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# THE INVESTMENT MARKET OF NON-CORPORATE DEVELOPERS IN POLAND – SURVEY ANALYSIS

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ABSTRACT

The paper presents an analysis of the private-sector developers' investment market in Poland focusing on its spatial effects. Initial observations showed an increase in the share of small developers in the Polish market. So far, however, no research on this topic has been conducted. The study used a two-stage research approach, analyzing source materials and conducting qualitative, quantitative, and statistical research on small Polish non-corporate developers. Data was collected in 2019-2020 through online survey tools. Results show that their activity can be boosted by better access to land, more funding choices, and less worry about market downturns. These developers focus on selling apartments quickly, maximizing profits and adjusting their strategies based on market trends by choosing specific plot sizes to develop. A typical method of land development for the surveyed Polish developer is the densest possible development of single-family housing, two-unit semi-detached houses with apartments ranging from 60-80 m$^2$. This article constitutes the second part of research conducted since 2020 on developer preference.

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## 1. Introduction

For an architect, the needs and expectations of their clients are important. In housing construction, the client may be a person planning to build an apartment for sale, for rent, for their own needs, or a developer business. This text is an attempt to analyze the real estate development market in Poland at the beginning of the 21st century from the perspective of the spatial effects of activities undertaken by the newly formed group of investors - developers. The article is the first part of the research and focuses on the results of the survey conducted among Polish developers. The second part of the research will focus on the summary of the spatial parameters analysis of the feasibility studies set for the selected development typology, characteristic of the group of developers.

Preliminary observations, made during the participation of the authors in the construction process, showed a steady increase in the share of private sector developers (individuals) or small, novice developers in the Polish market. However, no thorough research on this subject has been conducted in Poland so far. The only available information includes the data contained in the reports of the National Bank of Poland and the Central Statistical Office (as of January 2022) informing about the overall activity in individual segments of investors in the residential sector. These data show that, in 2021, the number of building permits for flats and houses decreased by 5%, with the decrease amounting to as much as 21% in the case of individual investors. In the case of developers, this figure increased by 5% (National Bank of Poland, 2022, p. 41). The COVID-19 pandemic led to caution among individual investors, who were more willing to entrust their funds to specialized companies. Therefore, it is not surprising that there is a growing interest in this form of activity among novice (therefore small) private sector developers. On the other hand, large enterprises conducting property development activities are subject to slightly different rules of market activity, and therefore the growth of their activity was more stable compared to previous years. According to research conducted by NBP, last year, the previously high concentration of the largest developers in terms of annual sales of apartments decreased in favor of an increase in the share of medium-sized and small developers analyzed in this text (National Bank of Poland, 2022, p. 38). At the same time, reports indicate a shortage of investment land, especially in big cities (National Bank of Poland, 2022, p. 42). Hence, there is an increase in interest in neighboring districts, an increase in the efficiency of the use of land already acquired, and an increase in interest in this form of economic activity of attractive location land owners. Since the beginning of 2014, there has been a nationwide trend of moving away from individual investments in favor of those intended for sale or rent. Since then, the number of commercial investments has constantly exceeded the number of individual investments in housing (GUS, 2022).

The specifics of real estate investments are no different for individuals and companies. The method of investing in the latter is distinguished mainly by its long-term nature. In addition to long-term investors, there is also another group of investors operating in the real estate market, namely people or companies for whom the fastest return is important, not burdened with the need to freeze capital for a long time, treating the real estate investment instrument in the short term. These include developers whose activity is related to the development of land for profit (Gostkowska-Drzewicka, 2007, p. 112). They have a significant impact on the economy in the countries of Central and Eastern Europe, where they shape the investment climate, and therefore, if possible, favorable investment conditions should be created for them (Binovska et al., 2018).

The paper aims to present, in architectural and economic-behavioral categories, the characteristics of natural or legal persons (small developers) as developers in the housing market in Poland, based on survey research. This may contribute to determining whether it makes sense to distinguish developers into individuals and corporations. An important element of this research is to determine whether the analyzed group can be characterized and whether their pattern of behavior on the market can be determined. The paper tries to answer whether representatives of this group invest in specific development types and whether they stand out from corporate developers and individuals building apartments for their use. The latter group of investors has been specified in the provisions of the Building Law, which introduced a separate legal category for single-family housing constructed to meet the investor's own housing needs (Building Law Act, Art. 29.1a), unlike investors involved in the commercial resale of completed flats.

This research describes the state of the law as of February 2023, and therefore by no means takes into consideration the changes to the provisions of the Planning and Development Act that occurred in the second half of 2023. Their goal was to determine the motivation, purpose, and types of investments of small developers.

### 1.1. Literature review

In the development industry, the term "construction developer" has become established as a way of differentiating from the IT industry, which has the term "web developer". The particularization itself, however, has not seen a change at a dictionary level. In the literature, we encounter the term "developer", both in Poland and abroad (Gostkowska-Drzewicka, 2007, pp. 111-113; Leishman, 2015; Cheshire, 2019; Leśniewski, 2018, pp. 190-191; Antczak-Stępniak, 2019, pp. 26-32). However, it does not distinguish whether one is dealing with a corporation or an individual. There are also very few papers describing differences and similarities between corporate property and private sector developers in terms of the types of erected facilities (Cheshire, 2019).

A review of the literature on property development in Poland indicates a corporate-oriented approach. The subject of research is the activity and behavior of development companies (Fita, 2013; Łaszek & Olszewski, 2014; Łaszek et al., 2017). Even scholarly works that indicate that a developer can also be an individual use the term 'development company' (Gostkowska-Drzewicka, 2007). Gostkowska-Drzewicka (2007) also analyzed the definitions of the term developer used in Poland from various perspectives. The article is a good source for the literature analysis of the evolution of the concept of a developer, the description of the essence of the development activity in various approaches, and the description of the subsequent phases of the development activity divided into market analyses, investment decisions, financial analyses, and implementation of the development project.

The very definition of the term, as indicated by Antczak-Stępniak (2019, pp. 28-29) and Gostkowska-Drzewicka (2007), due to the short history of the development market itself, has not created an independent nomenclature and typology in Poland, and is based on Western solutions. According to Kucharska-Stasiak, a developer can be both a natural and legal person who creates a vision of a project, promotes it, and initiates and implements it. This person sees opportunities to use space to increase its value and sell it for a profit. Therefore, the success of the business in this case depends, to a large extent, on its credibility and the opinion of the environment (Kucharska-Stasiak, 2006, pp. 229–233). In most Polish definitions, however, the nature of the entity that is the developer is not specified (Antczak-Stępniak, 2019, pp. 29-30).

A study on private-sector, small scale developers in Poland has recently been conducted (Wanago et al., 2024), but it focused on the potential of land properties and the characteristics of land plots in terms of their suitability for development purposes, regarding that the adopted methods usually strive to use the maximum allowable built-up intensity of a place.

Under Article 3 para. 1 of the Act on the Protection of the Purchaser of Dwelling Premises or Single-family House (Polish Journal of Laws of 2021 item 1177) a developer is defined as an entrepreneur within the meaning of the Civil Code Act (Polish Journal of Laws of 2020 item 1740 and 2320), who, in the course of their business activity, carries out a development project. Accordingly, a developer may be a natural or legal person and an organizational unit (Leśniewski, 2018, p. 190). Although the definitions and the market are dominated by the last two groups, it is clear that anyone can be a developer and earn profits from investing in real estate development. Thus, a research niche has been formed in regards to natural persons who are developers, which this article tries to fill.

At the same time, there is almost no literature relating directly to the development market in terms of only housing developers. Developers themselves and their preferences are very rarely the subject of research throughout the world, even less so in Europe (Leishman, 2015). The recent research shows mainly the difference between the increasing number of houses rather than flats being built and their impact on microeconomics (Leishman, 2015, pp. 591-592). There are also papers describing differences and similarities between corporate property and private sector developers building master planned estates of different types, although it is highly difficult to select those that refer only to single-family development and its specifics (Cheshire, 2019), and analyzing differences in customer and developer housing preferences, focusing mainly of factors influencing customer decisions in this matter (Kauko 2006) and trying to forecast them (Martínez et al., 2023).

This theme in the context of the relationship between the developer and the housing being created emerged as a topic of analysis relatively recently, in the mid-1960s, about the time of the emergence of the first developments described as high-density, low-rise housing in the London Borough of Camden by Neave Brown as a more humanized response to the growing housing needs of the post-war period (Swenarton, 2014). Development of the same type but located in Dublin city center had previously been studied by McNulty and MacLaran (1985), focusing, among other things, on economic and social analyses of different types of development, their costs, and their impact on residents.

While there is a lack of literature on the subject discussing the issue of preferences when selecting the type of development on the part of developers and attempting to analyze the characteristics that give rise to certain spatial priorities among developers, which again cause the solutions offered to revert to the usual patterns, the preferences of home buyers themselves have already been analyzed in this respect.

Research by the team of Erwin Hofman, Johannes Halman, and Roxana Ion shows, among other things, for European conditions, how potential new home buyers in the Netherlands prioritize different elements of home design in the context of individualization, focusing on understanding customers' preferences for customization of home designs, and determining how they value different attributes and what trade-off they are prepared to accept between price and customization. The results of this study have implications for decision-making in the construction industry regarding the balance of standardization and individualization in home design (Hofman et al., 2006). The research was also one of the few to rely on a questionnaire as the method of obtaining direct data, with a formulated weighting method for calculating research priorities (Hofman et al., 2006, pp. 932-935). Even though our study recognized the equal weight of the individual questionnaire modules (and therefore adopted a simplified method), this example demonstrates the great potential of this method for obtaining data on the client-developer relationship.

## 2. Material and methods

The research adopted a method involving two stages. The first was an analysis of source materials on the real estate development market in Poland according to a set of keywords adopted for the topic (Groat & Wang, 2013, pp. 141-170), and the second was a case study as qualitative research (Groat and Wang 2013, 215-218) summarized by quantitative research (Niezabitowska, 2014, p. 197-200). The techniques of survey research and statistical analysis of the collected materials were used for this purpose. Due to the method used, it can be considered as a pilot study aimed at checking the correctness of the questionnaire in terms of its content (Gruszczyński, 2004, p. 121), as well as a preliminary identification of the non-corporate developer market. The adopted methodology is the customary one for architectural and urban studies (Niezabitowska, 2014, pp. 187-189).

The survey research was conducted in March and April 2020 and consisted of examining the investment preferences of small non-corporate developers. Due to the lack of a publicly available database or registry to construct a sampling frame, we used a popular remote survey tool, the Google survey form. This way of collecting data has its strengths and weaknesses. The advantages include virtually no survey costs and nationwide territorial coverage. The data is automatically imported into an excel spreadsheet, which precludes data entry errors and it is relatively fast. In turn, the representativeness of the data collected in this way can be problematic. Since the subject of interest of the authors of the survey are young investors, either starting out or developing their business, it seems reasonable to assume that they use social media and willingly acquire knowledge from the internet. The data collected showed that nearly 80% of the developers (100 respondents) in the sample declared that they had been in business for no longer than five years, while around 97% for no longer than 10 years (122 respondents) . In addition, we assume that they are the beginners and non-corporate developers who reach out to online discussion forums to supplement their knowledge and benefit from the experience of others. In contrast to them, corporations have support in the increased access to information they can obtain independently, through the possibility of commissioning market research and surveys conducted by external companies. They do not need to gain knowledge through social media, serving them mainly as information and sales channels. As regards our assumptions, a link to complete the survey was made available online on three publicly accessible social network communication channels and published on the only four popular discussion groups existing on a social network for developers during the time the study was conducted. Although the sample obtained may not be random according to the classical statistical definition, this method of data collection was the only practical way to reach active market participants representing a group of small developers.

Determining the actual size of the market, including the sheer number of small, non-corporate developers among all those registered is, for the extent of data collection on companies in Poland, essentially impossible. Depending on the source of data, the number of developers in Poland varies, for example, between 16,259 (ASM 2021: 6) and 41,875 (MGBI, 2025). The discrepancy in the data is so large that the Authors decided not to determine the size of the analyzed market and the size of the research sample in an absolute manner, being content to reach the group of interest through communication channels preferred by them.

The flow of responses was monitored using the bit.ly tool. This made it possible that the survey was likely to meet the requirements of the random sample due to the influx of responses also from outside the groups. After 30 days of exposure, the survey received 100 responses. The survey was discontinued after 126 responses on the 38th day of the survey on 29.04.2020 at 23:59. The dynamics of the influx of responses weakened, and we assumed that majority of interested parties had probably managed to complete the survey. The answers were documented in the tables as qualitative observations and compiled in the summary which is annexed to the study.

In constructing the questionnaire, it was assumed that the participants would have diverse investor experience. Their level of competence in this area was operationalized using 3 variables - length of experience, number of completed investments, and self-assessed knowledge of investing in the construction market. Private investors' real estate development tends to be short-term investments. This suggested that most developers would have a short investment tenure. For this reason, it was possible to indicate one of 4 responses as to the length of experience - less than 2 years, 2 to 5, 5 to 10, and over 10 years. The choice of ordinal scale was therefore more precise in terms of indicating shorter experience.

Many fields of research point out that the length of experience in some professions does not correspond to actual competence, especially when social skills are at


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their core (Górniak, 2014, p. 13). In the case of professions whose essence is decision-making (such as developers), it was assumed that it would be good to illustrate competence in decision-making using other variables as well. Therefore, questions about the scale of the activity were introduced, which may involve a much greater resource of investor knowledge.

To do so, respondents were allowed to indicate the number of completed investments on a scale similar to the length of experience. However, as a person's approach may differ when planning their first investment and also when deciding whether to stay in the development profession after their first completed investment, these stages were considered as milestones in a developer's career. Therefore, an extended scale was used to include these two elements, which comes down to a choice between the options: zero completed developments, one, 2 to 5, 5 to 10, and more than 10 completed developments. Finally, respondents were allowed to indicate how they rate their knowledge of investing in the real estate industry on the Polish market on a five-point ordinal scale from 1 (no knowledge) to 5 (expert knowledge).

In addition, a question regarding the size of the largest building plot acquired to date was included to determine whether private sector developers' motivations and investment objectives depend on the size of the plots they choose. The plot size selection option was created in a way to obtain a distribution close to a normal one, which would demonstrate the randomness of the sample and therefore the validity and representativeness of the survey. The ordinal scale allowed us to select answers below 10 a., 10-30 a., 30-60 a., and above 60 a. Developers who had not yet acquired any plot were given the option to indicate such a response. The larger the plot, the greater the expenditure required to acquire and develop it. It was therefore assumed that the size of the largest plot is a way of operationalizing the variable scale of the developer's activity and can be used for this purpose in juxtaposition with the variable number of completed developments.

Further questions were divided into two blocks due to the type of residential development. Some of them were intended for developers implementing single-family development, and some for multi-family development. Developers who implement both types of investments could complete both parts of the survey.

This part of the study was aimed at examining the investment preferences of developers in terms of the development parameters by the adopted typology. To define individual features, the generally accepted nomenclature was used according to the provisions of the Building Law valid for 2022 (Polish Journal of Laws of 2021 item 2351), (Polish Journal of Laws of 9 June 2022, item 1225).

Concerning single-family housing, developers were instructed to choose any number of types of development they have decided to use in their business. In the columns of the answer field, 3 forms of development were marked: detached, semi-detached, and terraced houses, while in the rows: single-unit, side-by-side two-unit, and stacked two-unit buildings. This gave the possibility to mark multiple choices out of 9 possible answers.

In the following questions, the details of the implemented investments were determined - the most frequently designed area of flats, the number of rooms, and the layout of parking spaces. In the case of investors who also build multi-family buildings, they were asked to indicate the number of rooms and the size of the flats. Next, questions were asked about what determines the preferred development type, which of the selected factors is considered to be the most important, and what are the main constraints that prevent them from choosing the development they consider the most profitable (Tab. 1).

**Table 1**

Overview of questions included in the survey “Polish construction investment market through the Eyes of Practising Developers”

| No. | Question |
|---|---|
| | Metrics (previous experience) |
| 1. | How long have you been a real estate investor (developer)? |
| 2. | How many property investments have you completed so far? |
| 3. | What is the size of the largest plot of land you have acquired for residential development? |
| 4. | How would you rate your knowledge of property investment in the Polish construction investment market? |
| | Your investment preferences |
| 5. | What type of buildings does your development activity involve? |
| | Single-family development |
| 6. | Which of the following building forms do you most often choose for your investments? |

| | |
|---|---|
| 7. | Which floor area (floor area of individual units) do you most often choose for your investments in single-family housing? |
| 8. | Indicate the number of rooms in a single-family building most frequently designed for your investments |
| 9. | Indicate the car parking arrangement most frequently designed for your investments |
| | Multi-family development |
| 10. | What size (floor area of individual units) do you most often choose for your investments in multi-family housing? |
| 11. | Indicate the number of rooms most often designed for your investments in multifamily housing |
| | Investment preferences (closed-ended questions with the possibility of adding own answer) |
| 12. | What determines your choice of the type of development and meterage indicated in the previous questions? |
| 13. | Which of the following factors do you consider to be the most important? |
| 14. | What factors limit you in your ability to invest in the most cost-effective form of development? |

*Source*: own study.

We use both descriptive statistics and statistical inference in the analysis of the survey data. Of the statistical inference methods, we use the significance test for fraction, the non-parametric variant of ANOVA with post-hoc analysis, and Pearson's chi-squared test of the dependence of qualitative variables. In all statistical significance tests, we arbitrarily assume a significance level of 0.05. Note that for this significance level and for a standardized normal distribution, the critical value is +/- 1.96.

## 3. Results

### 3.1. General results

The current dynamics of the development market in Poland, which is characterized by a steady increase in the number of new dwellings (Fig. 1), can be considered favorable for the smallest developers.

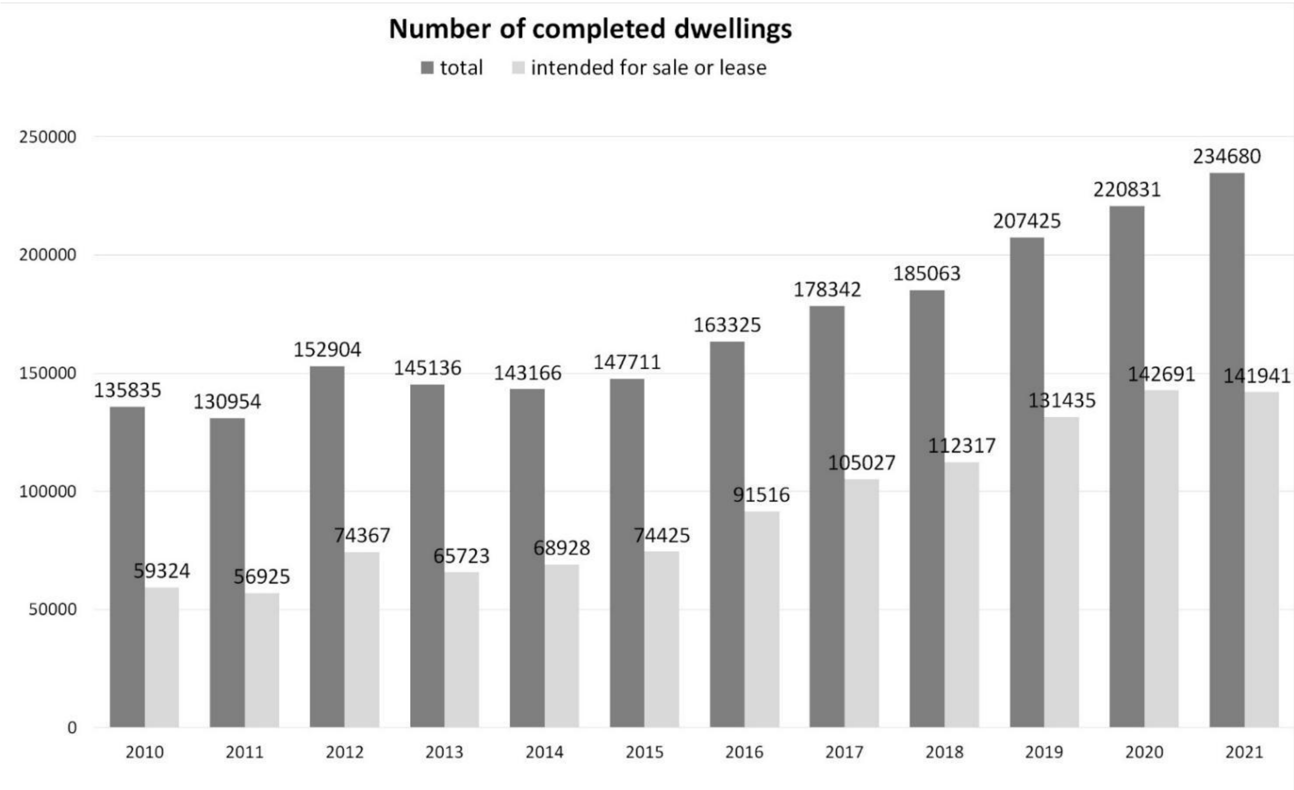


**Fig. 1**. Dwellings completed in Poland in the years 2010-2021. *Source*: A. Szczegielniak, J.Kleszcz, R. Wanago (2024), based on (GUS, 2022).

The upward trend was not even stopped by the turbulence related to the COVID-19 pandemic (National Bank of Poland, 2022, pp. 13-22). On the other hand, the number of private dwellings (built by investors for their own needs) is falling, while the number of dwellings commissioned by developers is rising. At the same time, new dwellings are affected by structural changes of an architectural nature - the average area of a new dwelling is decreasing (Fig. 2). This process applies to both private dwellings and those commissioned by developers, with the difference being that privately owned ones tend to be much larger.

Thus, it can be assumed that there are favorable


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investment conditions for developers who are natural persons. There is a visible increase in the number of new dwellings, and at the same time their average size is decreasing, and thus so is the cost of building one. Above all, however, the decrease in the number of dwellings completed by natural persons for their use, with the simultaneous increase in the number of dwellings built for sale or rent, proves that the savings of individuals are redirected from the construction of dwellings for their use to private development investments, perhaps carried out by the same people who would have decided to build a private flat in less favorable conditions.

Regardless of the adopted form and style, housing development is subject to certain classifications. If one looks at the market as a space of supply, the primary market corresponds to production, the profile of which is created by the demand for a certain type of housing.

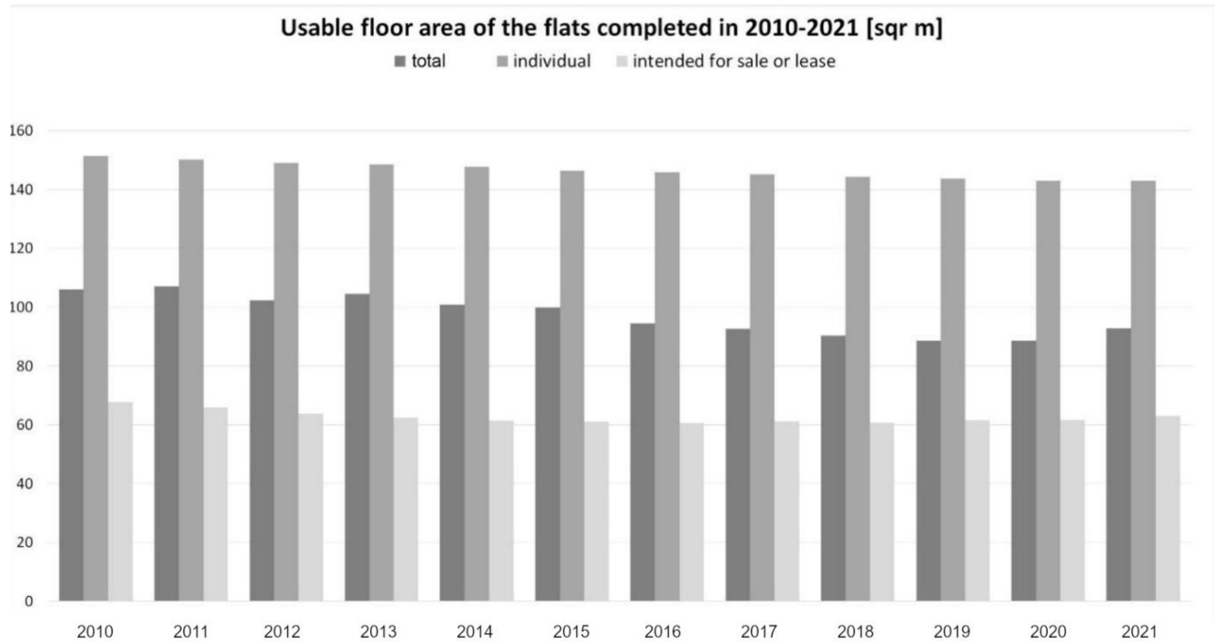


**Fig. 2**. Usable floor area of flats completed in 2010-2021. *Source*: A. Szczegielniak, J. Kleszcz, R. Wanago (2024), based on (GUS, 2022).

The housing market, although deeply regulated by urban planning, is a space where, as in the case of industrial production, demand and supply niches emerge. The high flexibility of individuals as investors can lead to the rapid filling of niches, and thus the market can escape all urban categories. In Poland, a good example may be the development trends of post-industrial cities, where extremes can occur, such as the development of space in the center with single-family housing. Internal suburbanization, as this is the phenomenon we are dealing with in this case, has recently intensified as an intrinsic process of the transformation of urban structures (Lorens, 2005; Jadach-Sepioło & Legutko-Kobus, 2021, p. 24). It occurs, however, so rarely that it is analyzed as a characteristic phenomenon of individual cities rather than a generalized one (Koman, 2017; Runge, 2018).

Consequently, in the analysis of development activity, in addition to economic categories such as the use of flats for sale and rent, architectural elements, such as the form and layout of the development, become of key importance. In this case, factors of urban composition determining the shape of the development itself, which in most cases are already strongly determined by local law, are less important for developers.

### 3.2. Market experience

The surveyed developers have been in business for a relatively short period. At a significance level of 0.05, we can conclude that 80% of them have been operating on the market for no longer than five years (a test statistic value of -0.18 was obtained in the two-side fraction test). This may result in little experience and a small number of completed investments. Nevertheless, the majority of them declared their knowledge in this area to be at least good. Table 2 shows the self-assessment of knowledge of real estate investments related to the market experience of the developers. The Kruskal-Wallis test showed that the mean self-assessments in the groups differed statistically significantly (p-value less than 0.00000001). Further post-hoc analysis (Tukey-Kramer-Nemenyi all-pairs test) showed that there are no statistically significant differences between groups "Less than 2 years" and "2-5 years" (p-value = 0.249), and also between groups "5-10 years" and "More than 10 years" (p-value = 0.6644). Otherwise, the differences between the means were significant at the 0.05 level of significance. The results of the analysis (Table 2) clearly show that, as experience in the developer market grows, so does the level of the self-assessment of investment competence. Interestingly, the statistically significant high self-assessment among novice developers suggests that they have probably received a number of training courses on investing in developer projects, so they have the necessary knowledge to start and run their first investments. When analyzing the results of research in this area, it is important to take into account the possibility of the occurrence of the Dunning-Kruger effect, which influences the perception of the results of the analysis, in which the experience of developers was assessed solely through self-assessment, and the objectivity of the results was verified using the only available criterion, i.e. the length of time the company had been present on the real estate development market and the amount of experience. In this case, the authors assumed that the actual time spent in the professional market is of greatest importance for gaining experience in a given field (Kruger & Dunninig, 1999),

Nevertheless, the early stages of the business still require continuous upgrading of skills, so it is worth investing in additional forms of support, such as mentoring and experience-sharing, which can further improve the quality of ongoing projects.

**Table 2**

Multivariate table for the variables Experience and Knowledge (first and fourth questions in the survey respectively, see Table 1)

| | Knowledge | | | | |
|---|---|---|---|---|---|
| Experience | 2 | 3 | 4 | 5 | mean |
| Less than 2 years | 14 | 28 | 30 | 0 | 3.22 |
| 2-5 years | 0 | 12 | 14 | 2 | 3.64 |
| 5-10 years | 2 | 0 | 8 | 12 | 4.36 |
| More than 10 years | 0 | 0 | 0 | 4 | 5 |

*Source*: own calculations.

### 3.3. Development parameters

The most popular size of the largest plot acquired for residential development was between 30 and 60 acres. Based on our sample, we can conclude that 40% of small developers buy these. The value of the test statistic in the test statistic in the Wilcox Mann-Whitney test, which is normally distributed, was 0.295. The remaining plots listed in the survey (i.e. less than 10 acres, between 10 and 30 acres, more than 60 acres) have an approximately equal distribution (including the option: no acquired plot).

The vast majority of small developers choose to invest exclusively in single-family developments. They account for 80% of the total (the value of the test statistic in the test for fraction was -0.178). The rest of the surveyed developers invest in both, single-family and multi-family buildings. None of the respondents declared that they invest only in multi-family development. This suggests that this type of development is rarely chosen by private sector developers in Poland and is rather characteristic of large corporate developers. It should be noted that the choice of building type was independent of the developers' experience (as measured by the four categories in question 1 of our survey). We used chi-square test and obtained a p-value of 0.53640. Similarly, we found that the choice of building type was independent of self-assessed investment knowledge. The p-value of the chi-square independence test was equal to 0.24722.

Nearly 80% of the respondents are building or planning to build two-unit buildings other than detached houses in the nearest future (of which 46% are semi-detached buildings). According to the developers' declarations, they almost do not plan to invest in single-family single-unit buildings, unless in parallel with investments in two-unit buildings.

36.51% of developers are building or planning to build single-family buildings with an area of individual flats of over 100 $m^2$, 14.29% from 80 to 100 $m^2$, 33.33% from 60 to 80 $m^2$, and 15.87% below 60 $m^2$. Thus, there are plans to strive for larger flat sizes, while separating the two most common segments - above 100 $m^2$, and 60 to 80 $m^2$. The other two ranges (80-100 and <60 $m^2$) are twice less popular. This shows the motivation of developers to implement the assumption that single-family houses are purchased due to several additional elements and are chosen by larger families with quite specific housing needs. The larger than national average size of flats sold is mainly due to the inclusion of all types of buildings in the annual national statistics (GUS 2022). At the same time, the average usable floor space of dwellings was 93.5 $m^2$, with 132.3 $m^2$ on average in single-family housing, of which 141.8 $m^2$ were built for individual use and 62.6 $m^2$ intended for sale or rent. This results in the average size of the usable floor space of dwellings in single-family development declared by the respondents being slightly larger than the national average.

The number of rooms differs from the square meterage. Developers are constructing or planning single-family development, in which there are mainly four-room apartments (42.27%) and two-room apartments (28.57%). Only 15.87% of developers pointed to three-room apartments, and 14.29% to apartments with 5 or more rooms. This corresponds to the housing needs of families with up to 2 children, or with a slightly more developed utility program (study or office).

An important element of development investments, affecting the cost of construction and the level of customer interest, is the way the plot is developed and the parking function on the plot. Among developers, 80.95% choose uncovered parking spaces for their investments, 15.87% choose garages, and 3.17% carports. No one declared an underground car park. This is dictated mainly by the speed and low cost of constructing such places, unlike other forms of parking.

Investment in multi-family development among non-corporate developers turned out to be less popular than single-family development. The number of collected surveys, i.e. 26, does not provide reliable grounds for drawing conclusions regarding the entire population. In this group, 4 developers declared that they were planning development consisting of flats with an average area of less than 30 $m^2$. It should be noted that the minimum statutory area of a flat in Poland is 25 $m^2$ (Polish Journal of Laws of 9 June 2022, item 1225, § 94), which proves that there is a group of developers who have adopted the minimum possible area as their goal, which was not observed in the case of single-family development. The number of rooms declared by developers for multi-family development is 3 in 16 cases, 6 in 2 cases, and 1 in 4 cases (concerning the minimum possible built-up area).

### 3.4. Investment motivation

The 12$^{th}$ and 13$^{th}$ questions in the survey (see Tab. 1) were designed to explore the investors' motivations. The first question offered multiple response options and the second question involved selecting the single most important motivating factor. Regarding the investment motivation of the surveyed developers, the largest group (66.67%) declared that they are guided by the ease of selling flats when planning an investment. This shows that developers are strongly market-oriented. 41.27% declared that they take into account the time of return on an investment, which means that 2 in 5 developers treat the construction of flats as a rather short-term investment. 31.75% indicated the low cost of construction as the dominant factor, while 30.16% declared that they attach importance to the rate of return on the investment (Fig. 4).

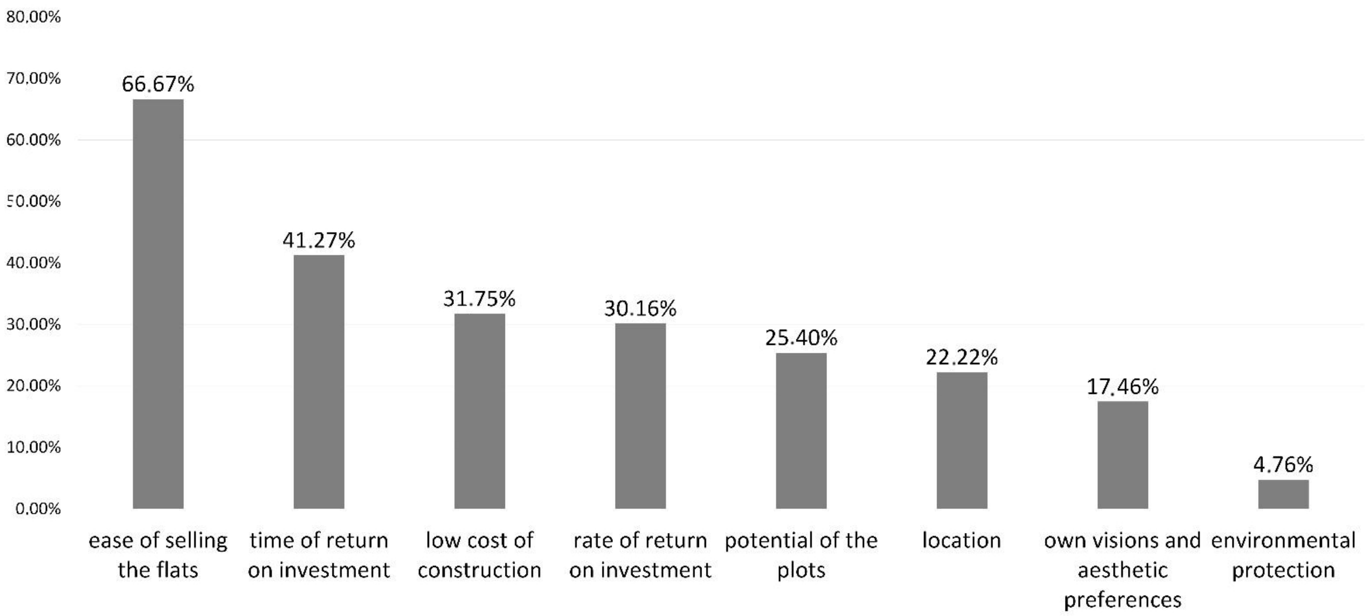


**Fig. 3**. Investment motivations and investment planning factors. *Source*: A. Szczegielniak, J.Kleszcz, R. Wanago (2024).

In comparison, corporate developers declare optimization as their main principle (Kanak 2014, 78; Paszkowski 2022). The above indicates that non-corporate developers treat the cost of investment more in terms of an entry barrier (Lubecka and Madej n.d.), rather than in terms of a burden to be reduced through


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undesirable optimization measures (e.g. the use of low-quality materials).

For 25.40% of developers, an important factor in planning investments is the potential of plots (capacity, urban development plan, technical conditions, shape). This means that there is a large group of developers who do not have investment freedom but adjust their plans to the available plots of land. 22.22% of developers declare that the decisive factor is the location (environment, neighborhood) to which the investment must be adapted, and 17.46% declare that their own visions and aesthetic preferences are taken into account. Merely 4.76% of developers declared that they are guided by environmental protection (Fig. 3).

In a single-choice question, respondents were asked to indicate which of the listed factors they consider to be the most important when planning an investment. A fourth of the small developers on the market indicate the potential for maximum profit and the highest rate of return on investment (the value of the test statistic in the test statistic in the Wilcox Mann-Whitney test was -0.308). The second most common motivation is the ease of selling the flats. This is driven by 20% of small developers (the test statistic in the fraction test was -0.713). In our sample, this motivation was only indicated by respondents with experience of up to 5 years. In contrast, the low cost of construction is indicated by merely 3% of small developers (the test statistic in the fraction test was 0.115)

The above indicates that non-corporate developers strive to maximize profit, but not by minimizing construction costs. For some of them, finding a suitable plot turns out to be a threshold criterion, and the possibilities of its development determine, to a significant extent, what form its development will take. Only a certain part of developers approach investing in such a comprehensive way that they do not consider any single criterion to be the most important. Only a small part of them (namely 10%, which has been confirmed by the test statistic equaling 0.416) treat investing in real estate in a strictly short-term way. It is also worth noting that location is considered a key factor by also only 10% of developers (test statistic equaling -0.178), which proves that, without applying the principles of urban planning, this group of investors could have a negative impact on spatial order.

At the next stage of the analysis, we accounted for the interrelations between individual factors influencing choice, such as: experience, the type of development selected and the surface area of the largest purchased developed land plot. Due to the zeros that appeared in the multivariate tables, we performed some data cleaning before applying the Pearson Chi-squared test. Thus, we omitted two motivations from the dependency study. The first is the "low cost of construction". In the multivariate table with the variable *Experience*, this category occurred only 4 times, together with the *Experience* category "More than 10 years". In the table with the variable *Type of buildings*, the category "low cost of construction" did not occur with the variant "single and multi-family buildings". In the case of the multivariate table with the variable *Area of largest purchased plot*, the category "low construction cost" occurred only 4 times in combination with the category "no purchased plots". For similar reasons, we excluded the category "Own visions and aesthetic preferences" of the variable *Motivation*. In addition, for the variable *Experience,* we removed the variant "Over 10 years", due to only 4 occurrences, all in combination with the category "rate of return on investment". The results of the chi-squared test and the Cramer's V coefficient of association are shown in Table 3.

**Table 3**

Pearson's chi-squared test and Cramer's V for variable *Motivation* combined with three other characteristics of the developers

| Motivation | Chi-squared statistic | Degrees of freedom | p-value | Cramer's V |
|---|---|---|---|---|
| Experience | 33.355 | 12 | 0.00085 | 0.3825 |
| Type of buildings | 7.6097 | 6 | 0.26810 | 0.2539 |
| Area of largest purchased plot | 91.671 | 24 | 0.00000 | 0.4407 |

*Source*: own calculations with a use of R program.

A statistically significant relationship can be seen here between *Motivation* and the variables: *Experience* and *Area of largest purchased plot*. As their experience grew, developers opted for larger plots of land. The Cramer coefficient indicates that this relationship is moderate. In contrast, *Motivation* is not related to the *Type of buildings* chosen. An analysis of motivations shows that small developers are primarily driven by the desire for a quick profit, but also to maximize returns and ensure the safety of their investment. With lower initial capital, they are more likely to choose smaller plots of land, which allows them to quickly regain their invested funds. As they gain experience and accumulate capital, they choose to invest in larger plots of land, which allows them to spread their returns over time while achieving higher profits.

Interestingly, among the developers, there were individuals with strong aesthetic and ethical convictions, who considered this element to be the most important factor in their investment decisions. 3.17% declared that they are guided primarily by aesthetic preferences, and 2.38% care about the natural environment.

### 3.5. Investment restrictions

Finally, there are factors that, according to developers, limit their investment opportunities. We explored these factors by giving respondents multiple choices (question 14 of the survey, see Tab. 1). Urban development plans were mentioned most often (41.27%). Thus, while developers do not directly declare that they consider them an important factor in choosing the investment method, a large part of them feel that these plans strongly influence how they can develop the investment plot.

Lack of financial resources was declared as a limitation by 26.98% of developers. This may confirm the thesis mentioned in the literature on the high impact of external funds on private-sector developers (Fita 2013, pp. 51-53). In this context, however, a relatively small group of people who indicated that they mainly take into account the speed of profit, which, after all, determines the time of freezing capital, may be surprising. It can be inferred that developers consider the technically invariant development time as the main component of the speed of return. Hence, this may be the reason for their strong orientation towards the ease of selling flats.

As many as 26.19% of developers consider their insufficient investment experience to be a limitation. This limitation is also related to other shortages of investment resources indicated by developers, e.g. too small scale of activity indicated by 19.05% of developers, too high costs of entering the development activity (3.17%), and too high costs of implementing certain types of development (7.94%).

For 26.19%, the problem is the lack of suitable plots of land or poor access to them. In other words, a very large group of developers have financial resources, but cannot find a suitable plot for their construction investments. One of the explanations for this limitation may be the large number of agricultural lands in Poland, especially in suburban areas, the purchase of which, and even more so the transformation into a building plot, may be difficult due to legal subjective restrictions that increase the investment risk and extend the implementation time. 23.81% of developers indicated the prices of plots considered the most attractive for development as a limitation. This is a potential area of the competitive advantage of a corporation over the group of developers analyzed in this study. Finally, 23.81% of developers indicated the fear of a market collapse as a limiting factor. This may prove the existence of a significant group of potential developers who have the necessary investment resources but are limited by risk (Fig. 4).

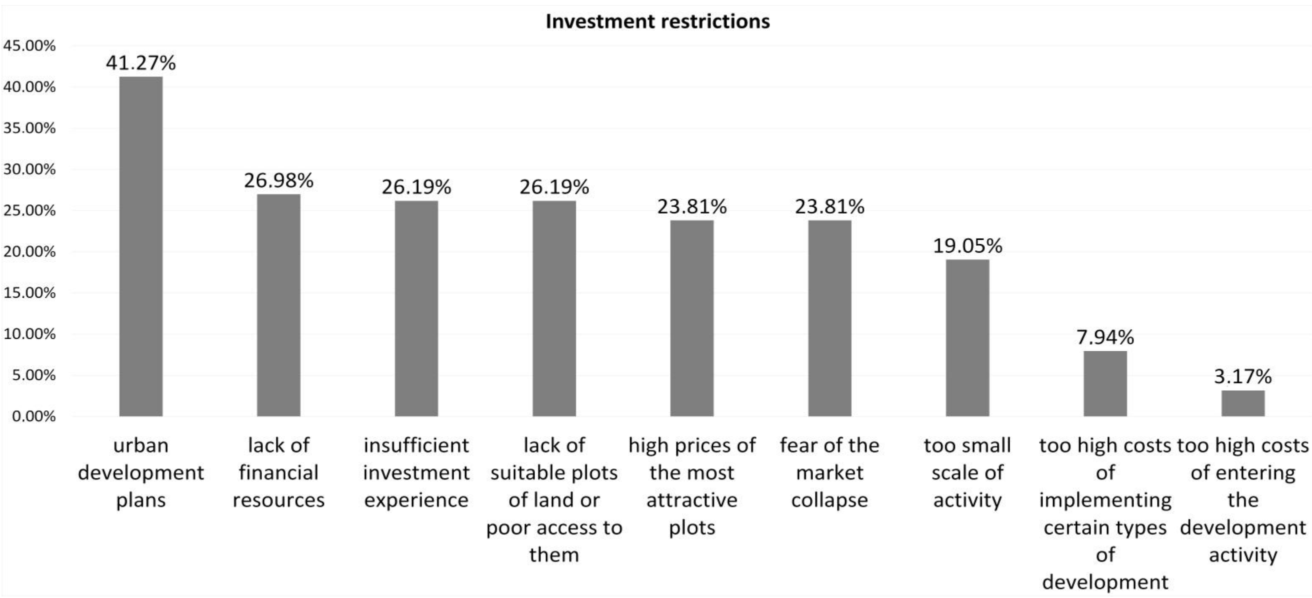


**Fig. 4**. Investment restrictions. *Source*: A. Szczegielniak, J.Kleszcz, R. Wanago (2024).

**Table 4**

Constraints of investments and experience of small developers. The percentage of responses

| | Experience | | | | |
|---|---|---|---|---|---|
| Investment restrictions | Below 2 years | 2-5 years | 5-10 years | More than 10 years | sum |
| To small scale of activity | 3.3% | 4.1% | 2.5% | 0 | 9.9% |
| Insufficient investment experience | 10.7% | 2.5% | 0.8% | 0 | 14% |
| Lack of financial resources | 9.1% | 0.8% | 4.1% | 0 | 14% |
| Too much competitiveness | 0 | 0 | 0 | 0 | 0% |
| Too high costs of entering the development activity | 2.5% | 2.5% | 0.8% | 0 | 5.8% |
| Lack of suitable plots of land or poor access to them | 6.6% | 4.1% | 2.5% | 0 | 13.2% |
| High prices of the most attractive plots | 2.5% | 5.0% | 1.7% | 0 | 9.1% |
| Urban development plans | 8.3% | 7.4% | 4.1% | 1.7% | 21.5% |
| Fear of the market collapse | 9.9% | 0 | 2.5% | 0 | 12.4% |
| sum | 52.9% | 26.4% | 19% | 1.7% | Total = 100% |

*Source*: own calculations.

The multiple-choice option made it difficult to analyze the correlations, as the nine response options resulted in 24 categories that are combinations of these. This resulted in a large number of zeros in the multivariate table. To gain some insight into the relationship between the factors limiting investment and the experience of small developers, we present the percentage of the indicated constraints (Tab. 4).

Only 1.7% of respondents with more than 10 years' experience pointed out any limitations of their businesses, and when so, this pertained to urban development plans. These are independent of their activity, and they deal perfectly with other constrains. None of the respondents felt the impact of competitiveness. This shows that the market is absorbing and that there is a niche in the market for small developers. The impact of factors limiting small developers is felt especially for those with little experience. Approximately half of the responses were posed by respondents operating in the market for less than 2 years. A positive phenomenon is the downward trend in the number of limitations indicated as experience increases. The most experienced property developers only reported restrictions in the administrative process and planning regulations. This research therefore confirms the general trend presented in the report "Analysis of the property development market in Poland in 2020, including a forecast for 2021-2025" (ASM 2021, 21) The main problems for small developers are complicated urban development plans and complex administrative procedures, especially for first-time investors. It therefore seems necessary to introduce simplified administrative procedures and a form of institutional support for smaller investors, which could stimulate the development of the sector and improve he conditions for dynamic development investments.

## 4. Discussion

This research has focused on a very specific, narrowed-down group of development types. As such, they are a kind of introduction and a test of the validity of the methodology adopted for further analyses covering both other types of development and the reality of the built environment, different from that in Poland, in which a given project is built.

The collected data relates to a specific moment in time - the preferences and knowledge of developers in the year 2020. Due to the specific moment in time, the outbreak of the COVID-19 pandemic and its impact on the real estate market situation, the data documents and illustrates a specific situation and can be the basis for comparisons and observation of changes in subsequent studies.

A key issue for the reliability of the results obtained is the representativeness of the sample. A survey sample that does not adequately reflect the characteristics of the population may lead to erroneous conclusions that are not relevant to the target group as a whole. The problem is that there is no uniform record of small developers in Poland, which makes it impossible to apply classical probabilistic selection methods. We can only assume that the selection of the distribution channels of our survey allowed us to reflect, to some extent, the structure of small developers. Therefore, the results of the statistical inference should be taken with caution and treated rather as a guide for further research. Nevertheless, we believe that the small p-values in the statistical tests performed indicate interesting areas for deeper analysis.

Future directions of research in this area may concern analogous solutions appearing in different countries, especially European ones, and refer to factors causing variability in the solutions applied. At the same time, in the conducted research it becomes a problem to determine the size of the actual group, and thus the possibility of estimating the size of the survey sample, due to the dispersion of the real estate development market in Poland itself.

The research only shows developers' preferences. For a complete picture of the state and preferences of the development market, analogous research should be carried out on a much broader scale, also taking into account the other groups of participants in the process, i.e. at least clients and designers.

The correlations between the individual coefficients studied were assumed to be equivalent in the research. The choice of correlations under study was based on the most substantial relationships described in the literature. Still, a method that would allow for the assessment of all possible relationships and their actual dependencies was not determined. Therefore, the choice remains potentially flawed.

The analyzed property development market in Poland is susceptible to changes in the economic situation and is dependent on the national legal situation, including the current state housing policy. How this policy is shaped can significantly distort the research results, temporarily changing the preferences of both developers and their customers in terms of the size and location of the selected apartments.

The approved method of collecting data has its strengths and weaknesses. The advantages include virtually no survey costs and nationwide territorial coverage. The data are automatically imported into an excel spreadsheet, which precludes data entry errors and it is relatively fast. In turn, the representativeness of the data collected in this way can be problematic. Note that the study is not easy, as there is no sampling frame. Since the subject of interest of the authors of the survey are young investors, either starting out or developing their business, it seems reasonable to assume that they use social media and willingly acquire a knowledge from the internet.

When analyzing the results, the occurrence of the Duning-Kruger effect should be taken into account, which could bias the results, as the effect may affect feelings towards one's own knowledge and competence about development projects.

## 5. Conclusions

Private non-corporate developers are a rarely studied group of investors in the primary residential housing market. In Poland, this group is constantly growing, and the current macroeconomic trends in the market created increasingly favorable conditions for them. This group is characterized by its dynamics and, in the event of an improvement in the availability of plots, sources of financing, or decreased fear of a market collapse, it may increase its investment activity.

In the potential model of behavior of non-corporate developers on the real estate market, an important component may be the pursuit of an easy and quick sale of completed flats, and thus strict market orientation, as well as the pursuit of maximizing profit, usually without reducing construction costs. Depending on the goals adopted by a given developer, adaptation to market niches is also visible through the selection of specific ranges of plots, the distribution of which is far from normal.

The typical way of site planning for a Polish non-corporate developer seems to be as dense as possible, with single-family, semi-detached, two-unit buildings, and flats of 60 to 80 $m^2$ in the maximum number possible on a given plot. A useful parameter in monitoring the activity of this group of developers may be monitoring the share of this type of development in the market, with the proviso that these developers can quickly adapt to changing market realities by changing the profile of their development activity.

At present, the market of non-corporative developers is based on investments that are considered safe and therefore short-term, based on the most typical forms of housing, which are considered the easiest and quickest to sell. This results in no attempts to experiment with new forms of development, aimed at improving the quality of housing, in favor of "safe" forms, i.e. familiar and relatively cheap dwellings.

This situation is in no way conducive to improving the quality of housing, as the first to be developed are not the areas that are most important for the quality of the space created, but those that are easiest for the developer to work with, and the safest as an investment tool, as is the case with innovative developments.

It therefore seems necessary to create a tool to motivate small non-corporate developers to take more risks in the choice of forms and location of development in the context of the need to improve the quality of the created living space.

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