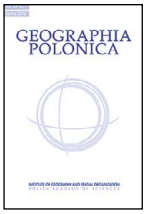

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OLD HOUSING ESTATES IN THE HOUSING MARKET OF A POST-SOCIALIST CITY: THE CASE OF BUDAPEST

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Abstract

Housing estates were constructed by public authorities and private investors long before the era of large prefab housing estates. Their dwellings, like almost all flats, became privatised after 1989 in the post-socialist cities, thus they appeared in the housing market. The aim of this paper is to analyse their market position and to explore how their physical characteristics and residential environment influence the dwelling prices. It also examines the impact of the renovation of buildings with a special attention to its housing policy background.

Key words

Budapest • pre-war housing estate • housing

Introduction

To date, an overwhelming majority of the literature has addressed the problems of the prefab large housing estates (LHEs) constructed mainly in the second half of the 20th century both in the Western and Eastern parts of Europe. This limited research focus has somewhat narrowed the meaning of "housing estate". The term is more and more used as a synonym for the prefab LHEs. However, housing estates were also created before the emergence of the precast concrete construction technology. In fact, the mass housing construction was a housing policy response to the urbanization challenges in both periods, though the scale and intensity of urban development, the construction technology, and consequently the physical characteristics of the buildings were different.

The prefab LHEs differ from the previous ones in terms of their size, homogeneity of dwellings, and monotony of residential buildings. The construction standards were less coherent before and around World War II than later on, so the old non-prefab estates are very diverse; their diversity reflects how the construction technologies and architectural styles changed from the 19th century until the middle of the 20th century. The garden

cities, the modernist estates of the 1920s, and the workers' colonies are the best examples of these various approaches.

It is an important question whether gentrification can be expected in the old housing estates as it has occurred in the historical centers and in the wider inner residential zones since the 1970s. Some characteristics of old housing estates, like the green areas between houses and the lower density may become an advantage in the near future.

In the post-socialist cities, the position of LHEs is stronger than in the West, they account for a significant part of the housing stock and owner occupied dwellings; a large part of the lower middle class and middle class population live there. The position of old housing estates is much weaker because they are smaller, became dilapidated due to the lack of maintenance during state socialism, and were neglected later on when the renovation activities intensified in the historical centre in the 1990s, and in the LHEs after 2005.

The focus of this paper is the market position of old non-prefab housing estates in a post-socialist city, Budapest. The big variety of old housing estates gives us an opportunity to examine the dwelling prices in several kinds of old estates from the low-rise ones constructed under the garden city concept till the socialist-realist housing estates. Most of their dwellings were privatised, just like the ones in all other residential buildings of the city in the early 1990s, so the housing prices can be used as an indicator of the status of old housing estates.

Several determinants of housing prices are analysed in housing studies; both the effects of dwelling characteristics and neighbourhood quality are explored and even ranked (Richardson et al., 1974; Nygaard & Meen, 2013). The datasets generally consist of physical and social indicators, and cover the whole city (Kholodilin & Ulbricht 2015). Social indicators like the level of unemployment or income of inhabitants reveal how prestigious different quarters of a city are. Unfortunately, these social indicators are not available for the purposes of our study because many of the analysed housing estates do not fit the borders of census tracts. What we have are different physical indicators, for example the condition of buildings, or the level of renovation which are also frequently analysed prestige and price influencing factors in many fields of urban studies from gentrification to urban regeneration (Górczyńska, 2017). The age of buildings has also relevance to the prestige, since dwelling standards and housing styles were different in different periods (Palm et al., 2020). The quality of housing also depends on the purpose of the investor and the target population. Houses for working class or lower social strata differ from those built for the middle class (Kandylis et al., 2018).

The paper aims to analyse some of the characteristics which have an impact on the dwelling prices, namely the physical characteristics of the residential buildings, their construction period and the investor, the residential environment of the estates and the rate of renovation. These characteristics are likely to have some direct or indirect impact on the old estates' position in the housing market.

Development of housing estates

Research of large housing estates (LHEs) has been popular in urban studies from the 1990s (Turkington et al., 2004; Rowlands et al. 2009; Hess et al., 2018) due to their importance within the cities and because the large housing estates became the symbols of newly emerging urban social problems. In many cases, these studies took a critical approach and concluded that the housing policy of the 20th century welfare state failed to meet societal challenges (Scanlon et al., 2014; Wassenberg, 2018).

Most problems to be solved originate from the social composition of LHE inhabitants – namely the concentration of vulnerable social groups and the resulting bad image/reputation of LHEs (Bolt, 2018). These problems have to do both with physical characteristics like the monotony of high-rise blocs, and with the neglect of maintenance that resulted in slow degradation.

In Western countries the urban research does not really distinguish between the pre-war and post-war housing estates, they are just treated like different generations of housing estates built by public authorities (Hastings, 2004). In post-socialist countries only the post-war LHEs are in the focus of urban studies (Maier, 2005; Szafrańska, 2012; Leetmaa et al. 2018; Burneika et al., 2019; Krišjāne et al., 2019; Šimáček et al., 2015) because the mass housing construction of the state socialist period made the prefab LHEs dominant in all big cities, the weight of the pre-war estates is lower and they are not even existing in every capital.

The number, size and importance of pre-war housing estates are almost negligible in the relatively small Eastern European cities, like the capitals of Baltic countries, and also in the big cities which were either seriously damaged in World War II, like Warsaw, or heavily reconstructed during state socialism, like Bucharest (Turnock, 1990). There are numerous pre-war estates in the large cities of Poland, e.g. Wroclaw (Gierko, 2021) or Katowice (Lamparska, 2013), in some Central European capitals, like Prague (Špačková, 2021) or Budapest (Pap, 2013), but their importance is not comparable to that of the large post-war housing estates.

The construction of prefab housing estates started right after World War II in the Western countries, and with a long delay in Eastern Europe where the first wave of mass housing construction was more "traditional". The construction material and technology used for almost two decades after 1945 were similar to those of the previous period, only the architectural style was different – the socialist-realism as a dominant style and the modernism in some shorter periods (Benkő, 2015). Studies on post-war but not prefab housing estates are usually part of the LHE-focused research (Ouředníček et al., 2018; Egedy, 2000), there are very few exceptions, mainly papers based on urbanistic/architectural approach (Kissfazekas, 2022). In some sense, this lack of distinction reflects the urban development of post-socialist cities where the housing policy did not change with the technological shift.

The change of regime put an end to the prefab housing construction in the early 1990s. A crucial element of the new housing policy, if it deserves this name, was the mass housing privatisation. The whole housing stock was privatised; an overwhelming majority of the flats in both old and prefab housing estates became privately owned. As a consequence, the housing market and the price mechanism suddenly regained their importance (Csizmady, 2005; Kovács & Herfert, 2012).

These changes drew attention to the construction method. The problems of prefab buildings (the lack of insulation resulted in high utility costs) were already well known before, but they further aggravated over time and weakened the market position of the prefab LHEs.

The renovation projects of the prefab housing estates started in the 2000s (Egedy, 2003). They were mainly financed from EU-support for refurbishment. Their results were spectacular in some LHEs (Kuusk & Kurniski, 2019; Szabó & Burneika, 2020), especially in the ones where the majority of buildings were renovated (Kovács & Herpai, 2011). However, the LHE renovation projects were not likely to result in social upgrading, population change or gentrification. As Western examples show, the renovation projects increased the satisfaction of local dwellers but the social structure only slightly changed (Helleman & Wassenberg, 2004).

We know precious little about the old non-prefab estates since they were not in the focus of housing studies either in the Western, or in the Eastern part of Europe. The very few research projects whose results are available dealt with the regeneration process of some old deteriorated housing estates (Coudroy de Lille & Bouloc, 2020), or their architectural value (Paneriai, 2004; Antonenko et al., 2016). Most of these were case studies, focusing on one specific housing estate for some specific reason. For example, the differences between the non-prefab and prefab estates raised research interest in Berlin

in the 2000s, which resulted in an evaluation study of pre-war houses (Uffer, 2014). This study pointed out that the old housing estates and the LHEs behave differently in the private market. The situation is similar in the post-socialist cities where the majority of dwellings are owner-occupied even in the old housing estates. The paper aims to go more in-depth while trying to explore the differences between the market position of different old housing estates.

Research questions and hypotheses

Since the old housing estates are heterogeneous, it deserves attention whether and to what extent their market value depends on their attributes such as their age, investors, residential environment, etc.

Our first hypothesis is that all these characteristics have some impact mainly because they all have to do with the quality of residential buildings and the flats in them. The older houses are expected to be cheaper than the newer ones because the architectural technologies and the housing standards changed a lot between the 19th century and the 1960s, so the construction period is in close connection with the quality of the building. The investors of housing estates had different aims and opportunities, which probably resulted in quality differences, so our hypothesis is that the market position of the estates depends on the investor type. Those built by factories and by state are cheaper than the ones constructed by insurance companies, banks, and other private investors.

The second hypothesis is: the renovation of residential buildings is generally likely to increase their value. Our hypothesis is that the prices of flats are significantly higher in the fully renovated houses than in the non-renovated ones.

Our third hypothesis: the residential environment is one of the most important influencing factors in the housing market in Budapest. Our hypothesis is that the same holds true for the old housing estates. Dwellings of old estates located in the most prestigious areas (villa quarter, inner city) are more expensive than those in the industrial areas or in the periphery.

Methods

In order to map the old non-prefab housing estates, a field study was carried out between 2021 and 2023 within the present borders of Budapest. The main physical characteristics of each building were registered in a database, coded, and attached to the map of Budapest. The data base was completed with additional information on other (non-visible) characteristics (year of construction, name of investor) coming from important urban historical monographs like Umbrai (2008), Körner (2004), Ferkai (2001) and webpages like https://telepekbudapest.blogspot.com/.

The housing prices (per square meters) were calculated by experts of the Hungarian Central Statistical Office (HCSO) for the purpose of our analysis. The raw data of the property transactions collected by the National Tax and Customs Administration were transferred to the HCSO where, after controlling and filtering, the statisticians merged the 2016-2021 data, aggregated them and calculated the housing prices in the level of residential buildings, according to the aims of the present study.

Development of housing estates in Budapest

The growth of the city was very intensive from the second half of the 19th century, mostly after 1873, the foundation of Budapest (merger of 3 cities). The leadership of the capital aimed to form a western-like metropolis, thus supported the constructions. Though mainly private tenement houses were built, small and big, high rise and low rise housing estates were also constructed throughout the whole period.

In terms of its overall extent, the construction of housing estates was less important in Budapest than in Western cities, but there were two intensive periods: one after World

War I, when the authorities had to provide housing for the refugees from the neighbouring countries, and another during and after the economic crisis of 1929-33, when masses lost their homes (Fig. 1).

World War II interrupted several housing projects, but they restarted in the late-1940s. The solution of the housing problem was one of the ideological goals of the so called communist regime, but mass housing construction started only in the late-1950s (Kocsis 2009). The first new estates of the post-war period (those which were not just finished but also planned in this period,) were constructed in small plots of the city. The first large projects started later on in the transition zone (13th and 14th districts), where both public infrastructure and good public transport were available (Csizmady 2004). Smaller estates were also constructed in the outer (4th, 15th, 19th, and 20th[1]) districts which became a part of Budapest only in 1950. No significant traditional housing estates were built after the 1960s when the housing factories started to produce prefabricated sections for new flats.

The number of housing estates changed a lot in Budapest from the 1920s; some of them were demolished while new ones were constructed, in some cases on the same plot. There was a wave of demolitions after the 1960s when the last traditional housing estates were built and the prefab construction started; some very deteriorated old housing estates disappeared (Kondor & Szabó 2007). The demolition became less intensive but not stopped after the change of regime.

In 2022, there were 132 old housing estates in Budapest with 3,323 buildings and more than 46,500 flats. The size of them varies a lot; there are very small ones (some of them only the remnants of former big estates) and really large residential estates.

The construction of the estates was the most intensive in the late 1950s, less than 10% of the buildings but more than one quarter of the dwellings were built in this period (Tab. 1). It has to be mentioned that none of the housing estates built after 1945 was demolished, while a lot of the ones from the earlier periods disappeared. The table displays the data of the still existing housing stock.

Both public authorities and companies invested in the housing construction though their purposes were different. The former tried to alleviate the housing shortage, the latter mainly wanted to provide accommodation for their employees (Gyáni, 1992). One of the best known examples of the state initiated housing construction is the first garden-city experiment. The state bought a large plot next to the capital, and a large low-rise housing estate (Wekerle) was built there between 1908 and 1925 (Fig. 2). It is the largest (more than 5 km^2) pre-war housing estate located in the south-eastern part of Budapest. It consists of more than 1000 residential buildings (4,000 dwellings) i.e. almost 10% of the non-prefab housing stock.

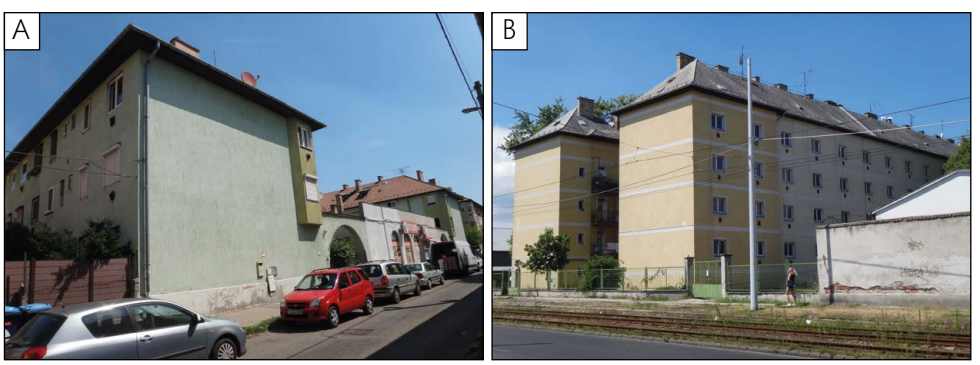

Figure 1. Housing project of the state for refugees (Pongrácz-telep 1921-24) and emergency housing project during the economic crisis (Bihari úti szükséglakás telep, 1930)

Table 1. Number and composition of buildings and flats in old housing estates by the time of construction

Time of construction	Number of		Composition [%] of	
	buildings	flats	buildings	flats
-1899	342	2,568	10.3	5.5
1900-1919	1,117	8,658	33.6	18.6
1920-1933	408	7,976	12.3	17.1
1934-1945	740	5,603	22.3	12.0
1946-1949	256	2,469	7.7	5.3
1950-1955	97	3,908	2.9	8.4
1956-1959	286	13,456	8.6	28.9
1960-	77	1,940	2.3	4.2
Total	3,323	46,578	100,0	100,0

Figure 2. Largest and imposing houses in the centre of Wekerle telep (1908-25)

The main investors – similarly to other European countries – were the public authorities (Tab. 2). In the pre-war period, the roles played by the municipality and the state were rather similar. The state initiated less but much bigger projects (including Wekerle) than the municipality, and it typically financed the construction of low-rise buildings. This explains that the number of flats built by the municipality slightly exceeds that of the state-constructed flats though the state built twice as many houses as the local government. Several public institutions and state-owned firms (like the national railway company) also built housing estates but the role of the private sector was more significant. The share of private investors was almost the same as that of the municipality, but their aim was different. Factories, banks and insurance companies built either for their own workers or for investment purposes.

The post-war period was dramatically different from the former decades. Under the communist regime, the housing construction became the sole responsibility of the state. All decisions were made by the central government. The municipality (called city council in this period) was not an independent actor, it only had implementation tasks, namely planning, financing and managing the construction of housing estates. State-owned companies and public institutions also happened to take part in housing construction, but they acted under government control and had to comply with official standards, thus there were no differences in comfort level between the housing estates.

The height of buildings significantly changed over time. The low-rise estates were typical in the 19th and in the first half of the 20th century, while only multifamily blocks were constructed after World War II. Though three quarters of the houses are low (0-1 level), only a bit more than one fifth of the flats can be found in them. The share of flats belonging to the minor (3,5%) group of the highest, 4 or more level buildings is also about one fifth. An overwhelming majority of the flats are located in 2-3 level houses (Tab. 3).

More than one third of the buildings are family and detached houses with 1-3 flats

Table 2. Number and composition of buildings and flats in old non-prefab housing estates by investors

Investor	Number of		Composition [%] of	
	buildings	flats	buildings	flats
Central government	1,228	7,336	37.0	15.7
Local government	568	8,795	17.1	18.9
Public institutions and public utility companies	227	2,651	6.8	5.7
Private companies, banks and other private investors	833	8,276	25.1	17.8
State-controlled city council (after 1945)	716	21,773	21.5	46.7
Total	3,323	46,578	100.0	100.0

Table 3. Number and composition of buildings and flats in old housing estates by the number of floors

Number of floors	Number of		Composition [%] of	
	buildings	flats	buildings	flats
Ground floor only, occasionally combined with higher parts	1,957	6,174	58.9	13.2
1 floor	567	4,402	17.1	9.5
2 floors	289	8,010	8.7	17.2
3 floors	393	18,757	11.8	40.3
4 or more floors	117	9,235	3.5	19.8
Total	3,323	46,578	100.0	100.0

but they account for only 5% of the old housing estates' housing stock (Tab. 4). There are very few really large houses with 80 or more flats, but the houses with 40-80 flats are also bigger than a typical tenement house. More than half of the flats are located in these two small groups of the buildings (Fig. 3).

There is no typical old housing estate, the physical characteristics of the old estates are varied. However, there are obviously differences between these non-prefab and the prefab housing estates in terms of size and heterogeneity. Most of them are smaller than the LHEs, and their housing stock is not

Figure 3. High-rise (Ganz-Mávag, 1910) and low-rise (Albertfalvai OTI telep, 1933) old housing estates

Table 4. Number and composition of buildings and flats in old housing estates by the size of buildings

Number of flats in the building	Number of		Composition [%] of	
	buildings	flats	buildings	flats
1-3	1,286	2,351	38.7	5.0
4-19	1,387	9,907	41.7	21.3
20-39	318	9,247	9.6	19.9
40-79	253	13,698	7.6	29.4
80-	79	11,375	2.4	24.4
Total	3,323	46,578	100.0	100.0

homogeneous (in many cases the residential buildings are not even unique within old estates). A large part of them were constructed by public authorities in order to meet the housing needs of low income people, so the original comfort level was low, and the size of flats is small in these estates. Bigger flats of higher quality were built by companies and other private investors but this part of the housing stock is relatively small.

Results

There were housing purchases only in 119 of the 132 old housing estates between 2016 and 2021. In these estates, just like in the capital as a whole, 5% of the housing stock was sold within 6 years. This similarity of the housing turnover suggests that the housing market works in the usual way in old estates.

On average, the dwelling prices are 12 percent lower in the old housing estates than in Budapest, as a whole, but the relative standard deviation (16,7%) reveals that there are significant price differences within the group of old estates. This is not surprising at all because – as we have already pointed out – they are very heterogeneous. The most attractive of them obviously have a good market position while the housing stock of the most deteriorated ones belongs to the cheapest flats of the capital (Fig. 4). The dwelling prices are above the Budapest average in 28 old housing estates (the difference is more than 10% in 9 cases).

At the other end of the scale we find an "outlier", the remnants of a deteriorated housing estate (Hős utca) where the prices are less than one quarter of the average. This estate is well-known as the worst slum area of Budapest; the housing prices are the lowest here in the whole city. The only buyer is the municipality that intends to empty the two buildings; then, they will be demolished. Apart from this special case, the prices in the six cheapest old housing estates are between 50 and 60% of the average. This is a very colourful group, consisting of estates built long ago by factories for their workers, a very peripheral estate of the Budapest Waterworks, and even one small post-war housing estate.

Compared to the prefab LHEs, the difference (8%) is significant; the dwelling prices are higher in more than half of the old housing estates than in the prefab ones, which shows that the buyers prefer the traditional building materials and technology to the more recent precast concrete technology. A detailed analysis of the construction period/dwelling price connection within the group of old housing estates do not support the first hypothesis about cheaper older houses (Tab. 5).

A possible explanation is that the positive effect of architectural development was probably overridden by the impact of housing policy changes instigated by the financial crisis of 1929-33. Masses lost their home, and the public authorities had to find a quick solution, so the quality standards were neglected. Several of the housing estates constructed in the

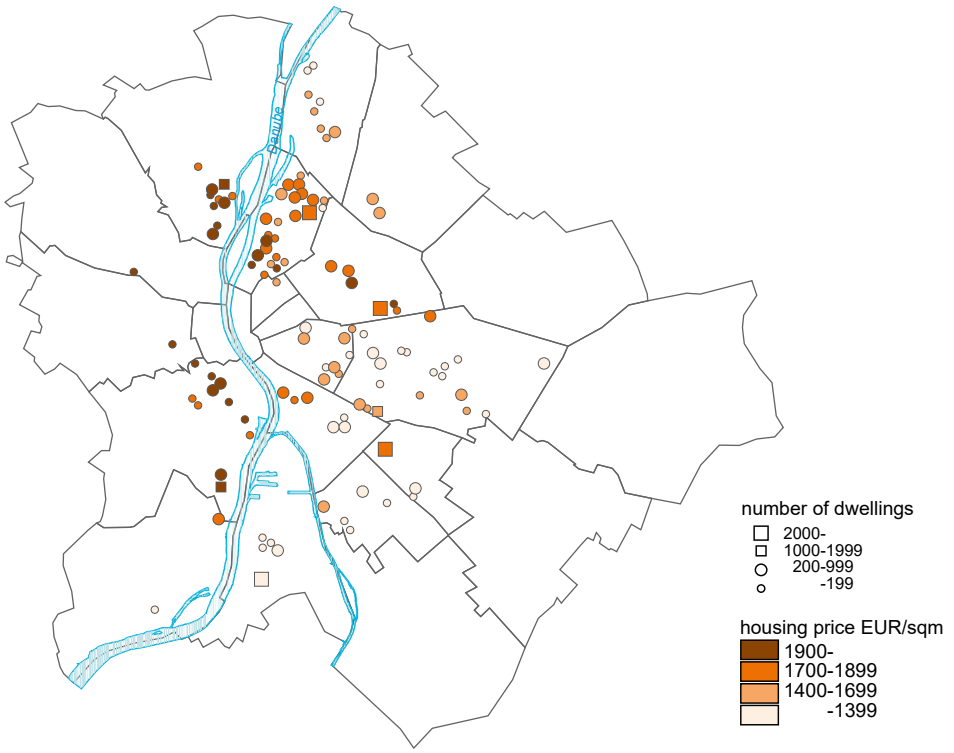

Figure 4. Housing price (EUR/sqm) in old housing estates in Budapest

Table 5. Dwelling price in old housing estates by year of construction (EUR/sqm)

Year of construction	Number of dwelling purchases	Dwelling price (2016-2021)
-1919	2,472	1,671
1920-1933	1,703	1,736
1934-1945	1,396	1,657
1946-1949	599	1,770
1950-1959	4,566	1,762
1961-	443	1,612
Total/Average	11,179	1,720

post-crisis decade developed into a slum, like Hős utca, and some of them even had to be demolished later on. With the exception of some estates whose construction followed the garden city concept, the prestige of the residential estates built in the late 1930s, early 1940s is low and this is reflected in the dwelling prices, as well. In the post-war era the standards were increased due to the radically different communist ideology. This is why the post-war housing estates built before the beginning of the area of prefab LHEs tend to be the most expensive among the estates constructed by public authorities. However, the flats are cheaper in some of them, namely in the last traditional estates

built in the 1960s, mainly because these latter are located in those districts (21st, 15th, 19th) where the dwelling prices are the lowest in Budapest.

As Eva van Kempen and Sako Musterd (1991) pointed out, the social history of housing estates has a significant effect on their reputation. Our data suggest that the "starting point" of this history is equally important. The size, quality and thus the price of flats depend on the investors' aims and motivations. The prices are similar in the estates built by the state or the municipality because the purposes of these public investors were almost identical; they intended to provide accommodation for the poor. Though both the targeted population (members of the working class) and the comfort level changed after 1945, the state-built flats of that period are not more appreciated in the housing market; they are only a bit more expensive than the old public housing estates, but cheaper than the private ones (Tab. 6).

The best housing estates are the originally private ones built by private investors, mostly banks, insurance companies, and the OTI (National Social Insurance Institute). The prices of flats in these estates are above the Budapest average. These investors launched progressive housing programs (they built not only housing estates but also tenement houses), they constructed buildings that were superior in quality, which has had a long-term effect still detectable in housing prices.

These findings support our hypothesis that the original aim and quality of the housing projects influence the prestige of housing estates. Those which were built for blue collar workers or vulnerable social groups are cheaper, while the ones built for middle class groups have a better position even in the present housing market.

In principle, the condition of residential buildings should be an important influencing factor of housing prices but its effect is almost negligible in the old housing estates (Tab. 7).

Table 6. Dwelling price in old housing estates by investors (EUR/sqm)

Investor	Number of dwelling purchases	Dwelling price (2016-2021)
Central government	1,678	1,709
Local government	2,261	1,665
National Social Insurance Institute and other insurance companies	212	1,979
Companies	989	1,524
Banks, financial institutions, private investors	900	1,874
Associations	81	1,491
State-controlled city council (after 1945)	5,058	1,752
Total/Average	11,179	1,720

Table 7. Dwelling price in old housing estates by renovation level (EUR/sqm)

Level of renovation	Number of dwelling purchases	Dwelling price (2016-2021)
Non renovated	6,352	1,726
Completely renovated	683	1,771
Partly renovated	3,966	1,694
Other (during reconstruction, renovation)	165	1,983
Total/Average	11,166	1,720

It raises the question whether the renovation is thorough enough to significantly improve the condition of their buildings. In fact, the composition and types of renovation activities are very different from those implemented in the prefab LHEs (Szabó & Bene 2019) where the public support programs successfully encouraged the insulation of residential buildings.

This kind of general support was and is still missing in the case of old estates; only some district municipalities gave minor support to local renovation programs. In the old housing estates the share of the insulated and fully renovated buildings is only 15%, but that of the partly renovated ones is 47%. This latter category includes several kinds of improvement from wall-painting till solar panel installation on the roof, but not the energy saving insulation (Fig. 5). The effect of partial renovation on the residential building is rather limited, which might explain the weak connection between the renovation and dwelling prices. The renovation activity is connected to the type of buildings. Both types of renovation are most frequent in the low-rise estates, where the owners do not have to cooperate with other inhabitants in order to improve their house.

The prices are not much higher in the renovated buildings of the old housing estates than in the non-renovated ones. These findings are similar to the results of a study of prefab LHEs (Szabó & Bene, 2019). The state supported renovation of high-rise blocks did not always have a strong and positive price effect, either. This had to do with the mechanism of the loans for renovation. The interest burden is pretty high in the first years after the renovation works, which may delay the price increase in the case of prefab estates. This is probably so in the large multifamily buildings of the old housing estates, as well.

The second hypothesis is not supported – the connection between the dwelling prices and the condition of residential buildings is not as direct and strong as in the inner city houses (Kovács et al., 2015); the renovation does not raise the price level, at least not immediately.

The residential environment is an important price-influencing factor in every type of housing, including the old housing estates. However, the impact of residential environment on housing prices is not exactly as it is expected (Tab. 8). In the villa quarters that are traditionally the most prestigious area of the capital, the flat prices in the old estates exceed the Budapest average only with 9%. It has an obvious reason: these estates consist of large housing blocks, very different from the typical buildings of their prestigious local environment.

The inner residential zone of Budapest is quite heterogeneous; the dwelling prices are not very high in the old housing estates located in this area. This suggests that belonging to a prestigious part of the city does not result in automatic upgrading, especially because

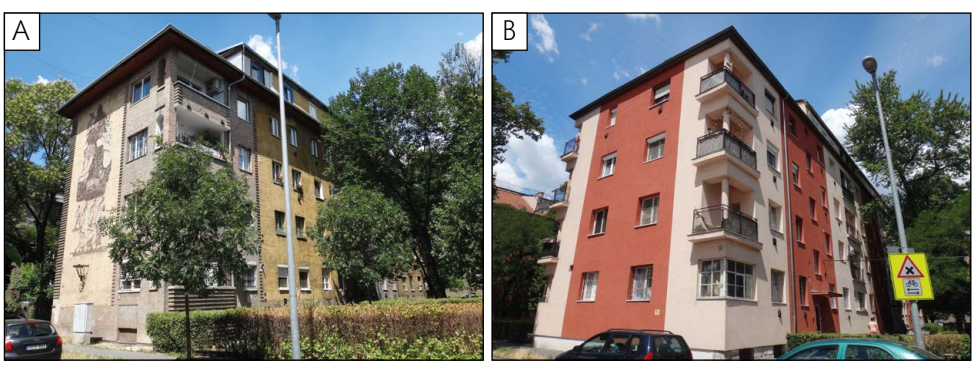

Figure 5. Partly and fully renovated houses in one of the largest estates of the city; Kis-Pongrácz-telep (1940)

Table 8. Dwelling price in old housing estates by location (EUR/sqm)

Location	Number of dwelling purchases	Dwelling price (2016-2021)
Inner residential zone	567	1,804
Villa quarters	755	2,119
Transition zone	5,741	1,755
Industrial area	648	1,418
Outskirts	3,468	1,618
Total/Average	11,179	1,720

these estates are located in the periphery of the inner residential zone, where the housing prices are generally lower than in the center. In addition, compared to the old tenement houses, the buildings of these estates are quite large, which makes renovation process and housing management more difficult.

The transition zone is the most heterogeneous part of Budapest. It is not an industrial area any more as it was when the old housing estates were built. With the enlargement of the capital in 1950 and the development of the public transport network, the largest old estates (especially those with metro lines) gained good accessibility. The closure of factories (or their relocation from the city) and the construction of new facilities, office-quarters, and residential parks changed the profile of some part of the area.

Throughout this process, the districts themselves played an important role. This was possible because the districts have strong local governments in Budapest, they are able to influence the direction of development. It is especially true for those municipalities which are located in the transition zone and attract business investments. They have intensive real estate market, and even the prices of old houses are high. In three of these districts (9th, 11th, 13th), there are many old housing estates in the ex-industrial area.

In two of them the dwelling prices in housing estates are above the average of old estates. They exceed even the Budapest average in the 11th and are close to it in the 13th district (Fig. 6). The 9th district which is one of the first examples of gentrification in Budapest is an exception because its old estates are located in a very segregated area surrounded by factories or railways and are not connected to other residential neighbourhoods, so they belong to the cheapest estates. In this 9th district there are some estates which are located in the vicinity of a development area, thus their market position is better, the prices are above average.

Figure 6. Expensive houses of Tizenháromházak telep (1896-97) with plain façade near the main Váci office corridor in the 13th district.

The further transformation of the industrial area could improve the market position of these places. There are several examples of old housing estates where the dwelling prices significantly increased in parallel with the urban development. Unfortunately, the general improvement of the district has negligible or no impact on the segregated housing estates.

The price level is low in the old housing estates in the outskirts of the city compared to the ones with better residential environment, but a bit still higher than in the prefab housing estates (a large part of them are also located in the outskirts). Only two large, prestigious pre-war low-rise estates are above the average. The general position of their district has an impact on the old estates in the outskirts, as well. For example, there are very different old estates in the upgrading 3rd district, and all of them have good market position in spite of their different quality. Their good availability is one of the main advantages in their case.

Conclusions

The old housing estates were constructed between the late 1880s and 1965 for various purposes by different investors, each with distinct concepts. These original differences continue to influence their prestige and market position. While the majority were built by public authorities, some were initiated by private actors, resulting in a heterogeneous housing stock. They underwent similar processes, including nationalization in the 1950s, gradual degradation due to insufficient maintenance during and after state socialism, and privatization in the 1990s, with few exceptions. They constitute a part of the housing market, with transaction frequency comparable to the Budapest average. Dwelling prices in most of the old housing estates are below the Budapest average but higher than those in prefab housing estates, where the comfort level is (or was originally) higher.

This suggests that the construction period does not have an important effect on housing prices. Although architectural technologies and standards evolve over time, housing prices – contrary to our hypothesis – are not influenced by this development.

There are other characteristics of the housing estates which overshadow the effect of age. Those estates which were built for the middle class by private actors (it is a smaller part of the stock) are of better quality, and this advantage has been converted into relatively high dwelling prices in the market economy. The opposite has happened on the other end of the scale: those estates that were built by factories for their workers or by public authorities during a crisis period are among the cheapest ones. The hypothesis about the effect of the type of investor is supported, the estates keep some of their original qualities which influence their market position.

Not only the original characteristics, but the present condition of the old housing estates can also have an impact on the dwelling prices. These estates were not in the focus of the urban rehabilitation projects in Budapest. While some districts provided support for renovation to select old estates, complete renovation projects were not undertaken. In contrast with the prefab LHEs, the old housing estates were excluded from the public support offered in the framework of the panel rehabilitation project. As a consequence, the share of renovation is low in the old estates consisting of high-rise buildings, and it has very small effect on their market position, so our hypothesis is not supported. However, some impact can be detected in some low-rise pre-war housing estates, where the renovated houses are more expensive.

The research results supported our hypothesis about the impact of residential environment on housing prices. The location and residential environment clearly have an effect on the old estates' housing market status. This is similar to the impact detectable in any other segment of the market. Since the marketability of dwellings was not an aim for most of the investors of old estates in the time of their construction (only the private investors were interested in), the spatial distribution of these estates is very different from and usually less advantageous than that of the other housings types. The transformation of the city during and after state socialism resulted in some modification: the location of some estates became more favourable, while others remained on the periphery.

Our results suggest that there are significant differences between the old housing estates in terms of their market position though their dwelling prices are generally below the Budapest average. The renovation rate of housing estates is not high, and positive effect on the housing prices is not likely. The transformation of local environment and new public transport connections could improve the market position of old housing estates. Finally, the paper focused on only one part of the prestige-influencing factors: the physical characteristics of old housing estates. It has to be emphasized that the impact of social characteristics (composition of the dwellers, housing management, social history, etc.) are equally or even more important. Clarification of their influences and the development of a full explanation require follow-up research.

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