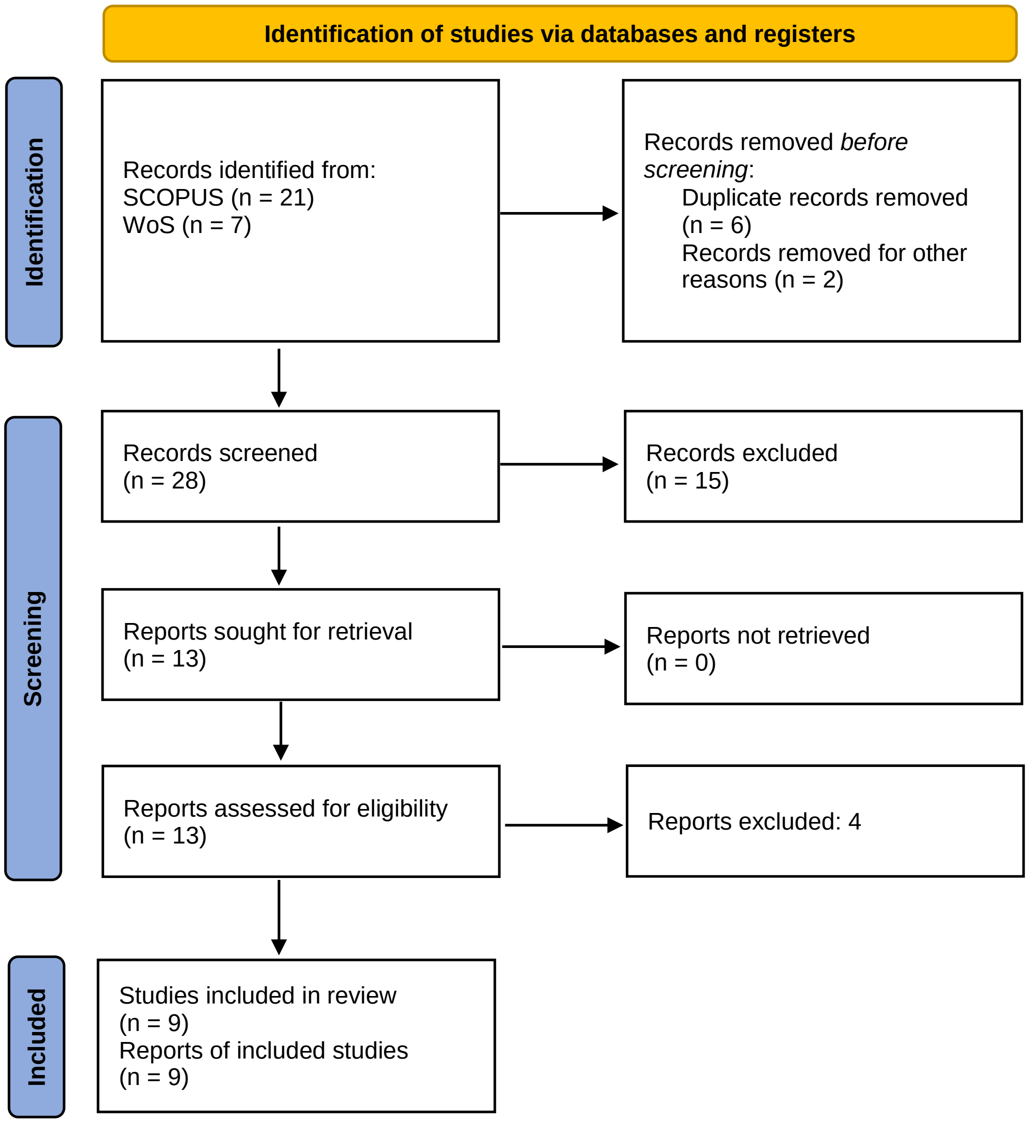

Figure 1. PRISMA 2020 flow diagram.

Source: Page, McKenzie, Bossuyt, Boutron, Hoffmann, Mulrow et al., 2021.

Table 1.
Search queries on SCOPUS and Web of Science databases

Database	Search Query
SCOPUS	(TITLE-ABS-KEY ("destination brand *" OR "nation * brand *" OR "cit * brand *" OR "region * brand *" OR "countr * brand *" OR "place brand *") AND (TITLE-ABS-KEY ("influencer marketing" OR "social media influencer" OR "Facebook" OR "Instagram" OR "Twitter" OR "Youtube" OR "Tiktok")) AND LANGUAGE (English) AND DOCTYPE (ar) AND SUBJAREA (busi)) AND (LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2014))
Web from Science	TS=((("destination brand *" OR "nation * brand *" OR "cit * brand *" OR "region * brand *" OR "countr * brand *" OR "place brand *") AND ("influencer marketing" OR "social media influencer" OR "Facebook" OR "Instagram" OR "Twitter" OR "Youtube" OR "Tiktok"))) and 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015 or 2014 or 2012 (Publication Years) and Article (Document Types) and Business Economics (Research Areas) and English (Languages)

Source: own study.

Articles published after 2014 up to and including 2022 were searched. However, it should be noted that data were extracted in August/September and not all publications included in the database in 2022 were therefore included in the query. Peer-reviewed articles published in academic journals were searched, excluding articles published in languages other than English. A total of 28 publications were identified. The search results were reduced to publications in Business and Economics.

The publications thus acquired in both databases were checked for duplicates and the articles were then scanned for a match to the query. In the end, only nine articles were qualified. The articles that were rejected at this stage included influencer terms that did not relate to influencer marketing, the phrase ‘influencer marketing’ in the titles of publications included in the bibliography or social media names that did not relate to influencer marketing.

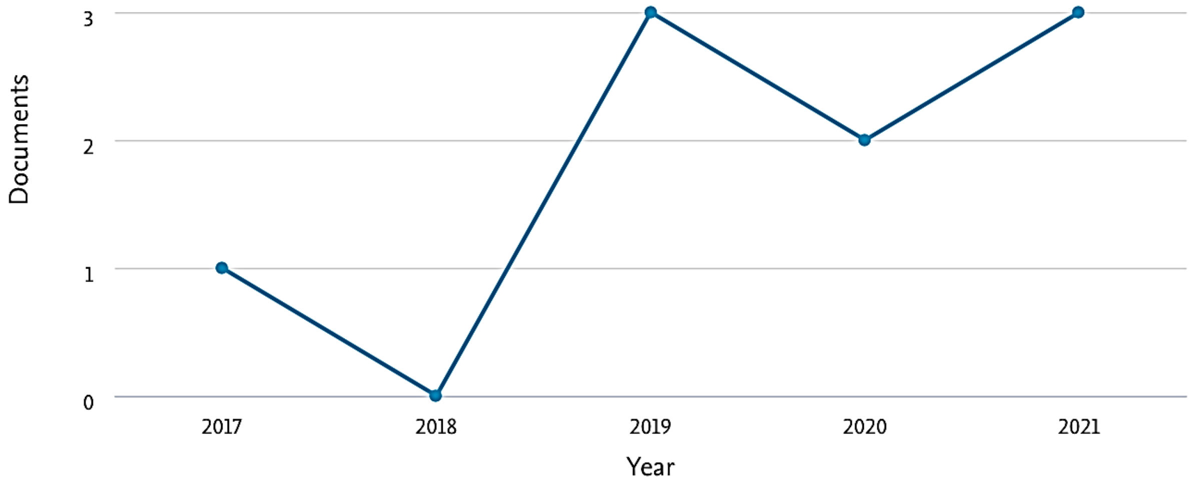

Figure 2. Number of publications in the period 2017-2022.

Looking at the breakdown by country of published articles, it is apparent that there is interest in this topic within the European Union. The United States and India also appeared in the list (see Figure 3).

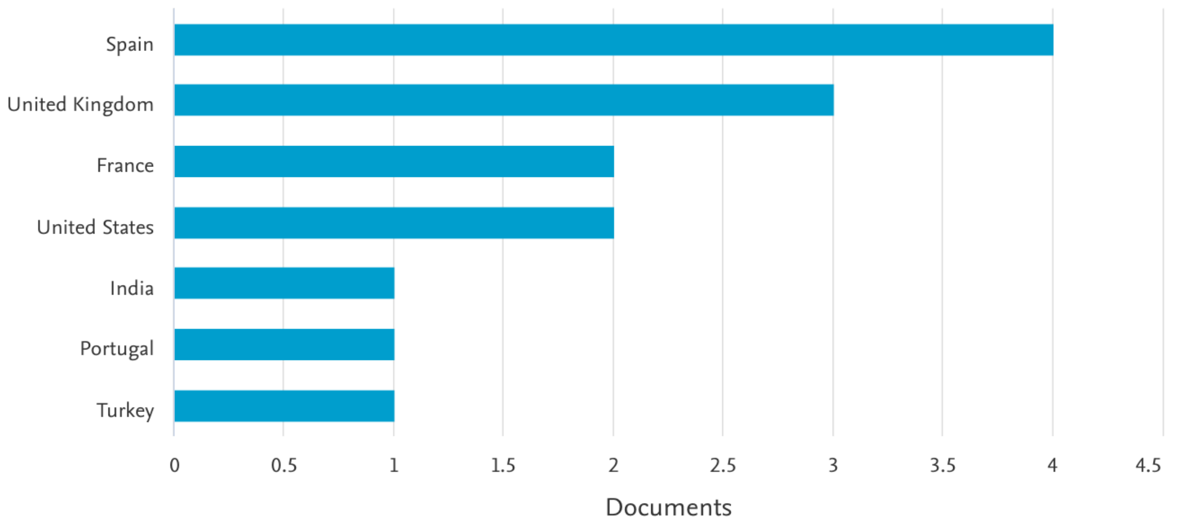

Figure 3. Publications by country.

The number of citations for each publication is presented in Table 2.

Table 2.
Number of citations of publications analysed

Title	Authors	Journal Title	Citations
Understanding the importance that consumers attach to social media sharing (ISMS): Scale development and validation	Dedeoğlu, B.B., Taheri, B., Okumus, F., Gannon, M.	Tourism Management	71
Classifying residents' roles as online place-ambassadors	Uchinaka, S., Yoganathan, V., Osburg, V.-S.	Tourism Management	41
#Visitspain. Breaking down affective and cognitive attributes in the social media construction of the tourist destination image	Garay, L.	Tourism Management Perspectives	30
#ILoveLondon: An exploration of the declaration of love towards a destination on Instagram	Filieri, R., Yen, D.A., Yu, Q.	Tourism Management	28
YouTube usage by Spanish tourist destinations as a tool to communicate their identities and brands	Huertas, A., Míguez-González, M.I., Lozano-Monterrubio, N.	Journal of Brand Management	23
Secrets to design an effective message on Facebook: an application to a tourist destination based on big data analysis	Villamediana-Pedrosa, J.D., Vila-Lopez, N., Küster-Boluda, I.	Current Issues in Tourism	22
The tourism effect of President Trump's participation on Twitter	Nicolau, J.L., Sharma, A., Shin, S.	Tourism Management	10
Tourism ambassadors as special destination image inducers	Morand, J.C., Cardoso, L., Pereira, A.M., Vila, N.A., De Almeida, G.G.F.	Enlightening Tourism	2
Destination Brand Communication during COVID-19 Pandemic - The Case of Iceland	Joseph, A.I., Anandkumar, V.	International Journal of Hospitality and Tourism Systems	1

3. Results

Influencer marketing is a marketing strategy in which a brand or company works with a high influencer in a particular field or community to promote its products or services. Influencers often have a large number of followers on their social channels, which allows them to influence their fans' purchasing decisions. Brands work with influencers to reach their audience and increase interest in their products.

Influencer marketing can be an effective element in promoting tourist destinations as well, including the promotion of places such as cities, regions or countries. Organisations connected with a given place, brands for which it is an area of socio-economic functioning and business, as well as local and governmental units can use influencer marketing to promote tourist attractions, events and all kinds of activities that can influence the positive image of a given place and encourage tourists to visit it. The most common way to do this is to collaborate with digital creators who have already visited a place.

Tourist destinations additionally benefit from the activity of tourists, visitors and locals who, on their own initiative, share their feelings and insights about the places they visit, inserting photographs with which they want to convey the character or uniqueness of the place presented, and use geo-location tagging or hashtags, making it easy for other social media users to reach the content thus tagged. Instagram is one of the more popular social networks used by users to share their experiences of places they have visited.

Influencer marketing in the communication of places (cities, countries, regions) is an increasingly common promotional strategy in tourism. The articles analysed show different aspects of this phenomenon. A summary of the content analysis is presented in Table 3.

Table 3.
The main thematic strands of the publications analysed

Title	Leading issues
#ILoveLondon: An exploration of the declaration of love towards a destination on Instagram	In the article, the authors examine the use of the hashtag #ILoveLondon on Instagram to promote London as a tourist destination. They note that the hashtag was particularly popular with influencers who were highly influential with their followers.
Destination Brand Communication during COVID-19 Pandemic - The Case of Iceland	The article analyses how Iceland promoted its country during the COVID-19 pandemic. The authors note that Iceland effectively used influencers to convey positive messages about its country and attract tourists.
Tourism ambassadors as special destination image inducers	The article focuses on the role of tourism ambassadors in shaping the image of tourism destinations. The authors note that tourism ambassadors can be effective promotional tools because they have a strong influence on their audience and are reliable sources of information about a tourist destination.
#Visitspain. Breaking down affective and cognitive attributes in the social media construction of the tourist destination image	The authors examine the impact of the hashtag #Visitspain on the construction of the image of Spain as a tourist destination on social media. They note that this hashtag was particularly popular among influencers and contributed to a positive image of Spain among the audience.
Secrets to design an effective message on Facebook: an application to a tourist destination based on big data analysis	The authors analyse the effectiveness of promotional messages posted on Facebook by tourist destinations. They note that the use of influencers can be an effective promotional strategy, as influencers have a strong influence on their audience and are reliable sources of information about a tourist destination.
Classifying residents' roles as online place-ambassadors	The authors explore the role of residents in promoting tourist destinations in social media spaces. They note that residents can act as ambassadors for a tourist destination and support promotion by sharing their experiences with other social media users.
YouTube usage by Spanish tourist destinations as a tool to communicate their identities and brand	The authors analyse the use of the YouTube platform by Spanish tourist destinations to communicate their identity and brands. They note that influencers and vloggers are effective promotional tools because they have a strong influence on their audience and can contribute to increasing interest in a tourist destination.
Understanding the importance that consumers attach to social media sharing (ISMS): Scale development and validation	The authors explore the importance consumers attach to sharing their experiences on social media. They note that influencers can have a strong impact on consumers' purchasing decisions and can be effective promotional tools for tourism destinations.
The tourism effect of President Trump's participation on Twitter	The authors examine the impact of US President Donald Trump's participation in Twitter communications on tourism in the United States. They note that the president's participation in social media can have both positive and negative effects on tourism depending on the content of the messages and their reception by the audience.

Destination branding is an activity conducted by Destination Management Organisations (DMOs) targeting tourists as well as locals. In addition to DMOs, the image of the destination is created by social media users sharing their experiences and emotions about the places they visit.

4. Discussion

Influencer marketing can be approached in two ways: as access to another communication channel to reach potential target audiences (in this case, influencer followers on social media), or as a form of communication with influencers themselves, the aim of which is to obtain brand ambassadors involved in numerous strategic company activities such as the launch of a new good or service. In the area of tourism, the significance of influencer marketing is partly due to the importance and use of whisper marketing (Litvin et al., 2008). The creators of blogs, in this case travel blogs, who were among the first to gather valuable and issue-focused communities around them, were also an interesting channel to reach potential audiences for destination marketers. Some of the early collaborations of tourism marketers include New Zealand's collaboration with Chinese travel influencer Yao Chen (Tourism New Zealand, 2012), or the Marriott hotel chain's collaboration with vlogger Jack Harries of JacksGap (JacksGap, 2015).

The articles analysed use different research methods depending on the objectives and research questions the authors set themselves. Some articles used quantitative methods such as a survey or data analysis, while others used qualitative methods such as content analysis or interviews with people involved in the promotion of tourist destinations. A detailed summary is presented in Table 4.

Table 4.
Research methods used and results of the research conducted

Article title	Date of publication	Research method	Result
#ILoveLondon: An exploration of the declaration of love towards a destination on Instagram	2021	Content analysis	The authors identified the main topics covered in posts on Instagram with the hashtag #ILoveLondon and noted that the most common themes were information about tourist attractions in London, photos of visitors and comments about positive experiences of visiting the city.
Destination Brand Communication during COVID-19 Pandemic - The Case of Iceland	2021	Qualitative study	The authors noted that Iceland focused on promoting safety during the COVID-19 pandemic and highlighted its unique tourist attractions and natural assets. The use of influencers to promote the country was also observed in messages posted on social media.

Cont. table 4.

Tourism ambassadors as special destination image inducers	2020	Content analysis	The study showed that tourism ambassadors can have a positive impact on the image of a tourist destination among tourists, especially if they are involved in promoting the destination and are seen as authentic and credible.
#Visitspain. Breaking down affective and cognitive attributes in the social media construction of the tourist destination image	2020	Content analysis	The authors noted that posts with the hashtag #Visitspain most often featured information about tourist attractions in Spain, photos of visitors and comments about positive experiences of visiting the country.
Secrets to design an effective message on Facebook: an application to a tourist destination based on big data analysis	2020	Data analysis, regression analysis	The authors created a model to assess the effectiveness of promotional messages posted on Facebook by tourist destinations. The model takes into account factors such as the type of content, audience engagement and the use of influencers.
Classifying residents' roles as online place-ambassadors	2020	Qualitative study	The authors identified the main roles that residents of a tourist destination can play as ambassadors of that destination online. Each of these roles is characterised by a different level of engagement and way of sharing information about the tourist destination with others.
YouTube usage by Spanish tourist destinations as a tool to communicate their identities and brands	2020	Quantitative and content analysis	The authors noted that Spanish tourist destinations often use YouTube to promote their tourist attractions and the country's assets. The videos uploaded to YouTube usually feature information about tourist attractions, photos and videos of visitors.
Understanding the importance that consumers attach to social media sharing (ISMS): Scale development and validation	2020	Content analysis	The study found that for most consumers, sharing their experiences on social media is important and motivates them to choose tourist destinations that are promoted by others. The authors created a scale to assess the extent to which consumers attach importance to sharing their experiences with others on social media.
The tourism effect of President Trump's participation on Twitter	2020	Content analysis	The authors noted that the US President's Twitter posts on tourism were often criticised by the audience and could have a negative impact on the image of tourist destinations in the US.

5. Limitations

The literature review conducted has its limitations. Firstly, two bibliographic databases were used. These are considered to be the databases that cover the majority of scientific publications; however, it is worth including additional sources that may contribute to identifying more publications addressing the issue under review in the future.

Secondly, the review only included scientifically peer-reviewed articles published in scientific journals. It can be assumed that this subject matter is also addressed in compact publications or conference proceedings. In addition, the search results were limited to the English language, which certainly affects the number of results and thus the number of publications included in the analysis.

6. Summary

An analysis of the articles leads to the conclusion that, in most cases, the topic of influencer marketing in connection with the promotion and marketing communication of tourist destinations and places has not yet been an issue of interest to researchers. Although the articles analysed referred to the phenomenon and potential of influencer marketing, these references were not the main focus of the research. Content created and shared by internet users has a very broad dimension and application - from spontaneously created content to thoughtful opinions and evaluations, both positive and negative (Dedeoğlu et al., 2020). They also have a significant impact on the audience, although this is also dependent on the intention of the message creator. The reception and effectiveness of the message are also dependent on the sender of the message and, in this case, content created and shared by residents of the tourism destinations in question is perceived as more trustworthy (Uchinaka et al., 2019). Equally important is the role of tourists as influential opinion makers in the online and social media space and managers involved in promoting the chosen destinations (Huertas et al., 2017). A strong influence, both positive and negative in nature, can also be exerted by recognisable individuals, such as politicians (Nicolau et al., 2020). The communication tools and formats used also influence the effects. Video formats generate significantly better audience engagement results than others such as text, images or even apps or interactive games (Villamediana-Pedrosa et al., 2019). In light of previous research and practitioners' experiences, the role of content created and shared on social media by tourism destination stakeholders is clearly evident. This content should be skilfully integrated into destination promotion strategies.

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SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2023
ORGANIZATION AND MANAGEMENT SERIES NO. 173

ALPHA WOLVES. ARE LOCAL BUSINESS LEADERS IMPORTANT FOR THE REGION BRAND? CASE STUDY OF WROCLAW AGGLOMERATION

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Purpose: The main objective of this study is to investigate and clarify the role of local business leaders in creating region brand.
Design/methodology/approach: The article uses the qualitative case study method to describe the role of local business leaders in shaping region brand. The analysis is conducted using Wroclaw Agglomeration as a subject.
Findings: The research conducted enabled to initially investigate and clarify some aspects of creating a place brand image using stakeholders engagement.
Research limitations: The research presented in the article is qualitative, making it impossible to infer the entire region's population.
Practical implications: The article includes essential conclusions valid for regions' authorities, mainly in the area of creating a positive brand image in the economic context and the importance of engaging stakeholders in this process.
Originality/value: The paper supplements the management sciences literature with knowledge about the local business leaders' role in creating a region brand.

Keywords: business leader, region, region brand, personal brand, brand image.

Category of the paper: research paper.

1. Introduction

Among many marketing concepts, the brand concept seems to be the most complex one. Numerous dimensions and factors refer to various types of brands, but especially to the concept of a place brand. Place (region, city, country etc.) is a specific, complicated and multidimensional construct with various stakeholders groups, making its branding a difficult and long-term task. However current scientific literature provides a significant number of conceptual models, methods and techniques that, used in practice, enable the city to distinguish and position on the national, continent or world scale (Kavaratzis, 2005), it is still discussed what particular activities are able to make place branding more effective.

In the following paper, the authoress initially analyses the role of local business leaders in creating region brand. Both their active and passive participation in this process is discussed, which means that not only their personal effort is considered, but also including them, as personas, and their stories, in region brand narration. The starting point for this consideration is – on the one hand - repeatedly confirmed fact that community stakeholders engagement is an essential asset of place branding (Berrada, 2018) and, on the second hand - the visible tendency of entrepreneurs to build strong and consistent personal brands, which, in turn, encourage them to be actively present in the regional business context.

The paper has been divided into four parts. In the first part, a brief overview of the previous research on leaders and leadership in the context of region branding is presented. The second part concerns the methodology, research questions, and sample selection method. The third section presents the main findings of the research. Finally, the fourth part gives the conclusion, summary and critique of the findings.

2. Literature review

Various models of place branding, which can be found in the previous research in the area of management (Anholt, 2007; Ashworth, 2009; Balakrishnan, Kerr, 2013; Berrada, 2018; Hanna, Rowley, 2011; Kavaratzis, 2004, 2005) confirm that one of the most crucial aspects of creating region brand is community stakeholders engagement, which is understood as engagement of "residents of a place who may be involved and mobilized to support the development and improvement of the brand identity and the brand delivery" (Berrada, 2018, p. 228). Moreover, according to Acharya and Rahman (2016), stakeholders participation is one of the three fundamental concepts in the nomological network of constructs related to the place brand concept (Figure 1).

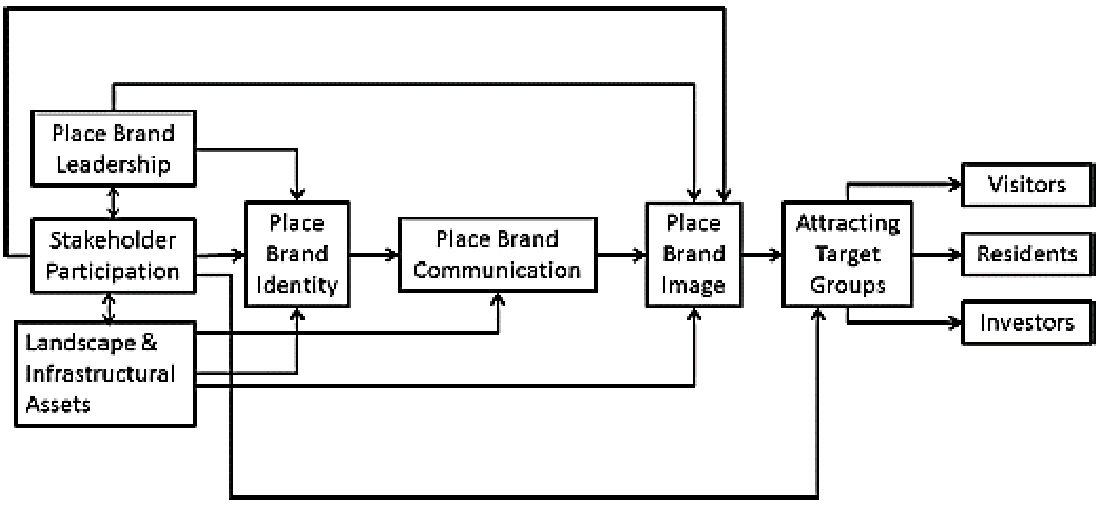

Figure 1. Nomological network of constructs related to the place brand concept.
Source: Acharya, Rahman, 2016.

Additionally, some scientists identify different roles the residents play in place branding. They can be either integral part of the place brand through their characteristics and behaviour or ambassadors for their place brand who grant credibility to any communicated message (Braun et al., 2013; Hatch, Schultz, 2010). In terms of creating a favourable economic image of the region, local business leaders, whose success stories may reinforce interest in investing and starting a new venture there, should be considered in both roles.

The extensive leadership literature with almost 70 existing leadership theories (Mango, 2018) usually understands a leader as “one or more people who select, equips, trains, and influences one or more follower(s) who have diverse gifts, abilities, and skills and focuses the follower(s) to the organization's mission and objectives causing the follower(s) to willingly and enthusiastically expend spiritual, emotional, and physical energy in a concerted, coordinated effort to achieve the organizational mission and objectives” (Winston, Patterson, 2006) and emphasize leader's role in shaping the local business environment.

What is more, currently, business leaders are more and more interested in creating their personal brands. In the modern economy, personal branding skills are considered to be a "leadership imperative" (Loppis, 2013; Perkins, 2015). Personal branding of the business leaders is mainly discussed in an organizational context and the reputation of an organization (Gorbatov et al., 2018; Khedher, 2014; Ranft et al., 2006; Saad, Yaacob, 2021; Zarkada, 2012), as it was proven, that personal brand of CEO is more effective in generating goodwill and brand equity than a business brand because society trusts people more than businesses (Montoya, 2002) and can create significant value for organizations (Bendisch et al., 2013).

However, it is clearly visible that leaders tend to be recognized brands not only inside the company they lead but also in the local business environment, understood mainly as a local business network and building consistent, mutually beneficial relationships with the local business ecosystem. This tendency is one of the so-called industry-related drivers to build the personal brand (Gorbatov et al., 2018, p. 12), which are claimed to be particularly important in shaping leaders’ positive attitude towards personal branding and – broader – towards being actively present in the local business community. Various research stated that significant involvement can create a successful personal brand (Lo, Peng, 2022).

In turn, from the region's perspective, public engagement of business leaders in emphasizing a positive economic climate may be an important aspect of its brand narration. So-called "entrepreneurial personality" of local business leaders (Baluku et al., 2016; Boyatzis, 2006; Chatterjee, Das, 2015; Gibb, Ritchie, 1982; Korunka et al., 2010; Zaech, Baldegger, 2017) together with the whole regional background, can be additionally a part of region brand biography (Avery et al., 2010), underlining its support for entrepreneurs, whose stories can be viewed as assets for place branding.

3. Methods

In order to investigate and clarify the role of local business leaders in creating region brand, the authoress uses qualitative, descriptive case study methodology. It is a research approach that facilitates the exploration of a phenomenon within its context using a variety of data sources. It is mainly applied when the focus of the study is to answer "how" and "why" questions (Baxter, Jack, 2008). As the subject (unit) of the analysis, the authoress has chosen The Wroclaw metropolitan area and additionally bind the time being analyzed to years 2021-2022 (Creswell, 1998). To perform analysis, various data sources were included: mainly websites and social media, reports, individual in-depth interviews (with city representatives and entrepreneurs) and participant observation.

To complete the conclusions, additionally, the qualitative content analysis method was used, which is *a research technique for the objective, systematic, and quantitative description of the manifest content of communication* (Berelson, 1952, p. 18). It was included to identify patterns and make some conclusions about the communicator (both agglomeration authorities and entrepreneurs), message and its effects or the situation and sociocultural background (White, Marsh, 2006, pp. 27, 34). In the course of content analysis, official websites and social media of both local authorities and entrepreneurs and additionally leading free access media from the beginning of 2022 were analyzed, creating a sample of nearly 200 units of analysis (social media posts, articles, news, video etc.). Following the procedure of this type of research, some content categories were defined and interpreted (McMillan, 2000; Riffe et al., 2005).

3.1. Research questions

Considering the above assumptions and the research problem identified in the introduction to this article, it was decided to formulate the following research questions:

RQ1: How can regions use local business leaders and their stories to create a positive brand image?

RQ2: What role can local business leaders play in shaping region brand?

RQ3: Do local business leaders engage themselves in creating positive region brand, and how?

3.2. Choice of the region analyzed

The Wroclaw metropolitan area has been chosen as the unit of analysis. Below, the authoress briefly presents the motivation for this choice.

Wroclaw metropolitan area is a monocentric agglomeration located in the southwestern part of Poland, in the Lower Silesian Voivodship. It consists of the city of Wroclaw and its satellite towns. The population living in the agglomeration was about 1,25 million people in 2021, but it has risen rapidly in 2022 due to the intensive influx of immigrants from Ukraine (Union of Polish Metropolises, 2022).

However, the area is not strongly urbanized, it states a well-developed network of cities, which are economically and geographically linked to Wroclaw, being currently one of the leading Polish R&D and IT centres. Various activities, but also reports and statistics confirm, that the city authorities are focused on building a robust, effective and cooperative business ecosystem (ARAW, 2022), which is a friendly place, especially for start-ups. According to the latest report of the Startup Poland Foundation, the Lower Silesia region with Wroclaw took second place in terms of the number of registered start-ups (Startup Poland Foundation, 2021) and is a national leader in attracting foreign direct investment.

Among 2,987 Polish start-ups, on average, every tenth starts its operation in Wroclaw (Polish Development Fund, 2022), which makes it the city with the highest start-up concentration in Poland (Wroclaw Agglomeration Development Agency, 2021). The reasons for such interest of start-up founders in operating in this area of Poland are various. Except for a favourable geographic location, Wroclaw is not only the most significant labour market in South-Western Poland but also one of the most important academic centres in the country, with thriving business incubators. Moreover, the city and its suburbs run Special Economic Zones, thanks to which investors can conduct business on preferential terms.

An essential advantage of the region is also significant organizational support for entrepreneurs. In the city operates Wroclaw Technology Park (Wroclaw Technology Park, 2022), which role is to support companies from the high-tech sector and Wroclaw Research Centre EIT+ (EIT+, 2022), which possesses a comprehensive research infrastructure in order to support innovation, new technologies and research needs of the industry (Książek, Suszczewicz, 2017).

Another important organization is The Wroclaw Agglomeration Development Agency (ARAW), a company established in 2005, owned by the Wroclaw Commune and 32 local governments from the agglomeration. One of its brand is Startup Wroclaw, which mission is to "bring together all local ecosystem players to promote and support the growth of innovation, entrepreneurship and cooperation" (Startup Wroclaw, 2022). Among numerous tasks connected with organizing and supporting the local business ecosystem, according to the website, its role is to work on the city's economic promotion and attract foreign investors and promote Wroclaw start-ups success stories (Startup Wroclaw, 2022).

Such intensive development in terms of economy and business goes hand in hand with the general strategic goals of Wroclaw, which are emphasized in the city's Strategy 2030, like reliance on social capital, innovation and entrepreneurship (City of Wroclaw, 2017). Additional supplement to the strategy called “Enterprising Wroclaw 2030” set “promoting” entrepreneurship and entrepreneurs as one of the city's strategic goals (City of Wroclaw, 2019). In the document, it was rightly noticed that entrepreneurs could reinforce the region brand's positive image among various stakeholders, like other young entrepreneurs, students, investors and business tourists. In the following part of the article, the authoress presents the main findings of the analysis conducted in the course of case study research and formulates managerial implications for regional authorities in this regard.

4. Findings

Findings obtained in the course of case study research refer to both active and passive participation of business leaders in creating region brand image and are considered both from the region and business perspective.

According to the representative of ARAW, “Local leaders act as the city's ambassadors. They spread information about the region among other countries (to mother/sister companies, international advisory boards etc.) They also participate in local initiatives inviting other companies to join and initiate joint projects to create favourable conditions for the business's existence. Also, many business leaders engage in mentoring programs sharing their knowledge, experience and company culture with younger generations, thus helping to shape future business leaders.”

Some local business leaders are highly interested in participating in actions which role is to create a positive economic image of the region. According to the individual in-depth interviews conducted (n = 3), their primary motivations are rarely altruistic and related to the desire to promote their business and themselves - they perceive a growing need to be recognizable on a local scale. Among the most important activities of region branding that actively engage local business leaders are various business and business-related events. In the Wroclaw Agglomeration, we can observe a growing number of business events, e.g. "Made in Wroclaw", which gather local entrepreneurs, enabling them to network and share their success stories. The last edition of this meeting, entitled "Future mindset", was summarized by local media mainly as the gathering of "valued businessmen, innovators and scientists” (Wroclaw TV, 2022), which confirms basing narration on the strong personalities. Together with its program, full of speeches, it shows the will to underline the role and position of local business leaders. The city also hosts important international business events, like Wolves Summit in 2022, which is an event that brings together “alpha wolves” - entrepreneurs, investors, representatives of corporations, and recruiters looking for young, ambitious, and talented people ready to start a career in the world of technology and innovation (Wolves Summit, 2022).

Another essential tool for creating the positive business identity of the Wroclaw Agglomeration brand are various reports, rankings and awards, which rules and results are widely spread using official and private social media accounts. Also, local media are willing to share the effects of national and international successes of the region itself and local entrepreneurs -it is regarded as a reason to be proud for all citizens. An example of this kind of award is the "Lower Silesian Griffin Award", which is awarded yearly in various categories, including innovative business ideas, achievements in promoting development in Lower Silesia, commitment to CSR and cooperation with science.

Other significant findings were obtained in the course of qualitative content analysis. The authoress analyzed the official websites and social media of local authorities and entrepreneurs and, additionally, the leading media from the beginning of 2022. Some illustrative examples of the content analyzed are presented in Table 1.

Table 1.
Results of content analysis – selected examples

	About region	**About business leaders**
Media	• "Wroclaw wants to be the Polish Silicon Valley". • "On the list of top 10 Polish bio and nanotechnology start-ups - half of them are companies from Wroclaw". • "Nearly every fifth Polish start-up operating in the field of artificial intelligence (AI) comes from Wroclaw". • "Wroclaw stands out from other cities in Poland and is one of the most important centres of the gamedev industry".	• "(...) A Polish woman, more specifically a resident of Olesnica, is one of the most inspiring women in the world". • "companies (…) that are the engine of economic life in the region"
Region	• "goal is to provide real, professional support to Lower Silesian entrepreneurs". • "Wroclaw always tries to think about the future in order to be at least one step ahead of others. This is not a competition. This is embedded in the DNA of Wroclaw's people, business and academic community and local communities". • "(they) praise Wroclaw primarily for its relatively good access to skilled workers. They also appreciate the culture of networking, mutual assistance and exchange of experience". • "The city is known for its business-friendly approach: many renowned Polish companies were founded here, and foreign investors regarded Wroclaw as one of the best locations in Europe".	• "it is entrepreneurs who create not only our beautiful city but also our region, and thus its success and future". • "Microentrepreneurs? Innovators? Students? Social activists? Who and how makes Wroclaw develop so dynamically?"

Source: own elaboration based on results of content analysis of social media websites and web pages of regional authorities, entrepreneurs and media. Authoress's translation.

The content analysis enabled to identify some repeatable narration patterns about local business leaders. However, the analysis was qualitative, it could be observed that both media and region willingly share news about the successes of local business leaders, focusing on their regional roots or region as a place of activity. However, this news rarely takes the form in which the individual achievements of the businessman are presented and happens most often in the case of either spectacular achievements on a global scale or in the case of a young entrepreneur's age. The stories of women who have been successful in business are also presented more often. Both in the media and official channels of the city authorities, the narrative concerning the position of Wroclaw on the business map of the country and Europe prevails. Also, it is important to note that only seldom authors of a message decide to use evaluative terms in relation to entrepreneurs (e.g. "inspiring", "skilled", "successful") but also – relatively rarely – present the whole story of a business leader, a venture or an innovation.

Conclusions

The objective of this paper was to explore whether and to what extent business leaders are essential for creating region brand. The image power of this group of stakeholders is significant and finds a visible reflection in media and social media coverage. Both media representatives and social media users are interested and impressed by the success stories of entrepreneurs – founders and managers of local ventures. This is why news including this type of content is willingly published and shared. The ongoing participation of local business leaders can be demonstrated in various ways, both online and offline, and seems to be crucial for the vitality of the place brand. It is also mutually beneficial – both for the region and for the business stakeholders, as the vast majority of business leaders is increasingly eager to make their work visible through story-driven content, enabling them to build their own personal brands.

The findings presented above confirm that business leaders' engagement can be an important asset in creating a region brand and has a huge image potential. However, the analyzed case of Wroclaw shows that the full potential of business representatives in these terms is not used, and, despite declarations in official documents, their possible engagement is not managed strategically.

According to previous research (Sandbach, 2022), stakeholders participation does not have to be concentrated in the development phase of brand creation but is an ongoing process that needs to be facilitated by the brand manager. What is more, a place brand becomes more authentic when local stakeholders are involved in the process of creating it. Unfortunately, the observation held in the course of case study research clearly shows that this kind of facilitation does not exist. Various attempts to create a region brand do not involve strategic stakeholders engagement, and different opportunities for business leaders to active participation are not fully used. For example, events are not treated as a chance to locally produce videos, photographs, feature articles and interviews explicitly made with the intention of emphasizing the business aspects of the region's brand.

To conclude - it is vital for city authorities to understand that, however, sustaining stakeholders participation can be challenging, such co-branding is one of the most effective methods used in the development and promotion of territorial brands, and the brand content co-created by internal actors shapes region brand authenticity, but it needs strategic facilitation.

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INNOVATIVE TECHNOLOGY FOR SUSTAINABLE BEHAVIOR – INVESTIGATING PREDICTORS OF CONSUMER INTENTION TO USE SMART WATER METERS

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Purpose: Smart water meters (Internet of Things based) are technologically advanced tools delivering precise data on water consumption in a household. However, it has not been examined yet what influences consumer intention to adopt smart water meters. The study objective is to investigate predictors of consumer intention to install smart water meters. The Technology Acceptance Model was applied as the main theoretical framework.
Design/methodology/approach: Data were collected from 366 respondents through an online survey conducted in 2021. Structural equation modeling was used for hypotheses verification.
Findings: The intention to adopt smart water meters was mainly predicted by attitude towards the use of smart water meters. which, in turn, was predicted both by perceived ease of use and by perceived usefulness of these devices. The direct positive impact of perceived ease of use on the intention to adopt smart water meters was also found, whereas the direct relation between perceived usefulness of smart water meters and the intention for the adoption turned out to be statistically insignificant.
Research limitations/implications: One research limitation is the probable lack of smart water meter usage among the responders, which may have affected their perception on how these devices are useful and easy to use. Additionally, only the main variables of TAM were applied, thus, other variables were not considered that may have had impact on perceived usefulness and perceived ease of use or usage behavior.
Social implications: Considering practical implications, by analyzing what may influence consumers to adopt smart water meters, we are able to apply this knowledge in real life and increase the amount of smart water meters in households, which may lead to household water reduction.
Originality/value: In previous research. what influences consumers to apply smart water meters has not been examined. This research indicates variables (adopted by TAM) influencing consumers to apply smart water meters, potentially leading to reduction in household water consumption.

Keywords: smart water meter, intention to adopt innovative technology, water, Technology Acceptance Model, sustainable consumption

Category of the paper: Research paper

1. Introduction

Good water quality o is vital for human society. Yet, water scarcity is a global problem; about 500 million people live in countries where water resources are not sufficient for the local population (Evans, Sadler, 2008). The increase of the global population has caused an increase in water demand, both for domestic and also industrial purposes, which together with climate change, stress the global water supply (Evans, Sadler, 2008). According to the United Nations, water usage has been constantly increasing by about 1% per year since 1980, and it is expected to keep rising (WWAP, 2019). Water scarcity and its predictors have been well-documented. Predictions suggest that the main drivers for the increase in water demand will be the domestic and industrial sector (Pimenta, Chaves, 2021). Therefore, the importance of efficient water uses and sustainable water management is crucial.

Although technological advancement is occurring, in many cases, it is not possible to precisely measure the real-time domestic water consumption in order for it to be monitored and water conservation behaviors implemented. Most countries rely on analogue and manual water-metering systems which are cost-effective, but cannot provide consumers with real-time and precise data. Applying automatic reading devices that have the ability to measure real-time water consumption can provide enormous potential both for the end users and also the environment (Pimenta, Chaves, 2021). These automatic water meters, so-called smart water meters or IoT (Internet of Things based) meters, are devices that are linked to home appliances and record the water consumption while they automatically transmit the data in a remote device (smartphone etc.) (Meyer, Nguyen, Beal, Jacobs, Buchberger, 2021). The smart water meter is connected to a remote device via WiFi for remote control (Hsia, Wang, Hsu, 2021). The main aim of smart water meters is to provide information to the consumer about her/his water usage, which can lead to water consumption reduction or to detect any possible leaks (Mudumbe, Abu-Mahfouz, 2015). Thus, as the interest in sustainable water consumption is increasing, it is noted that the interest in smart water meters is also rising (Pimenta, Chaves, 2021).

One of the ways to reduce water consumption may be achieved by individual efforts in the household (Larrabee Sonderlund, Smith, Hutton, Kapelan, 2014).In past research, the positive effects of smart water meters on reducing water consumption in households have been proven. Erickson et al. (2012) conducted research in order to evaluate the effectiveness of the Dubuque Water Portal which included a real-time consumption feedback recorded by smart-water meters that were given to households. The results indicated a 6.6% decrease in water consumption during the first 9 weeks. Petersen, Shunturov, Janda, Platt, and Weinberger (2007) also conducted research on smart water meters and water consumption: smart water meters were installed in college dormitories, the group of students who got feedback from the smart-water meters reduced their water consumption by about 3% per person. Larrabee Sonderlund et al. (2014) conducted a review on smart water meters and the influence of feedback on water consumption. These authors came to the conclusion that in studies focusing on this area, a water reduction between 3% and 53.4% what observed when information about water consumption was fed back to consumers. Cominola et al. (2021) carried out a study on long-term changes in the behavior of consumers who installed smart water meters and received feedback regarding their water consumption. They recorded a long-term decrease in volumetric water consumption by 8%. Further research was conducted by Daminato, Diaz-Farina, Filippini, and Padrón-Fumero (2021) who examined annual consumption data from approximately 51,000 households during the timeline of 10 years and concluded that due to applying smart water meters, a decrease by about 2% was noted for water consumption. Although the reductive effect of smart water meter application on water consumption was proven, in a study conducted by Montginoul and Vestier (Montginoul, Vestier, 2018), it was shown that the level of consumers' willingness to adopt this technology was low, even when they were offered smart water meters for free by water utility companies. This leads to the conclusion that attention should be focused not only on the results of smart water meter usage concerning water consumption, but also on the intention to adopt this technology by consumers as well as the predictors of this intention.

Despite the fact that there is much research regarding the effect of smart water meters on the reduction of water consumption, in not many papers has it been examined what influences the consumers to install smart water meters in their households. In a precedent study focused on the future acceptance of smart water meters by consumers based on their beliefs and expectations towards them, it was found that the majority of consumers had a positive attitude towards accepting smart grids in their households (Chang, Nam, 2021; Krishnamurti et al., 2012). In a previous study focused on consumers' perceptions of smart home devices, such as smart water meters, it was also concluded that consumers had a positive perception of smart home consumption devices (Paetz, Dütschke, Fichtner, 2011). However, past research was not focused on factors influencing consumer intention to apply smart water meters in their households. It is very important to examine these determinants in order to find effective ways of making consumers adopt sustainable lifestyles and, in particular, decrease water usage. There is still a research gap related to factors influencing these pro-environmental behaviors that lead consumers to care about the environment and that will make them act accordingly (Obery, Bangert, 2017), such as installing smart water meters in order to reduce their household water consumption. In this research, to investigate the motivation of consumer intentions to apply smart water meters, the Technology of Acceptance Model (TAM) was applied as the main theoretical framework. TAM, introduced by Davis (1989), is still one of the most frequently applied and influential models in numerous studies on the adoption of various technologies, such as: cloud e-learning applications (Wang, Lew, Lau, Leow, 2019), driverless cars (Koul, Eydgahi, 2018), smart homes (Hubert et al., 2019). TAM was proposed for information technology adoption but is currently being used in many other disciplines and fields, such as examining the intention to use a smartwatch for medical purposes (Elnagar et al., 2022).

Although TAM is a model that is nowadays used in order to examine consumer acceptance of technology, there are not many studies in which this model has been adopted to examine the acceptance of smart water meters. Park, Kim, and Kim (2014) examined the technological acceptance of smart grids, i.e., energy smart meters, and noted a positive relationship between perceived ease of use and perceived usefulness towards intentions to use energy smart grids, however, they did not examine smart water meters. Thus, it is noted that there is a research gap concerning determinants affecting the intention to apply smart water meters, specifically. By finding out the mechanism as to how TAM variables predict consumers' intentions to apply smart water, a possibility to more effectively promote the application of smart water meters in households will emerge. The aim of this paper is not only to bridge this gap but also, to practically apply its results in order to find ways to encourage consumers to use smart water meters in order to reduce their household water consumption and introduce a water conservation strategy.

The paper is structured as follows; the first part is devoted to a literature review, where hypotheses are developed on the basis of TAM and previous studies on the investigated area of research. The second part is focused on the methodology of the current study. The third part contains a presentation of the results achieved in our empirical research. The last part is focused on discussion of the results, directions of further research as well as practical applications of our results. Last but not least, a conclusion is given, in which the key findings and the limitations of our research paper are included.

2. Literature background and hypotheses development

Innovative technologies are currently developed very rapidly due to the fact that technological limitations have been successfully overcome in numerous sectors. However, in the case of various technologies, the willingness to apply them by potential users remains the most important barrier in launching them onto the market. In previous research, predictors of technology acceptance were examined both in the case of institutional entities, such as enterprises (Andaregie, Astatkie, 2021; Bruque, Moyano, 2007), and also consumers (Chan, Yee-Loong Chong, 2013; Nguyen, Borusiak, 2021). Numerous theoretical frameworks have been applied in these studies (Lai, 2017; Marangunić, Granić, 2014; Taherdoost, 2018). Two groups of them may be distinguished. The first one consists of universal models widely applied for any type of research on consumer behavior, mainly focused on behavioral intention predictors, i.e. Theory of Reasoned Action (Fishbein, Ajzen, 1975), Theory of Planned Behaviour (Ajzen, 1991), Theory of Interpersonal Behaviour (Moody, Siponen, 2013), or Social Cognitive Theory (Schunk, 2012). The other set includes theories strictly dedicated to the process of examining the adoption of new technologies, such as: Technology Acceptance Model (Davis, Bagozzi, 1989), Diffusion of Innovation theory (Dingfelder, Mandell, 2011), or Unified Theory of Acceptance and Use of Technology (Venkatesh, Morris, Davis, Davis, 2003).

Technology Acceptance Model (TAM) has become one of the most widely-used theories in the examination of technology adoption processes (King, He, 2006; Svendsen, Johnsen, Almås-Sørensen, Vittersø, 2013; Yousafzai, Foxall, Pallister, 2007a). This is mainly due to its simplicity, understandability and robustness (Gao, Bai, 2014). It was proposed by Davis in 1986 (Davis et al., 1989) for modeling user acceptance of information systems. TAM is based on the Theory of Reasoned Action - one of the most popular theories explaining people's behavioral intentions and their actual behavior predicted by the intention which, in turn, is determined by two other variables: attitude towards a given behavior and subjective norm concerning this behavior. TAM posits that intention to adopt an innovative technology is chiefly predicted by attitude towards using a technology which, in turn, is driven by behavioral beliefs. These beliefs in TAM are expressed by two key variables: perceived ease of use and perceived usefulness, which - directly or indirectly - explain outcomes (Marangunić, Granić, 2014; Scherer, Siddiq, Tondeur, 2019). Perceived ease of use is the degree to which the consumers believe that the use of a particular technology will be effortless. Perceived usefulness is defined as a potential user's probability that using a given technology will increase her/his task performance. Both perceived ease of use and perceived usefulness have positive effects on the attitude of the consumers towards the examined technology and they further positively affect consumer intentions to use and apply the particular technology.

Previous studies using TAM for explaining the predictors of technologies were mainly connected with computers and the Internet, such as: personal computers, electronic mail, voice mail, word processor, graphic software, the world wide web, smart cards, online shopping, virtual stores, digital libraries and Internet banking (Yousafzai et al., 2007a). It was also applied for technologies which are, in some ways, related to the smart water metering technology. Gao and Bai (2014) examined factors influencing consumer acceptance concerning the 'Internet of Things' technology, whereas Park et al. (2014) focused their research on smart grid technology acceptance. Both studies proved that two basic motivation variables - perceived ease of use and perceived usefulness - are related to the intention to apply smart solutions.

In the current study, TAM was implemented to explain the intention to apply smart (IoT) water meters. In order to build hypotheses, the following variables were used: intention to apply a smart (IoT) water meter in a consumer's household, attitude towards smart (IoT) water meters use, perceived ease of use and perceived usefulness of smart (IoT) water meters. The following hypotheses were constructed expressing relations proved by previous TAM-based studies:

H1: Perceived ease of IoT water meter use (PEOU) is positively related to attitude towards smart (IoT) water meter use (ATW).

H2: Perceived usefulness of IoT water meter (PU) is positively related to attitude towards smart (IoT) water meter use (ATW).

H3: Perceived ease of IoT water meter use (PEOU) is positively related to perceived usefulness of smart (IoT) water meters (PU).

H4: Attitude towards IoT water meters use (ATW) is positively related to intention to apply smart (IoT) water meters (IAW).

H5: Perceived ease of IoT water meter use (PEOU) is positively related to intention to apply smart (IoT) water meters (IAW).

H6: Perceived usefulness of IoT water meter (PU) is positively related to intention to apply smart (IoT) water meters (IAW).

All hypotheses are presented in the research model (Figure 1).

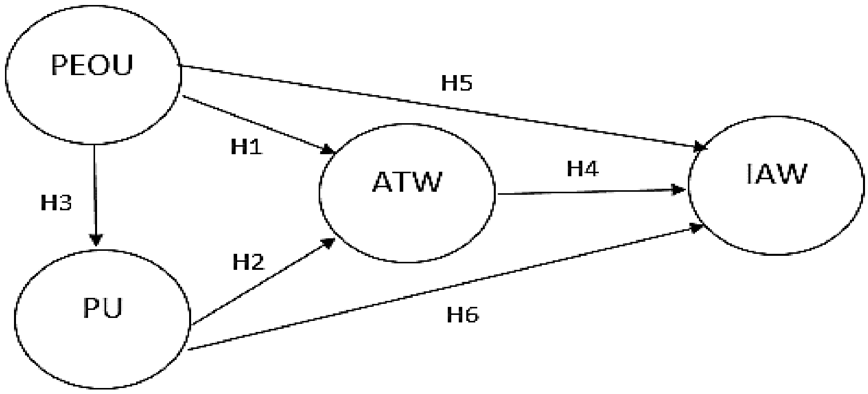

Figure 1. Research Model.

3. Methods

In order to collect data, a survey was conducted using a self-administered questionnaire – the Computer-Assisted Web Interview (CAWI) method. The participants responded to the statements on a 7-point scale (1 – ‘I strongly disagree’; 7 – ‘I strongly agree’). Validated scales were used to measure latent variables: Perceived usefulness of IoT water meters (PU), Perceived ease of IoT water meter use (PEOU), Attitude towards IoT water meter use (ATW) and Intention to apply IoT water meters (IAW). The full list of statements and sources is presented in Table 1.

Table 1.
Measures

Variable	Statements	Source
Perceived usefulness of IoT water meters	PU1. Using an IoT water meter in my household would allow me to measure water usage more precisely. PU2. Using an IoT water meter in my household would improve knowledge on my water usage. PU3. Using an IoT water meter in my household would enhance my effectiveness in water usage management.	Davis, F.D. (1989) Tsourela, M., Nerantzaki, D.M. (2020) Gao, L., Bai, X. (2014)
Perceived ease of IoT water meter use	PEOU1.Learning to operate IoT-based water meters would be easy for me. PEOU2. I would find it easy to get IoT-based water meters to do what I want them to do. PEOU3. My interaction with IoT-based water meters would be clear and understandable. PEOU4. I would find IoT-based water meters to be flexible in interaction. PEOU5. It would be easy for me to become skillful at using IoT-based water meters. PEOU6. I would find IoT-based water meters easy to use.	Davis, F.D. (1989)
Attitude towards IoT water meter use	ATW1. Using IoT water meters is a good idea. ATW2. Using IoT water meters is wise. ATW3. Using IoT water meters is beneficial. ATW4. Using IoT water meters is interesting.	Schierz, P.G., Schilke, O., Wirtz, B.W. (2010)
Intention to apply IoT water meters	IAW1. I plan to apply IoT-based water meters in my household. IAW2. I am willing to apply IoT water meters in my household. IAW3. I will make an effort to apply IoT water meters in my household.	Han et al. (2010) Chen, Tung (2014)

The study was conducted on the Amazon Mturk platform. In order to ensure the credibility of the provided answers, an answer selection step was performed. In the survey, attention-checking questions were used. The answers of people who passed this test were accepted for analysis. In addition, the answers of people who gave unreliable responses to the question about age, e.g., 2222, were eliminated. Moreover, the time of answering was considered and people who gave them in less than 3xSD from the mean were not taken into account because this may indicate lack of time to thoroughly read the statements. The final number of participants was 366, which exceeds the recommended 300 for structural models. The number of participants was 22 times greater than the number of statements, which allows us to assume that the sample was sufficient. In total, 56.56% of respondents were women and 43.43% comprised men. The mean age was 41 years (min. 18, max. 76, SD 14.09). The full characteristics of the sample is presented in Table 2.

Table 2.
Characteristics of the sample

Variable		Frequency	Percentage
Sex	Female	207	56.557
	Male	159	43.443
Education	Bachelor's degree	190	51.913
	Doctorate	8	2.186
	High school degree or equivalent	83	22.678
	Master's degree	76	20.765
	Other	9	2.459
Income	\$20.000 - \$29.999	36	9.836
	\$30.000 - \$39.999	45	12.295
	\$40.000 - \$49.999	42	11.475
	\$50.000 - \$59.999	45	12.295
	\$60.000 - \$69.999	70	19.126
	\$80.000 - \$89.999	32	8.743
	\$90.000 ≥	65	17.760
	≤ \$19.999	31	8.470
Status	Employed full-time	213	58.197
	Employed part-time	51	13.934
	Retired	31	8.470
	Self-employed	25	6.831
	Student	9	2.459
	Unable to work	13	3.552
	Unemployed	24	6.557
Residence	Apartment	108	29.508
	Multi-family home	8	2.186
	Single-family home	250	68.306
	Total	366	100.000

4. Results

First, confirmatory factor analysis was performed to test the method of measuring the variables. For all variables, the loading values exceeded the recommended 0.6, ranging from 0.72 to 0.94. Moreover, the values of Cronbach's α and CR also exceed the recommended 0.7 for all variables and ranged from 0.79 to 0.93. The AVE analysis showed recommended internal consistency among the variables ranging from 0.58 to 0.76. In the next sequence, HTML analysis demonstrated that none of the variables correlated with each other above the recommended 0.85, reaching a maximum of 0.71. On this basis, it was found that there was no common method bias and the model was assessed using bootstrapping at the level of 2000 repetitions. The RMSEA value was 0.065, chi^2/DF did not exceed 3 and was 2.54. Other parameters were also below the cut-off level: CFI 0.968, GFI- 0.29, TLI 0.958 and NFI- 0.948. This indicates that the theoretical model is correctly constructed and individual relations have been analyzed.

The analysis of direct effects showed that all except one relationship was significant at the level of $p < 0.001$. In the case of PEOU, both the influence on PU (b=0.51, $p < 0.001$) and ATW (b = 0.24, $p < 0.001$) turned out to be significant, which confirms the adopted H1 and H3 hypotheses. PU affected ATW (b = 0.62, $p < 0.001$), which is in agreement with H2, however, the effect of PU on IAW turned out to be statistically insignificant (b=-0.3, ns), indicating that there is no basis for confirming hypothesis H6. IAW was significantly influenced by PEOU (b = 0.42, $p < 0.001$) and ATW (b = 0.63, $p < 0.001$), which is a confirmation of H5 and H4, respectively. All SEM analysis values are presented in Table 3.

Table 3.
SEM Results

Endogenous variable	**Exogenous variable**	**Beta**	**B**	**SE**	***p*-value**	**CI lower**	**CI upper**
ATW	PEOU	0.24	0.37	0.10	***	0.17	0.55
ATW	PU	0.62	0.83	0.18	***	0.55	1.26
PU	PEOU	0.51	0.60	0.07	***	0.46	0.76
IAW	ATW	0.63	0.60	0.14	***	0.37	0.93
IAW	PEOU	0.42	0.61	0.13	***	0.37	0.91
IAW	PU	0.30	0.38	0.20	*ns*	-0.88	-0.10

5. Discussion

The objective of this study was to extend our knowledge regarding predictors of consumer intention to apply IoT water meters in their households, which may lead to a better understanding of how to reduce household water consumption. Based on TAM, intention to adopt a new technology is predicted by attitude towards using a certain technology, which is further influenced by the belief of perceived ease of use and perceived usefulness of the technology. The findings of this study are consistent with previous TAM- based research. The majority of hypotheses (H1-H5) posed in the current study are supported.

Consistent with TAM, our results allowed to verify that the behavioral intention to use smart water meters is determined by positive or negative attitude towards using smart water meters, thus, one of the predictors of the intention to apply smart water meters is attitude towards using them. In previous studies, it was found that attitude affects behavioral intention of consumers. Robles-Gómez, Tobarra, Pastor-Vargas, Hernández, and Haut (2021) found that attitude towards IoT cloud platforms affects the intention of using this platform. The research results obtained by Kranz, Gallenkamp, and Picot (2010) are also in line with ours, as their findings suggest that attitude towards using energy smart meters mediates the intention to use smart meters. In addition, based on our results, attitude, compared to other variables, has the strongest influence on intention (b = 0.63, $p < 0.001$).

In addition to our finding that attitude towards using smart water meters influences consumer intention of using them, determinants that impact the consumers' attitude towards using IoT water meters were also examined. Consistent with previous research based on TAM, our result allowed to verify that perceived ease of use and perceived usefulness of the technology positively impact attitudes towards the technology. Chen, Xu, and Arpan (2017), while investigating what has impact on consumers towards accepting renewable energy, it was found that both perceived ease of use and perceived usefulness are predictors of consumer attitudes towards using renewable energy. Zhang, Guo, and Chen (2007) noted that the attitude of consumers towards e-learning services is affected by perceived usefulness and perceived ease of use. In the present study, perceived usefulness has stronger impact on attitude (b = 0.62, $p < 0.001$) than perceived ease of use (b = 0.24, $p < 0.001$). Thus, future research, policymakers and IoT water meter producers need to focus on perceived ease of use and perceived usefulness of smart water meters as they are positively related to attitude which can affect the intention to apply smart water meters.

Based on the current study, perceived ease of use does not only influence attitude towards using smart water meters, but it also has impact on consumer intention to apply smart water meters. Our research supports previous results achieved by Taylor and Todd (1995) who investigated different models regarding technology acceptance of the Computer Resource Center facility. They found that consumer intention can be predicted by the facility's level of perceived ease of use. In addition, Kuo and Yen (2009) also noted that perceived ease of use affects consumer intention to use 3G mobile services. Thus, it is important for future strategies that focus on water conservation by applying smart water meters to aim on explaining the ease of use of smart water meters as it can, directly and indirectly, influence consumer intention to apply them in their households. An interesting finding is that although the TAM model and previous research suggest a rather positive connection between perceived usefulness and intention (Davis, 1989; Moon, Kim, 2001; Taylor, Todd, 1995; Yousafzai, Foxall, Pallister, 2007b), in our study, no such significant, direct relationship was found between perceived usefulness and intention to apply smart water meters. It should be also noted that in the quantitative meta-analysis of TAM conducted by Yousafzai et al. (2007b), for 8 trials out of 89, no significant relationship was indicated between perceived usefulness and intention, while in 19 out of 60, there was no proven significant relationship between perceived ease of use and intention.

In the current study, positive relationships both between perceived usefulness and attitude towards using smart water meters, as well as between attitude and intention to apply smart water meters, were found. Thus, attitude towards using IoT water meter use was proved to mediate the relationship between perceived usefulness of IoT water meters and intention to adopt them. This can be explained with a different valuation of these two beliefs, depending on the stage of action: at the level of attitude foundation, usefulness expressing outcome evaluation, i.e., the benefits of using a smart water meter delivered a potential user good rationale, whereas at the stage of behavioral intention, perceived ease of IoT water meters use turned out to be a more important predictor than perceived usefulness, actually - the only significant predictor. Thus, the most important management implication is that IoT water meters should be as easy to use as possible. To achieve this, user experience studies at the stage of a particular model of IoT water meter design could be quite helpful.

Based on the TAM model, and proved by our result, perceived ease of use can explain the perceived usefulness of IoT water meters. Based on our results, consumers will find IoT more useful if they can use it without difficulties. Past research supports our results, for instance, Gao and Bai (2014), when examining the factors that influence consumer acceptance of IoT mobile terminals, found that perceived ease of use is strongly connected with perceived usefulness, as consumers will not find it useful to use IoT mobile terminals with poor and difficult to use interfaces. Liao, Tsou, and Huang (2007), while researching mobile services, concluded that perceived ease of use directly influences perceived usefulness. Lee, Park, Chung, and Blakeney (2012) conducted research focused on acceptance of mobile financial services and verified a positive relationship between perceived ease of use and perceived usefulness. Our study also supports the results of the previous research, thus, consumers will perceive IoT water meters as more useful if they are able to use them without difficulties.

6. Conclusion

The objective of the current study was to examine the intention to apply IoT water meters using Technology Acceptance Model variables: perceived ease of use, perceived usefulness, and attitude towards IoT water meters. Based on the analysis, the intention to use smart water meters is highly explained by attitude towards the use of these devices. This conclusion is in line with the majority of studies on consumer behavioral intention based on such theories as TAM, but also on others, including the relationship between attitude towards a given behavior and behavioral intention, such as TRA and TPB. In the study, it was also found that attitude towards IoT water meter use is more strongly predicted by perceived usefulness of IoT water meter than by perceived ease of smart water meter use, intention to use smart water meters is predicted directly only by perceived ease of smart water meter use. Attitude towards IoT water meters turned out to be both mediators regarding the influence of perceived usefulness on intention to use IoT water meters and of the impact concerning perceived ease of use on the same intention. Therefore, it was noted that here, attitude towards smart water meters plays a key role as a determinant of intention with regard to smart water meter application. Based on the results of the study, 5 out of 6 posed hypotheses are supported. To be more precise, perceived ease of use and perceived usefulness of IoT water meters are positively related to attitude towards smart water meter use. At the same time, perceived ease of use is positively related to perceived usefulness of IoT water meters, while attitudes towards IoT water meters are positively related with intention to apply smart water meters and perceived ease of using IoT water meters is connected with intention to apply smart water meters. On the other hand, perceived usefulness of IoT water meters is not related to intentions to apply smart water meters.

The current study has several limitations. One of them is related to the potential lack of smart water meter usage experience among respondents, as this technology is at the initial stage of its market life cycle. This fact could, to some extent, cause bias regarding both perceived usefulness and perceived ease of IoT water meter use. Another limitation of the current study is connected with the fact that only basic TAM variables were applied in order to examine predictors of intention to use smart water meters. In this research, neither the variable predicting both perceived usefulness and perceived ease of use nor of usage behavior were considered.

Despite these limitations, this study has many scientific and practical contributions. First of all, the results and understanding of determinants concerning consumer intention to apply smart water meters can be used to increase IoT smart water meter application in households. This, based on previous research, will lead to a reduction in water consumption (Sønderlund, Smith, Hutton, Kapelan, 2014). As in this study the existing TAM model was used and evaluated, future research could be focused on its extension by examining moderating effects of such variables, i.e. frugality, personal innovativeness and environmental concern, to find effective ways of influencing consumer intentions to apply smart water meters. Other directions of further studies could be related to actual behaviors and examination of predictors. Thirdly, the results of our study allow to state that policymakers, smart water meter producers and researchers should focus on improving information on how to use smart water meters, as perceived ease of use both directly and indirectly influence intentions to apply smart water meters, but also they should pay attention to providing consumers with more information about the usefulness of smart water meters in their everyday life to potentially increase the possibility of consumers adopting this technology. Moreover, based on the results of the current study, ways of influencing consumers to install smart water meters in their households, which could potentially lead to household water reduction, are identified. Thus, in this study, implications were given and more information was provided, both on the theoretical and empirical grounds which can be used to promote individuals' application of smart water meters in their households.

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