

## AFFORDABILITY OF RENTAL APARTMENTS IN POLAND IN COMPARISON TO SELECTED EUROPEAN UNION COUNTRIES

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**Purpose:** The aim of the article is to present the affordability of rental prices in relation to property sales prices and to assess the situation in Poland compared to selected European Union countries.

**Design/methodology/approach:** To examine rental affordability in Poland, the ratio of average rents to incomes was determined in the 7 largest cities, and compared. Rental prices for a standardized apartment size (50 m<sup>2</sup>) were calculated for selected EU capitals based on average rent per m<sup>2</sup> rates, and their ratio to average monthly earnings of a full-time worker was assessed.

**Findings:** Based on the conducted analyses, it can be concluded that despite the increase in average rents in the surveyed Polish cities, rental affordability is improving. This is due to the fact that incomes are rising faster than rental prices. Simultaneously, while rental costs in Poland burden budgets significantly, Warsaw's situation is not the worst among the selected European capitals. There are cities where high incomes do not guarantee ease of renting. Affordability is very limited, and housing expenses consume a significant portion of earnings (more than in Poland).

**Research limitations/implications:** The analysis of rental affordability in Poland was conducted for the 7 largest cities. Further analysis for smaller cities would be valuable to assess affordability in smaller, local rental markets. In the context of the European market analysis, calculations were based on selected EU capitals due to data availability regarding rental rates, making it difficult to generalize the situation across entire countries. These limitations suggest potential directions for further research focusing on both local markets within Poland and considering the situation across entire EU countries. Future research should also focus on developing new indicators and evaluation methods for housing affordability, as well as assessing the effectiveness of various housing policies.

**Practical implications:** Determining rental affordability can provide crucial information for governments developing support programs for individuals struggling to afford rent, as well as for property owners and developers making decisions regarding new investments and property purchases for rental purposes based on investment returns. Knowledge of rental affordability can assist in adjusting market offerings and pricing strategies to meet market needs.

**Social implications:** Studying rental affordability reveals the scale of issues related to mismatching rental prices with societal income levels. Affordable housing could increase societal mobility, enhancing income by providing access to better-paying jobs, education,

and services. Affordable housing provides residents with a greater sense of stability, influencing quality of life and reducing stress.

**Originality/value:** Rental affordability is a growing concern in the EU. While numerous indicators address this issue, most focus on the property sales market. The authors identified a gap in studying rental affordability, particularly in a European context. This research targets investors in the rental market, developers, and governments influencing rental rates.

**Keywords:** rental market, rental affordability.

**Category of the paper:** research paper.

## 1. Introduction

Rental housing affordability is a crucial element of housing markets across Europe, and housing accessibility issues have broad social and economic implications. In recent years, the issue of rental affordability has gained prominence, especially in the context of urbanization, demographic changes, and the concept of sustainable housing market development.

In many European countries, including Poland, the rental market plays a pivotal role in providing housing solutions for diverse social groups, from young individuals seeking flexibility to families in need of stability and security. However, varying economic conditions, regulatory frameworks, and housing policies significantly influence the dynamics of rental housing affordability. Understanding these factors is crucial for policymakers, investors, developers, and tenants navigating the complex landscape of housing provision and rental pricing strategies.

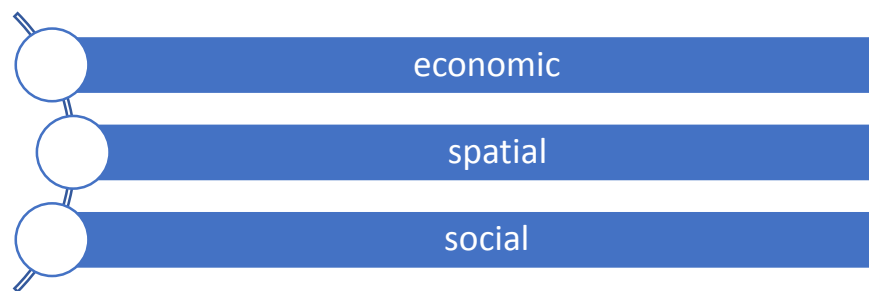
This article aims to explore and compare the affordability of rental housing in Poland with selected European Union countries, focusing on key factors influencing rental affordability. The study centers on assessing rental housing affordability by analyzing the ratio of average rents to incomes in major Polish cities and comparing them with selected capitals in the EU. Through this analysis, the article seeks to provide insights into the challenges and opportunities of the rental housing sector, aiming to support evidence-based policy decisions and strategic investments.

## 2. The concept of rental housing affordability

Housing costs are among the largest expenditures for households in Europe (Eurostat, 2024). High rental costs, mortgage payments, and other housing-related expenses significantly impact finances, quality of life, and social mobility. Analyzing and understanding these costs are crucial for developing effective housing policies, increasing housing affordability broadly defined, and thereby improving citizens' living conditions (Molloy, 2020). High housing costs

can exacerbate social inequalities, especially in cities where incomes do not rise proportionally to the cost of living.

Housing affordability, understood as the extent to which residents of a particular area can meet their housing needs considering their incomes, property prices, and rents, is a key element of social and economic policy in many countries. It influences citizens' quality of life and economic stability. This concept refers to the ability of different social groups to acquire or rent housing based on their incomes and housing needs. In the literature, housing affordability is examined from multiple perspectives, encompassing economic factors (Bryx, Rudzka, 2021), social factors (Rolfe, Granham, Godwin, 2020; Hick, Pomati, Stephens, 2020), and spatial considerations (Haffner, Hulse, 2012; Szumilo, 2018; Cavicchia, Peverini, 2022).



**Figure 1.** Dimensions of housing affordability.

Source: Own study.

The term "affordable housing," although often used synonymously with "social housing", has its own definition and policy instruments in specific cities and countries. However, the boundaries between these concepts remain relatively unclear, and affordable housing is increasingly becoming a distinct field parallel to the development of social housing (Czischke, van Bortel, 2018).

Many factors influence housing affordability. The most important ones include:

- Household incomes: Higher incomes increase the ability to purchase or rent housing.
- Property prices and rental levels: Increases in property prices and rents can reduce housing affordability.
- Housing policy: Government support programs such as rent subsidies, construction of communal housing, and real estate market regulations significantly impact housing affordability.
- Credit conditions: Ease of obtaining mortgage loans and interest rates affect the purchasing power of potential buyers.
- Demographic factors: Demographic changes such as population aging or migration also affect housing demand.

The term "affordable housing" is typically used in countries where both the rental market and housing acquisition system are highly developed, with rental affordability becoming a significant issue (Bryx, 2021). Since the global financial crisis, housing affordability has gained greater political importance in many countries worldwide. Nationally, housing policy

development increasingly follows global political trends, and the emergence of new policies addressing housing affordability relies on networks involving global political entities, housing experts, and consultants (Murphy, 2014).

Bryx (2021) emphasizes that the definition of affordable housing in Poland should focus on two directions. Firstly, the purchase of housing to meet personal needs, and secondly, efforts to increase the number of rental apartments available, which is crucial for meeting societal housing needs. As indicated above, Poland is characterized by a relatively low percentage of rental apartments in the housing stock. Simultaneously, in order to pursue these directions, state-offered rental housing should be financially accessible (cheaper than those on the free market), and the increase in investment purchases should not limit the ability to purchase housing for personal residential purposes.

Housing affordability is a significant focus in real estate market research. It is analyzed in the context of housing policy formulation (Strączkowski, 2022; Marona, Tomasik, 2023; Machalica, Nowak, Potocki, 2023), housing market financing (Bryx, Rudzka, 2021), as well as the sustainable development of the market (Bryx, 2021; Lis, 2021).

Income-based rental affordability is a concept within housing affordability, focusing solely on the ability to rent housing in relation to household incomes. International comparisons of rental affordability may be challenging due to:

- Rental costs: Analyzing rental prices across different cities and countries in Europe, where costs can vary significantly by location, impacting income-based affordability.
- Household incomes: Analyzing household incomes, a key element in assessing income-based affordability, which may be evaluated in terms of median or average incomes in a given location.
- Housing policies: Regulations influencing the rental market, such as rent control, tenant support programs, or social housing construction (Yang, Zan, Chen, Jie, 2014).

Discussions on housing affordability and income inequality are increasingly linked to the concept of income quintiles, a statistical tool used to analyze income distribution within a population. Quintiles divide the population into five equal parts, each representing 20% of the whole. Researchers, policymakers, and organizations dealing with housing and social policy use income quintiles to better understand and assess how different income groups are affected by housing issues and income inequalities (OECD, 2016; World Bank, 2018). Using income quintiles in the analysis of housing affordability allows for: identifying the most affected groups, evaluating housing policies, and understanding regional differences (Dewilde, Bram, 2013).

Discussions on the affordability of housing and income inequality are closely intertwined due to several reasons:

1. **Impact of Incomes on Housing Affordability:** Income inequalities directly affect the ability of different income groups to purchase or rent housing. Households with lower incomes face greater difficulties in accessing affordable housing, thus exacerbating their economic situation.
2. **Social and Economic Issues:** Income inequalities can lead to social problems such as housing segregation, lack of housing stability, and social exclusion.
3. **Public Policy:** Understanding the linkages between housing affordability and income inequalities is crucial for shaping effective public policies. These policies may include housing support programs, tax reforms, rental market regulations, and initiatives to increase the affordability of affordable housing.

The scale of housing affordability issues varies across European countries, with differences less related to wealth levels and more influenced by classifications within the social welfare system. In many countries, housing problems are often more prevalent among market renters than homeowners burdened with mortgages, although this is not always the case. The rental market position in relation to homeownership affordability deteriorated between 2010 and 2018 in most European countries (Hick, Pomati, Stephens, 2022).

There have been discussions in the literature for several years about the global crisis of urban housing affordability and accessibility. This crisis stems from the fact that household housing expenditures are rising faster than wages and salary increases in many urban centers worldwide. This situation has been driven by at least three global megatrends emerging after the global financial crisis: accelerated urbanization of capital and people, provision of cheap credit, and increased inequality within societies (Wetzstein, 2017).

Confirming the global pursuit of affordable housing are three supra-national programs formulated within the United Nations framework: Sustainable Development Goals (SDG 11), New Urban Agenda Habitat III (UN, 2017), and the European Union's Urban Agenda (European Commission, 2016). In various formulations, these programs promote sustainable access and living in affordable and adequate housing conditions.

The issue of accessibility also pertains to the rental housing market across different regions worldwide, which has been the subject of numerous studies and analyses. For instance, over the past few decades, American metropolitan areas have witnessed increasing income inequality and deteriorating rental affordability. Income inequality has been the focus of research revealing its direct impact on rental affordability for low-income households. This research also indicated that incidental factors play a significant role in determining housing affordability for many individuals seeking housing. This suggests that housing policies and demand-side programs cannot be overlooked (Dong, Hongwei, 2017).

Financially, studies examining the relationship between changes in mortgage interest rates and housing affordability have shown a strong seasonal and bidirectional link between rental housing affordability and homeownership affordability. An increase in homeownership affordability affects rental affordability, but this relationship appears stronger in the reverse direction, where rental affordability influences homeownership affordability. Furthermore, rental affordability affects homeownership affordability with a one-year lag, and the reverse causality diminishes. Therefore, policies aimed at controlling housing price inflation should focus on influencing rental market prices rather than mortgage interest rates (Squires, Webber, 2019).

### **3. Measures of housing affordability**

Housing affordability refers to the costs of housing services and shelter – both for renters and homeowners – relative to the disposable income of an individual or household. Despite the lack of a universal definition for this term, the concept of housing affordability is generally understood. However, practically determining affordability is complex, especially in defining appropriate geographic market scopes, representative units or households, and accounting for changing circumstances over time. At its most basic form, housing affordability relates to the ratio of rent to income or the ratio of house price to income. More advanced measures of affordability consider additional aspects such as:

- The extent to which non-housing expenditures are constrained by the amount remaining after housing costs are paid,
- Beyond "income affordability," distinguishing "purchase affordability" (the ability to secure a mortgage for home purchase) and "repayment affordability" (the ability to service mortgage repayments for a home).

There are numerous indicators used to assess housing affordability, each differing in their definitions and calculation methods.

The National Bank of Poland (NBP) utilizes two indices in its analyses: the housing accessibility index and the credit accessibility index. According to NBP (2024), the housing accessibility index is an income-based measure indicating the square meters of housing that can be purchased at the transaction price equivalent to the average monthly wage in the corporate sector in a given city. It reflects the number of square meters of housing that can be acquired based on the average transaction price in the market (40% from the primary market and 60% from the secondary market, according to NBP's database).

The credit accessibility index, on the other hand, determines the number of square meters of housing that can be purchased using a housing loan, considering the average monthly wage in the corporate sector in a given market (as per the Central Statistical Office, GUS), along with

bank credit requirements and loan parameters (interest rate, amortization period, minimum subsistence as residual income after mortgage payments) based on the average transaction price of housing in the market (calculated similarly to the housing accessibility index). The informational significance lies in the index's rate of change and the spread across markets.

In Europe, housing affordability is often defined using the Housing Cost Overburden Rate published by Eurostat, which measures the percentage of the population living in households where total housing costs (net after deducting housing allowances) exceed 40% of disposable income (net after deducting housing allowances). This approach is also employed by the OECD in studies related to affordable housing. In the EU in 2022, 10.6% of the urban population lived in such households, while the corresponding rate in rural areas was 6.6%. The highest rates of housing cost overburden in urban areas were observed in Greece (27.3%) and Denmark (22.5%), and the lowest in Slovakia (2.3%) and Croatia (2.6%). In rural areas, the highest rates were in Greece (24.2%) and Bulgaria (18.1%), and the lowest in Malta (0.2%) and Cyprus (0.5%). Housing cost overburden was higher in urban areas compared to rural areas in 20 EU member states (Eurostat, 2023).

In the United States and Australia, a threshold of 30% is commonly used. The Global Housing Watch takes a slightly different approach, defining housing as affordable if the ratio of house price to household annual income does not exceed 3.05 (Housing Affordability and Sustainability in the EU, Analytical Report, 2019).

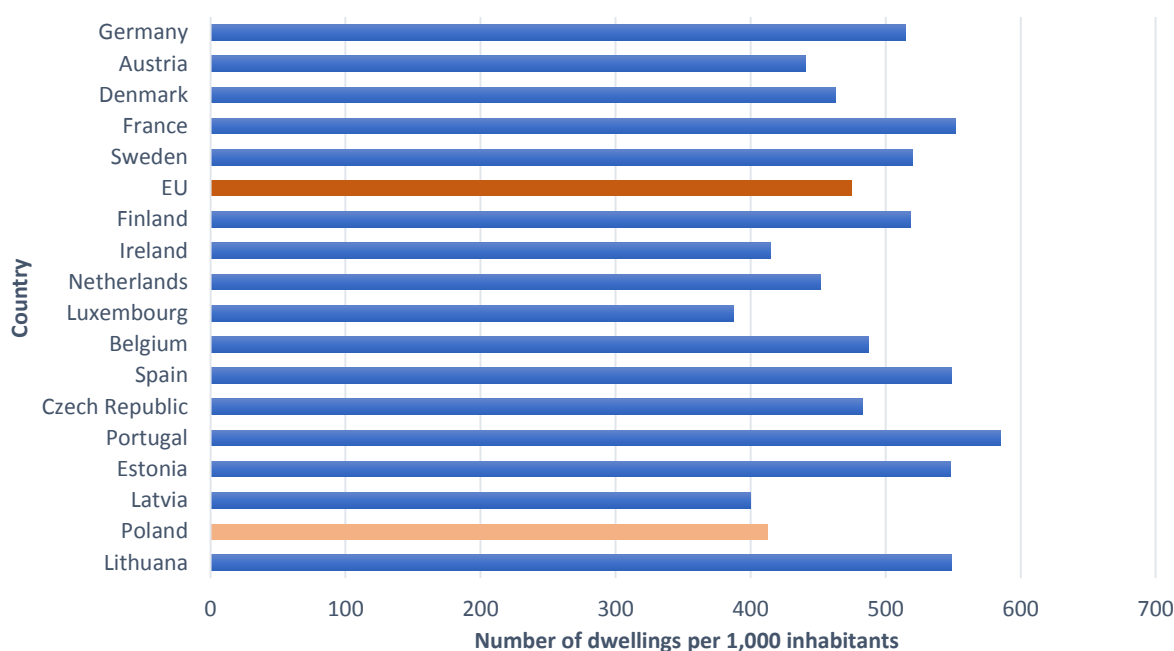
In the United States, the "rent burden" indicator is used, which identifies the financial burdens households face from rental costs. Households spending more than 30% of their income on rent are often categorized as "rent burdened", and those spending more than 50% of their income as "severely rent burdened". According to the Joint Center for Housing Studies of Harvard (2024), a record 22.4 million renting households in 2022 spent more than 30% of their incomes on rent and utilities. This marks an increase of 2 million households over three years, completely offsetting the modest improvements in cost burden rates seen from 2014 to 2019. Among cost-burdened households, 12.1 million had housing costs that consumed more than half of their incomes, the highest value recorded to date.

#### **4. Rental housing affordability in Poland**

The aim of the article is to present and assess the rental market situation regarding housing affordability in Poland. The rental market situation will be presented analogously to the sales market. The empirical material of the article concerns the situation across Poland and its 7 largest cities and will be compared to the situation in the European Union. Numerical data is sourced from Eurostat, the Central Statistical Office of Poland, and materials from the National Bank of Poland and AMRON, covering the period from 2019 to 2024. The collected and

subsequently organized empirical material has been processed using a comparative method and presented in graphical and tabular form.

One of the best indicators determining the degree of housing satisfaction in a given country is the number of dwellings per 1000 inhabitants. As Figure 2 shows, the average indicator for the European Union was 475 dwellings in 2023. Among the analyzed countries, Poland ranked third from the bottom with an indicator of 413 dwellings per 1000 inhabitants. The best situations were observed in Portugal (585 dwellings), France (552 dwellings), and Lithuania (549 dwellings). Despite Poland's less favorable position compared to other countries, it is important to emphasize that this indicator has been steadily improving (mainly influenced by the number of dwellings put into use, as well as a decreasing population). In 2018, this indicator was as low as 380 dwellings for Poland<sup>1</sup>.



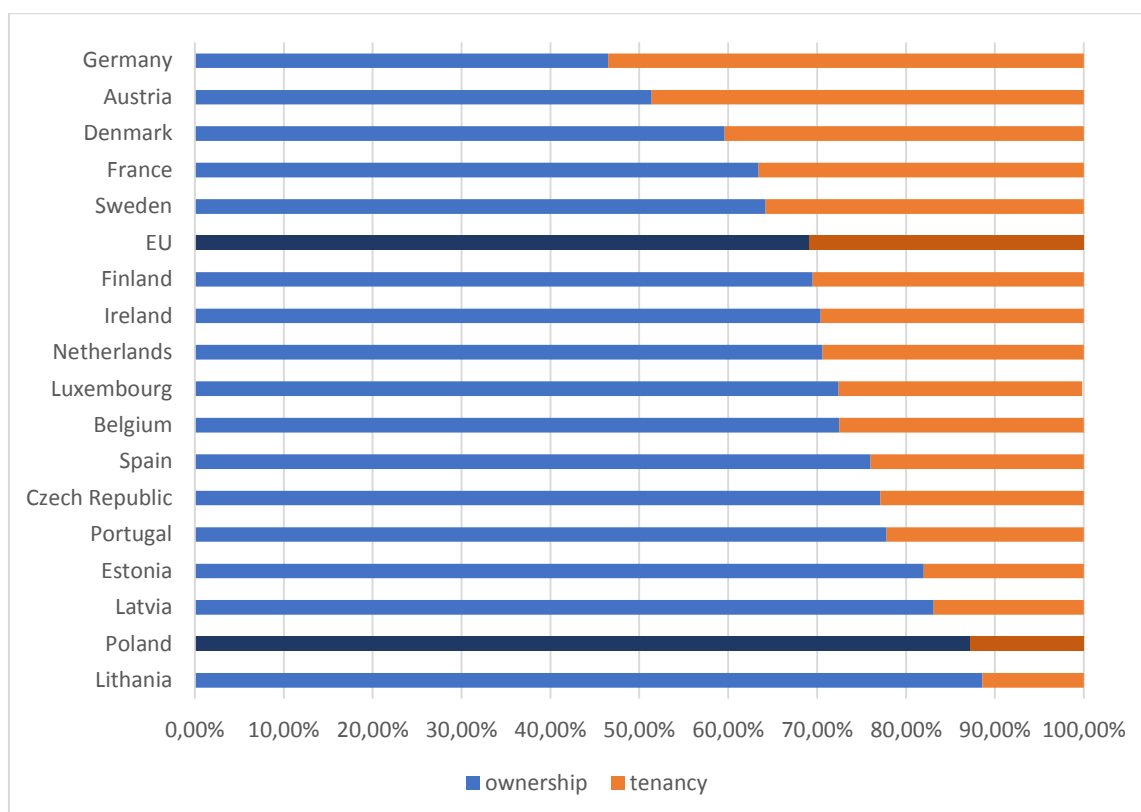
**Figure 2.** Number of dwellings per 1000 citizens in selected European Union countries.

Source: Own study based on Eurostat (2023).

In Poland and Eastern European countries (Lithuania, Latvia, Estonia), the majority of the population owns their homes. These are countries where rental housing does not exceed 20% of the ownership structure. It can be observed that Poles consider renting an apartment as something inferior, whereas in Western European countries, it is completely the opposite. The average level of homeownership is 69%, with countries like Germany (46.50%) and Austria (51.50%) where homeownership is beginning to give way to rental housing (Figure 3).

<sup>1</sup> Data from the Central Statistical Office (GUS) regarding basic indicators of housing resources in 2018. <https://bdl.stat.gov.pl/bdl/dane/podgrup/tablica>, 25.06.2024.





**Figure 3.** Ownership structure of dwellings in selected European Union countries.

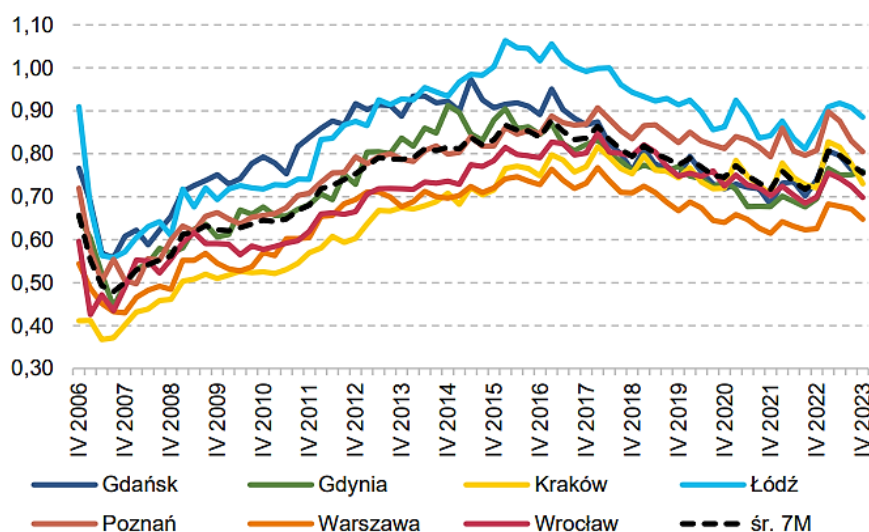
Source: Own study based on Eurostat (2023).

The affordability indicators of housing mainly concern the market of residential properties intended for sale, yet for the purposes of this article, they are also presented in the context of the rental market, referring to the rental affordability ratio. The housing affordability ratio, defined in foreign literature<sup>2</sup> as the ability of households to meet the costs of purchasing or renting a property, has been included in the article with regard to the rental market. For many individuals, purchasing a home represents the largest expenditure in their lifetime, and the costs associated with maintaining a residence (mortgage, rent, operating expenses) constitute one of the largest categories of household expenses. To assess it, the average level of home prices/rental rates is compared to the average household income. Additionally, housing cost burden indicators can be calculated, which represent the percentage of the population for whom housing costs exceed 40% of disposable income (including utility costs).

In Poland, the measure of housing affordability is the indicator used by the National Bank of Poland (NBP), where housing affordability is defined as the ability to purchase a certain area of housing expressed in square meters based on the average monthly wage in the corporate sector in a given city. The average transaction price is considered to be the price derived from

<sup>2</sup> Report „The State of Housing in Europe 2023”, 2023, [https://www.stateofhousing.eu/The\\_State\\_of\\_Housing\\_in\\_Europe\\_2023.pdf](https://www.stateofhousing.eu/The_State_of_Housing_in_Europe_2023.pdf), 10.06.2024.

the NBP database concerning prices in the primary market (40%) and the secondary market (60%)<sup>3</sup> (Figure 4).



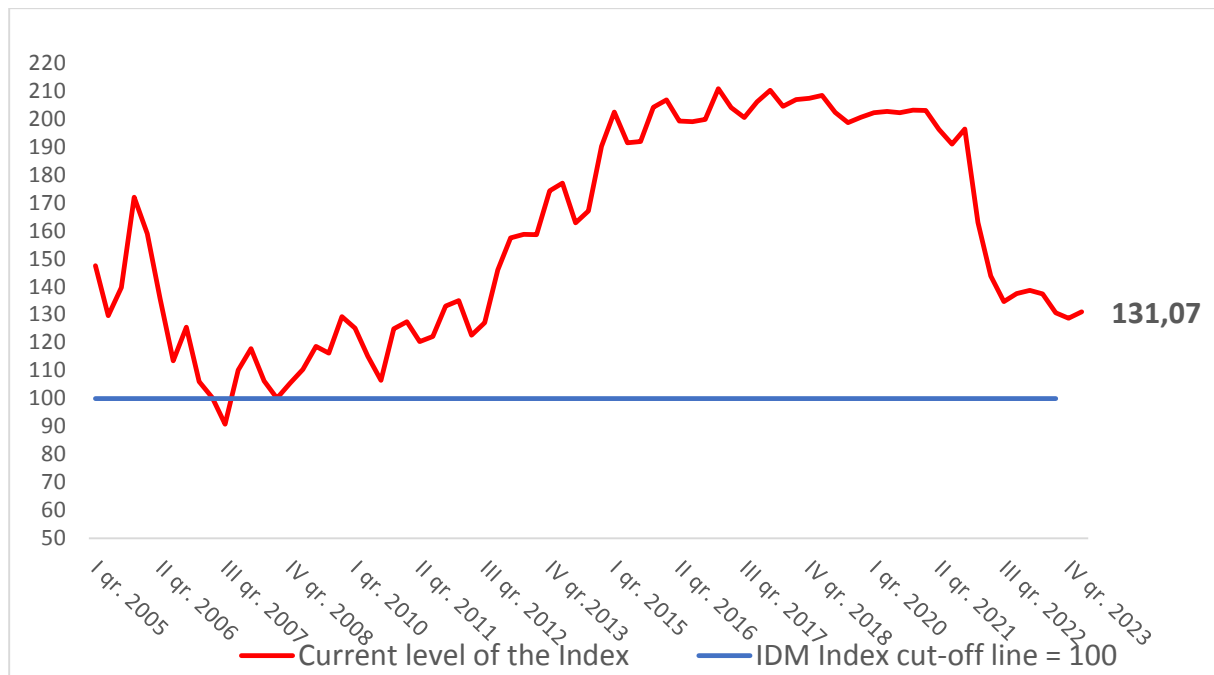
**Figure 4.** Estimated housing affordability in the 7 largest cities in Poland based on the average monthly wage in the corporate sector (m<sup>2</sup>).

Source: NBP (2024).

According to data from the National Bank of Poland, at the end of 2023, the average salary in Poland could buy just under 0.8 square meters of housing. Residents of Łódź could afford a little more (around 0.9 square meters), while residents of Warsaw could purchase the smallest area (slightly over 0.6 square meters). As shown in the presented graph, the most favorable situation for buyers was in 2015-2016, when housing affordability was highest, nearly 0.9 square meters per average salary in Poland. Since then, housing affordability has declined, with a slight increase in 2022 bringing it to the current level of 0.75 square meters.

Another way to determine housing affordability in Poland is through a synthetic measure published by the Amron Research Center – the Housing Affordability Index (IDM) M3. This index assesses housing affordability for a typical family in terms of prices (two working adults and an older child), taking into account changes in transaction prices, interest rates on new housing loans, average gross family income, and changes in living costs (Figure 5).

<sup>3</sup> Information on apartment prices and the situation in the residential and commercial real estate market in Poland in the fourth quarter of 2023. Financial Stability Department, 2024 <https://nbp.pl/wp-content/uploads/2024/03/Informacja-o-cenach-mieszkan-w-IV-2023-.pdf>, June 10, 2024.



**Figure 5.** Housing affordability index M3 in Poland in the years 2005-2023.

Source: Amron, 2024.

Since 2021, there has been a noticeable decline in housing affordability in Poland due to rising transaction prices (the average transaction price for the 7 largest cities in Poland in the primary market increased from 9,142 PLN/m<sup>2</sup> in Q1 2021 to 12,730 PLN/m<sup>2</sup> in Q4 2023)<sup>4</sup>. During the same period, the interest rates on new housing loans also increased from 2.86% in Q1 2021 to 7.7% in Q4 2023<sup>5</sup>. Additionally, maintenance costs have risen, leading to the Housing Affordability Index M3 reaching 128.68 points in Q4 2023, matching the level of the index in 2010.

Both indices (NBP and Amron) focus on purchasing apartments. However, what does housing affordability look like in the rental market? It's important to note that the affordability of rental housing depends on the specific rental market, whether it's the open market or rentals supported by the government or municipalities. Assessing "ease" should be considered separately for non-market rent resources and for apartments rented on the open market (Bryx, 2021).

When it comes to renting with support, we mean social housing, communal housing, and housing provided by Social Housing Associations (TBS), where household eligibility depends on an upper income threshold. Criteria for allocating social housing are determined annually by municipalities and are conditional on income levels. Consequently, these accommodations are typically earmarked for the poorest individuals with very low

<sup>4</sup> Data from NBP regarding the Housing Property Price Database (III Q 2006-I Q 2004): <https://nbp.pl/publikacje/cykliczne-materialy-analityczne-nbp/rynek-nieruchomosci/informacja-kwartalna/>, 10.06.2024.

<sup>5</sup> Data from "AMRON-SARFiN Report. Nationwide report on mortgage loans and transaction prices of real estate" 2024, No. 4(58), p. 23.

incomes. Rent rates for social housing are set individually by municipalities; for instance, in Poznań in 2024, it was 2.45 PLN per square meter (ZKZL, 2024A).

Meanwhile, renting communal housing depends on housing circumstances and the absence of entitlement to another property with low family income. Rent rates for communal housing are determined by the mayor or city president and in Poznań in 2024 ranged from 4.90 PLN to 12.90 PLN per square meter based on a scoring card set individually for each apartment (ZKZL, 2024B). On the other hand, TBS apartments are available to individuals residing in the respective municipality without rights to another property, provided their income does not exceed 1/3 of the average monthly salary in the given voivodeship. Rent rates for TBS apartments vary based on the type of lease (rent with the option to purchase, rental for graduates, rental for seniors, etc.) and are determined by the assembly of partners, general meeting of shareholders, or general meeting. In Poznań, under the "Rent with the option to purchase" program, this rate was set at up to 31 PLN per square meter (PTBS, 2023).

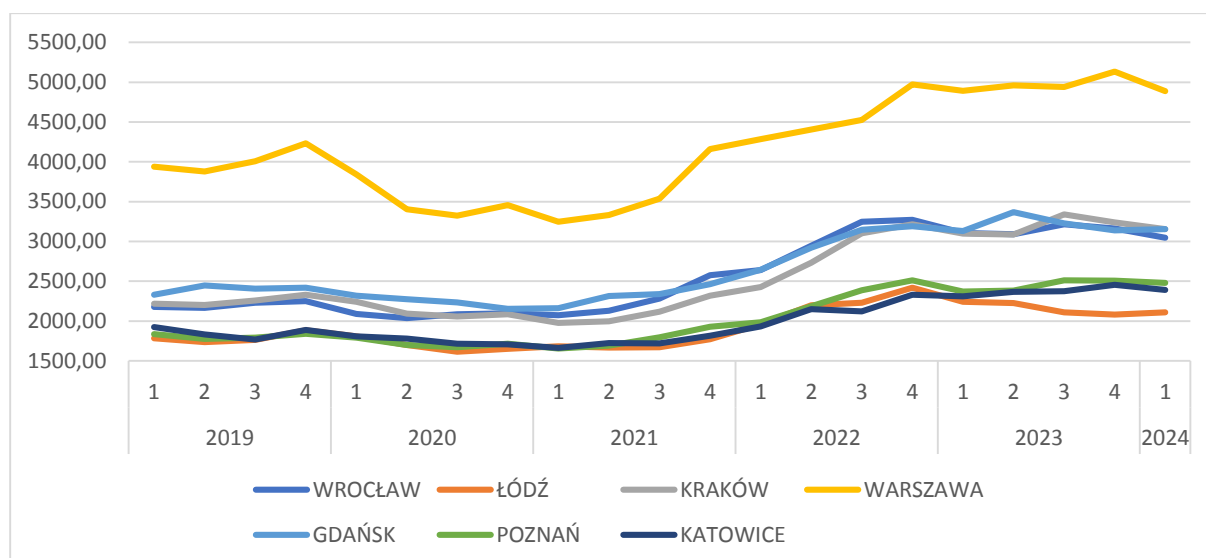
The affordability in the subsidized rental market, or rather its lack, stems from a significant imbalance where the number of applicants far exceeds the number of available apartments. According to GUS data, the number of people awaiting social housing in Poland exceeded 70,000 in 2022, while demand for rental units from municipal housing stock—including residential units that do not meet technical standards for habitation, with signed social lease agreements—reached over 143,000 individuals (Bank Danych Lokalnych, 2024B).

The situation is quite different in the free market, where rents are determined by apartment owners, among whom two distinct groups of landlords can be identified:

- Private individuals, mostly owners of single apartments for rent, who derive additional income from renting and do not rely on it as their primary source of income;
- Institutional rental, involving individuals engaged in business activities related to leasing properties.

As emphasized by Bryx (2021), the rent in the free market should be set at a level that, on the one hand, is affordable for tenants while maintaining their current standard of living, and on the other hand, ensures that the landlord recoups costs associated with the construction/purchase of the apartment.

For the purposes of this article, an analysis was conducted on the average rent rates in selected 7 largest cities in Poland (Figure 6).



**Figure 6.** Rental prices in the 7 largest cities in Poland at the end of each quarter from 2019 to 2024.

Source: Own study based on (Otodom Analytcs).

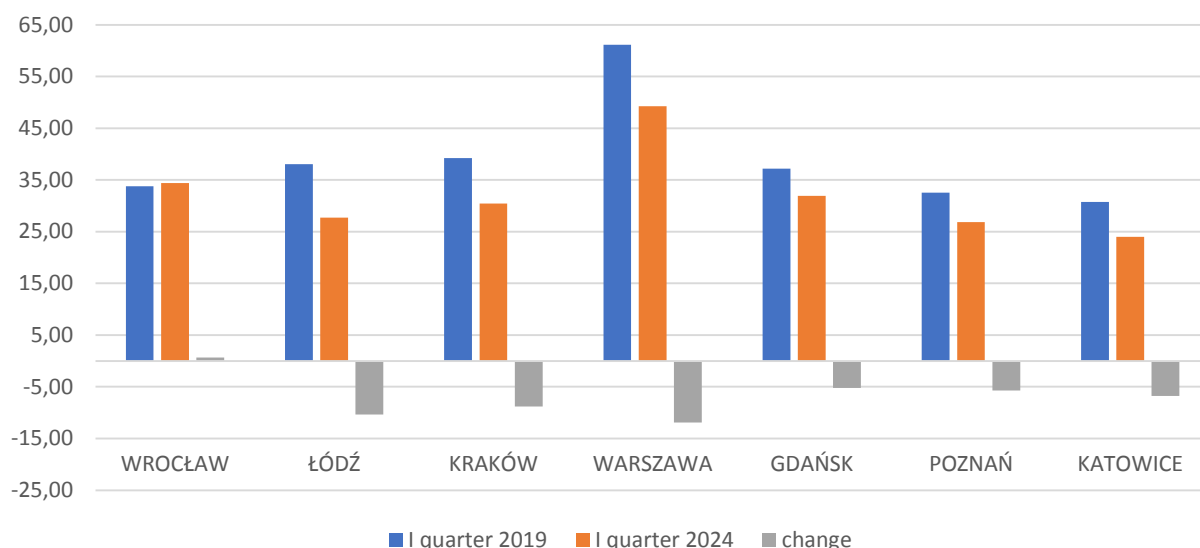
As indicated by the above chart, rental prices in the first quarter of 2024 increased on average by about 30% compared to rental prices from the first quarter of 2019. The highest increase was observed in Krakow (by over 40%), followed by Wroclaw and Gdansk. The lowest increase was in Lodz, around 18%. Regarding rental prices outside the capital, where rental prices are significantly higher and averaged over 4800 PLN in the first quarter of 2024, some of the higher prices were observed in Wroclaw, Krakow, and Gdansk, at approximately 3000 PLN in the first quarter of 2024, while about 500 PLN less was paid in Poznan, Katowice, and Lodz. Rental prices have been consistently increasing with a slight decline in the second and third quarters of 2020 due to the pandemic<sup>6</sup> and government restrictions, which led to remote learning at universities and reduced mobility and tourist traffic.

Based on the conducted analysis and considering that the average rental rates per square meter were 68 PLN/m<sup>2</sup> <sup>7</sup> in January 2024, it is evident that supported housing units are significantly cheaper for tenants than housing units on the open market and cannot compete in terms of rental affordability.

The affordability of rental apartments on the open market involves determining the income level required to rent an apartment. Marek Bryx defined the rent affordability index as the ratio of the average offered rent price for a two-bedroom apartment to the average gross per capita wages in a given city. For the purposes of this article, data from Otodom Analytics regarding average rental prices in the 7 largest cities in Poland were used, along with data on average monthly gross wages in the business sector in these cities at the end of each quarter from 2019 to 2024 (Figure 7).

<sup>6</sup> The Covid-19 pandemic – epidemic cases throughout Poland caused by the Sars-CoV-2 virus.

<sup>7</sup> "Rental Market Report" Otodom, January 2024, [https://www.otodom.pl/wiadomosci/wp-content/uploads/2024/02/OTOD\\_raportzryнку\\_STY2024-3.pdf](https://www.otodom.pl/wiadomosci/wp-content/uploads/2024/02/OTOD_raportzryнку_STY2024-3.pdf), 13.06.2024.



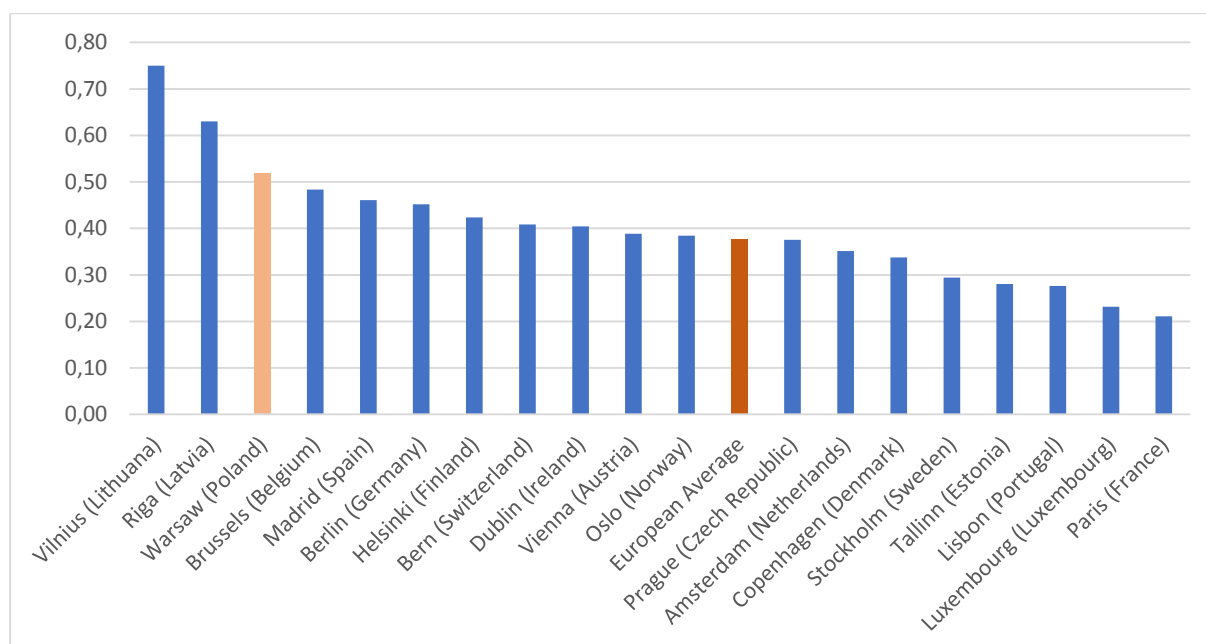
**Figure 7.** Rental affordability index for the 7 largest cities in Poland.

Source: Own study based on (OtodomAnalytics, 2024) i (Bank Danych Lokalnych, 2024).

As shown in Figure 7, the highest rent affordability index in the first quarter of 2019 was in Warsaw, reaching 61.13. This means that on average, more than 60% of gross earnings were needed for rent, indicating that during this period, rental costs were a significant burden on household budgets. The situation was somewhat better in the other largest cities in Poland, but rent affordability still exceeded 30%. Over the next 5 years, despite increases in average rents, rent affordability improved. By the first half of 2024, the index in Lodz, Poznan, and Katowice was below 30%, while in Krakow, Gdansk, and Wroclaw, it did not exceed 35%. Only in Warsaw, despite a decrease, it remained high at 49.23%. In almost all cities (except Wroclaw), the rent affordability index decreased, which is favorable for tenants.

Comparing the data on rent affordability with housing purchase affordability, it is evident that while housing purchase affordability is decreasing, rent affordability is improving. This indicates that with the rise in average earnings, property prices for sale are increasing faster than earnings, whereas average rental prices are also rising but not as rapidly as earnings, making rental housing more accessible. It's important to note that several factors influence average rental prices, including the standard of accommodation, the number of newly constructed apartments in the area, the affordability of rental properties and location.

When presenting the housing affordability situation in Poland, it is valuable to compare it with selected European Union countries to provide context. To determine the affordability of homes for sale, similar to the index calculated by NBP in Poland, the housing affordability index was calculated using data on the average price per square meter of housing in the third quarter of 2022 in euros in selected EU capitals (Catella, 2022), and Eurostat data on average monthly earnings of full-time employees in selected EU countries (Figure 8).

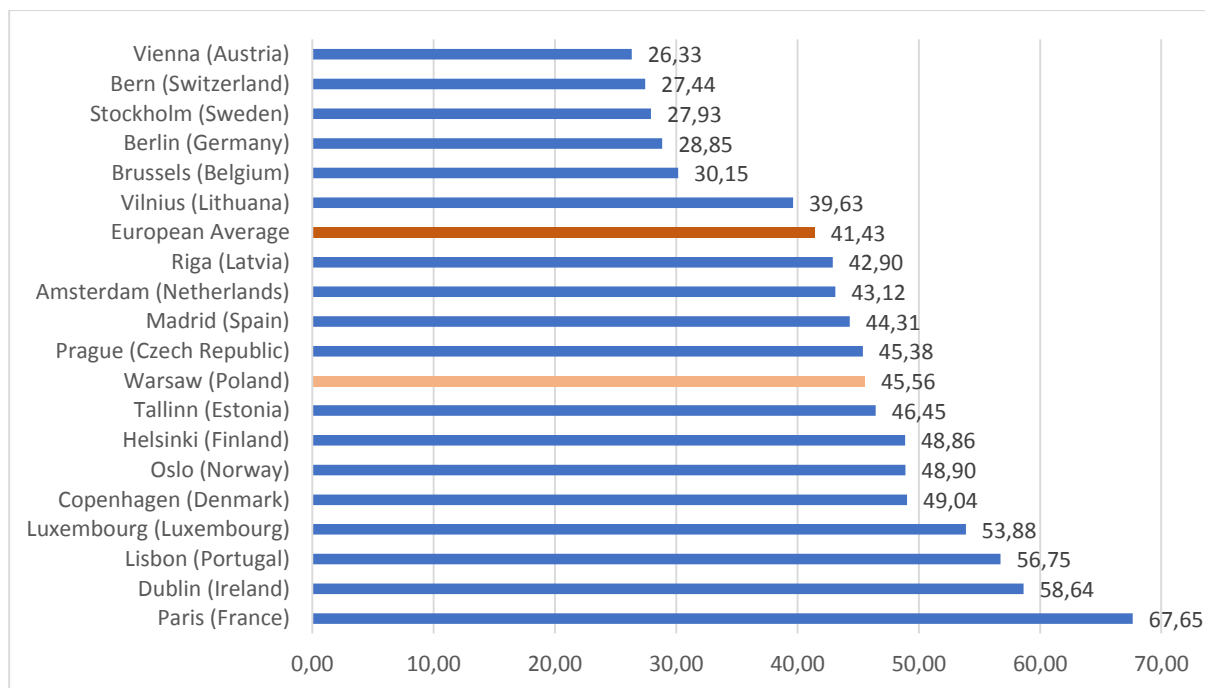


**Figure 8.** Estimated affordability of purchasing an apartment in selected European Union capitals based on average monthly net earnings of a full-time employee.

Source: Own study based on (Catella, 2002), (Eurostat, 2024).

Despite the fact that the average monthly earnings of an employee in Poland, according to Eurostat data, are around 1558 euros per month and are among the lowest among the presented countries, the price of apartments at approximately 3010 euros per square meter in Warsaw results in an affordability index of 0.52 square meters. This means that for the average salary, Poles can purchase just over half a square meter of apartment in the capital city. As shown in the chart, Warsaw ranks third after Vilnius and Riga in terms of the highest level of affordability. In comparison, an average resident of Paris (France) can afford to buy 0.2 square meters of apartment. Similarly, in Luxembourg, despite earnings exceeding 2700 euros per month, residents can afford only 0.23 square meters of apartment. The average affordability for purchasing an apartment in the European Union is 0.38 square meters. Referring to the data presented in Figure 9, despite the decreasing affordability for purchasing apartments in Poland, the situation in Warsaw compared to other countries is very favorable.

Another indicator calculated to present the situation in Poland compared to the European Union was the rental affordability index. Since such an index does not exist for other countries, the authors independently calculated the rental affordability using data on average monthly rent per square meter in selected EU capitals in the third quarter of 2022 in euros (Catella, 2022), along with Eurostat data on average monthly earnings of full-time employees in selected EU countries. The authors assumed that the average rented apartment size in all countries is 50 square meters and calculated the rent for such a size. Based on this, they determined the ratio of rent to average monthly earnings, as presented in Figure 9.



**Figure 9.** The rental affordability index for selected European Union countries.

Source: Own study based on (Catella, 2002), (Eurostat, 2024)

The average rental affordability index in the European Union was 41.43%, indicating that rental expenses consume more than 40% of earnings. In Warsaw, according to the adopted data, the index was 45.56%<sup>8</sup>, ranking among the higher ones, with the highest rental burden observed in Paris (67.65%), Dublin (58.64%), and Portugal (56.75%). Conversely, the lowest rental affordability index was in Vienna (26.33%), Bern (27.44%), Stockholm (27.93%), and Berlin (28.85%), which is favorable for tenants and partially explains the high proportion of rental properties in Austria, Sweden, and Germany.

## 5. Conclusions

Housing affordability is becoming an increasing problem in the EU. Housing and inequalities are intertwined, with homes constituting a significant portion of wealth in developed economies. Simultaneously, housing cost burdens and quality of living conditions are becoming more critical issues. Understanding these indicators requires looking beyond sums and averages, as divisions by area and income present a different picture.

Rental affordability depends on two variables – rental prices and wage levels. Research indicates that rents in the 7 largest cities in Poland have been steadily increasing. Over the past 5 years, they have risen by approximately 30%. However, simultaneous wage growth has

<sup>8</sup> The magnitude of the index corresponds to the value calculated in Figure 7, where the figure for Warsaw in the first quarter of 2024 was 49%.



improved rental affordability despite the rise in average rents. Housing affordability is becoming an increasing challenge in the face of rising property prices and income inequalities. Many cities worldwide are witnessing housing exclusion, where a significant portion of the population cannot meet their basic housing needs. Meanwhile, the situation in Warsaw, compared to other selected European capitals, is not the worst. In cities where high incomes do not guarantee easy access to rental housing, affordability is severely limited, and housing expenses consume a significant portion of incomes.

Future research should focus on developing new indicators and methods for assessing housing affordability, as well as analyzing the effectiveness of various housing policies. Understanding how economic, social, and political changes impact housing affordability in the long term is particularly crucial. Future studies should identify best practices and innovative solutions that can improve housing accessibility in different property markets.

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