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CONSTRUCTION ATTRACTIVENESS OF POLAND'S RURAL AREAS DURING THE COVID-19 PANDEMIC

Abstract: The subject of this article is housing construction carried out in rural areas of Poland between 2016 and 2023 by individual investors. Residential construction is an exciting aspect of geographical analyses as it is one of the main factors in the transformation of settlement systems and modification of rural settlements.

The materials presented are intended to show their development and spatial differentiation in connection with a new factor that appeared in the analysed period – the COVID-19 pandemic. Based on statistical data, the authors will develop a typology of the construction attractiveness of rural areas in Poland. Based on this, they will diagnose different types of areas: areas of definitive migration, areas associated with the construction of second homes, and areas unattractive to live in. They will also outline the effects visible in the social and economic sphere in the different types of areas, caused by the analysed phenomenon.

Keywords: residential construction, rural areas, Poland, COVID-19, typology of the construction attractiveness

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Introduction

Housing can be seen as one of the main indicators that synthesises changes in the entire economy. This is because it not only plays a fundamental role in raising the living standards of the population, but also influences the development of many areas of the economy (Wesołowska & Jakubowski, 2018).

After the end of warfare in the Polish countryside, there was a need to rebuild many dwellings. Between 1950 and 2021, an approximately 40% increase in the housing stock was recorded in rural Poland (Table 1). During this period, a much higher increase in the housing stock was recorded in cities, which were characterised by dynamic population growth. Meanwhile, in rural areas, the population remained at a similar level throughout the analysed period (Table 1).

Table 1. Characteristics of housing resources in the Polish countryside

Years	Dwellings	Chambers	Population	Average floor area of dwellings in m²	Average number		
	million				Chambers per dwelling	Persons per dwelling	Persons per room
1950	3,1	7,0	15,0	-	2,3	4,4	1,9
1960	3,5	9,4	15,1	-	2,4	4,3	1,8
1970	3,5	10,4	15,0	55,8	3,0	4,3	1,4
1978	3,5	11,6	14,6	61,3	3,3	4,1	1,3
1988	3,7	13,1	14,6	69,3	3,6	4,0	1,1
2002	3,8	15,4	14,5	84,9	4,1	3,9	0,9
2011	3,9	16,4	14,9	88,1	4,2	3,6	0,9
2021	4,3	20,1	15,0	99,1	4,3	3,2	0,8

Source: compiled based on the data of Central Statistical Office in Poland (CSO)

Since 1950, an improvement in the standard of dwellings has been observed, with an increase in the area of dwellings (from 56 m² in 1970 to almost 100 m² in 2021), the number of rooms (almost doubled), and an improvement in the spaciousness indicators per person (number of persons per room, more than doubled). Despite the unquestionable progress in the development of housing, Poland is still characterised by a weak saturation with dwellings, reaching 2023 420 dwellings per 1,000 people and is one of the lowest among European countries (Fig. 1). The housing situation in Poland has for years been characterised by a significant shortage of dwellings, compounded by rising prices of construction materials and services, and may also exacerbate already existing problems such as an ageing population (Drożdżyński, 2022).

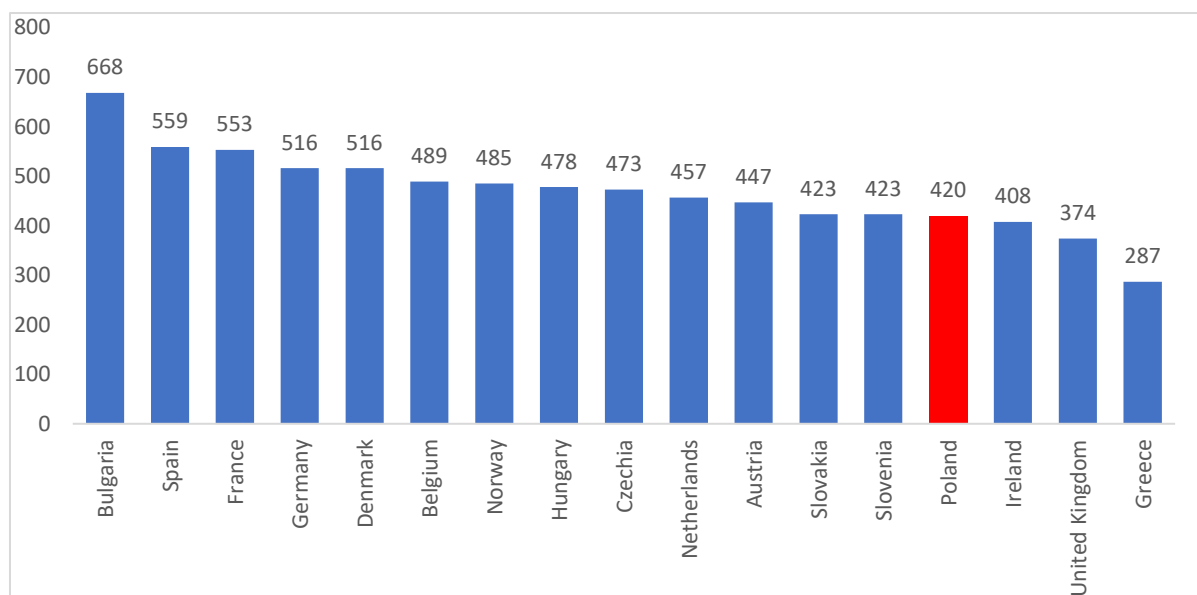


Fig. 1. Number of dwellings per 1,000 inhabitants in selected European countries, 2023

Source: own work based on the data of Statista Research Department

Today, the housing situation in Poland is spatially differentiated, and the distribution of housing stock does not correspond to the variation in population density. As a result, there are significant disparities in the degree of housing saturation (Fig. 2). The highest indicator of the number of dwellings per 1,000 persons is in the municipalities of the eastern part of Podlaskie and Lubelskie Voivodeships, while the lowest is in Małopolskie, Podkarpackie, and Wielkopolskie Voivodeships. The difference in extreme values between communes is very big, almost 10 times. The good situation, as far as saturation with dwellings is concerned, is apparent, and results from the depopulation of these regions, especially of Eastern Poland, the peripheral areas of Warmińsko-Mazurskie, Świętokrzyskie, Łódzkie, Mazowieckie, and Dolnośląskie voivodeships, which has been going on for decades (compare with Fig. 3).

Materials and methods

This article aims to examine the residential construction movement in rural areas of Poland during a specific period, coinciding with the development of the COVID-19 pandemic. The authors will analyse the quantitative results of this construction and its spatial distribution. They will base their analysis on data from the Central Statistical Office (CSO) regarding dwellings completed and the balance of migration between 2016 and 2023, specifically during the period just before, during, and after the onset of the pandemic. The research will result in a typology of rural municipalities in Poland based on building attractiveness.

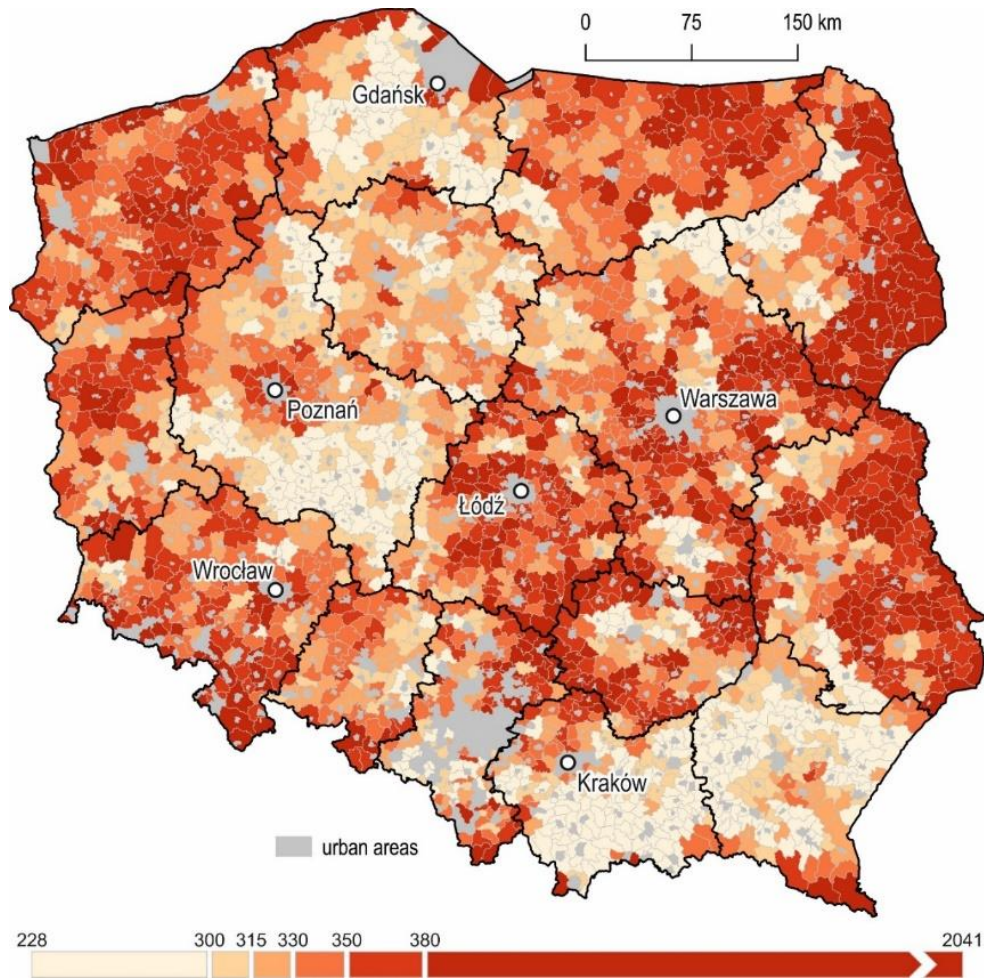


Fig. 2. Number of dwellings in rural areas of Poland per 1000 inhabitants, 2023

Source: own work based on the data of Central Statistical Office in Poland (CSO)

To classify the building attractiveness of rural areas in Poland, an agglomeration clustering method was used: Ward's method. Two indicators were compared: the volume of residential construction in rural municipalities between 2016 and 2023, and an indicator reflecting permanent migration. The data were standardized before clustering, using Euclidean distance as a measure of distance. The analysis utilized Statistica, version 10. Based on the obtained image, four cluster groups were identified. The composition of each group was then determined. To characterize the individual groups, a table of average values for all clusters was compiled. The final result of the work was the creation of a map illustrating the distribution of individual village classes, prepared in QGIS.

Results and discussion

Housing is one of the most important elements of human life. It is not only essential for meeting one's basic needs (such as shelter and security), but is also related to other aspects of quality of life, including a sense of privacy and comfort (Shucksmith & Chapman, 1998; Miklaszewska et al., 2024). This good became particularly important during the pandemic, when the population was obliged to stay in their homes and had

limited contact with other members of society. Rural areas are also considered safe havens, characterized by better daily living conditions thanks to easy social distancing and access to nature, culture and nature-based recreation (de Luca et al., 2020). The pandemic reinforced the movement of the population to the countryside. It became, in a way, an asylum for the population coming from the city. This is because the countryside, at the time of danger, appears as a place of refuge and asylum, helping to avoid confusion and weather difficult times (Stanny, 2014; Śpiewak, 2012). A study by Poślusznny et al. (2020) shows that for many people, the pandemic period became a time to return to the countryside. These actions were taken to 'wait out' the dangerous period, prop up the budget, and assist their parents. It was mainly young people who returned to the countryside: students and people in the early stages of their careers, who continued their studies or work remotely.

On the other hand, people who lost their jobs at home or abroad or were obliged to work remotely as a result of the pandemic also moved to the countryside. This is confirmed by studies from other parts of the world, e.g. Nepal, where one of the main effects of the pandemic was the return of migrants to their original households in rural communities due to job loss (Bista et al., 2022). In addition, due to the COVID-19 pandemic, the behaviour of the population in the tourism market changed. A study by Mazurek-Kusiak (2021) shows that, as a result of the pandemic, as many as 25.67% of adults and 27.61% of families with children used agro-tourism services, due to the fact that these are intimate places with less tourist traffic. The pandemic situation and the shift towards rural areas, perceived as safer, have been exploited by many developers and individuals who have begun building small recreational houses (with a usable area of up to 30 m²) in rural areas, taking advantage of simplified building procedures. Houses "on application" appeared in the most environmentally attractive areas of Poland.

Population migration is one of the most significant indicators of socio-demographic and economic transformations occurring in particular regions of a country (Szymańska & Biegańska, 2011). Rural areas play an important role in the system of internal migration in Poland, being of great importance for the spatial redistribution of population. On the one hand, suburbanisation has a significant impact on migration processes in rural areas surrounding large and medium-sized cities in Poland. On the other hand, migration outflow is caused by unfavourable socio-economic situations in the case of external and internal peripheries (Długosz & Szmytkie, 2022). Analysing the spatial distribution of migration, it can be observed that, apart from suburban areas, areas located in central and southern Poland are characterised by higher spatial mobility than those in the eastern part of the country. It is worth noting that lower spatial mobility is characteristic of areas outside the direct influence of cities, especially large and medium-sized urban centres, which is also confirmed by studies by other authors (Długosz & Szmytkie, 2022). The influx of population into rural areas is associated, among other things, with the development of construction traffic in rural areas. When analysing the situation in this respect, it should be noted that the largest number of new residential buildings is being built in the suburban areas of large cities (Fig. 3).

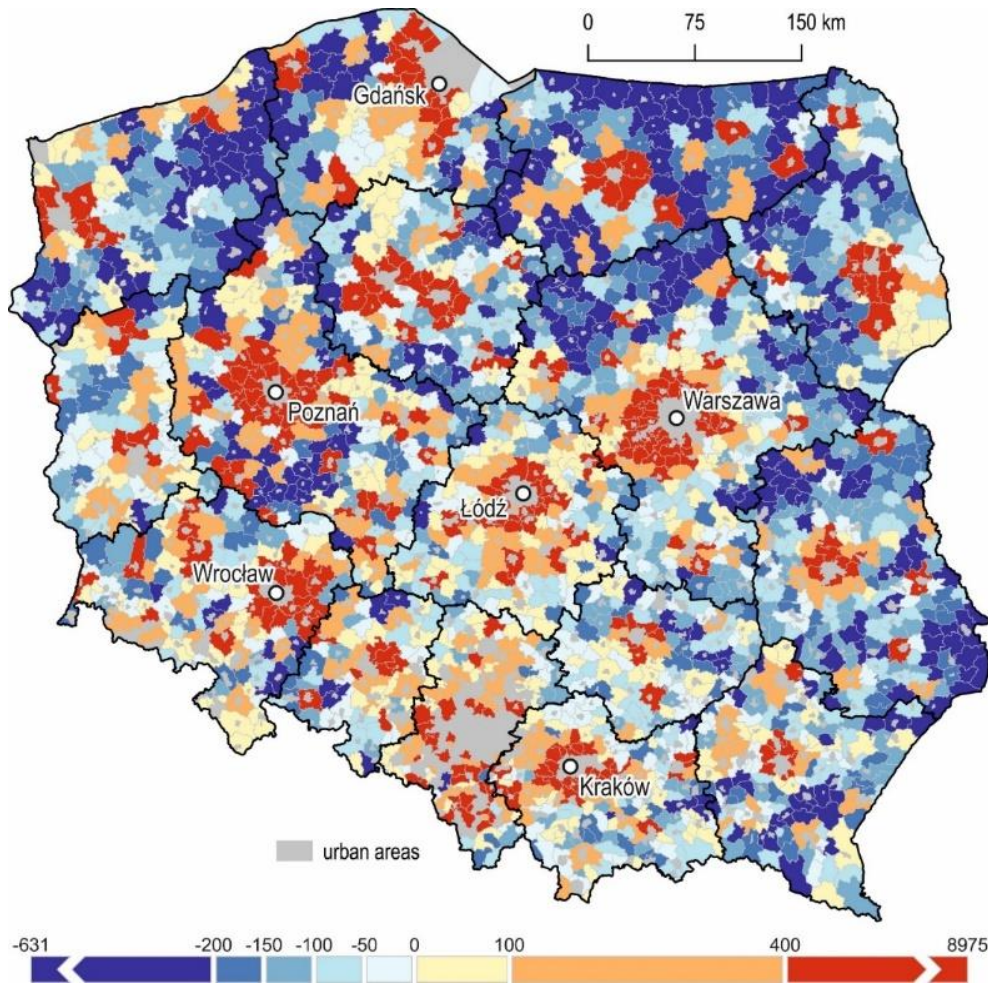


Fig. 3. Migration balance in rural areas of Poland, 2016–2023

Source: own study based on the data of Central Statistical Office in Poland (CSO)

The effects of population migration to rural areas are widely reported in the literature as they have clear social and economic consequences. Migration behaviour and population flow directions often reflect the level of development (or underdevelopment) of job functions, service delivery sites, and other factors (Szymańska & Biegańska, 2011). Firstly, young, better-educated and more entrepreneurial people predominate among the emigrating population. This process exacerbates social polarisation between regions of the country and between cities and rural areas in a particular region. As a result of selective migration, a polarisation of the population is taking place: suburban areas are characterised by a lower proportion of the population in the post-working age, while peripheral, typically agricultural areas have a high proportion of the population in the post-working age. Moreover, the outflow of the young and most active population is becoming a serious barrier to the economic recovery of peripheral areas. As a result, the hitherto unfavourable socio-economic structure of these areas not only perpetuates, but may even worsen. Also noticeable in peri-urban areas is the development of certain types of services, which are characterised by a low degree of centrality and links to the population's daily life, i.e., trade, repair, or catering services (Smutek, 2012). As noted by

Szymańska and Biegańska (2011) and Dyszy (2017), the rejuvenation of the demographic structure of these areas indirectly influences their greater economic activity, expressed, among other things, in the emergence of new economic entities, the creation of new social and living infrastructure, and thus increasing the competitiveness of suburban municipalities.

The motivations of migrants also vary. The motivation of suburbanites to move to the countryside was to fulfil the dream of 'their own house with a garden' (Kajdanek, 2011; Kajdanek, 2012). As Wrona (2020) noted, '...they fled the city from the effects of systemic transformation – unemployment and rising prices – hoping to reduce the cost of living'. Other motives for leaving the city are characterised by people who move further away from it. Bukraba-Rylska (2008) stated that these migrations are inspired by a sentiment for rural life, i.e. the need for closer contact with nature and closer interpersonal ties. From the perspective of residents moving to rural areas, whether suburban or more remote, they are fulfilling their needs, although their motivation is somewhat different (Wesołowska & Kulawiak, 2025). The observations resulting from this classification are consistent with those of other authors on the processes of rural urbanisation. The contemporary processes of population movement and housing construction are subject to several regulations. As Szymańska (2013) noted, affluent urban residents are moving out to rural areas without cutting themselves off from the city; she referred to this stage as counterurbanisation. Living in peri-urban areas provides residents who have migrated from the city with jobs and fulfils cultural needs, but often reduces the country house to a bedroom role (Wesołowska, 2006). In turn, the displacement of the population to smaller settlement units, motivated by anti-urban attitudes, was described by Szymańska (2013) as a stage of anti-urbanisation. On the part of indigenous residents, on the other hand, the change in the social situation is to their disadvantage. Indigenous residents often harbour a clear dislike for the incoming population group, whether they are second-home owners, individuals moving permanently to the countryside but connected to the city through work, or older people settling in the countryside in retirement (Shucksmith & Chapman, 1998).

Between 2016 and 2023, approximately 432,000 dwellings were completed in rural areas of Poland. A significant issue is the substantial spatial differences in the number of completed dwellings. The statistical data do not accurately reflect the complexity of the housing situation for the population. The possibilities of satisfying housing needs for people living in large metropolitan areas are presented in different ways. In contrast, the situation for people living in depopulating rural areas of eastern Poland is entirely different. However, what should be emphasised is that the greatest optimism regarding the improvement of the housing situation is characteristic of the inhabitants of rural areas. As many as 39% of rural residents hope that their housing situation will improve over the next five years. At the other extreme are residents of medium-sized cities (50,000–250,000 inhabitants), where only 14% of respondents expect an improvement in their housing situation during the corresponding period (Machalica et al., 2023).

The largest number of new dwellings was completed in the analysed period in the suburban areas, which are most attractive for construction development. The provinces

of Lesser Poland, Subcarpathian, Greater Poland, Pomeranian, and Lower Silesian were the most dynamic in terms of construction development. In stark contrast to the above areas, there were areas located in the east of the country, mainly in the Polish-Ukrainian and Polish-Belarusian border zone, and in the west – Zachodniopomorskie and Lubuskie Voivodeships, where the size of new construction was relatively small (Fig.4). These are typically agricultural areas with a low proportion of non-agricultural population and a high migration outflow. The quantitative effects of new construction are too small in these areas to have a more pronounced impact on the housing situation of the population.

A similar trend has been observed in other European countries. International literature points to evidence of a "rural renaissance", reflecting the "urban exodus" hypothesis. Research by Gonzalez-Leonardo et al. (2022) shows that in Spain, internal migration increased in rural areas close to cities and characterized by a high prevalence of second homes. Population inflows to rural areas included internal migrants across a broad age range, from young adults and families to retirees.

The COVID-19 pandemic has severely impacted all economic sectors worldwide, and the resulting socioeconomic impacts are likely to have long-term consequences (Gupta et al., 2021; Wunder et al., 2021). It has had an unprecedented impact on construction markets worldwide, causing supply chain disruptions and labor constraints (Bukhari et al., 2024). Researchers have noted that the most visible effects of the COVID-19 pandemic have been project suspension, employment impacts, job losses, and deadline and cost overruns (Yaser & Abdulsalam, 2020). Even though during the sars-cov 19 pandemic, from as early as 2020, both the Polish and global markets were subjected to restrictions and strictures resulting from the situation, when analysing the number of dwellings handed over for occupancy at that time in rural Poland, no downward trend is observed (Fig. 5). Researchers confirm that the Polish property market was characterised by a relatively high resilience to the international crisis caused by the COVID-19 pandemic (Samorek & Cichocki, 2023). Research by Grzegorzewski and Lazarowicz (2024) shows that during the pandemic, demand for construction market products was very high. Experts cited not the obstacles resulting from COVID-19 restrictions and uncertainty in the face of the economic situation (27.5%), but the increase in the price of construction materials (32.5% of respondents) as the main barrier to construction operators' activities.

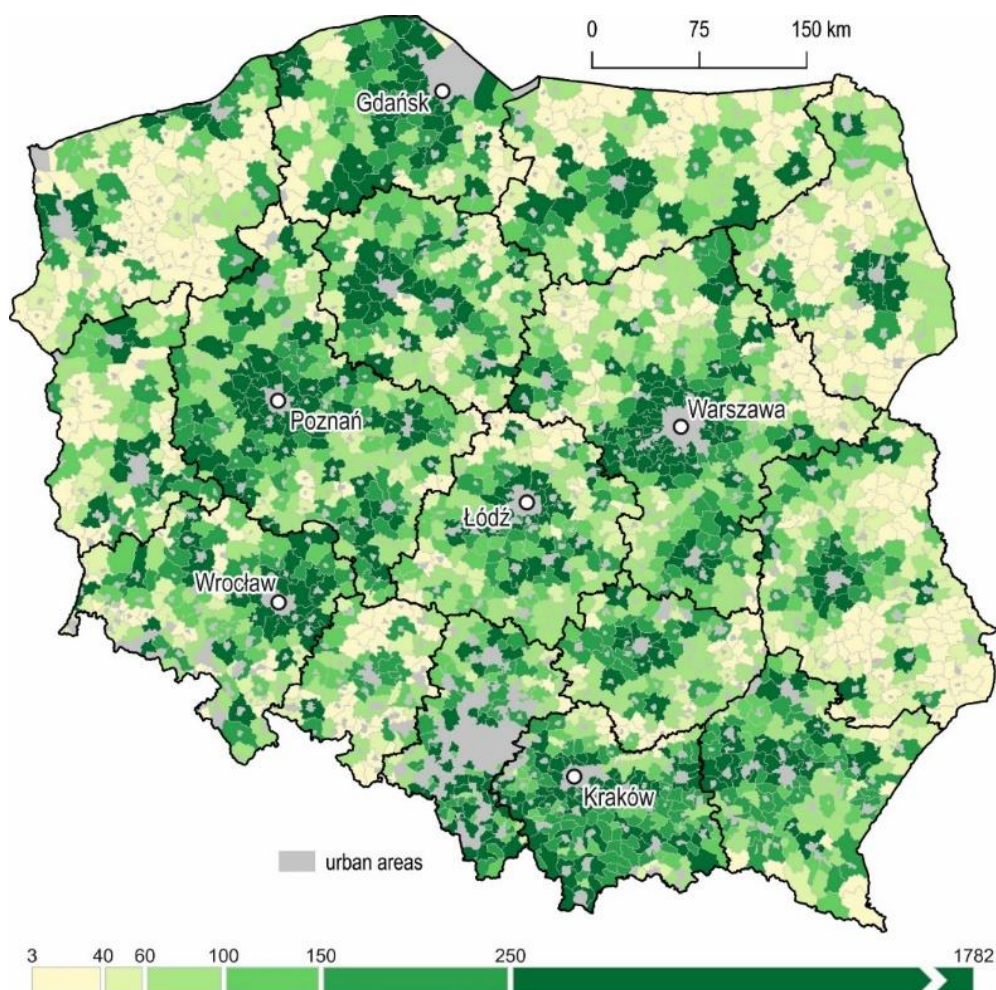


Fig. 4. Dwellings delivered for use in rural areas of Poland in 2016–2023

Source: own study based on the data of Central Statistical Office in Poland (CSO)

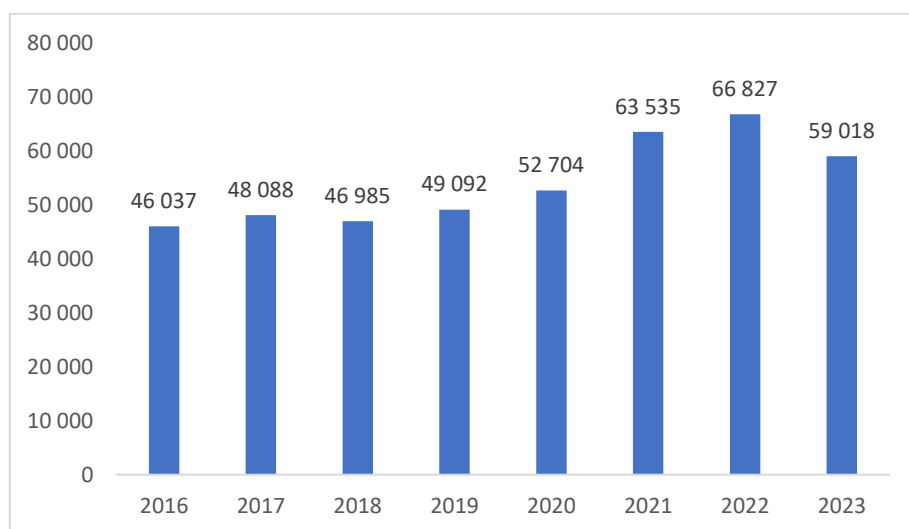


Fig. 5. Dwellings delivered in rural areas in Poland between 2016 and 2023

Source: own compilation based on the data of Central Statistical Office in Poland (CSO)

By comparing construction activity in rural communes in Poland with population migration in the years 2016–2023, the authors classified the communes in terms of construction attractiveness (Table 2, Fig. 6).

Table 2. Classification of Polish rural communes according to their attractiveness for construction purposes

Class Ward	Number of communes	Dwellings completed 2016–2023		Migration Balance 2016–2023	
		extreme values	average	outliers	average
1	131	282-2233	859	116-8975	2256
2	288	226-716	414	-153-1534	455
3	1310	3-180	78	-631-137	-118
4	448	98-397	218	-599-547	56

Source: own elaboration based on the data of Central Statistical Office in Poland (CSO)

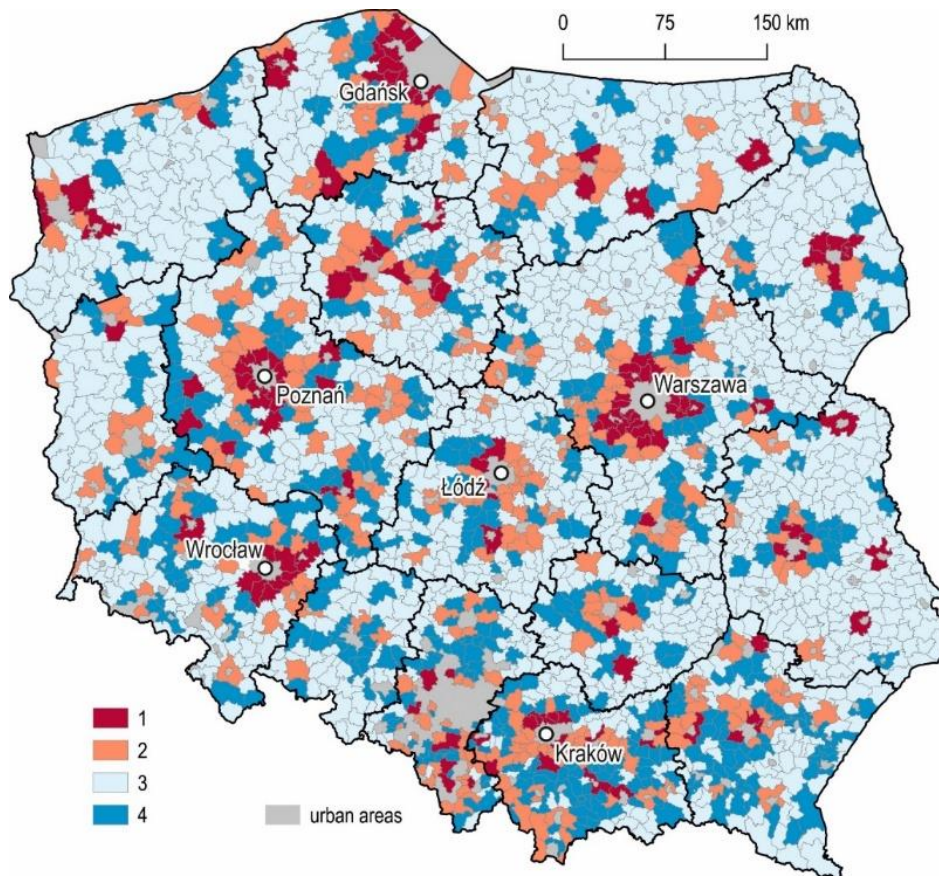


Fig. 6. Classes of construction attractiveness of rural areas in Poland

Source: own elaboration based on the data of Central Statistical Office in Poland (CSO)

Six per cent of the analysed municipalities fell into the first class. These are suburban gmina of large and medium-sized cities (suburban areas of the so-called Big Five: Warsaw, Tricity, Wrocław, Poznań and Kraków, as well as other cities, mainly voivodeship ones:

Lublin, Szczecin, and Białystok). They are characterised by a large increase in new residential construction and a high migration inflow. Thus, it may be concluded that class one concentrates the most attractive areas for permanent residence (suburbia). Completing this group is class 2, comprising 13% of the surveyed rural municipalities. These are also suburban municipalities, but often located further away from the city, in the second ring of municipalities surrounding it. They are characterised by a lower intensity of both construction traffic and permanent migration.

The third class included 60% of the analysed municipalities. They are characterised by very low construction traffic and a negative migration balance. They are areas of definite emigration. They can therefore be considered as unattractive areas to live in. Their main concentrations are in the peripheral areas of eastern and central Poland, i.e. the Lubelskie, Podlaskie, Warmińsko-Mazurskie, Świętokrzyskie and Łódzkie Voivodeships, and in western Poland, in the area of the Zachodniopomorskie and Lubuskie Voivodeships (Fig. 6).

The last group of municipalities – Class 4 – includes approximately. 20% of rural municipalities in Poland. Among them, approximately. A negative migration balance characterises 40%, but they record building traffic at an average level. Gmina in this class are concentrated in the southern part of Poland, in the Małopolskie, Opolskie and Podkarpackie voivodeships, i.e. in the most attractive rural areas of Poland in terms of landscape (mountain areas) and the areas of gmina located in the second and third ring of large cities, e.g. Warsaw, Wrocław, Poznań, Gdańsk and Kraków. It can be assumed that city dwellers use these areas for leisure and recreation, as well as for building second homes.

Conclusions

Despite the pandemic in Poland, there has been no reduction in construction traffic in rural areas. Furthermore, it was noted that construction traffic still depends on the economic resilience of the area. The classification carried out shows that one in five rural municipalities in Poland is characterised by increased construction traffic, accompanied by a sustained influx of residents. These are suburban areas, primarily located in the most developed and economically stable cities, known as the so-called Big Five cities: Warsaw, Kraków, Poznań, Wrocław, and the Tricity (Śleszyński, 2016). The suburban municipalities of not only large cities, but also smaller, mainly provincial cities (e.g. Lublin, Łódź, Białystok) are also attractive areas for residence. Surveys conducted by J (2021) indicate that suburbanization processes in Poland are intensifying as a result of the pandemic. This is particularly true for those working remotely. Other authors have also speculated on the potential impact of the COVID-19 epidemic on suburbanization processes (Crețan & Light 2020; De Vidovich & Scolari 2020; Krellenberg & Koch 2021). During the pandemic period, as noted by Poślusznny et al. (2020), *the countryside offered an expanded space, characterised by the possibility of unfettered contact with nature, freedom of movement, and wider possibilities for functional adaptation of the land. Settling into a rural retreat also provided psychological solace, which resulted from the possibility of*

disconnecting from contact with other people, as well as from one's thoughts and the information coming from the media. Hence, the classification carried out revealed areas with more construction traffic, but not accompanied by definitive migration. This was the case for nearly 21% of Poland's rural municipalities, located in areas of great landscape attractiveness, typical for recreation and leisure (e.g. Podkarpackie and Małopolskie voivodeships). It can be assumed that these areas are related to the construction of second homes. On the other hand, areas unattractive for residence and temporary stay accounted for as much as 60% of Poland's rural gmina, located in the periphery, near the country's borders (external periphery) and voivodeships (internal periphery). This class is dominant in Eastern Poland and in the Western provinces.

References

- Bista R., Parajuli R., Giri K., Karki R., Song C. (2022). Impacts of COVID-19 pandemic on the livelihoods of rural households in the community forestry landscape in the Middle Hills of Nepal. *Trees, Forests and People*, 9:100312.
- Bukhari S.R.A., Nasir A.R., Greco R., Mollo, L. (2024). The Impact of COVID-19 on Construction Project Performance: A Case Study in Pakistan. *COVID*, 4(8), pp. 1253–1271.
- Bukraba-Rylska I. (2008). *Socjologia wsi polskiej (Sociology of the Polish countryside)*. Warszawa: PWN.
- Crețan R., Light D. (2020). COVID-19 in Romania: transnational labour, geopolitics, and the Roma 'outsiders'. *Eurasian Geography and Economics*, 6(4–5), pp. 559–572.
- de Luca C., Tondelli S., Åberg H.E. (2020). The Covid-19 pandemic effects in rural areas: Turning challenges into opportunities for rural regeneration. *TeMA – Journal of Land Use, Mobility and Environment*, pp. 119–132.
- De Vidovich L., Scolari G. (2020). Seeking polycentric post-suburbanization: a view from the urban region of Milan. *Urban Geography*, pp.123–133.
- Długosz M., Szmytkie R. (2022). Obszary wiejskie w systemie migracji wewnętrznych w Polsce (*Rural areas in the internal migration system in Poland*). *Studia Regionalne i Lokalne*, 3(89), pp. 86–100.
- Drożdżyński M. (2022). Sytuacja mieszkaniowa Polaków i działania organów publicznych w celu jej poprawy (*The housing situation of Poles and the actions of public authorities to improve it*). S. Kańduła i J. Przybylska (ed.), *Gospodarka w cieniu pandemii COVID-19*, pp. 112–129. Poznań: Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu.
- Dyszy M. (2017). Migracje wewnętrzne ludności w wybranych gminach wiejskich województwa śląskiego w latach 2002–2015 (*Internal migration of the population in selected rural communes of the Silesian Voivodeship in the years 2002–2015*). *Acta Geographica Silesiana*, 26, pp. 17–29.
- González-Leonardo M., Rowe F., Fresolone-Caparrós A. (2022). Rural revival? The rise in internal migration to rural areas during the COVID-19 pandemic. Who moved and Where? *Journal of Rural Studies*, 96, pp. 332–342.

- Grzegorzewski M., Łazarowicz, M. (2024). Sektor budowlany wobec wybranych zjawisk kryzysowych XXI wieku (*The construction sector and selected crisis phenomena of the 21st century*). Research Papers of Wrocław University of Economics, 68, 1, pp. 51–63.
- Gupta D., Fischer H., Shrestha S., Shoaib Ali S., Chhatre A., Devkota K., Fleischman F., Khatri D.B., Rana P. (2021). Dark and bright spots in the shadow of the pandemic: rural livelihoods, social vulnerability, and local governance in India and Nepal. *World Development*, 141:105370.
- Jura J. (2021). Potencjalny wpływ pandemii COVID-19 na procesy suburbanizacji w Polsce (*The potential impact of the COVID-19 pandemic on suburbanization processes in Poland*). *Urban Development Issues*, vol. 70, pp. 49–57.
- Kajdanek K. (2011). Suburbanizacja w Polsce – pejzaż społeczno-przestrzenny (*Suburbanization in Poland – the socio-spatial landscape*). *Przegląd Socjologiczny*, 60(2–3), pp. 303–320.
- Kajdanek K. (2012). Suburbanizacja po polsku (*Suburbanization in Polish*). Kraków: Zakład Wydawniczy NOMOS.
- Krellenberg K., Koch F. (2021). Conceptualizing Interactions between SDGs and Urban Sustainability Transformations in Covid-19 Times. *Politics and Governance*, 9(1), pp. 200–210.
- Machalica B., Nowak M., Potocki P. (2023). Polityka mieszkaniowa w Polsce. Eksperyment bez happy endu (*Housing Policy in Poland: An Experiment Without a Happy Ending*). Fundacja im. Friedricha Eberta, Warszawa.
- Mazurek-Kusiak A. (2021). Model zachowań konsumentów na rynku usług agroturystycznych w dobie pandemii COVID-19 (*A model of consumer behavior in the agritourism services market during the COVID-19 pandemic*). *Turystyka wiejska i dziedzictwo wsi w kontekście pandemii SARS-CoV-2*. E. Kmita-Dziasek, M. Szandula (ed.), Państwowy Instytut Badawczy, Kraków, pp. 41–49.
- Miklaszewska A., Marks-Krzyszkowska M., Starosta P. (2024). Rozwój lokalny a polityka mieszkaniowa w gminach wiejskich (*Local development and housing policy in rural communes*). Wydawnictwo Uniwersytetu Łódzkiego, Łódź.
- Posłuszny Ł., Kubicki P., Olcoń-Kubicka M., Felczak J. (2020). Społeczny obraz życia codziennego na wsi w pamiętnikach z czasu koronawirusa (*The social image of everyday life in the countryside in diaries from the time of coronavirus*). *Więś i Rolnictwo*, 3(188), pp. 185–203.
- Samorek B., Cichocki M. (2023). Polski rynek nieruchomości mieszkaniowych (*Polish residential real estate market*). Instytut Rozwoju Miast i Regionów, Warszawa – Kraków.
- Shucksmith M., Chapman P. (1998). Rural Development and Social Exclusion, *Sociologia Ruralis*, 38(2), pp. 225–242.
- Smutek J. (2012). Migracje ludności na tereny podmiejskie a rozwój usług w obszarach metropolitalnych w Polsce w latach 2000–2010 (*Migration of population to suburban areas and the development of services in metropolitan areas in Poland in 2000–2010*). *Ekonomiczne Problemy Usług*, 95, pp. 203–216.
- Stanny M. (2014). Wieś, obszar wiejski, ludność wiejska – o problemach z ich definiowaniem. Wielowymiarowe spojrzenie (*Villages, rural areas, rural populations*

- *on the challenges of defining them. A multidimensional perspective*). *Wieś i Rolnictwo*, 1(162), pp. 123–138.
- Szymańska D. (2013). *Geografia osadnictwa (Geography of settlement)*. Warszawa: Wydawnictwo Naukowe PWN.
- Szymańska D., Biegańska J. (2011). Obszary podmiejskie dużych miast w Polsce w świetle migracji stałych (*Suburban areas of large cities in Poland in the light of permanent migration*). *Człowiek w przestrzeni zurbanizowanej*. M. Soja, A. Zborowski (ed.), Instytut Geografii i Gospodarki Przestrzennej UJ Kraków, pp. 83–98.
- Śleszyński P. (2016). Współczesne i prognozowane uwarunkowania demograficzno-migracyjne w rozwoju miejskiego systemu osadniczego Polski (*Contemporary and forecasted demographic and migration conditions in the development of the urban settlement system in Poland*). *Konwersatorium Wiedzy o Mieście*, 29, 1, pp. 97–106.
- Śpiwak R. (2012). Definiowanie kategorii „wieś” na początku XXI wieku, czyli o kłopotach badacza obszarów wiejskich (*Defining the category of "village" at the beginning of the 21st century, or the problems of a researcher of rural areas*). *Wieś i Rolnictwo*, 3 (156), pp. 30–45.
- Statista Research Department (2025). Total number of dwellings per 1,000 citizens in Europe 2024, by country. <https://www.statista.com/statistics/867687/total-number-dwellings-per-one-thousand-citizens-europe/> [1.06.2025].
- Wesołowska M. (2006). Rozwój budownictwa mieszkaniowego a przemiany przestrzenne wsi województwa lubelskiego (*The development of housing construction and the spatial transformation of rural areas in the Lublin Voivodeship*). *Studia Obszarów Wiejskich*, 10.
- Wesołowska M., Jakubowski A. (2018). Konsekwencje procesów ludnościowych na obszarach wiejskich województw Polski Wschodniej w ujęciu przestrzennym (*Consequences of population processes in rural areas of Eastern Poland voivodeships in spatial terms*). *Studia Regionalne i Lokalne*, 3(73), pp. 117–145.
- Wesołowska M., Kulawiak A. (2025). Profil społeczno-kulturowy kontrurbanity w soczewce studiów literaturowych i badań własnych (*The socio-cultural profile of counterurbanity in the lens of literature studies and own research.*). *Czasopismo Geograficzne*, 96(1), pp. 51–72.
- Wrona A. (2020). Przeprowadzki z miast do wsi: spotkanie dwóch kultur i co z niego wynika dla lokalnych społeczności (*Moving from cities to the countryside: the meeting of two cultures and what it means for local communities*). *Górnośląskie Studia Socjologiczne. Seria Nowa*, 6, pp. 123–144.
- Wunder, S., Kaimowitz, D., Jensen S., Feder S. (2021). Forest policy and economics coronavirus , macroeconomy , and forests: what likely impacts? *Forest Policy and Economics*, 131:102536.
- Yaser G., Abdulsalam A. (2020). The Impact of Pandemic Crisis on the Survival of Construction Industry: A Case of COVID-19. *Mediterranean Journal of Social Sciences*, vol. 11, no. 4, pp. 122–128.