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ATTRIBUTES OF LISTED COMPANIES THAT AFFECT GENDER DIVERSITY ON CORPORATE BOARDS

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Purpose: The purpose of the article is to identify the key factors affecting the representation of women on the boards of companies listed on the main market of the Warsaw Stock Exchange.
Design/methodology/approach: Data exploration was conducted using cluster analysis. Its application enabled the identification of homogeneous groupings with maximum similarity based on specified attributes of the analyzed listed companies. The sampling of companies for the study results from the fact that these organizations hold particular economic importance and are expected to serve as models of good practice for other entities, which is emphasized in legal regulations concerning employment parity.
Findings: A retrospective analysis of the scientific literature indicates that the representation of women on company governing bodies depends on several factors, with varying degrees of significance. The result of the conducted study is the identification of homogeneous clusters of companies with maximum similarity, based on certain attributes.
Research limitations/implications: It should be noted that due to the situational context (socio-cultural or legal and political environment) affecting the representation of women in socio-economic life in different countries, the formulation of universal recommendations or unambiguous conclusions regarding gender diversity in organizations may prove problematic.
Practical implications: The research results can contribute to the formulation of targeted recommendations and actions tailored to the Polish context in the field of gender equality, which is one of the objectives of sustainable development.
Social implications: Diagnosing the situation concerning the structure of women's employment at the highest levels of management and identifying the determinants of this situation are essential issues both for the implementation of the guidelines of EU directives and for the quality of management and the implemented diversity policy. Increasing the number of women in senior positions is not only an issue of social justice, but also a step towards a more modern and sustainable society. As a result, popularizing these issues is of considerable social significance.
Originality/value: The study contributes to understanding the extent to which the underrepresentation of women at the highest levels of management (on corporate boards) can be related to such attributes of companies as their size, ownership structure, and sector.
Keywords: gender employment structure, diversity, gender parity.
Category of the paper: Research paper.

1. Introduction

Gender balance on company governing bodies is an issue that is becoming increasingly significant in public debate and business strategies. However, the participation of women in making strategic decisions within companies remains limited. The impact of legal regulations, such as EU directives, among other things, can be of great relevance to the development of gender equality policies on company governing bodies.

Equality and non-discrimination are firmly grounded in the EU Treaties and the EU Charter of Fundamental Rights. The European Commission has placed equality at the core of its agenda, aiming to build a Union of Equality that is free of discrimination. Furthermore, reducing inequalities and vulnerabilities that leave people behind constitutes a guiding principle of the 2030 Agenda for Sustainable Development, adopted by the United Nations (Eurostat, 2024). The pace of changes required to achieve Goal 5 of the 2030 Agenda, titled "Gender Equality", is regarded as insufficient for its realization within a reasonable timespan. Equality in managerial roles will be achieved in 176 years (UN, 2024). What is more, according to the report (UN, 2024), while women make up 40% of the global workforce, in 2022, they held only 27% of managerial positions. The percentage was identical to that recorded in 2016 (UN, 2024).

Issues of equality and non-discrimination are not only a significant part of employment policy making and monitoring, but are also of interest to NGOs and the public. Popularizing these issues may ultimately contribute to improving the situation of women in the labor market.

The purpose of the article is to analyze the current situation and identify the key factors affecting the representation of women on the boards of companies listed on the Warsaw Stock Exchange. The issue raised has a significant practical dimension, as the EU Women on Boards directive requires increasing gender diversity on corporate boards by 30 June 2026. As a result, the underrepresented gender in companies (and in all EU countries it is women) is supposed to make up a minimum of 40% of non-executive director positions or at least 33% of all director positions (executive and non-executive) (Directive of the European Parliament and the Council EU 2022/2381). Gender diversity regulations are amplifying interest in the issue and the ongoing scientific discussion (Martinez-Garcia et al., 2024). Considering the fact that just a few years ago in Poland the gap between the number of women and men with a university degree was estimated at almost 19 percentage points in favor of women (Biuletyn, 2023), it is difficult to attribute the lower percentage of women in managerial positions merely to a lack of supply of suitable female candidates for such positions (Stainback et al., 2024). Therefore, an attempt was made to establish to what extent the underrepresentation of women at the highest levels of management (on corporate boards) can be linked to such attributes of companies as their size, ownership structure, or sector. The research results can contribute to the formulation of targeted recommendations and actions tailored to the Polish context in the field of gender equality, which is one of the objectives of sustainable development.

2. Literature review

A review of the available research results on the issue at hand constitutes the starting point for the considerations undertaken. The theoretical findings to date are multifaceted, however, the perspective of institutional theory, according to which women's participation in economic life is shaped by the broader social context, cultural context or transformations in the institutional environment, has been adopted as the theoretical framework of the conducted own research (Abadi et al., 2020; Rakowska, 2021).

The authors emphasize the complexity of mechanisms that affect women's representation in decision-making bodies (Tyrowicz et al., 2020). What is significant, the results of the literature review are not unambiguous and frequently contradict each other. Some authors indicate the positive impact of women on boards on a company's performance (Hamdan et al., 2022; Nielsen, Huse, 2010; Singh, Vinnicombe, Johnson, 2001). Gender diversity is emphasized as contributing to value creation (Nguyen et al., 2020), supported by a strong business case.

The Deloitte Global Report (2024) on gender diversity on boards and women in leadership positions states that companies with more diverse boards tend to demonstrate better financial performance. Moreover, organizations that are more gender diverse as a whole, from executives and board members to managers and employees, tend to have better performance than those that are less gender diverse.

As a result, legislative initiatives are being undertaken and regulations are being implemented to increase the participation of the underrepresented gender on company management. An example of specific action is the development of the European Commission's Gender Equality Strategy 2020-2025. The strategy sets out policy objectives and initiatives to achieve significant progress by 2025 toward a gender-equal Europe (Strategy 2020-2025). Its objective is a Union in which women and men have equal development opportunities and can equally participate in and lead our European society. One of the core elements of this strategy is the directive on gender equality on corporate boards (Women on Boards), which seeks to improve the gender balance in decision-making at the EU's largest listed companies. After 10 years of negotiations, the directive was ultimately adopted on 22 November 2022. The directive was to be implemented into Polish law by 28 December 2024. The first obligations under the directive, such as the development of a diversity policy, became effective in 2025. The subsequent steps in its implementation are presented in Figure 1. Notably, for SOEs, certain requirements must be met sooner, by 31 December 2025 (Piątek, Przedpełska, 2025).

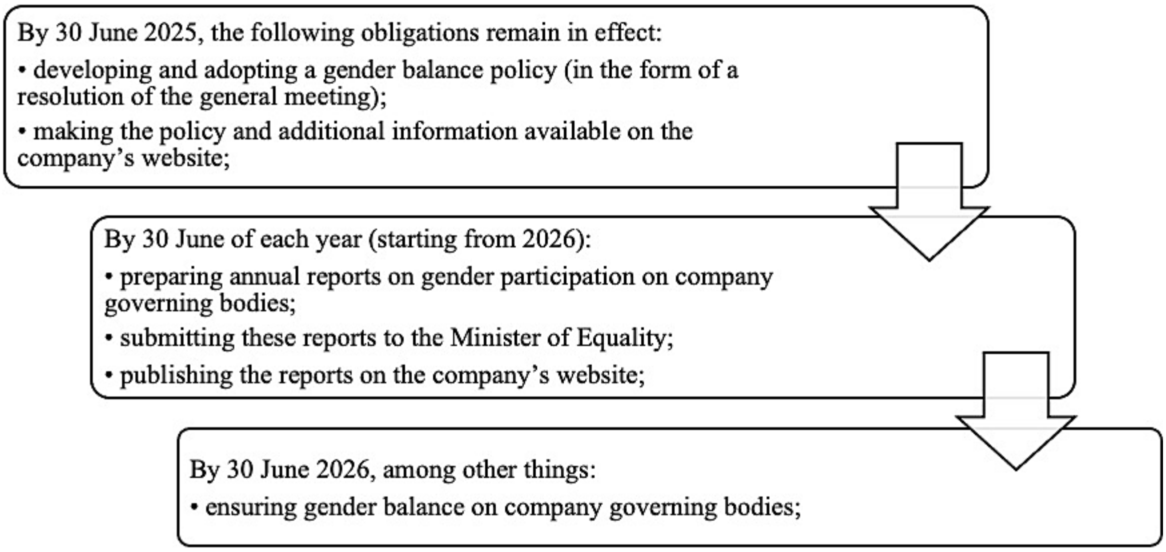

Figure 1. Stages of implementation of the directive on gender equality on corporate boards.
Source: own elaboration, based on (Piątek, Przedpełska, 2025).

The implementation of the Women on Boards directive is not only a matter of compliance, but also a chance for real change in the management structures of Polish companies. This new EU legislation is ultimately intended to help break the glass ceiling on the boards of listed companies and provide women who qualify for top managerial positions with a real chance to obtain them.

Another example of efforts promoting gender equality is the adoption, in March of this year, of the Roadmap for Women's Rights (2025). The plan sets forth a long-term vision for achieving gender equality based on the core principles and policy objectives outlined in the Declaration of Principles for a Gender-Equal Society. However, the document emphasizes that the full implementation of the goals set out in this plan is beyond the EU's competence and needs to rely on actions at the national level. This requires adequate commitment, cooperation, and close partnership with the member states. That is why it is vital to analyze the situation in individual markets.

In 2023, the Polish Economic Institute, based on data from Eurostat, reported that women in Poland accounted for 43% of persons occupying managerial positions (Oksiuta, 2023). On the one hand, Poland performed better than such countries as the Netherlands and Cyprus, where these proportions amounted to 26% and 21%, respectively. However, already on the boards of listed companies, women's representation amounted to 24%, while the average rate for the European Union is 32% and for France as high as 45% (Oksiiuta, 2023). The above justifies further consideration of the extent to which the position of women in the labor market is becoming equal, and to what extent there are still processes that hinder, or even make it impossible for women to occupy top managerial positions.

Data from EU member states indicate that increasing women's representation in the statutory bodies of companies is yielding several positive effects, particularly where the rate was lowest before the introduction of relevant regulations. The report *Diversity Wins.*

How inclusion matters (Hunt et al., 2020), prepared by McKinsey & Company on a sample of 1039 companies from 15 countries, indicated that the penalty associated with a lack of diversity on corporate boards deepens over time.

This, however, stands in contrast to research findings suggesting that women's representation has a negligible impact on, among other things, the financial performance of Italian innovative SMEs (Schifilliti, La Rocca, 2024), and that the very innovativeness of a particular sector is difficult to link to the presence of women on corporate boards (Tyrowicz et al., 2020). Kompa and the team (2016) indicate that the presence of women on company governing bodies is not linked to their efficiency and financial standing. Appointing more women as directors has also not had a significant impact on the solvency of Norwegian companies (Garcia-Blandon et al., 2023).

According to Roffia and Dabić (2024, p. 1366), the presence of women on the boards of Italian companies, had "slightly significant ($p < 0.1$), but with a negative sign" impact on SME resilience (this effect, however, the authors were prone to explain primarily by the fact that female respondents were more cautious when answering questions about the strength of their organizations). Meanwhile, Hurley and Choudhary (2020) indicate that increasing the number of women on boards decreases financial risk.

In light of such disparate research findings, it is all the more significant to identify organizational attributes that determine gender diversity in companies.

Table 1 synthesizes selected studies on the perspective of gender diversity. Researchers recognize the co-occurrence of certain company characteristics (i.e., sector, company size, industry, company maturity) with the presence or absence of women on supervisory or management bodies. The multiplicity of features concerning the companies studied makes the research area of gender diversity in the composition of management and supervisory boards complex and multifaceted.

As it is shown in Table 1, over the years, various attributes of companies have been studied in connection with the issue of women's employment. These include:

- the sector in which the company operates,
- ownership (dominant shareholder),
- size of the supervisory board and gender of the chairman,
- size of the company,
- period of operation in the market.

However, it should be noted that, most frequently, studies indicate simultaneously several attributes that affect the employment of women, which suggests the complexity of the issue being addressed.

Table 1.
Gender diversity on company governing bodies – a summary of selected studies

Organizational attribute – potential grouping factor	Author	Country	Findings
Sector/industry +digital transformation and automation	Simionescu et al. (2021)	Technology sector (USA)	Women improve P/E ratio-positive **board diversity** impact.
	Tasnim et al. (2024)	Healthcare industry (USA)	The proportion of female directors and the Blau and Shannon diversity indices exhibit a robust and positive correlation with the **intensity and quality of sustainability reporting**.
Institutional ownership	Fernando, Schneible, Zhang (2024)	U.S. public firms – the S&P 1500 index	The **institutional ownership** is linked to a higher proportion of top female executives.
Gender of the chairman of the supervisory board	Samborski (2024)	Poland	An essential factor that increases the gender diversity of supervisory boards in SOEs is the chairperson of the board (a woman).
Company size, age, and duration of operation	Bukalska et al. (2024)	The Visegrad Group Countries	**Larger, more mature and well-established** companies tend to appoint women to company governing bodies more frequently, diversifying their management methods.
	Singh, Vinnicombe, Johnson (2001)	Great Britain	More women in director roles can be found in companies with a **greater number of employees, higher turnover, and profits.**
	Nekhili, Gatfaoui (2013)	France	The presence of women in French listed companies is also related to **the size of the company or board, as well as to family ownership**, women's skills, and network ties.
Board size	Dimovski, Lombardi, Cooper (2013)	Australia	Women directors are more commonly employed on boards of directors in **larger entities** and **entities with larger boards**.

Source: own elaboration.

To synthesize, the analysis of the research output on gender diversity reveals that the rationale behind initiatives aimed at improving the situation of women is not limited to business considerations. Moral arguments also play an important role. For example, from the perspective of stakeholder theory (Freeman, 1984), appointing women may be perceived as fulfilling a moral obligation in response to stakeholder expectations (Moraka, 2023). One might also take into account that the significance of transformations in the institutional environment can lead to differentiated outcomes depending on intra-organizational conditions and the principles guiding individuals in managerial and other roles. It is also worth noting, among other things, the so-called trickle-down effect, which refers to the idea that changes in the gender composition of top management should immediately affect changes in lower managerial positions. However, the occurrence of this effect has not been conclusively confirmed in the literature (Stainback et al., 2024). One of the main explanations for this effect may be the empirically proven (Stainback et al., 2024) issue of women in managerial positions feeling a sense of obligation to help other women. A similar effect was observed as early as the 1970s by Kanter (1977), who noted that men tended to prefer hiring only men for managerial positions. The trickle-down effect, portraying women as agents of change, is not the only possible explanation. Attention is drawn to the possibility of signaling (e.g., to investors) unobservable characteristics of companies, such as the significance attributed to social values through the presence of women in top managerial positions (Stainback et al., 2024). This perspective reflects the assumptions of the abovementioned institutional theories (e.g., Scott, 2001), according to which organizations, to be seen as legitimate, should act in accordance with social expectations outlined by laws, regulations, and value systems (Moraka, 2023). From this point of view, the implementation of legal requirements discussed in the previous section that prescribe specific steps to be taken to improve the situation of women seeking top managerial positions, amplifies institutional pressures targeted at companies, for which compliance with rules and acceptance of norms (Oliver, 1991) in such a situation should serve as the primary strategy for responding to institutional processes.

However, taking into account the aforementioned multifaceted nature of the considerations carried out in the selected topic, it is worth pointing out other theoretical positions, such as social capital theory (Burt, 1992) or social identity theory (e.g., Turner, Haslam, 2001). Taking these into consideration may prompt the opposite question, i.e., whether women employed in senior positions might be more prone to maintain the status quo and, in doing so, contribute to the continued underrepresentation of women on supervisory boards and in company management teams. The first theory referred to draws attention to the fact that board directors bring significant resources to the organization in the form of their links to the business world. Therefore, the mere lack of invitation to such networks may turn out to be problematic for women applying for managerial positions (Moraka, 2023). The other theory points to existing categorizations among members of top management (Moraka, 2023). In this way, it is feasible to consider whether, for instance, a minority group of women, pursuing alliances with influential directors (Huse, Grethe Solberg, 2006) to overcome potential marginalization, might act in such a way at the expense of engaging with women at lower levels of the organizational hierarchy. A premise that could increase the probability of such phenomena occurring might be situations where the expected relationships discussed in Table 1 – between company size, its sector of business activity, or the chairperson of the supervisory board, and the involvement of women in top managerial positions – when studied in light of groupings concerning companies listed on the Warsaw Stock Exchange could be regarded as less likely.

3. Research method

Data exploration was conducted using cluster analysis. Its application made it possible to extract homogeneous groups with maximum similarity based on specified attributes.

Clustering can be understood as "grouping observations based upon their proximity to each other on multiple dimensions" (Ho Yu, 2010, p. 13). It can be assumed that the null hypothesis in cluster analysis states that no significant clusters exist in the data and that all observations belong to a single homogeneous group (spssanalysis.com).

A two-step cluster analysis was used because, unlike the k-means and hierarchical clustering methods, this approach accepts not only continuous variables but also categorical variables. The algorithm also demonstrates resilience to violations of assumptions regarding the distribution of variables taken into consideration in the analysis, i.e., the normal distribution for continuous variables and the multinomial distribution for categorical variables. This algorithm can also automatically determine the correct number of clusters, so contrary to the k-means method, it does not require prior knowledge of this. The advantage of this method is also its scalability. Unlike hierarchical cluster analysis, it can successfully analyze even thousands of observations (Ho Yu, 2010, p. 13).

The original study included all 410 companies listed on the main market of the Warsaw Stock Exchange as of 7 March 2025 (WSE, 2025). However, the final result base did not include Comarch S.A. and Ovostar S.A. due to the Polish Financial Supervision Authority's Decision to authorize the withdrawal of the companies' shares from trading on the regulated market of the Warsaw Stock Exchange on 26 March 2025 and 14 March 2025, respectively. Ultimately, the study was exhaustive and covered 408 companies listed on the regulated market of the Warsaw Stock Exchange. A non-random sampling method – purposive selection – was used. An analysis was conducted on secondary data obtained from the Notoria database for the period from 31 March 2025 to 14 April 2025 (Department of Business Management, 2025)[1].

The sampling of entities for the study results from the relative ease of access to information about listed companies and the fact that the companies are of particular economic significance, and are expected to serve as a model of good practice for other entities, which is emphasized in legal regulations (Directive (EU) 2022/2381 of the European Union and the Council, 2022).

Ultimately, the analysis of the empirical material obtained enabled us to achieve the objective of the study, which is to diagnose the situation and to identify the basic attributes shaping the participation of women in the company governing bodies of the companies listed on the Warsaw Stock Exchange. Table 2 provides detailed information on the research sample.

[1] The study is part of a broader research task entitled "Women in the Bodies of Companies Listed on the Warsaw Stock Exchange", conducted in 2025-2026, by the Department of Business Management at the University of Economics in Katowice.

Table 2.
Characteristics of the surveyed companies – measures of frequency

Items and category	Frequency	Percentage
Company size (employees)		
small	157	38,5%
medium	104	25,5%
large	147	36,0%
Leading sector (WSE classification)		
finance	89	21,8%
fuel and energy	22	5,4%
chemistry and raw materials	28	6,9%
industrial production and construction	85	20,8%
consumer goods	69	16,9%
trade and services	41	10,0%
health care	34	8,3%
technology	40	9,8%
Company headquarters		
country	17	4,2%
small town – up to 20 thousand inhabitants	24	5,9%
medium city 20-100 thousand inhabitants	61	15,0%
large city – over 100 thousand inhabitants	306	75,0%

Source: own elaboration.

As shown in Table 2, small companies (157), employing up to 49 people, were dominant. They accounted for 38.5% of the surveyed sample. There were slightly fewer large companies (147), employing more than 250 people, 36%, while medium-sized companies accounted for 25.5% of the research sample (104). The most numerous group included entities that have operated in the market for more than 20 years. Their share amounted to 45.8%, while the least numerous group included companies that have operated in the market for up to 10 years (79).

Given the presented characteristics of the research sample (Table 2), it should be noted that company size is formally linked to corporate governance standards. Large companies, which account for 36% of the research sample, are usually more exposed to regulatory or social pressure. A clear example of this is, among other things, the Women on Board Directive, whose provisions do not apply to all companies but are particularly relevant for large entities. Patel and Yates (2023) also point out that the proportion of women among decision-makers increases with company size. The impact of company size on the diversity of its governing bodies is analyzed, among others, by Saeed et al. (2016). Within the governing bodies of small companies, pressure to achieve gender diversity may be inconsistent or stem mainly from limited availability of resources rather than regulatory requirements (Owalla et al., 2021). Consequently, the bimodal composition of the Warsaw Stock Exchange (with 38.5% small and 36% large companies) suggests that the studied sample may actually include two populations with different management styles. Data on the dominance of small and large companies in the research sample are more than mere statistics. They indicate, even at an early stage, diverse management requirements that ultimately directly affect gender diversity patterns.

From a research standpoint, the share of companies operating in the financial sector (21.8%) and in industrial production and construction (20.8%) is also of particular relevance. Due to its specific nature and strict regulations, the financial sector may display distinct patterns compared to other industries. The existing sector-specific characteristics may shape both the baseline level of gender diversity and the potential barriers to women's representation on corporate boards. Among others, Torchia et al. (2010) point to real obstacles that not only hinder women's access to boards but also their ability to perform effectively once appointed.

4. Results

The results of our own research indicate that in 30 of the surveyed companies (less than 8%), the CEO is a woman. In the remaining 375 companies, however, it is a man who holds this position (92%). Even the preliminary data (as of the first half of 2025) indicate the scale of challenges relating to the implementation of the recommendations on the underrepresentation of women on company governing bodies. The application of a two-step cluster analysis made it possible to distinguish specific clusters within the dataset. This analysis was conducted four times. Each time, the Silhouette score (cohesion and distinctiveness of the developed model) indicated a good quality of the identified clusters. As shown in Table 3, the quantitative variable taken into consideration in each case was the number of women on the management board. Depending on the variant, different qualitative variables were applied. The qualitative variable considered each time was the gender of the company's CEO, and complementarily: company size (variant I), sector according to the WSE classification (variant II), dominant shareholder (variant III), and company headquarters (variant IV). Company size was determined based on the number of employees. The analysis results are presented in Table 3. The initial findings (based on the qualitative variable: CEO, and the quantitative variable: the number of women on the management board; Silhouette measure: good) made it possible to state that the largest cluster (260 companies) consists of companies led by male CEOs and with no women on the management board. On average, more than one woman was present on the board in the remaining two clusters, with a larger cluster (114 companies) including companies where the CEO was male. The fact that the position of CEO was occupied by a woman did not seem to have a significant impact on the composition of the companies' boards of directors.

Table 3.
Overview of qualitative and quantitative variables and outcomes of the cluster analysis

<table>
<tr><th rowspan="2">Variant</th><th colspan="2">Variables considered</th><th rowspan="2">Number of clusters extracted / Silhouette measure</th><th rowspan="2">Cluster characteristics</th></tr>
<tr><th>qualitative</th><th>quantitative</th></tr>
<tr><td>1</td><td>a) CEO
(W / M)
b) size
of the company</td><td rowspan="4">number of women on the management board</td><td>4
</td><td>On average, the highest number of women on the management board is seen in companies where the CEO is a woman (most frequently, a female CEO is the only woman on the management board – cluster size is 33 companies, in 90.9% of cases the CEO is a woman, and the average number of women on the board is 1.27), and the situation occurs regardless of the size of the company (both in large, medium-sized and small companies). In companies where the CEO is a man, on average, a higher number of women is seen in large companies (in the cluster of 136 large companies, where the CEOs are exclusively men, the average number of women on the board is 0.56., whereas in the cluster of 140 small companies, where the CEOs are exclusively men, the average number of women on the board is 0.27).</td></tr>
<tr><td>2</td><td>a) CEO
(W / M)
b) sector
according
to WSE
classification</td><td>6
</td><td>In the group (comprising 33 companies) with the highest average number of women on the management board (1.27), the CEO is a woman (in 90.9% of cases), and the majority of companies operate in the financial and consumer goods sectors. Companies in the financial sector with a male CEO (cluster size: 77 companies) have an average of 0.44 women on the management board, while a slightly higher average, i.e., 0.46, is observed in companies operating in the trade and service sectors as well as the healthcare sector (cluster size: 68 companies).</td></tr>
<tr><td>3</td><td>a) CEO
(W / M)
b) dominant
shareholder</td><td>5
</td><td>Among the groups where the CEO is exclusively or commonly a man, the highest average number of women on the management board (0.64) can be observed in companies where a financial institution is the dominant shareholder (cluster size: 56 companies). In companies where the CEO is mainly a woman and the average number of women on the management board is the highest (1.07 – cluster size: 29 companies), the dominant shareholder is (most frequently) a natural person or another entity.</td></tr>
<tr><td>4</td><td>a) CEO
(W / M)
b) company
headquarters</td><td>5
</td><td>The highest average numbers of women on the management board (1.27 and 1.25, respectively) were recorded in groups where either the CEO is a woman (in 90.9% of cases) and the company is based mainly in a large city (cluster size: 33 companies), or the CEO is a man and all companies in the group have their headquarters exclusively in large cities (cluster size: 85 companies). On the other hand, there is a group of companies where the CEO is a man, all companies in the group are based in large cities, and the average number of women on the board is 0 (cluster size: 192 companies).</td></tr>
</table>

Source: own elaboration.

Discussion

A retrospective analysis of the scientific literature indicates that the representation of women on company governing bodies depends on several attributes, with varying degrees of significance, which is at least to some extent indicated by the conducted analyses. Referring to the theoretical findings concerning the occupation of top-level positions by women, it can be pointed out that intra-organizational conditions do not appear to be the most significant. In other words, the fact that a woman occupies the position of the CEO did not co-occur with an increased number of women on the management board. Frequently, a female CEO is the only woman on the management board. The literature in the women on corporate board debate concludes that there must be at least three women on a board before the women really make a difference (Torchia et al., 2010, p. 42). Given the above, it is impossible to assert that the previously mentioned triple-down effect occurs in the companies studied. This also does not mean that women holding board positions focus above all on building relationships with other board members at the expense of promoting other women. However, the perspective of social identity theory could provide greater explanatory potential for the phenomena discussed. According to the assumption of institutional theory regarding companies' pursuit of legitimacy, the presence of women may be associated with efforts made to meet external expectations. Although the results do not conclusively prove this, it is possible that regulatory pressure constitutes the main factor determining the representation of women on corporate boards (rather than reasons rooted in the system of values). Referring to previous remarks, the fact that the presence of women is highest in companies in the financial sector can be regarded as consistent with this suggestion. Of particular interest is the result of theoretical research on the difficulty of women developing adequate social capital (Gabaldon et al., 2016), and the fact that divisions exist among top executives, with gender being one such dividing factor. The fact that city size is not a significant factor for 192 companies, in terms of women holding board positions, can be viewed as potentially challenging the significance of arguments based on Burt's social capital theory (1992). Women developing their careers in large cities should potentially have greater opportunities to build relationships in the business world, which should translate into more opportunities to apply for board positions. However, the lack of female representation in such a large number of companies suggests that interpersonal relations are unlikely to be the main reason for this situation. Nevertheless, the clustering results presented do not make it possible to reach a definitive conclusion on this matter.

The multifaceted nature of this issue makes it difficult to unambiguously identify the attributes of companies that determine gender diversity on their boards. The dynamics of the changing environment are forcing a new perspective on gender diversity on corporate boards. In light of inconsistent theoretical findings resulting from diverse cultural, social, legal, or political conditions, the interplay of the experience and expertise is the key, because the minority women might face a "token" status (Makkonen, 2022). A comprehensive comparative analysis of an international nature is a challenge for future research. However, conducting such an analysis is impeded by the impact of various factors, including political (in some countries, appointments to company governing bodies, especially in state-owned companies, are made based on political affiliation), as well as legal and socio-cultural factors. However, gender equality remains an objective we are pursuing, although, as previously highlighted in the literature, there are positions that question the impact of women's participation on corporate boards on, for instance, the financial performance of companies (i.e. Garcia-Blandon et al., 2023).

That said, one needs to bear in mind that achieving gender parity is not and should not be an end in itself, and the mere fact of appointing women to managerial positions does not yet prove their actual participation in decision-making processes. In its absence, the participation of women on boards may merely function as a signal of the company's commitment to social values (Stainback et al., 2024). The fact that the number of women on boards increases with company growth and the growing need for board expansion may indicate that their participation in decision-making is not a priority.

Furthermore, one should bear in mind that in addition to gender diversity, there are other dimensions of diversity, such as age, or, for example, cultural diversity, which further contribute to the multifaceted nature of the issue and make it an ongoing research challenge.

Conclusion

The obtained results of the cluster analysis make it possible to formulate certain conclusions. Firstly, companies seeking to meet legal expectations and social norms that are changing in this area build their legitimacy by appointing women (usually one) to the management board. It can be presumed that an appointed woman can encounter constraints if she wishes to promote greater inclusiveness within the company. As the results indicate, such constraints can exist in companies regardless of their size. On the other hand, these are large companies with male CEOs that may feel the greatest pressure to have women on their boards. Therefore, there is a justified concern that the actions undertaken may bear the hallmarks of diversity washing, rather than reflect a genuine commitment to diversity, motivated, for instance, by an awareness of the benefits resulting from broader and more diverse team competencies. This is due to the fact that Polish managers, at the declarative level, manifest a moderate positive attitude towards diversity management (Moczydłowska, 2017), and existing initiatives in this field are frequently undertaken for image-related goals (Rakowska, 2018).

Secondly, the dominant shareholder may also constitute a significant factor in shaping the composition of management boards. In companies with male CEOs, the highest average number of women is observed in those where a financial institution is the main shareholder. Therefore, based on the results, it can be assumed that financial institutions express interest in developing diversity policies. Moreover, women occupy CEO positions primarily in organizations where natural persons are the main shareholders. Simultaneously, while it is true that companies whose headquarters are located in large cities have, on average, the highest number of women on boards, the analysis also made it possible to identify a group of companies where, despite all being located in large cities, there are no women on boards. This suggests that it is not necessarily the general (diffuse) sense of social pressure to implement diversity policies, which is presumably stronger in large cities, that determines the presence of women on corporate boards. The source of such pressure can be identified and originates from the company's main shareholder. Thus, it is also doubtful that in organizational hierarchies, a greater number of women in managerial positions can have an impact on filling top managerial positions. This is supported by research to date, which indicates that the effects of diversity management in a broad sense (including in the field of gender) are moderated by perceptions of ethical climate, managerial commitment, and motivation (Leslie, 2019) or cultural conditions (Mehing et al., 2019).

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