

CHANGES ON THE HOUSING MARKET OF THE DOWNTOWN AREA IN SELECTED POLISH CITIES

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Abstract

Large Polish cities¹ are currently dealing with an increasing significance of downtown areas, extending outside of the city centers (meaning the area directly surrounding the city square). The downtown alone seems to influence the fate of entire cities, facilitating their success or contributing to their failure. A good demographic, social and economic condition of a downtown, its positive image and the dynamic development of the part of the city perceived as the business and administration centre and a meeting place of residents and tourists, contribute to the image and potential of the whole city to a great extent.

Changes in urban surroundings, the signs of which may be observed in spatial, aesthetic, architectural, urban-planning and socio-economic aspects, determine the functioning and condition of local real estate markets. Whether potential buyers consider the real estate attractive depends on the assessment of its significant features, of which transaction price is representative.

The main research objective of the article is the identification, assessment and interpretation of differences in prices registered in the years 2009-2014 in downtown residential real estate markets. These considerations have been referred to analogical phenomena within the entire cities under examination. The detailed research objective is an attempt to explain the sources of individual reactions of the analyzed real estate markets in downtown areas. The cities under research include: Bydgoszcz, Kalisz, Toruń and Wrocław.

The authors applied quantitative analysis (statistical, comparative) to transaction data registered in local residential real estate markets.

Key words: *housing, residential, urban, downtown, prices.*

JEL Classification: *O18, R21, R31.*

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¹ According to Polish literature studies and legal regulations, large cities are considered to be those having over 100,000 residents and governed by a president (Article 26 of the Law of the Local Government of 8 March 1990, Dziennik Ustaw of 11 March 2013, Item 594). More on this topic in Chapter 3.

1. Introduction

Downtown areas have been created through long-lasting processes and consecutive modifications resulting in a mixed-use development, with the majority of functions being residential, administrative, commercial and service. The downtown is an area of the city which is the subject of continuous changes relating to the development of technology and emerging requirements of the population (JUCHNOWICZ, 1971). The status and size of the selected Polish cities in the 19th century have strongly shaped their current image and the importance of their downtown areas. Downtown areas are evolving, but they continue to carry their residential function. Due to the special significance of the downtown to the development of the entire city, it is worth looking at how the downtown real estate market performed against the markets of the other urban areas. An assessment of the specific way the downtown market functions allows for a better understanding of the directions of the development of acity, as well as for more responsible management. A depiction of the activity of the downtown residential real estate market participants (buyers, sellers and developers), as well as their preferences (indirectly) and the mechanisms governing this market, improves opportunities for modelling and forecasting phenomena in local development.

The article focuses on the changes occurring in downtown residential real estate markets in selected large cities in Poland. The cities in the research sample differ with respect to the number of residents and other criteria. The choice of cities is intentional - the sample includes cities high up on the settlement network (Poznań and Wrocław) as well as those lower on the scale (Bydgoszcz, Kalisz and Toruń).

Such a selection of the research area will help to identify similarities and differences between local markets and distinguish any particular phenomena occurring within them. Therefore, to achieve the set-out objectives, the authors attempted to:

1. evaluate the phenomena occurring in downtown residential real estate markets in Bydgoszcz, Kalisz, Poznań, Toruń and Wrocław,
2. interpret the changes noted in the years 2009-2014 in downtown residential real estate markets,
3. compare the scale of the phenomena occurring in downtown areas against the remaining urban areas,
4. illustrate the specific reactions of analyzed downtown markets against entire cities.

2. Literature review

The city, as a basic settlement unit, may be diverse with respect to the forms of land development, types of land use, or character of the buildings (REGULSKI, 1986, pp.16-25). Diversification of urban space is primarily the result of various functions, which, by being focused in a given space, create certain areas of activity, called the functional areas of a city (SŁODCZYK, 2001, p. 141).

Residents associate the downtown as an area displaying the most important processes of public life. It is also of great importance to tourism (SNEPENGER et al., 1998). This is the most economically and culturally attractive area (TANAŚ, 2015), which is influenced, according to PAZDER (2011), not only by cultural values, but also by its multifunctional character, stemming from the diversified functional and spatial resources, which, according to the author, comprise of:

- the existing transportation network, including vehicle, pedestrian and bicycle transportation, presence of public transport stops, parking areas and rail/bus stations,
- existing price-determining functions, which directly influence the character of the public space, including historic buildings and urban planning schemes; contemporary cultural assets; culture-forming functions; administration, science and education services; shopping precincts; and markets, squares and green areas, i.e. parks and public gardens,
- existing forms of development, including high-density housing areas, characteristic for city centres, as well as areas of urban housing of medium to low density.

Additionally, according to BELL (2007) and MORANDI (2011) the attractiveness of the downtown is influenced by its atmosphere and character, which are built by small, local shops, restaurants and hotels distinguished by an individual and a more emotional attitude towards the customer. It is this unique identity, stemming from the originality of features, which influences the competitiveness of the downtown when compared to other areas of the city. Factors shaping the attractiveness of the downtown also include shopping precincts with unique customer service solutions. According to the

“Report on residential and commercial real estate markets in Poland in 2014” (NBP, 2015), the most highly priced properties are located in the center, with good communication and access to infrastructure. Rent in such properties is a number of times higher than rent in the properties located farther from the center.

As demonstrated through functional and spatial resources analyses, (PAZDER, 2011) the downtown has a multifunctional character, where residential properties occur alongside commercial, recreational or special-purpose real estate. According to BEAUREGARD (2005), this diversity of co-existing sectors of real estate increases the attractiveness of the downtown, which indirectly improves the competitiveness of the city against neighboring units. As stated by TANAŚ (2015), such strong diversity, combined with inconsistent spatial policy, may cause havoc. For that reason, the downtown, as the central, most exposed part of the city, should receive continuous assistance to improve its condition and ensure an elegant image of the urban space (SOLKIEWICZ-KOS, 2014). In Poland, the development of the downtown areas follows two tracks. In most cases, it is implemented via extensive revitalisation programmes of a masterplan type, which combine planning activities with potential investment opportunities in correlation with social and economic circumstances. In parallel, there are examples of activities of solely an investment nature. These are carried out without wider consultations, and, as such, contribute not only to spatial but also social conflicts (BERNACIAK, 2015). American experiences confirm that, in the face of growing sub-urbanisation, revitalisation activities should focus on preserving and improving the unique character of the downtown, in comparison with other parts of the city. Such actions help preserve the identity of niche markets, which build the character of these areas (FAULK, 2006).

3. Data and methods

The downtown may be identified by the following elements: distinctiveness, scale, accessibility, identification and significance (WALLIS, 1979). Distinctiveness is meant as the separation of the downtown in urban space with regard to the presence of institutional infrastructure, presented architectural values and the urban concept used. Scale refers to its size (the downtown is relatively small compared to the city as a whole, and usually dense). Accessibility stems from the location of the downtown within the city space, as it enables quick access thanks to transportation options. Identification and significance relates to the public perceptions associated with this space.

For the delimitation of downtown areas, the authors identified areas within the cities with comparable features and significance. The identification was supported by the division into local government auxiliary units, official local documents referring to downtown areas, and also specific spatial, architectural and urban features of the analyzed areas, such as: intensive development dominated by tenement houses built before World War II, with a significant number of heritage-listed buildings, high concentration of regional level services and commerce, a relatively dense road network and strong functional ties with the centre of the city. For the purpose of the article, the downtown has been defined as an area decisively larger than the city centre. The only exception to the rule is Wrocław. During the siege of Breslau (*Festung Breslau*) in May 1945, two thirds of Wrocław were destroyed, with the central areas almost completely lost. Their rebuilding and restoration process has been extremely difficult and has not been entirely completed to date. Almost 100% of Wrocław residents were replaced. The downtown in Wrocław is considered to be the area within the Old Town, as per the surveying and administration division. Additionally, the downtown includes the areas directly bordering Ostrów Tumski (the oldest part of the city – currently occupied by churches, monasteries and the diocese).

The authors applied quantitative analysis (statistical and comparative) to the transaction data from the local residential property markets. The analyzed data is sourced from notarial deeds of sales of self-contained premises (Bydgoszcz, Kalisz), real estate price and value registers (Poznań, Toruń, Wrocław) and from the Central Statistical Office (GUS). Part of the Toruń data has been processed using the Systems of Transaction Analysis <http://www.analizysat.pl/>.

Short socio-economical characteristics of the 5 cities under research have been provided in Table 1.

The cities under research have a population of 103,000 to 634,000 inhabitants. The analyzed group of large cities is quite diverse with regard to the number of inhabitants, which consequently implies variations in data from the remaining characteristics (Table 1).

Table 1

Characteristics of the cities

| Criterion/City | Current as of: | Bydgoszcz | Kalisz | Poznań | Toruń | Wrocław |
|--|-------------------------|-----------|---------|---------|---------|---------|
| Area [km²] | 31.12.2014. | 176 | 69 | 262 | 116 | 293 |
| Population | 31.12.2014. | 357,652 | 103,373 | 545,680 | 203,158 | 634,487 |
| Budgetary spending per resident [PLN/year] | 2014 | 4408 | 4516 | 4716 | 5548 | 5894 |
| Gross average monthly salary [PLN] | 2014 | 3677.79 | 3395.84 | 4354.40 | 3876.00 | 4337.99 |
| Unemployment rate [%] | 2014 | 7.4 | 6.8 | 3.1 | 8.1 | 4.1 |
| Tourist accommodation | 31.12.2014. | 28 | 11 | 90 | 34 | 76 |
| Number of students per 1000 residents | academic year 2014/2015 | 97 | 56 | 214 | 130 | 193 |
| Housing stock: | | | | | | |
| - number of flats per 1,000 residents | 31.12.2014. | 411 | 415 | 454 | 426 | 467 |
| - number of rooms per 1,000 residents | 31.12.2014. | 1,416 | 1,426 | 1,592 | 1,490 | 1,811 |
| - usable floor space per person [m²] | 31.12.2014. | 23.8 | 25.8 | 29.3 | 25.0 | 32.9 |
| Quality of living (position in the ranking) | 2015 | 20 | no data | 1 | 5 | 13 |

Source: Compiled by authors based on GUS and Social Diagnosis (DIAGNOZA 2015...).

The authors analyzed residential market transactions within the downtown and beyond, in the years 2009-14 within the secondary market, and in the case of Bydgoszcz, Kalisz and Poznań – also within the primary market. Turnover of cooperative ownership right was not included in the analysis. After the elimination of seemingly non-market and abnormal transactions, 77,365 transactions were included in the research (Table 2).

Table 2

Number of analysed transactions in the cities under research

| Factor/City | Bydgoszcz | Kalisz | Poznań | Toruń | Wrocław | Total |
|-------------------------|--------------|--------------|---------------|--------------|---------------|---------------|
| primary market | | | | | | |
| downtown | 433 | 18 | 5,033 | - | - | 5,484 |
| beyond downtown | 568 | 481 | 5,907 | - | - | 6,956 |
| secondary market | | | | | | |
| downtown | 1,465 | 235 | 4,580 | 278 | 1,705 | 8,263 |
| beyond downtown | 3,965 | 1,014 | 8,770 | 2,318 | 40,586 | 56,653 |
| Total | 6,431 | 1,748 | 24,290 | 2,596 | 42,291 | 77,356 |

Source: Compiled by the authors.

4. Empirical results

4.1. Statistical analysis

The analysis of variation in unit transaction prices of residential dwellings in the cities under research has shown that, in Kalisz and Bydgoszcz, there is no statistically significant correlation between the prices and the time when the transactions were made. However, in Poznań, Toruń and Wrocław, there was a slight decrease in prices (respectively 0.63%, 0.71% and 1.67% annually). Due to insignificant price variation and low determination rate indicating a low degree of influencing the variation of price in time, no correction of price with reference to time was made. Next, the analysis of transaction prices was undertaken. Firstly, from the generally accessible market transactions, the authors eliminated those in which unit transaction prices indicated non-market sale conditions (prices significantly

inflated or deflated). The fundamental finding refers to the variation of prices within the sub-markets under research: the downtown variation is larger than elsewhere. Undoubtedly, this stems from the varied technical and functional state of the buildings and dwellings within the downtown. Some of them are old, in poor technical condition, with relatively cheap apartments; however, some buildings are new, often built in place of demolished, disused or destroyed structures, with highly priced apartments.

Positional variation coefficients (Table 3) in the downtown primary market are at the level of 15% (Kalisz) to 12% (Bydgoszcz), and beyond the downtown – from 4% (Kalisz) to 7% (Bydgoszcz). In the secondary market, variation coefficients (Table 4) within the downtown fall between 12% (Wrocław) and 16% (Poznań), and beyond the downtown – from 9% (Bydgoszcz, Kalisz) to 12% (Poznań).

4.2. Primary market

The primary market in Bydgoszcz is well developed within the whole city. Activity is especially noticeable with regard to one-bedroom dwellings, with an area of up to 50 m². These are being constructed in various suburbs, most frequently as part of small residential complexes. Some are built in the downtown, as a result of studies prepared in the Municipal Urban Office in Bydgoszcz. The investors are, to a large extent, developers and, to a certain degree, – housing cooperatives. Currently (as of February 2016), out of 26 residential investments, six, i.e. 23%, are being constructed within the downtown.

The primary market in Kalisz is undeveloped due to low accessibility of land approved for multi-family residential housing. Within the last few years, only a few multi-family residential housing transactions took place, half of which were already developed land, approved for demolition. The main investor was a housing cooperative; remaining investments were carried out by local developers. Primary market transactions take place in the suburban areas.

The primary market in Poznań is well-developed within the entire city. The relative proximity to the city centre is a factor strongly considered by the developers, which results in a high supply of new apartments in the downtown. This, in turn, explains the high concentration of transactions within this part of the city – it is where almost half of the city primary market sales are made. The buyers' interest in the downtown indicates its high development potential in the future. This effect may be directly accredited to the effective city center revitalization policy carried out in Poznań for years and, since recently – supporting the development of downtown areas.

In Toruń, during the researched period, there was no primary market transaction listed in the downtown. This is due to the fact that Toruń is a tourist attraction, with the Old Town considered a National Monument and listed as a UNESCO World Heritage Site. These circumstances significantly limit any investment activity, which, in turn, is directly reflected within the real estate market and the number of transactions.

The downtown of Wrocław did not note any primary market transactions within the research period either. The restoration of the city after World War II and the architectural concepts of the 1970ies resulted in the downtown having no areas suitable for the construction of any new buildings. Any rare vacant spaces, due to high prices per square meter and high demand for office space in this area of the city, are used for commercial development.

Table 3

Selected statistical parameters – primary residential real estate market

| Factor/City | Bydgoszcz | Kalisz | Poznań | Toruń | Wrocław |
|--|-----------|--------|--------|-------------|-------------|
| Downtown | | | | | |
| average price [PLN/m²] | 4,249 | 3,243 | 6,183 | no data | no data |
| median price [PLN/m²] | 4,274 | 2,998 | 6,200 | no data | no data |
| variation coefficient | 12% | 15% | 10% | - | - |
| Beyond downtown | | | | | |
| average price [PLN/m²] | 4,434 | 2,969 | 5,801 | no research | no research |
| median price [PLN/m²] | 4,399 | 2,979 | 5,801 | no research | no research |
| variation coefficient | 7% | 4% | 6% | - | - |

Source: Compiled by the authors.

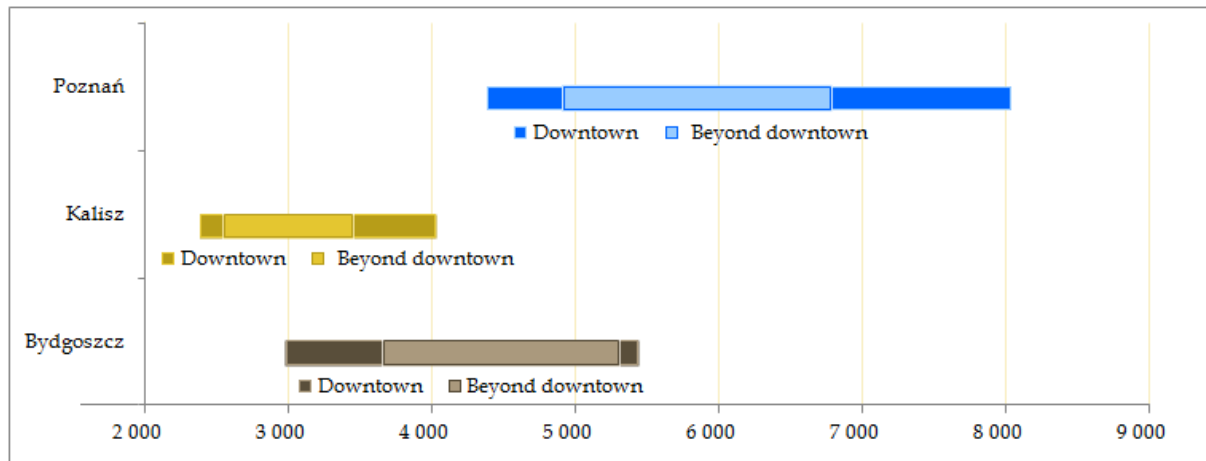


Fig. 1. Range of price per unit in the primary market. Source: Compiled by the authors.

In the cities where the primary market for dwellings was analyzed, i.e. in Bydgoszcz, Kalisz and Poznań, the range of prices is wider in the downtown than elsewhere (Fig. 1). The higher level of prices of newly built housing in the downtown may be explained by the attractive, central localization and access to public and commercial services. The lower prices in the primary market may be brought about by poorly thought-through localization, surrounded by areas with a high concentration of social disadvantage and buildings in disrepair.

When analyzing prices in the primary market, it is important to note that conclusions may be difficult to draw. Most frequently, signing the notary deed takes place many months after signing the pre-sale or reservation contract. This means that the circumstances surrounding price negotiations are not what could be inferred from the date of the change of the ownership contract. At the same time, there is no option for defining the time that passed since the date of the pre-sale or reservation contract for each transaction, as not all the developers are willing to provide such information.

4.3. Secondary market

The secondary residential market is well-developed in all the cities, which is evidenced in the number of transactions, both in the downtown and beyond (Table 2). The basic descriptive statistics for this market have been shown in Table 4 and Fig. 2.

Table 4

Selected statistical parameters – secondary residential real estate market

| Factor/City | Bydgoszcz | Kalisz | Poznań | Toruń | Wrocław |
|--|-----------|--------|--------|-------|---------|
| Downtown | | | | | |
| average price [PLN/m²] | 3,122 | 2,358 | 4,815 | 3,853 | 6,375 |
| median price [PLN/m²] | 3,125 | 2,331 | 4,803 | 3,831 | 6,265 |
| variation coefficient | 14% | 14% | 16% | 13% | 12% |
| Elsewhere | | | | | |
| average price [PLN/m²] | 3,698 | 2,711 | 5,111 | 4,047 | 5,026 |
| median price [PLN/m²] | 3,693 | 2,719 | 5,074 | 4,026 | 4,971 |
| variation coefficient | 9% | 9% | 12% | 11% | 11% |

Source: Compiled by the authors.

The relations of boundaries of the price range in Bydgoszcz, Kalisz and Wrocław, in the secondary market, do not follow the pattern of the trends observed in the primary market (Fig. 1 and Fig. 2). In cities with less tourist and investor appeal (Bydgoszcz), and those neglected in the revitalization policy department (Kalisz, in which approximately 75% of the buildings in the inner center were built in the 1920-30-ies) the range of prices for the downtown areas in the secondary market is shifted left of the “beyond downtown” range (Fig. 2). The opposite holds true in Wrocław, where the price range in the downtown is shifted to the right in relation to the areas beyond the downtown. This is the result of the high attractiveness of the Wrocław downtown and better technical condition of the buildings (the

center of Wrocław was rebuilt extensively after World War II). When it comes to Poznań and Toruń, two cities with a quite diverse technical condition of the downtown buildings (some renovated and some neglected), and with downtown areas attractive to tourists and business, the price range follows the pattern from the primary markets – the range is bigger in the downtown than beyond.

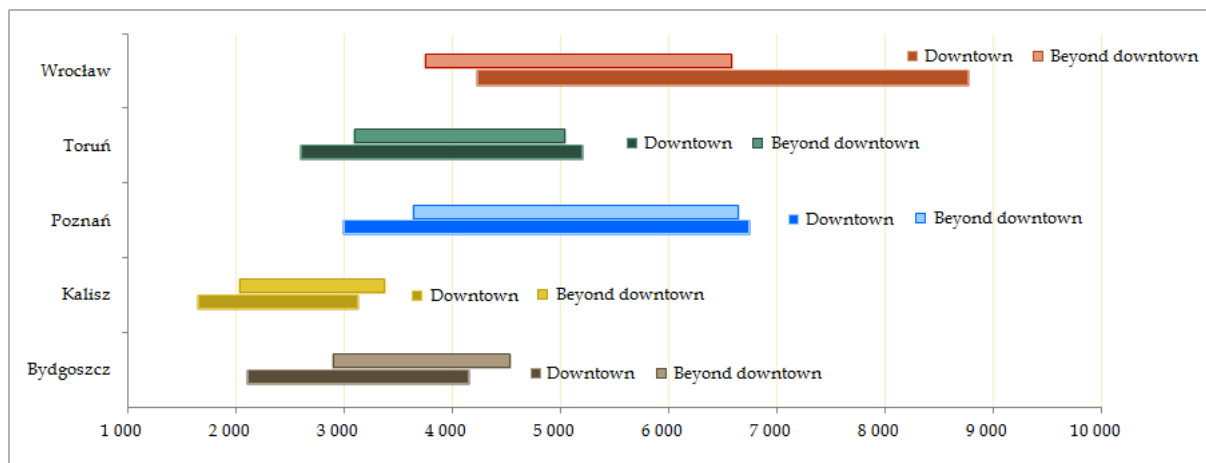


Fig. 2. Range of price per unit in the secondary market. Source: Compiled by the authors.

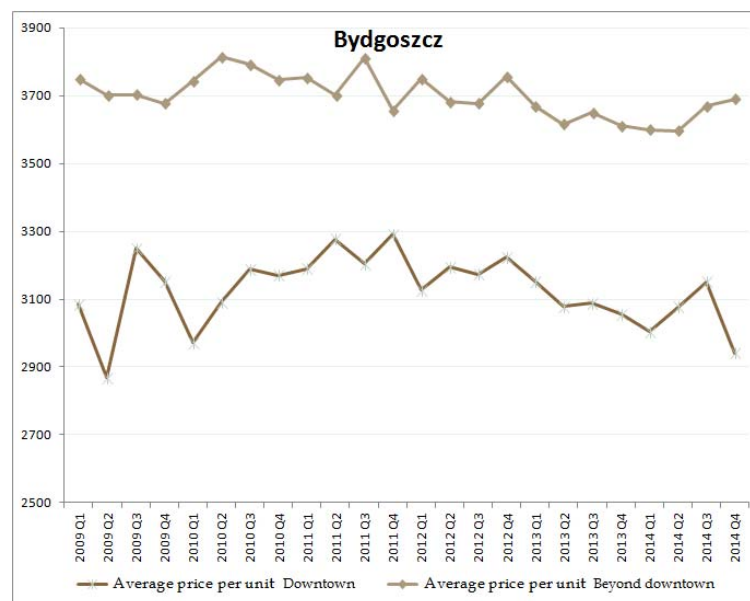


Fig. 3. Average price per unit in the secondary market in Bydgoszcz. Source: Compiled by the authors.

In Bydgoszcz, average quarterly dwelling prices within the downtown are lower than elsewhere, and this is a clear, permanent trend occurring in 2009-14 (lower by 16% in the analyzed time frame). Within the whole research period, the average prices were as follows: in the downtown 3,122 PLN/m², elsewhere – 3,698 PLN/m² (Table 4). The price variation is not large – the variation coefficient within the whole analyzed period is 14% in the downtown and 9% elsewhere. Any larger variations in the quarterly downtown apartment prices are the result of the isolated actions of some investors, who raise the average apartment prices by releasing a new apartment block.

Average quarterly prices in Kalisz were lower in the downtown than elsewhere throughout the analyzed period (Fig. 4). The number of transactions in the downtown constitutes 18% of the secondary market transactions. The detailed analysis of the collected data shows a variation in the number of downtown transactions within particular quarters (in the third quarter of 2013, no transactions with the price falling within the typical variation range were listed; however, in the first quarter of 2013, up to 42% of secondary market transactions were made in the downtown). At the

same time, the price variation is not large – the variation coefficient in the entire analyzed period is 14% in the downtown and 9% elsewhere.

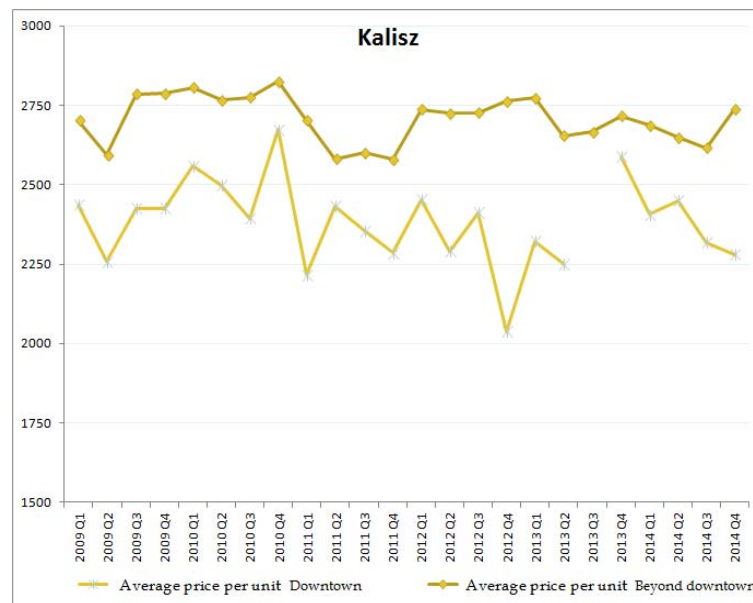


Fig. 4. Average price per unit in the secondary market in Kalisz. *Source:* Compiled by the authors.

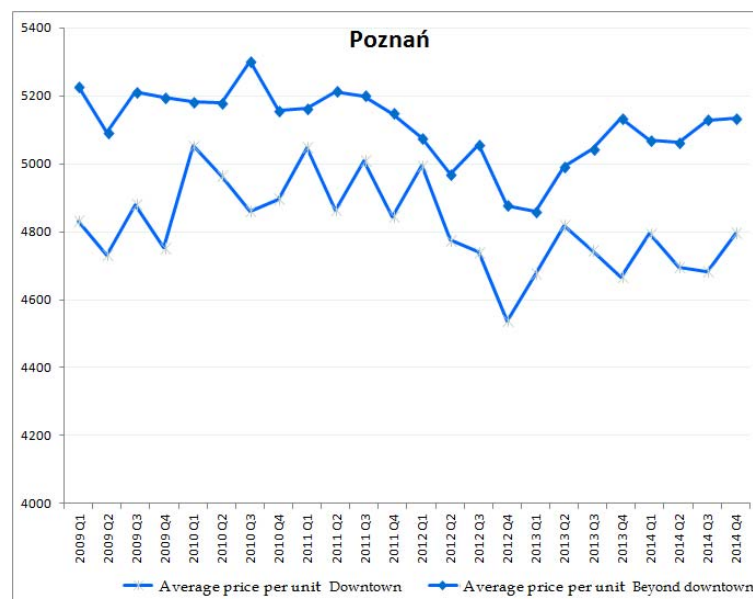


Fig. 5. Average price per unit in the secondary market in Poznań. *Source:* Compiled by the authors.

Average quarterly prices in Poznań were lower in the downtown than elsewhere throughout the analyzed period by an average of 6.1% (Fig. 5). The number of downtown transactions constituted 34.5% of all the secondary market transactions, and the percentage of downtown transactions in the particular quarters of the analyzed period was generally stable (ranging from 30% to 38%). The price variation in the secondary market was quite low – the variation coefficient within the whole analyzed period is 16% in the downtown and 12% elsewhere (Table 4).

In Toruń, the graph of prices registered in the downtown is very ragged, which may indicate a large variation in the transactions (the bought real estate is expensive or cheap, depending on the period). As mentioned previously, Toruń has tourist appeal and, because of that, the prices of apartments in the Old Town in the renovated tenement houses exceed 5,000 PLN/m². At the same time, the prices of unrenovated apartments fall as low as 2,500 PLN/m². However, in the majority of the analyzed quarters, the average downtown prices were lower than elsewhere. It must be

highlighted here that the analysis excluded buildings and business premises, which dominate the Toruń Old Town, and the prices of which reach significantly higher levels.

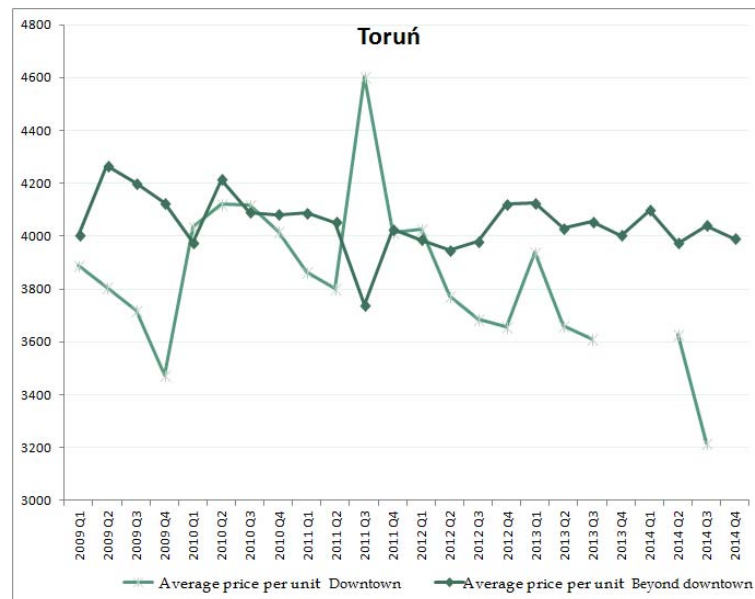


Fig. 6. Average price per unit in the secondary market in Toruń. *Source:* Compiled by the authors.

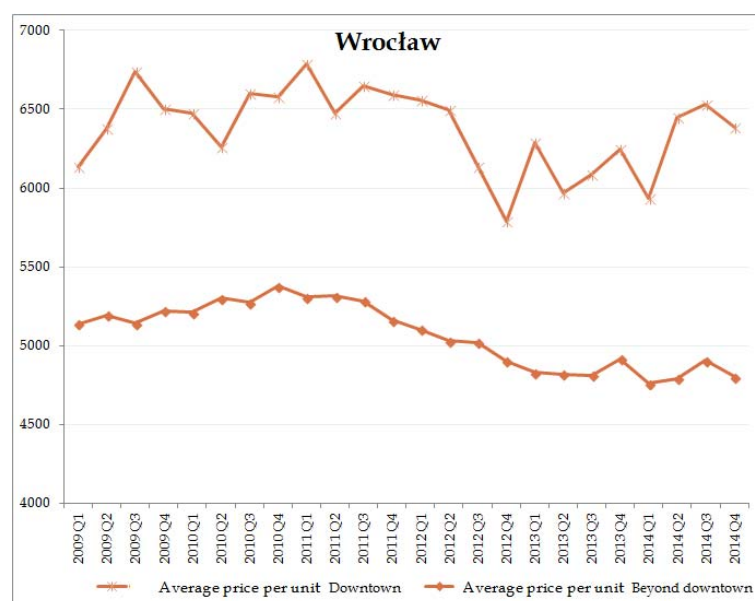


Fig. 7. Average price per unit in the secondary market in Wrocław. *Source:* Compiled by the authors.

Average quarterly prices in Wrocław were higher in the downtown than elsewhere throughout the analyzed period (by up to 35%). It is noticeable that the graph for transaction prices beyond the downtown is quite smooth and close to a sinusoid. The graph for downtown prices is more jagged, which may indicate a large variation in the transactions (the bought real estate is expensive or cheap depending on the period). The number of downtown transactions constituted 4% of all the transactions made in the secondary market (Table 2).

4.4. Results interpretation

The secondary residential market is richer in transactions than the primary market and includes real estate in varied technical condition. The following trends may be observed in the analyzed downtown markets:

- apartments in the Bydgoszcz downtown were, on average, 16% cheaper than elsewhere in Bydgoszcz,
- apartments in the Kalisz downtown were also cheaper (by 13%) than elsewhere in Kalisz,
- average apartment prices in Poznań were lower in the downtown than elsewhere in Poznań, on average by 6.1%,
- in Toruń, no strong dependence was observed between the prices in the downtown and those beyond the downtown,
- in the Wrocław downtown, apartment prices were higher than elsewhere in Wrocław, with up to a 35% difference.

When comparing the cities under research and their downtown markets, the following conclusions can be drawn:

- Average prices in residential secondary markets may be ranked as follows (descending): Wrocław, Poznań, Toruń, Bydgoszcz, Kalisz.
- Wrocław registered the highest level of prices in the downtown residential secondary market. The prices are, on average, 32% higher than in Poznań, which is the next city down in terms of size. Such a significant difference may be the result of the spatial limitations of the Wrocław downtown. Consequently, the analysis incorporated transactions within an objectively more attractive area in terms of localization, as it was closer to the historic city center than in Poznań. The comparison of average prices per unit in the Wrocław market beyond the downtown shows that the prices were slightly (by 2%) lower than those in the Poznań market.
- The relatively low attractiveness of the downtown secondary market in Poznań may also stem from the demand shifting to the primary market within the downtown. The downtown primary market in Poznań includes 45.7% of all transactions within the city, while in the downtown secondary market, only 34.5% of all the city transactions were made. This is a symptom of the low assessment of, often de-capitalized, housing stock in the downtown and, at the same time, the preference for new-builds within this localization. Interestingly, in light of the results of a representative study of Poznań residents' preferences when buying an apartment, a central or downtown location turned out to be the least desired (MATUSIAK, PALICKI 2015). This is probably a reflection on the discrepancy between the notion of buying an apartment and the reality of what the market has to offer.
- The comparison of the downtown secondary markets of Toruń and Bydgoszcz (the two cities are located close to each other) shows that prices in Toruń are approximately 23% higher than in Bydgoszcz.
- The lowest prices were registered in the Kalisz market; they were 24% lower than in Bydgoszcz and 51% lower than in Poznań.
- Bydgoszcz and Kalisz show similarities in the dependence of the prices within particular segments of the market.

When examining the dependence between the average level of prices in downtowns and beyond in the analyzed cities, it was established that, in all of the cities, the dependence² is positive, and:

- the strongest dependence is observed in Bydgoszcz (0.30),
- in Wrocław, Kalisz and Poznań, it is lower (0.24, 0.23 and 0.22 respectively),
- in Toruń there is no strong dependence between the prices in the two analyzed areas (0.13). Toruń is a unique city due to the Old Town Complex which is listed as a UNESCO World Heritage Site. These special circumstances are a determinant of investment development (very limited) and irregularities in the real estate market, such as isolated cases of excessively expensive apartments.

5. Discussion and conclusions

- Prices in the primary market in the cities under research were always higher than in the secondary market, irrespective of the area of the city. This is a typical situation, observed in the

²² Due to the unmeasurability of the two-fold "localization" feature (downtown and beyond), the dependence between the variable and the unit price was determined using Cramér's V, which is based on the chi-squared test of independence. Cramér's V varies from 0 to 1. Cramér's V close to 1 indicates a strong association between variables, close to 0 shows little association between variables.

markets of many cities, as the primary market offers apartments in the buildings constructed using new technologies.

- The price variability in the downtown is higher than elsewhere.
- In Poznań, the buyers show a noticeably high interest in apartments in the downtown primary market (up to half of all of the city transactions), while the downtown secondary market is less active (approximately 1/3 of all the city transactions). Such a configuration may be interpreted as a sign of the high attractiveness of the downtown area in Poznań.
- The activity of the participants in the downtown market mirrored the attractiveness of the area. In smaller cities, the downtown registered from 18% (Kalisz) to 25% (Bydgoszcz) of all of the secondary market transactions in the given city. In Poznań, this was 34.5% of all the transactions, thus almost twice as much as in Kalisz. The attractiveness conclusion does not refer to Wrocław and Toruń due to the specifics of the delimitation of the downtown area and/or legal limitations on the real estate market within the downtown.
- The downtown in Wrocław (contrary to other cities under research) is an area desired by investors; the prices achieved in the downtown are higher than elsewhere.

6. References

- BEAUREGARD R.A., 2005, *The Textures of Property Markets: Downtown Housing and Office Conversions in New York City*, *Urban Studies*, 42(13), pp. 2431-2445.
- BELL D., 2007, *The Hospitable City: Social Relations in Commercial Spaces*, *Progress in Human Geography*, 31(1), pp. 7-22.
- BERNACIAK A., 2015, *Współczesne przemiany centrów miast w świetle wybranych doświadczeń amerykańskich i europejskich (Current Transformations of City Centres in Light of some American and European Experiences)* [in Polish], *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, 77(4), pp. 265-275.
- Diagnoza społeczna, 2015 (Social Diagnosis, 2015), Czapiński J., Panek T. (red.), www.diagnoza.com/pliki/raporty/Diagnoza_raport_2015.pdf
- FAULK D., 2006, *The Process and Practice of Downtown Revitalization*, *Review of Policy Research*, 23(2), pp. 625-645.
- JUCHNOWICZ ST., 1971, *Śródmieścia miast polskich : studia nad ukształtowaniem i rozwojem centrów (Downtowns of Polish Cities: Study on the Shaping and Development of Centers)* [in Polish], Zakład Narodowy im. Ossolińskich, Wrocław, Kraków.
- MATUSIAK M., PALICKI S., 2015, *Potrzeby i preferencje mieszkaniowe poznańców - rekomendacje dla polityki mieszkaniowej (Housing Needs and Preferences of Poznań Citizens - Recommendations for Housing Policy)* [in Polish], maszynopis (typescript), Uniwersytet Ekonomiczny w Poznaniu, Poznań.
- MORANDI C., 2011, *Retail and Public Policies Supporting the Attractiveness of Italian Town Centres: The Case of the Milan Central Districts*, *Urban Design International*, 16(3), pp. 227-237.
- NBP, 2015, *Raport o sytuacji na rynkach nieruchomości mieszkaniowych i komercyjnych w Polsce w 2014 r. (Report on the Situation in the Residential and Commercial Real Estate Markets in 2014)* [in Polish].
- PALICKI S., 2015, *Multi-criteria Assessment of Public Space from the Social Perspective*, *Real Estate Management and Valuation*, Vol. 23, No. 4, pp. 24-34.
- PAZDER D., 2011, *The Conception of Cultural Space Revitalization as a Way to Increase Downtown Attractiveness. A Case Study of Chosen Medium-Sized Towns in the Wielkopolska Region*, *Quaestiones Geographicae*, Vol. 30, Issue 4, pp. 63-67.
- REGULSKI J., 1986, *Planowanie miast (Urban Planning)* [in Polish], Państwowe Wyd. Ekonomiczne, Warszawa, pp. 16-25.
- SŁODCZYK J., 2001, *Przestrzeń miasta i jej przeobrażenia (The City Space and its Transformation)* [in Polish], Wyd. UO, Opole, p. 141.
- SNEPENG D.J., REIMAN S., JOHNSON J., SNEPENG M., 1998, *Is Downtown Mainly for Tourists?*, *Journal of Travel Research*, 36(3), pp. 5-12.
- SOLKIEWICZ-KOS N., 2014, *Kształtowanie przestrzeni publicznych na obszarach śródmiejskich na przykładzie miasta Częstochowy, (Shaping of Public Areas on the Example of the Downtown of the City of Częstochowa)* [in Polish], *Zeszyty Naukowe Politechniki Częstochowskiej. Budownictwo*, pp. 266-270.
- TANAŚ J., 2015, *Użytkowanie nieruchomości lokalowych w strefie centralnej Poznania (The Use of Real Estate Premises in the Central Area of the City of Poznań)* [in Polish], *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, 77(1), pp. 369-384.

WALLIS A., 1979, *Informacja i gwar. O miejskim centrum (Information and Bustle. About the City Center)* [in Polish], PIW, Warszawa.