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Is the impact of COVID-19 on housing construction activity inside and outside a large city evident? The example of Łódź (Poland)

Magdalena Załączna^{1, CDFMR}, Agata Antczak-Stępnia^{2, CDFMR}

^{1,2}University of Łódź, Faculty of Economics and Sociology, Department of Investment and Real Estate; ¹e-mail: [magdalena.zalaczna@uni.lodz.pl](mailto:magdalenazalaczna@uni.lodz.pl) (corresponding author), <https://orcid.org/0000-0003-4385-6119>; ²e-mail: agata.antczak@uni.lodz.pl, <https://orcid.org/0000-0002-5858-2774>

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Abstract. The coronavirus pandemic has influenced cities' shape and future. Telecommuting, teleconferencing, telelearning and e-commerce are creating a new environment of human life. These new factors should be added to the existing problems of urbanisation that are urban sprawl and depopulation. The authors of the paper decided to examine the intensity and spatial distribution of residential construction activity and residential real-estate trade in one of the biggest Polish cities – Łódź – and neighbouring municipalities to answer the question of whether the pandemic has affected housing decisions taken by developers and buyers. Based on statistical data, attempts were made to observe new signs confirming the intensification or weakening of past trends. The research was based on desk research and comparative analysis.

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1. Introduction

Living in urban space has its advantages and disadvantages; undoubtedly, people looking for better material prospects tend towards places with a greater choice of jobs, higher wages and the technical and social infrastructure that simplifies life. However, a common problem of city residents is the cost of housing and transport, as well as health problems resulting in part from air pollution. The pandemic further complexified this puzzle. It turned out that close contact with another person whom we need can be deadly; the small apartments in which we live with loved ones can look like traps. Now we can study those phenomena that can already be observed, but, because human rationality is limited and negative experiences are quickly forgotten, we cannot prejudge whether they will become dominant in the future (Camerer, 1998; Jones, 2001; Gigerenzer, 2004). In the long term, we will learn how the pandemic and the awareness of the possibility of similar phenomena in the future influenced the patterns of human behaviour, cultural trends and culture.

For many people, conducting everyday life using a computer brought the necessity to re-evaluate and to choose new priorities. The home and residential space gained in importance, and the need for space, including green areas, was noted. People started asking themselves and politicians questions about both the causes of the crisis and about new cultural models and development prospects (Leach et al., 2021; D'alessandro et al., 2020). People are wondering if they indeed need to live in a big city and pay the related costs – not only financial but also non-material. Already in previous years, problems with urbanisation were noticed, and efforts were made to introduce new solutions. More and more attention has been paid to the need to create and observe a catalogue of rules that condition the coexistence of people and the environment. In 2015, members of the United Nations adopted the 2030 Agenda for Sustainable Development with 17 global Sustainable Development Goals, or SDGs, and their 169 targets. SDG11 was devoted to urban sustainability, to “make cities inclusive, safe, resilient and sustainable” (UN-HABITAT 2016). Whether an effort will be made to achieve these noble goals and

the extent to which they will be achieved, i.e., under what conditions the inhabitants of a given city will live, is determined by a compromise concluded between many stakeholders. They include: central government establishing the basic principles, local self-government operating within the national distribution of powers, tasks and money; actors investing in space; producers of new facilities; infrastructure managers; and users (sometimes taking on the role of investors).

In the spatial context, many conflicts and aspirations often appear; for example, the idea of a compact city collided with the urban sprawl trend. The pandemic has become a new, previously unforeseen factor that is disrupting efforts to create a more sustainable, resilient city. Concerns about the severity of negative phenomena, instead of their suppression, are strong with regard to those systems that are not working properly. Critical opinions about the spatial planning system in Poland have been expressed for many years by scientists and practitioners (Izdebski et al., 2007; Ney, 2011; Kowalewski et al., 2013; Parysek, 2016; Gorzyski-Wilkowski, 2017; Chmielewski et al., 2018). First, the spatial order is not protected; urban sprawl processes are standard, which causes inevitable negative economic and environmental consequences (Śleszyński et al., 2020). These consequences are due not only to the legal regulation itself but also to the social perception of spatial development processes and the planning culture in Poland (Nowak & Załączna, 2021). Even though the critical tools of spatial policy exist at the local level, municipalities rarely assume a leadership role (Havel, 2017).

The pandemic has triggered new phenomena, including successive lockdowns that caused people to strive (as far as possible) to secure their own (i.e., safe) space. Due to rising housing prices in recent years, the pressure on the development of suburban areas has already been growing. Currently, it is anticipated that urban sprawl will intensify due to insufficient protection of the spatial order. It will probably be more visible in less attractive cities suffering from depopulation. The pandemic has proven that remote work and learning are possible universally; with the closure of restaurants, theatres and other recreational and leisure venues, cities lose their inherent value: placemaking (Cohen, 2020).

The case of Łódź has been repeatedly cited as an illustration of a post-socialist city with enormous social and economic problems, including in the context of the urban shrinkage process in CEE post-socialist cities and housing issues (Szafranska et al., 2019; Kazimierczak & Szafranska, 2019; Holm et al., 2015). However, Łódź is not a typical case, because it is the third city in Poland by number of inhabitants. It plays a vital role as the voivodeship capital in central Poland, an influential academic and a cultural centre. It is often indicated that shrinking European cities are generally small or medium-sized (Turok, & Mykhenko, 2007; Haase et al., 2014).

Currently, Łódź is counted among the European Union's 72 most significant cities by the European Observation Network for Territorial Development and Cohesion. It is listed among Metropolitan European Growth Areas as a weakly developed, fourth-tier European metropolis (Burchard-Dziubińska et al., 2016). The population-level has been systematically declining – in 1995 the city had 823,800 inhabitants, and only 672,100 in 2020. However, the city authorities have been trying to create a new image concentrating on two processes: improving quality of life and regenerating the urban fabric. They are using new technologies and culture to give new meaning to the city space and eliminate local poverty enclaves. The New Centre of Łódź is a strategic area for the city's future development, one of the most significant large-scale urban regeneration megaprojects in Europe (Kazimierczak & Kosmowski, 2017). The municipal administration planned the construction of a new urban structure on an area of around 100 ha based on diversification of functions: offices (46.47%), services (19.92%), flats (19.00%) and hotels (13.01%) (*Strategia Przestrzennego Rozwoju Łodzi*, 2013).

The way that the mechanism of supply and demand for space responds to a pandemic shock depends on many different factors, including the level of state intervention aimed at reducing the effects of the pandemic (e.g., in the form of a moratorium on repayment of mortgage loans, facilitating the financing of various spheres of activity), the economic situation and the prospects for its development, the availability of long-term funding, the level of satisfaction of housing needs,

planning regulations, the planning culture, and the level of social capital expressed through trust in state and local-government institutions. Undoubtedly, in recent years in Poland there has been a shift in investor interest towards the residential market, which resulted from very low interest rates and the high risk of most available investment instruments. Admittedly, government bonds offered a stable return with little risk, but it was not high¹. Also, in the residential market in Łódź, the number of development projects located inside the city has grown in recent years, so the question of whether this trend was interrupted by the pandemic was very relevant.

Data from the real-estate market is available with an inevitable delay. Therefore, it was difficult to analyse it already before the pandemic, particularly in investment and valuation (Baum, 2009; Marcato & Nanda, 2016; Kucharska-Stasiak, 2016), and the pandemic complicated these analyses even more. The researchers have grounds to predict evident changes in the real-estate market, and it will be possible to verify new theories in the future. It is noticeable that individual national studies embedded in local conditions differ in subject, scope, analysed period and hypotheses. Irish studies highlighted the negative outlook for the housing market due to pandemics (Allen-Coghlan & McQuinn, 2021). The authors feared that the economic slowdown would make potential buyers reluctant to invest money in real estate and, consequently, reduce the volume of transactions and lower prices. Turkish (Tanrıvermiş, 2020; Ahsan & Sadak, 2021), Spanish (Alves & San Juan, 2021) and Italian (De Toro et al., 2021) studies mainly presented changes in the real-estate market expressed by the activity of the supply-and-demand side, transaction volume. Turkish studies predict an increase in demand for land and emphasise the importance of public intervention in reducing mortgage rates. Spanish studies broadly analyse residential market changes, showing the strengthening of some pre-existing trends in housing demand, such as the shift from more populated municipalities towards other, less densely populated ones. Italian studies also predicted increased demand for real estate located outside administrative centres, often of a second home character where people could live more comfortably during possible future lockdowns.

Other studies went beyond the national context, focusing, among other things, on future home space requirements in terms of the expected popularity of remote work, and health requirements in the context of residential space (Hipwood, 2020; Peters & Halleran, 2020; Megahed & Ghoneim, 2020). A variety of these problems are also addressed in studies on the epidemic's impact on the transformations and development of cities (Eltarabily & Elghezanwy, 2020).

The paper's authors aimed to analyse how the pandemic has affected housing decisions taken by developers and buyers in one of the biggest Polish cities – Łódź – and neighbouring municipalities. The authors focused on residential construction activity and number of transactions to elaborate some conclusions. The primary time scope of the study covers the years 2018–2020, i.e., two years before the outbreak of the pandemic that were characterised by high demand for housing, and the year 2020, which was fraught with consequences for many areas of the economy. For some data, a more extended time series was used as background.

2. Material and research methods

To investigate the direction in which the pandemic affected housing decisions taken by actors representing the supply and demand sides (developers and buyers) in Łódź and neighbouring municipalities, two research methods were used, i.e., desk research and comparative analysis.

Desk research method is based on the analysis of secondary data, or data that can be collected without field work. Most often, various types of public and private statistics, reports, library resources and Internet content are analysed and interpreted, even though originally collected for a different purpose (Hague, 2006). It is characterised by high cost-effectiveness and convenience, it can accelerate the pace of research (the time-consuming stage of data generation is omitted) (Johnston, 2014). Comparative analysis, on the other hand, consists in determining the cause-effect relationships between the studied variables. As part of the analysis, we compare two or more cases, e.g. of countries, cities or families. However, it should be noted that the objective of this analysis is not only to describe

the relationships (similarities and differences), but also to try to explain them. It can be used for both quantitative and qualitative data (Pickvance, 2001).

In this article, the literature on the subject, various reports and statistical data were used, as the desk research method. Data for Łódź have been compiled with the national information to check if the local housing market is developing according to national trends. In addition, statistical data for neighbouring cities/poviats were analysed to obtain information whether demand shifted from Łódź to smaller cities during the pandemic. The years 2018–20 were studied as the main period. For some data, a more extended time series was used as background. In the case of the number of transactions obtained from the Ministry of Justice, these data are cumulated for the Łódź district, including Łódź and its neighbouring municipalities. The activity of the housing market has been studied with the help of a variety of statistical data. They were obtained from:

- Local Data Bank of Statistics Poland (for the number of started developer dwellings and those for which a building permit has been issued: data for Poland, Łódź and neighbouring poviats),
- Notaries' reports collected by the Ministry of Justice (data on the number of developer contracts and the transfer of ownership of developer dwellings, as well as the sales volume of undeveloped land, including construction plots – at the level of the Łódź region),
- Reports of Łódź Geodesy Centre (information on the number of land transactions in Łódź, including their locations and prices)
- property appraisals based on information database VALOR for property appraisers (number of transactions in land with developed and undeveloped land in the poviats neighbouring Łódź).

3. Results

The results are presented in two parts. The first part describes the construction and transaction activity in Łódź compared to Poland. The second part shows the construction and transaction activity in Łódź

and the surrounding municipalities/poviats. From the point of view of the supply of housing units, expressed mainly by developer activity, residential stock is developing less actively in Łódź than in other large Polish cities. There are several reasons for this phenomenon. First of all, the population has constantly diminished in the city (Kazimierczak & Szafrńska, 2019; Marszał, 2017; Szukalski, 2019). Secondly, the small number of local plans and the need to apply for planning decisions (procedures often take up to several months) effectively discourage external entities from implementing investments. Thirdly, many developers decide to operate on the outskirts of the city and in neighbouring towns with good access to the central city and much lower land prices (compare: Świątkiewicz et al., 2021; Gałka & Warych-Juras, 2018; Matysiak et al., 2021).

Developer activity has been present in Poland for 30 years; it has replaced the traditional construction for private individual needs and the construction by cooperatives that had dominated for decades. There are very close links between the development activity and the construction industry, and seasonality is visible here. The index of the number of new housing units does not directly reflect the impact of the pandemic on construction activity. The new

units were completed during the pandemic period and started much earlier. In the second and third quarters of 2020 there was a noticeable decrease in dwellings delivered for use. Probably, the lockdown slowed construction supervision, which must issue an occupancy permit for more significant investments. After some of the restrictions were lifted, in the fourth quarter of 2020, the number of dwellings completed in Łódź was the highest it had been since the beginning of development activity in this city. This situation results from the commencement of many investments in 2019 (as a result of an earlier increase in demand, NBP Report 2021).

The data on residential units that developers have started shows that 2019 was successful for this type of activity (Fig. 1). However, in April and May 2020, there was a marked decrease in the number of new starts, which was caused by the introduction of a lockdown in Poland. However, this does not mean a collapse of development activity. The reduction of restrictions in the following months restored the high construction activity of developers.

Analysing the impact of the pandemic on residential market development, we should look at the data on the number of dwellings for which

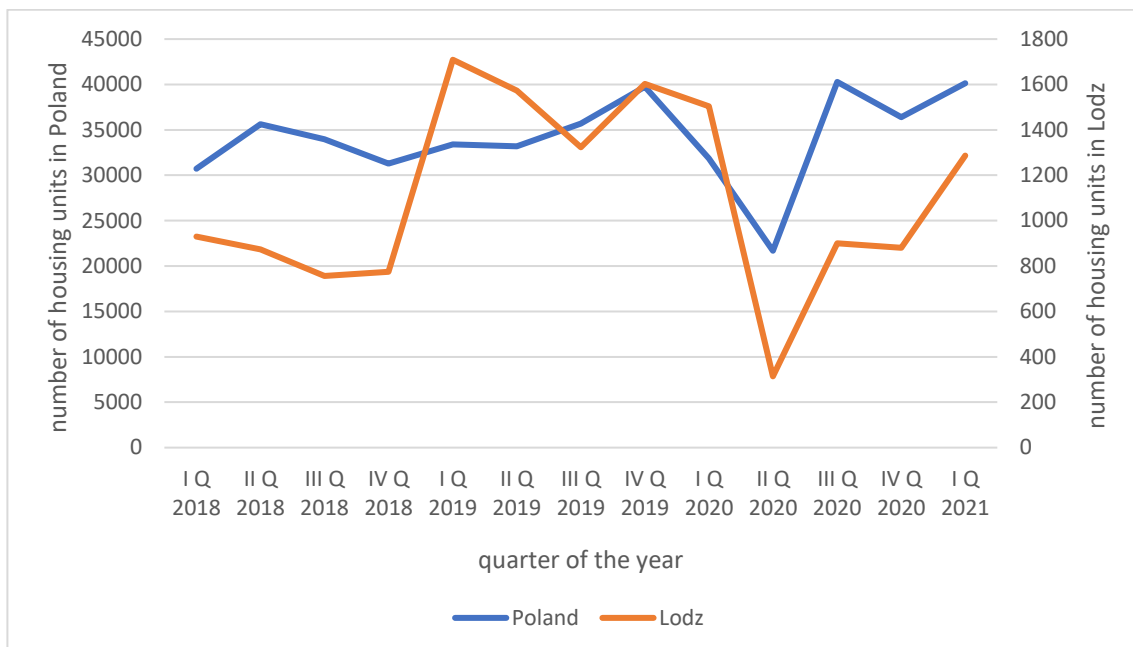


Fig. 1. Housing units started by developers in Poland and Łódź, 2018–2021 (quarterly data)

Source: own study based on the BDL

construction permits were issued and the number of transactions. They better reflect the investment decisions that were made after the outbreak of the pandemic.

Also, data on residential units for which construction permits have been issued show a decline in developer activity in the second quarter of 2020 in Poland and the third quarter of 2020 in Łódź (Fig. 2). The highly uncertain economic situation resulted in the suspension of investment decisions in the housing market. However, there was a sharp increase in the number of housing units for which permits were issued in the following quarters – the highest rates since the beginning of developers' operations in Poland and Łódź were recorded.

During the lockdown in Poland, there was an increase in demand for undeveloped plots, including typically recreational plots. Developers also sold their projects quickly in the form of single-family houses. The number of dwellings for which building permits were issued generally increased, in terms of both multi-family and single-family housing. Interestingly, in the period of Q1–Q3 2020, more permits for the construction of single-family houses (including those with two flats) were

issued than flats in multi-family buildings (Fig. 3) – and this is the total data including housing units built individually by natural persons for satisfying personal needs (not development).

In 2013–2019 in Poland, transactions concluded for both flats and single-family houses increased. As a result of the pandemic, in 2020, there was a decrease in the number of transactions, particularly concerning flats. However, the decline in the number of transactions was not significant. In Poland, when buying an apartment from the developer, a developer agreement is first signed. The developer undertakes to build the unit and transfer the rights to the buyers. Once the building has an occupancy permit, you can sign an ownership transfer contract. In Poland, the number of property transfer contracts is growing (as a result of developer contracts). The number of developer contracts alone, after increasing continuously from 2013 to 2019, in 2020 decreased by over 9% compared to 2019 (Fig. 4). Due to the aggregation of data by court jurisdiction, it is not possible to separate the data only for the city of Łódź; they cover the whole region. Data from notaries' reports show that in the Łódź region in 2018–20, there was an increase in both categories of



Fig. 2. Housing units with building permits in Poland and Łódź, 2018–2021 (quarterly data)

Source: own study based on the BDL

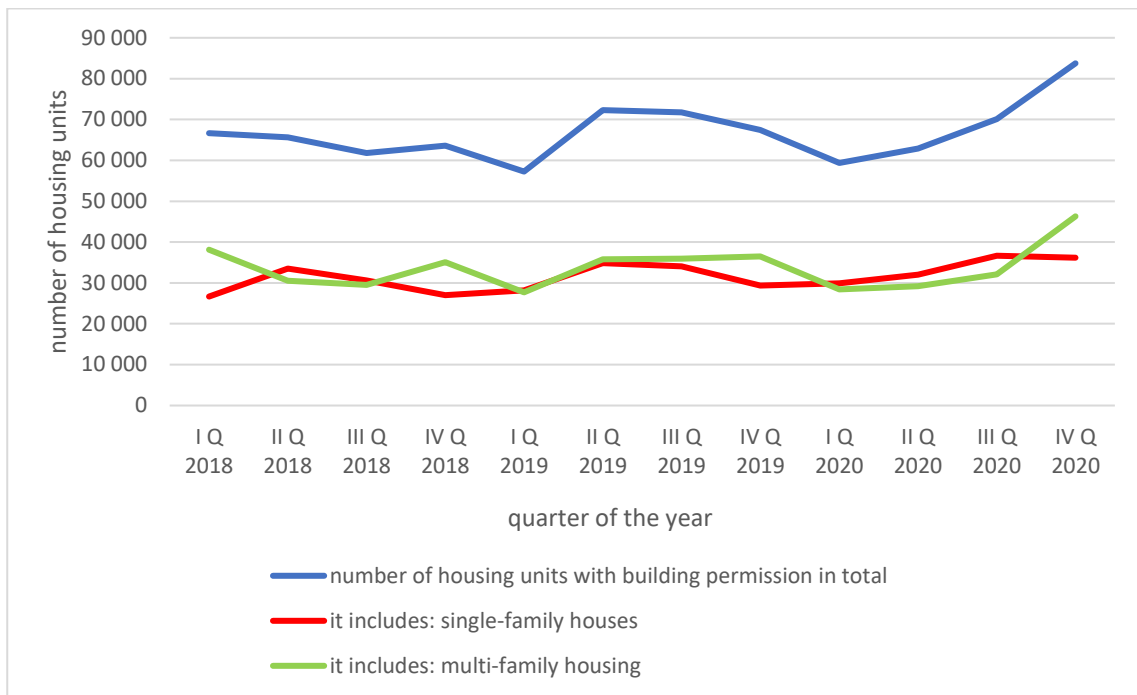


Fig. 3. Housing units with building permits by category in Poland, Q1 2018 – Q4 2020
Source: own study based on the BDL

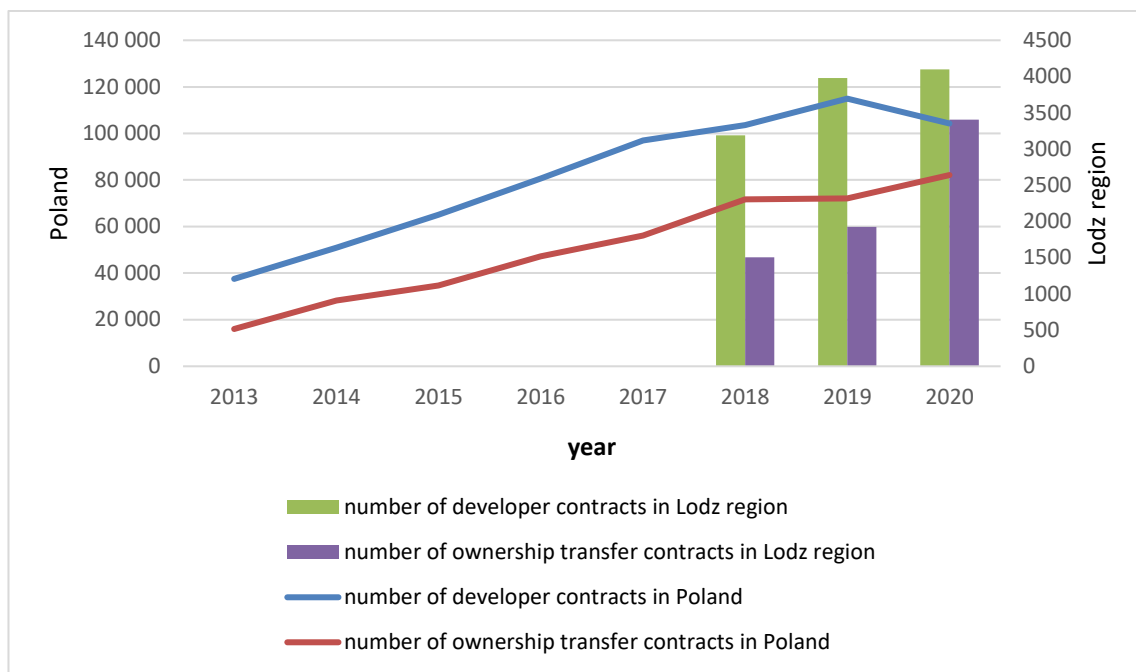


Fig. 4. Developer contracts and ownership transfer contracts (as a result of developer contracts) in Poland and the Łódź region, 2013–2020
Source: own study based on Notaries' reports on notarial activities, Ministry of Justice

contracts. The COVID-19 pandemic did not stop the sale of developer projects – quite the contrary. The number of developer contracts in 2020 was higher than in previous years. The different tendency in the Łódź region than the national trend may result from developers' projects in Łódź being cheaper than in many other voivodeship cities. This situation encourages the purchase of apartments also for investment purposes.

To assess the potential activity of the housing market, including developers operating in it, it is also worth looking at statistical information on the sale of undeveloped land.

In Poland, the number of transactions with undeveloped plots increased significantly during the pandemic (by nearly 19% compared to 2019, Fig. 5). Building plots accounted for 44%, which means that a significant number of buyers were interested in plots that did not have a building function at the time of purchase. It should be remembered that due to the irregularities of the Polish spatial development system, it is often possible to assign a construction function to an area intended for

other purposes. It is also of crucial importance that a plot without a building function is much cheaper to purchase.

Also, in the Łódź district, residents are showing a growing interest in undeveloped plots. Building plots in the analysed years accounted for about half of all undeveloped parcels for sale. Since agricultural real estate is excluded from this category, it can be concluded that the remaining real estates are mostly forest plots or recreational plots. In 2020, when many people stayed at home in the Łódź region, the number of parcels sold increased by 28% compared to 2019. This trend is, therefore, similar to the national trend.

In the second part of the analysis, the construction and transaction activity in Łódź was examined in comparison to neighbouring poviats and towns. Łódź is a clear leader in development activity; the scale shows differences – in 2020, 5,315 housing units were commissioned in Łódź, 0 in Brzeziny, 271 in Zgierz, 151 in Pabianice, and 68 in Lodzkie Wschodnie. The analysis of the started developer housing units, which allows for reference to the

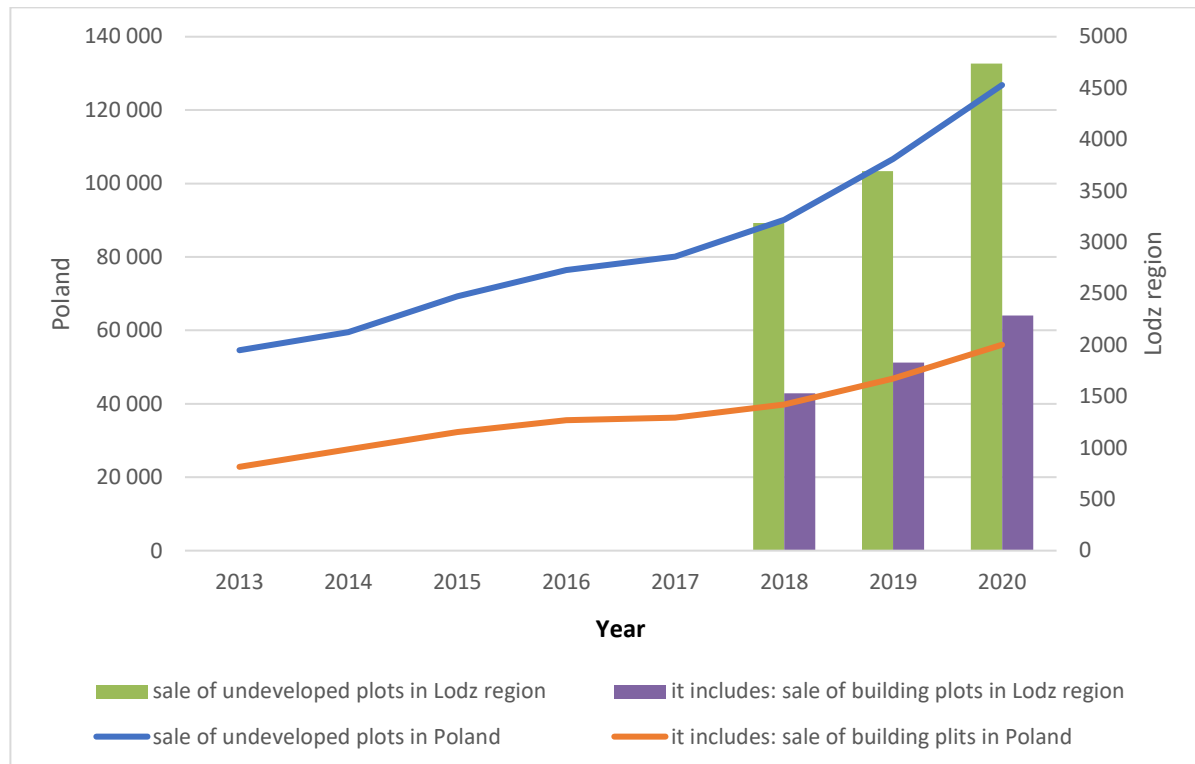


Fig. 5. Sale of undeveloped plots, including building plots in Poland and the Łódź region, 2013–2020 (real estate other than State Treasury and local government units)

Source: own study based on Notaries' reports on notarial activities, Ministry of Justice

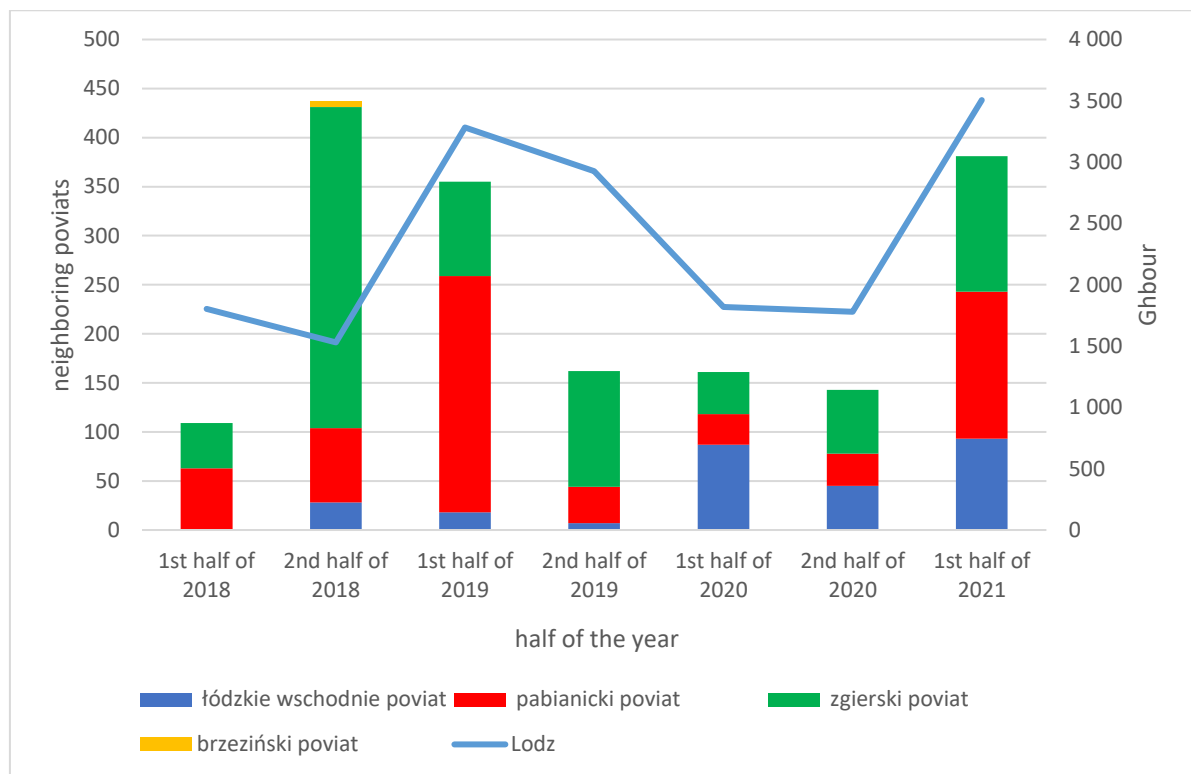


Fig. 6. Developer housing units started in Łódź and neighbouring poviats, 2018–2021 (semi-annual data)

Source: own study based on the BDL

effects of the pandemic, indicates that construction activity in suburban areas may increase in the future – as indicated by the results of Q1 2021 (Fig. 6).

As indicated earlier, the number of housing units for which building permits are issued in Łódź is generally growing, both in multi-family and single-family housing (Fig. 7). The increase in the number of dwellings for which construction permits have been issued in single-family housing is observed in Zgierski powiat and single-family two-apartment housing (most often developer's projects) in Łódź and Łódzkie Wschodnie.

The transaction activity of the poviats around Łódź and the largest cities in these poviats was examined using the local information service for property appraisers. Despite the pandemic, the number of transactions with built-up land stayed at the similar level as in 2019 (Fig. 8).

In the case of undeveloped land transactions, though, there was a slight increase in numbers (Fig. 9).

In Łódź, the most significant number of transactions with undeveloped land took place in 2018; there were 592 transactions, whereas in 2019 there were 577, and in 2020 there were 530 (LOG

2021). The introduction of restrictions as a result of the outbreak of the pandemic caused a decrease in the number of transactions to only 66 in the second quarter of 2020. This result was in line with the national trend. An upward trend characterised the following quarters. The share of land sold for single-family housing is growing in Łódź. In 2018 it was less than 70%, while in 2020 it was 77% (LOG 2021).

Real-estate prices are rising in Łódź. The highest prices are for land for multi-family function, commercial and multi-functional development. The land prices for single-family housing in 2020 ranged from 24 to 722 PLN/m², depending on size and location (LOG 2021). Average prices per square metre of undeveloped land increased from PLN 152/m² in 2018 to PLN 194/m², for single-family housing from PLN 132/m² to PLN 164/m². The increase in land prices and rising inflation also cause an increase in the prices of ready-made apartments. This fact may indicate that developers have raised prices so much that the purchasing power of the inhabitants of Łódź is declining. As a result, the demand for apartments in the secondary market

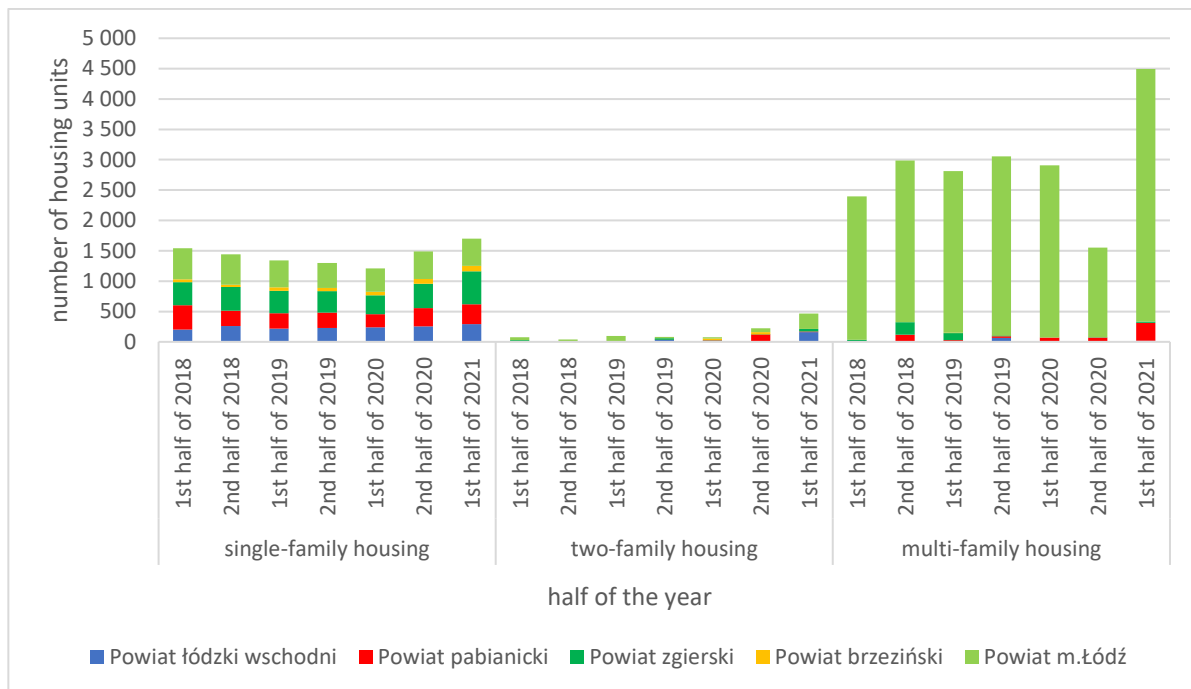


Fig. 7. Number of housing units with building permits granted in Łódź and neighbouring poviats by type of development, 2018–2021 (semi-annual data)

Source: own study based on the BDL

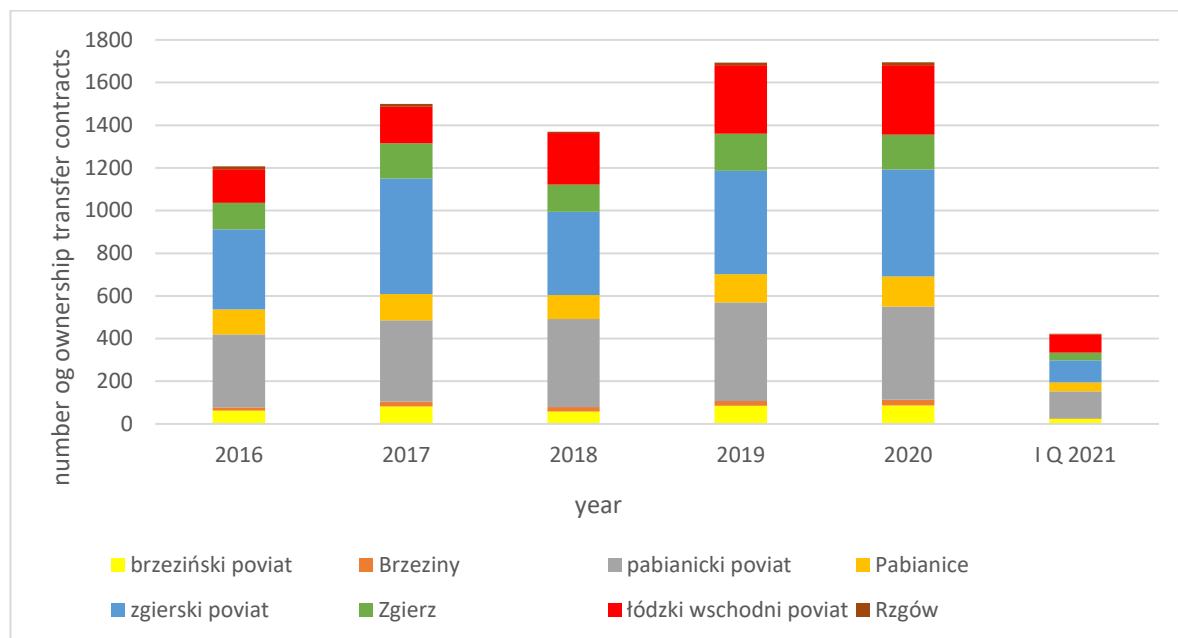


Fig. 8. Number of transactions with built-up real estate in poviats and larger towns adjacent to Łódź, 2016–2021

Source: own study based on local information service for property appraisers

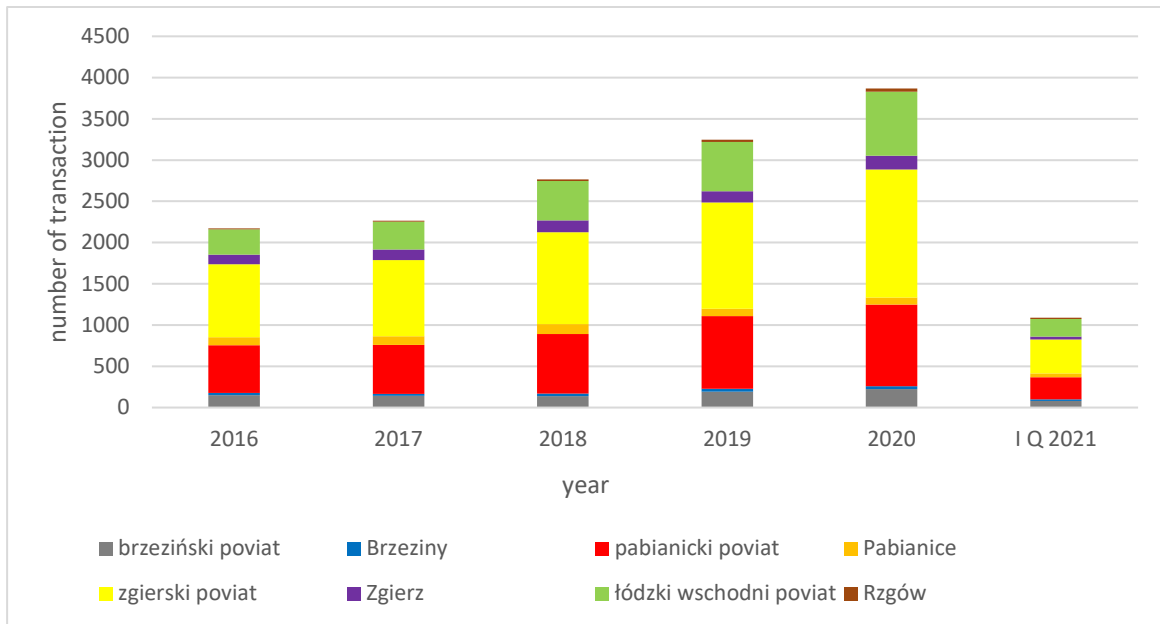


Fig. 9. Number of transactions with undeveloped land in poviats and larger towns adjacent to Łódź, 2016–2021
Source: own study based on local information service for property appraisers

is growing. Until 2019, new apartments were more expensive than those on the secondary market. In 2020, the trend was reversed, although the difference is not significant.

4. Conclusions

Many efforts to create a more sustainable, resilient city are visible in Łódź (Szpakowska-Loranc & Matusiak, 2020). The housing market also plays a part in this; local authorities' planning policy aims to develop empty spaces inside the city and post-industrial areas. Developers gain the right to create new projects there, including based on special resolutions of the city council within the framework of the Act on Facilitating the Preparation and Implementation of Housing and Associated Facilities. The local government aims to create an image of the city and its living conditions that will counteract the outflow of people and favour the influx of new residents. The pandemic has raised important questions, including whether there will be a change in the scope and manner of satisfying housing needs. To find an answer to this, the authors examined local housing markets. Łódź as a central city and nearby poviats and towns were chosen, and the results were compared against phenomena

at the national level. In the light of research, it turned out that developers are still interested in preparing their projects in Łódź, and the rising prices of housing units certainly influences their decisions. The developers did not transfer any significant part of the development activity outside the city to neighbouring poviats. However, more detailed analyses of the developers' offers show that a substantial proportion of new projects target private rental market investors. Prices are rising, and demand is strong – for reasons related to low profitability or the high risk of other investment vehicles. The question is whether this rental stock that is currently being created by developers and finding buyer-investors but not users will be used. On the other hand, increased interest in undeveloped land was expected, and analyses showed that the threat of intensified urban sprawl is real. The pessimistic vision of the development of the situation shows that in the future, Łódź, despite many efforts to create an urban space that is friendlier to its inhabitants, will continue to lose its population, as wealthier households move out of the city. First of all, there has been an increase in the demand for undeveloped plots of land outside cities; these plots can potentially be used for single-family housing. In the centre, on the other hand, there will be residential buildings intended largely

for rent, which means, among other things, the risk of vacancy and rapid degradation in the event of an economic downturn. Only in the longer term will it be possible to determine whether the residential market will continue to be attractive to investors, developers and residential unit users.

Notes

¹However, some studies show that the results of investments in government bonds are more profitable than in residential estates, see: Wolski, Załączna 2021.

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