



CHANGES IN THE RESIDENTIAL REAL ESTATE MARKET IN REGIONS OF SLOVAKIA ZMENY NA TRHU REZIDENČNÝCH NEHNUTEĽNOSTI V KRAJOCH SLOVENSKA

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Abstract: *This paper examines the veracity of the data concerning residential real estate in all 8 Slovak regions. The research addresses the most significant factors in housing affordability, vacancy rates, and government policies' effects on market trends. The analysis in eight regions identifies major trends such as income stagnation, speculative ownership, and demographic change. Results point towards an increased mismatched housing demand and supply, especially in the form of excessive vacancy and urban-rural disparity. The study highlights the need for comprehensive policy interventions, from taxation to regulation of empty flats and investment in social housing.*

Keywords: real estate market, housing stock, housing affordability, empty dwellings.

JEL Classification: O18, R21, R31

Introduction

Housing is one of the most crucial socio-economic needs. It is serving not only as shelter but also as a determinant of social inclusion, financial stability, and regional development. The last decades have witnessed a vast transformation in the European housing market (Pittini et al., 2017; Lux and Sunega, 2020). This was due to globalization, urban migration, demographics shifts, and changes in macroeconomic policy. The Slovak housing market shares many of these wider European trends, but with unique characteristics determined by its post-

socialist history, regional variations, and changing affordability concerns (Murray Svidroňová et al., 2020).

Over the last two decades, housing affordability has become a growing problem for Slovakia, especially in urban areas (Výbošťok and Štefkovičová, 2023). In contrast to one of the most low-income disparities in the world, rising housing costs have created challenges for new families and low-income individuals. At the same time, aging stock and a growing number of vacant homes reflect inefficiencies in use and allocation of the available housing stock. These forces mark a transitional housing market, where public and private actors must reconfigure to meet complex and sometimes conflicting pressures (Lux et al., 2023).

This paper contributes to the existing policy and academic debate on housing in Slovakia. The main objective is to evaluate the Slovak housing market by inspecting the combination of key socio-economic factors, housing policy measures, and real estate development patterns. Through a combination of theoretical research and practical analysis, the study seeks to determine the principal structural problems and potential responses that would shape the future of Slovak housing and the residential real estate market.

1. HOUSING MARKET IN SLOVAKIA

The main socio-economic factors impacting the dynamics of housing affordability are interest rates, demographic trend, and income inequality. This environment is further complicated by urban development. It happens because cities often face problems such as spatial inequality, strained infrastructure, and rapid population growth (Kim, 2008; Power, 2012; Rodríguez-Pose and Storper, 2020). Tax breaks, subsidies, and regulatory frameworks are government initiatives that are also extremely important in determining the affordability of housing (Vartášová et al., 2024).

Due to Slovakia's unique historical and economic background, these dynamics are particularly pronounced. In recent decades, the housing sector has undergone significant changes. It moved from a socialist-era system of state-controlled housing provision to a market-driven system (Murray Svidroňová et al., 2017). Property prices are continuously rising in central cities like Bratislava and Košice, causing affordability problems. On the other hand, in rural areas housing construction and economic opportunities are limited. This situation leads to significant differences in access to housing (CIJ Europe, 2024). Amnesty International (2024) reported 55 homeless from 10,000 in the regional capitals which is significantly higher than France or Germany. A major problem with housing is the small size of the rental sector (6%) and a shrinking municipal sector (1.6%) (Habitat for Humanity, 2023). This issue was exacerbated by the War in Ukraine where there was a large influx of refugees.

1.1 Income inequality and housing affordability

Income inequality and housing affordability are very closely connected issues. It is a key socio-economic factor that determines the ability of individuals and households to get suitable housing. The disconnect between income growth and rising housing costs in urban areas is a serious problem (Stessl and Liska, 2024). Figure 1 indicates that things improved in Slovakia compared to the OECD average (OECD, 2024). The price-to-income ratio compares the median home price in an area to the median household income.

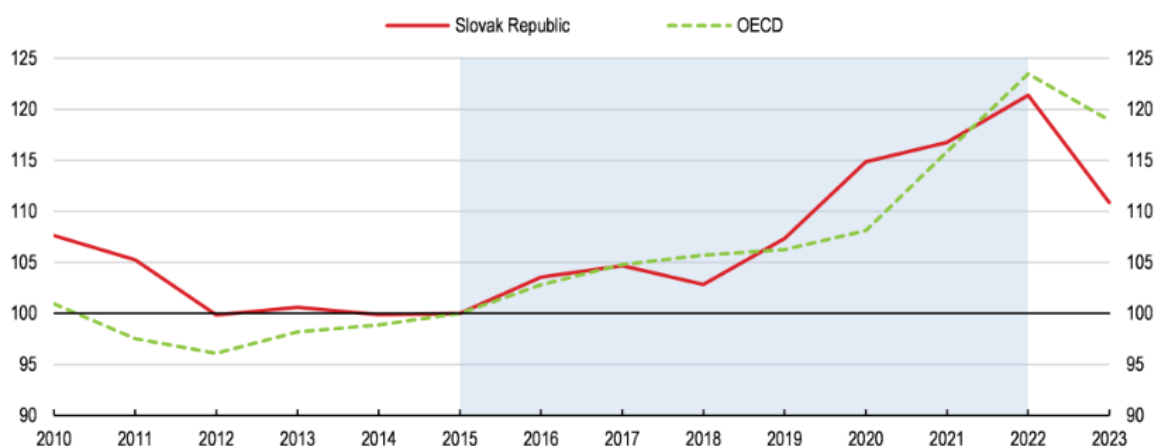


Figure 1: Price-to-Income ratio in Slovakia

Source: OECD, 2024

The key indicators that offer some valuable information on this issue are price-to-income and rent-to-income ratios (Wang et al., 2024). In Slovakia, low- and middle-income households are increasingly facing difficulties in finding affordable housing (rent or ownership). This happens due to rapid urbanization and economic concentration in large cities (Cole et al., 2025; Alfimov, 2025).

These issues are additionally made worse by regional differences. Urban areas like Bratislava are experiencing a growing demand for housing, which leads to a high price (Výbošťok and Štefkovičová, 2023), while rural areas offer more affordable housing options, but often lack employment opportunities, social services, and infrastructure. It fosters a complicated system in which houses in less developed areas are not affordable to the individuals who are provided with jobs in more developed areas (OECD, 2024).

Historical and structural factors also influence the shape of Slovakia's housing market. Mass homeownership in the nation discourages the emergence of a consistent market for rental housing (Habitat for Humanity, 2023). The State often subsidized the construction of housing during the socialist era, which led to widespread homeownership (Pittini, 2017).

Another issue affecting housing is the dramatic change of influences that occurred with the fall of socialism and the subsequent transition to a market economy. More than 60% of the existing housing stock in Slovakia are either concrete panel flats (panelák) constructed from the 1960s to the late 1980s, or the brick flats (tehlové byty) constructed from the late 1940s to the 1960s. Social era housing has few admirers and even the former president of Czechoslovakia, Vaclav Havel (1978), referred to the blocks of flats as “rabbit hutches for people.” Yet, they exist in abundance and have become normalized as a societal standard without any real negative stigma. With retrofits, the life of these flats could be extended to 80-100 years or longer (Tallis, 2019). For Slovak municipalities, the main issue with panel flats is the lack of parking as cars were mostly non-existent when they were built. These types of constructions were reflective of a socialist centrally planned economy that is never to return and stand in sharp contrast to newer housing options.

1.2 Market policies and government interventions versus real estate market

The Slovak housing market is a mix of market forces and government intervention in the interest of encouraging affordability, accessibility, and sustainable development. The policies of intervention consist of regulatory instruments, tax measures, state-subsidized lease programs, and developer incentive schemes (European Commission, 2024).

Slovakia has historically lacked affordable housing as a result of the shift from a centrally planned to a market economy. Since the establishment of an independent Slovak Republic, the

issue of housing has been addressed in the state's housing policy, which is defined by several legislative documents, i.e. by the concepts of state housing policy elaborated for a standard five-year period (Špírková et al., 2009). The government offers a number of policies to solve this problem. These include subsidies for housing construction, developer tax benefits, and loans for first-time homebuyers but also creation of new financial instruments to support housing development; increasing the availability of housing; development of the private housing sector; increasing or at least maintaining the same share of public expenditure on housing; introducing a new housing allowance and supporting the development of the non-profit sector in housing provision (Murray Svidroňová et al., 2017).

Demographic changes have further strengthened the demand for affordable housing. Single-person households in Slovakia are more usual than before (Egner and Krapp, 2025). Delays in marriages, lower birth rates, and longer life expectancies are some of the root causes of this. In the context of shrinking average family size, one- and two-bedroom flats represent a rational housing solution that meets the needs of people seeking affordable and comfortable housing. Small flats are ideal for urban settings because they save space and promote sustainable urban planning using efficient land use (Dubois and Nivakoski, 2023). However, the increasing focus on smaller flats is not without its problems. Critics opinion that an over-reliance on compact housing can limit diversity in the housing market. While small flats are ideal for short-term or transitional housing, they may not provide space and stability for growing families and could further impact the declining birthrates, especially in urban areas. Achieving a balance between compact flats and larger housing options is essential to ensure inclusivity and equity in the market (Talen, 2010; Chapman and Watkins, 2018).

To better understand this change, the number of 1- and 2-bedroom flats in Slovakia needs to be looked at. In 2021 there were around 440,000 1-2 room flats, which is about 20% of all dwellings. It is because of both new construction and the allocation of larger flats in older buildings. Most of this growth is in urban areas, especially the bigger cities of Slovakia. Of the eight analysed regions in Slovakia, only two have seen a growth in population between these times: Bratislava (13.5%) and Žilina (0.08%), yet all cities have seen substantial growth in residential construction.

2. METHODOLOGY

The impetus of this research is to investigate the dichotomous discrepancies regarding housing: the overburden in housing cost is not consistent with the increase in supply; the high rate of homeownership; and a very low Gini-coefficient. Our initial view of the research data indicates a very high rate of vacancy which could lead one to believe that Slovak cities are dying, however, there are no 'Detroit's' in Slovakia. As such, this research focuses on the housing oversupply as has been reported in the 2021 census when compared to the 2001 census (Statistical Office of the Slovak Republic, 2021). The main objective is to find what is being measured and how considering the housing situation in Slovakia. From the discrepancies mentioned above, we formulated the following research questions (RQ):

- RQ1: What is true number of uninhabited dwellings in Slovak regions?
- RQ2: What is the level of housing stress in terms of factors affecting the housing affordability in Slovak regions?
- RQ3: Are housing purchases speculative or necessities?

Eight regions of Slovakia (Bratislava, Košice, Banská Bystrica, Nitra, Prešov, Žilina, Trnava, and Trenčín), were selected as subject for analysis. The regions differ in economic and demographic conditions and give some indication of how regional circumstances affect vacancy

in housing. The object of analysis is vacancy in housing as seen in the 2001 and 2021 Slovak censuses, published by the Statistical Office of the Slovak Republic (the Statistical Office of the Slovak Republic, 2001; 2021). There are a few drawbacks. Census data only appears every ten years and thus does not capture short-run movements. And even with that time gap, 2001 and 2021 were picked as examples. The 2011 census was not used because there was no differentiation between occupied and unoccupied buildings or temporarily used buildings (e.g., chalets, weekend houses, and derelict uninhabitable structures).

Two general types of housing were analysed:

- Family houses: Individual residential houses typically in suburban or rural environments.
- Residential buildings: Multi-dwelling structures such as apartment blocks.

The key indicators are total dwellings, permanently occupied dwellings, and vacant units. Attention was also paid to differentiating between types of vacancy - structural, transitional, and due to depopulation - where feasible. Not all vacant forms are clearly defined as mutually distinct, and there may be some reporting variations across areas. Using Microsoft Excel a descriptive analysis (means, percentage change, etc.) was employed.

From this output, the validity of the number of empty flats (from the Statistical Office of the Slovak Republic) as well as housing affordability (as reported by Amnesty international, Habitat for housing) was given an acid test of plausibility. Using data from the Statistical Office of the Slovak Republic and the National Bank of Slovakia, we investigated the following factors:

- Interest rates - Mortgage interest rates as a major cost factor in home ownership and this rate has fluctuated considerably over time.
- Electrical use - A unique study was conducted in Bratislava where excessive electrical energy use was applied to purportedly unoccupied houses in order to ferret out the number of 'illegally' or unreported rental arrangements. Bratislava officials assumed there were 51,000 empty apartments in the city held by investors and homeowners. The city decided to work with power companies to find out how many apartments were using no electricity or barely any at all. It turns out, there are at most 18,000 empty units in the city, a mere one-third of what had been anticipated (Prime, 2023). We used this measurement in other regions to ballpark the unreported occupancy use. Despite these limitations, the chosen method enables a serious comparison of long-term vacancy patterns and offers implications for the development of future housing policy.
- A Housing stress index based on average income and home prices as well as a more robust index considering standard mortgages and dual-income households.

3. RESULTS

The starting point of this research is the data from the Statistical Office of the Slovak Republic (2024), listing of unoccupied homes in each of the regions to form a base line. Comparison of the Slovak censuses of 2001 and 2021 reveals a significant shift in trends in housing vacancy and occupancy. The emphasis of this study is on the increase in empty houses and its implications on housing supply efficiency.

In 2001, Slovakia had 1,884,846 dwellings, out of which 1,665,536 (88.3%) were in permanent occupation and 219,310 (11.7%) unoccupied. In 2021, the number of dwellings had risen to 2,149,224, while houses in permanent occupation stood at a mere 1,707,035. This had left 442,189 dwellings unoccupied – 20.5% of the housing stock (the Statistical Office of the Slovak Republic, 2001; 2022). Family houses increased in number from 995,157 in 2001 to

1,098,868 in 2021. But their occupancy rate fell from 82.4% to 78.2%. The number of unoccupied family houses increased from 175,115 to 239,655. For the regions studied the changes can be seen in Table 1 below.

Table 1: Status of dwellings by regions 2001, 2021

2001						
Region	occupied dwellings	unoccupied dwellings	total amount	flats	(flats/total) %	% unoccupied dwellings
Bratislava	166 587	15 434	182 021	158 364	87.0%	8.5%
Trnava	38 422	4 097	42 519	19 986	47.0%	9.6%
Trencin	35 678	4 406	40,084	19 220	47.9%	11.0%
Nitra	51 524	7 097	58 621	25 713	43.9%	12.1%
Žilina	47 534	5 063	52 597	25 234	48.0%	9.6%
Banská Bystrica	38 930	4 052	42 982	27 235	63.4%	9.4%
Prešov	44 401	3 573	47 974	25 490	53.1%	7.4%
Košice	109 355	9 437	118 792	80 404	67.7%	7.9%
2021						
Bratislava	177625	53293	230918	202177	88%	23.1%
Trnava	44059	10591	54650	26392	48%	19.4%
Trencin	37849	8851	46700	23511	50%	18.9%
Nitra	54989	13859	68848	30060	44%	20.1%
Žilina	50300	12411	62711	31026	49%	19.8%
Banská Bystrica	38193	9396	47589	31112	65%	19.7%
Presov	47639	8514	56153	27686	49%	15.2%
Kosice	110688	21584	132272	87426	66%	16.3%

Source: authors

* Bratislava and Košice are divided into separate districts and only constitute the city boundaries. All other regions contain the city plus surrounding municipalities.

There is a marked increase in the number of uninhabited flats with an average of ~19% purportedly uninhabited, meaning 1 out of 5. The main factor for this increase is the robust construction activity in each region as developers add to the housing mix, an impetus that is partially driven by the perceive desire to escape the socialist era panel houses.

3.1 Applying electrical usage to reported uninhabited dwellings

There are reasons to believe the above data contains discrepancies or rather over-reporting of uninhabited dwellings. There are several extenuating factors that need to be considered:

- Most of the rental stock is in the hands of individual-owners and dedicated purposely built rentals play a minimum role in the housing market (Pittini et al., 2023). There is a certain level of informality with rental arrangements, and this is even encouraged by the tax rules. According to the tax code, no special reporting of rental income is necessary

if gross rental income minus eligible expenses do not exceed 500€ a year (595/2003 Coll. ACT on Income tax). As such many rentals are unregistered.

- There is no separation classification of secondary homes, so a dual-use dwelling may be classified as uninhabited. There is a significant amount of mobility especially to Bratislava. This can be seen in the Friday afternoon out-commute and the Sunday night/Monday morning in-commute. The property tax in Slovakia is extremely low and there is no provision in the tax code that distinguishes secondary residences from primary residences (i.e., individuals do not need to declare a primary residency to obtain a better tax rate).
- The records at the Cadastre office may be out of date, especially with dwellings that are no longer inhabitable. Slovakia is littered with homes, many built before World War II that are dilapidated beyond repair or where renovation cost would exceed the value of the property. These ‘ghost dwellings’ are included in the housing stock. They are more numerous in rural regions, but they still can be found in our studied regions.

To gain a more realistic vacancy level, a model was developed using data from Bratislava. The official 2021 census data reported 53,293 vacant dwellings in the region. However, when cross-checked for energy consumption, the number of unoccupied dwellings fell to ~18,000 indicating that only ~33.8% of the dwellings were actually unused. This correction ratio (0.338) was applied to other regions offering a proxy for estimating actual vacancy (Table 2). Though it cannot be definitively said that the other regions have the same dynamics as Bratislava, robust housing development can still be found throughout all Slovakia.

Table 2: Probable unreported usage based on the electricity adjusted model

Region	Unoccupied dwellings units reported in the 2021 census	Estimated # of unoccupied houses using the electricity adjusted model	Ratio of used to empty flat using 2021 census model	Ratio of used to empty flat using electrical-use model
Bratislava	53 293	18 013	4.3 to 1	12.8 to 1
Trnava	10591	3 580	5.2 to 1	15.3 to 1
Trenčín	8851	2 992	5.3 to 1	15.6 to 1
Nitra	13859	4 684	5.0 to 1	14.7 to 1
Žilina	12411	4 195	5.1 to 1	14.9 to 1
Banská Bystrica	9396	3 176	5.1 to 1	15.0 to 1
Prešov	8514	2 878	6.6 to 1	19.5 to 1
Košice	21 584	7 295	6.1 to 1	18.1 to 1

Source: Authors, based on Housing Census 2021

If the electrical usage were factored in, it can be assumed that the regions have a lessened amount of free dwelling for rentals, and this would mean higher pricing. If we consider informal and completely legal rental arrangements and in accordance to the tax rules, then a certain subset of rental units is not being counted which could indicate a lower housing over-burden than what is being reported. The percentage of unoccupied dwellings would not be so dissimilar from earlier times.

3.2 Selected factors affecting housing costs

This part analyses factors impacting the dynamics of housing affordability, namely interest rates, income (measured by monthly wages, using Housing Stress Index), and demographic trend.

Homeownership is approximately ~93% in Slovakia, 2nd only to Romania at 96% (Eurostat, 2024). Interest rates are an important determinant in the trends of the housing market, influencing affordability, investment, and mortgage supply. It can have an inverse relationship to property price, i.e., higher interest rates reduce demand and could put downward pressure on prices. After 2008, housing in the EU became more affordable due to rising incomes and decreasing bank interest rates. Yet, the housing affordability index in the EU (and in the studied area) decreased in recent years due to increasing property prices and, more recently, a reverse tendency in bank interest rates (Výbošťok and Štefkovičová, 2023). Slovak mortgage rates have been as low as 0.98% in September 2021 and as high as 7.15% in January 2005 (The Global Economy, 2024). The price of mortgage loan insurance also plays a role (Izáková and Stoláriková, 2024). These fluctuations have had profound effects on interest rates and potentially the cost of housing.

To understand the dynamics of prices, we took data from the National Bank of Slovakia for the time period of 2017-2024 to find the annual total amount of loan originations for each year. This figure was divided by the cost of an average size dwelling (70m²) for that year. There is a decrease in during the years of COVID-19 where Slovakia was one of the hardest hit countries with 0.36% of the population succumbing to the disease. Considering this, the data would suggest relative stability in loans for housing.

Table 3: Loan origination/ by average price of a 70m² dwelling

Year	Total mortgages originated €	price per sq m ² in 4th Q	total loans per 70m ² dwelling*
2017	2.81b	1 395	2 882
2018	3.16b	1 502	3 004
2019	3.48b	1 597	3 114
2020	3.81b	1 853	2 940
2021	4.28b	2 314	2 598
2022	4.71b	2 661	2 527
2023	5.13b	2 433	3 015
2024	5.27b	2 596	2 904

*Average size of a dwelling in Slovakia

Source: Own elaboration according to the National Bank of Slovakia

One of the major concerns for mortgages is the possibility of high interest rates affecting people's ability to repay their mortgages long-term. This is not seen in the loan origination model seen above. While Slovakia's mortgage default rate is still low in comparison to other European countries, it cannot be denied, that such a rise may result in some household struggling financially. In January 2023, 1.8% of Slovak loans were non-performing, although the actual rate of mortgage default was likely lower since housing loans are usually better than consumer loans (National Bank of Slovakia, 2023). In comparison, France had an even lower default rate, only 0.44% of mortgage balances were overdue for 12 months at the end of 2023, and the share of doubtful loans was 0.97% (Autorité de Contrôle Prudentiel et de Résolution, 2024).

In the future, interest rates are expected to remain within the 4-5% range. And while this may be elevated in comparison to the extremely low levels of 2020-2021, it is still moderate by

historical standards. Though this may slightly reduce loan affordability, it is unlikely to deter most buyers entirely. However, higher monthly repayments can still be a challenge for some first-time buyers or lower-income households. Government measures such as interest rate subsidy programs for young families or expansion of the state rental fund are possible responses (Ministry of Transport and Construction of the Slovak Republic, 2023). Thus, mortgage rates are not only a financial factor, but also an important element of public policy affecting housing affordability in Slovakia in the coming years. Home prices will plateau or decline slightly due to the "sticky market" effect—sellers do not want to lower their prices and buyers wait because prices are so high. Demand may shift towards more affordable regions or rental housing.

To understand regional differences in affordability, a Housing Stress Index (HSI) was constructed by dividing average housing price per square meter by average monthly wages in each region (Table 4). The higher the index, the more expensive the region is in terms of housing. An HSI value of 1.00 represents a theoretical affordability equilibrium - meaning the cost of one square meter of housing equals one month's average wage. Values above 1 indicate higher housing stress, where property prices significantly exceed average income.

Table 4: Housing Stress Index

Region	Price per sqm (€)	Avg. Wage (€)	HSI = Price/Wage
Bratislava	3,127	2,280	1,37
Trnava	1,837	1,937	0,95
Trenčín	1,569	1,792	0,88
Nitra	1,393	1,755	0,79
Žilina	1,819	1,874	0,97
Banská Bystrica	1,562	1,763	0,89
Prešov	1,818	1,623	1,16
Košice	2,087	1,804	1,16

Source: Authors, based on 2024 Slovak Statistical Office and Global Property Guide

The results of HSI show notable disparities in affordability across Slovakia's major regions. Bratislava has the highest housing stress level with an HSI of 1.37. Similarly, Košice (1.16) and Prešov (1.12) also reflect elevated stress levels, suggesting that lower wages in these eastern regions are not enough to offset rising housing costs. On the other hand, such regions as Trenčín (0.88) and Banská Bystrica (0.89) demonstrate better affordability, with a more favourable balance between wages and property prices. Trnava (0.95) and Žilina (0.97) are in the mid-stress level, while Nitra, with an HSI of 0.79, emerges as the most affordable regions. These results underscore that housing affordability is shaped not just by income, but also by the rate at which property prices outpace wage growth.

We deemed the above index as being too simplistic and as such wanted a measurement with a more realistic scenario whereas:

- Each household contains 1.8 earners (One full time worker and one working at 80% of capacity thus factoring in periods of unemployment or child-care activities).
- Using gross pay minus tax obligations using and average 25% tax rate.
- Assuming an average size dwelling of 70m².

Table 5: Housing Stress Index based on dual income and average size dwelling

Region	Price (€/m ²)	Wage (€-gross)	Home Cost (€)	Ann. Net Income (€)	Ratio (Cost/Income)	HSI (nominalized)
Bratislava	3 127	2 280	218 890	36 936	5.93	1.35
Trnava	1 837	1 937	128 590	31 379	4.10	0.93
Trenčín	1 569	1 792	109 830	29 030	3.78	0.86
Nitra	1 393	1 755	97 510	28 431	3.43	0.78
Žilina	1 819	1 874	127 330	30 359	4.19	0.95
Banská Bystrica	1 562	1 763	109 340	28 560	3.83	0.87
Prešov	1 818	1 623	127 260	26 293	4.84	1.10
Košice	2 087	1 804	146 090	29 225	5.00	1.14
Average	–	–	–	–	4.39	1.00

Source: Authors, based on Slovak Statistical Office and Global Property Guide

The more complex data set is remarkably similar to the simplify model. If we assume, the same tax obligation as above, then an acceptable cap for the ratio cost/income would be 4.67x-6.0x. We can assume that there would be a 20% initial down payment, the standard in Slovakia and this was not included in the tabulation. Regarding the down payment, there is an assumption of an available inter-generational cash transfer, i.e., a gift from the parents to supplement a down payment. After the fall of socialism, occupants of flats had the opportunity to purchase the flats outright for a very nominal sum of money. This instant equity and consequential run up in value means that parents/grandparents are likely to have the financial capital to help children. There is also a tradition of family help in Slovakia, so it would stand to reason that a 20% down payment could be raised in a rather short amount of time.

According to Pittini et al. (2017), housing has become a problem due to the prices (buying a house is the highest expenditure for Europeans, house prices are growing faster than income in most member states, while inequality and housing exclusion are mutually reinforcing). According to Eurostat data the housing overburden in Slovakia, where total housing cost represents more than 40% of disposable income, was 7.3% in 2024. This is a substantial increase from 2022, where the housing overburden was 2.3% (Eurostat, 2024), when Slovakia had the lowest score in Europe. Still, housing overburden is considerably less than most countries of Europe. Czechia, for example, has a housing burden of 14.1%, almost twice that of Slovakia.

Age-driven demographic change is another leading cause of vacancy expansion. Slovakia is not only aging but also shrinking in the majority of its rural as well as middle-sized urban municipalities. In Slovakia, a combination of an aging population and legal complications has left a high number of vacant dwellings, mostly in more rural areas (Cole et al., 2025). This suggests that housing is not being built in response to a growing local economy but is rather speculative in nature. When comparing population growth with a rise in vacancies there is a much larger increase in housing. The question becomes how much of this housing can be absorbed. The gulf between aging brutalist housing and newer, more aesthetically pleasing dwellings is undoubtedly driving new development. This is seen with the vacancy growth greatly outstripping population growth (table 6). The relatively high percentage of unoccupied units here is an indication of a market more and more disconnected from genuine demand. In

the metropolitan areas of Banská Bystrica, on the other hand, high vacancy rates are more closely related to economic decline and outmigration. Even as property values fall - Banská Bystrica fell 7.41% in Q2 2024—few homes are occupied because they need to be repaired or are in areas of little job opportunities. In such cases, vacancy is less of an affordability issue and more a reflection of overall socio-economic decline (Trembošová, 2023).

Table 6: Comparative analysis of population growth and vacancy between 2001 and 2021

Region	Population 2001	Population 2021	Change (%)	Vacant Dwellings 2001	Vacant Dwellings 2021	Vacancy Growth (%)
Bratislava	428,672	475,503	+10.9%	15,434	53,293	+245.3%
Košice	343,092	357,386	+4.2%	9,437	21,584	+128.7%
Trnava	127,125	131,894	+3.8%	4,097	10,591	+158.7%
Trenčín	112,767	113,777	+0.9%	4,406	8,851	+101%
Banská Bystrica	111,984	108,730	-2.9%	4,052	9,396	+131.9%
Prešov	161,782	172,804	+6.8%	3,573	8,514	+138.2%
Nitra	163,540	164,788	+0.8%	7,097	13,859	+95.3%

Source: Authors, based on Housing Census 2001,2021

One assumption of this oversupply would be the loss of utility of the panel flats as a desired option. The rise in popularity of secondary property would likely limit their demise. According to Ličák (2023), 70% of mortgage originations among those aged 35 to 50 already have or have had a mortgage. He stated: “It is often second-home buyers making investment purchases and their increased activity drives demand and raises prices, worsening affordability for those trying to buy their first home”. As such home prices have continued to increase. Smaller property such as 1 and 2 room flats has the greatest value per m². The market has also responded with a new supply of smaller flats as can be seen in figure 2.

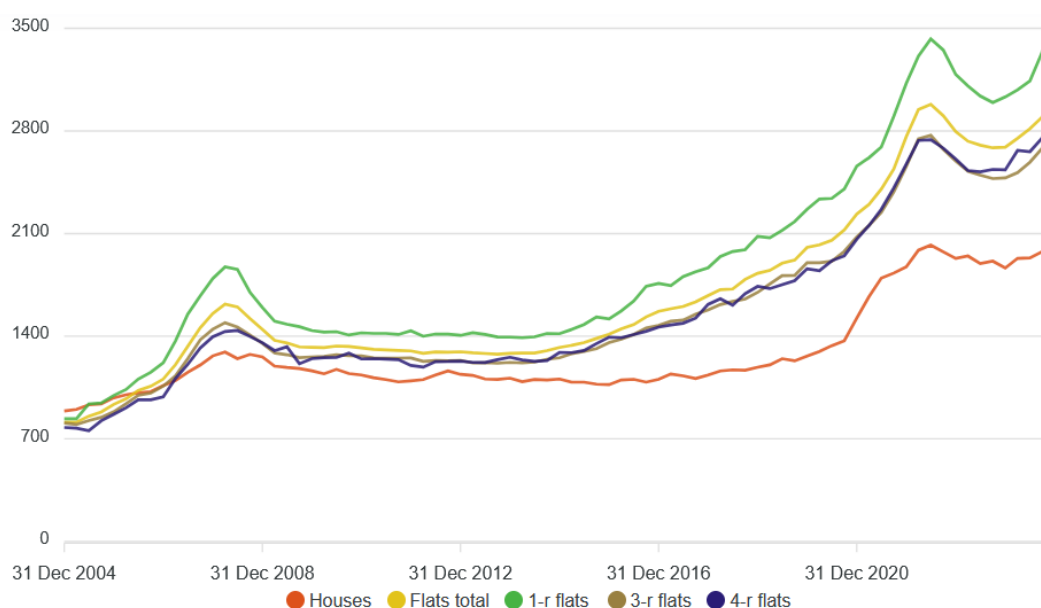


Figure 2: Price of dwellings by square meter and type

Source: National Bank of Slovakia

CONCLUSION

Slovakia has evolved from a period of low-cost panel flats to the transition period of slow development in the 1990s to the current period of increased efficiencies in real estate development. If current trends continue, Slovakia can end up with a paradoxical housing shortage—lots of housing, but none of it affordable or in demand. The main issue is not the number of dwellings, but their quality and location. This research started with the question of how many uninhabited dwellings are in Slovakia, namely in 8 regions (the basis for RQ1). This research was unable to make a determination in true numbers, and we also found that the census data to be less than reliable, especially given the discrepancy found with electrical usage in Bratislava. A recommendation could be made to apply data on electrical use to determine the extent of vacancies. As such, RQ1 is undetermined.

For RQ2, the level of housing stress is limited to a sub-group in the population. Low-income earners and single-income households would likely find it a challenge to homeownership and could be at mercy to the private rental market. For the median two-income households, the market is relatively stable. The reports from both Amnesty International and Habitat for Housing focus on the low-income subset in the market. It needs to be said that Slovakia contains a high ethnic Romany concentration that has been ill-served by a high reliance on the private sector in housing. Due to the high levels of discrimination, many in the Romany population are forced to live in marginal and segregated communities, with much of this in rural areas outside of major cities. There is also a price difference between renters, who officially need a contract for work purposes (e.g., foreigners working in Slovakia, international students, etc.) and the informal rent that goes unreported in official data. Even with the electric-usage numbers for uninhabited dwellings, there is still a high number of empty flats that are not being utilized and thus would drive up prices for urban property.

As many home purchases are 2nd homes, housing necessity becomes questionable. There is no data available on how many dwellings were acquired through inheritance. Antidotally, keeping an inherited home for an offspring to use as startup capital creates an inheritance-based class advantage that contributes to unequal advantages for 2nd homeowners (Filčíková, 2025). Since most of the mortgages in the >35 age group is going for the purchase of a 2nd home, it can be said that home sales are more for speculation than for necessity (answering RQ3 “Are housing purchases speculative or necessities?”).

Since the official statistical data includes too many unused property and property that has not been reported as being used, it is difficult to obtain accurate numbers. As such, a better measure would be to cross-check uninhabited homes with electrical use (based on cooperation with power companies supplying electricity). As the speculative nature of housing increases, there is a question of fairness to individuals without the possibility of housing inheritance. To alleviate housing stress, the government could consider a different tax rate for homes used as primary residency and those that are not (i.e., only one property could be declared as a primary residence). There is the issue of building state-controlled social housing when there is already an oversupply of vacant homes, abetted homes that are in the hands of private owners. One remedy would be the creation of a rental guarantee fund that provide insurance and protection for landlords who provide housing for marginal tenants that have been vetted and are supported by social workers. A few examples of these initiatives include Solibail in France, offering reduced taxes in exchange for below market rents to low-income households (Taylor et al., 2020); Agences Immobilières Sociales in Belgium, providing guarantee rents, property maintenance, and administration management to landlords (Buxant et al., 2015), and housing first in the Netherlands, providing rent mediation, guarantees, and intensive support service to

landlords (Boesveldt, 2024). This type of public-private partnership could adapt these test models, especially in areas beginning to face social decline.

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REFERENCES

Act on Income tax, 595/2003 Coll. as amended.

ADLER, J., 2020. Privatizing social housing supply—the new-build Agence Immobilière Sociale model in the Brussels capital region. PhD Thesis. Vrije Universiteit Brussel, Brussels.

ALFIMOV, B., 2025. An investigation into the residential real estate market in the major cities of Slovakia. Bachelor thesis. Online. Dostupné na: [<https://opac.crzp.sk/?fn=detailBiblioForm&sid=F3AF90715DF24108AF3B11E80399>]. [cit. 2025-05-25].

AMNESTY INTERNATIONAL, 2024. Slovakia: Housing rights and challenges. Online. Dostupné na: [<https://www.amnesty.org/en/documents/eur72/8641/2024/en/>]. [cit. 2025-03-08].

Autorité de Contrôle Prudentiel et de Résolution, 2024. Housing financing 2023 – Developments in outstanding loans, new housing loans, and borrower profiles. No. 160. Banque de France. Online. Dostupné na: [<https://acpr.banque-france.fr/en/publications-and-statistics/publications/ndeg-160-housing-financing-2023>]. [cit. 2025-06-08].

BOESVELDT, N. F., 2024. Governing Homelessness in the Netherlands: Incremental Change Towards Providing Housing First. In: The Routledge Handbook of Global Perspectives on Homelessness, Law & Policy. Routledge, 175-187.

CHAPMAN, J. a WATKINS, K., 2018. Houses and flats. In: Metric Handbook. Routledge, 401-428.

CIJ Europe, 2024. Slovak house prices surge in late 2024: Major cities reach record highs. CIJ Europe. Online. Dostupné na: [<https://cijeuropa.com/en/slovak-house-prices-surge-in-late-2024-major-cities-reach-record-highs/post.html>]. [cit. 2025-03-05].

COLE, D., MURRAY SVIDROŇOVÁ, M., GUBALOVÁ, J. a STRNÁDOVÁ, P., 2025. The urban/rural community divide based on a geo-economic perspective: An analysis of work contracts in Slovakia. *Quaestiones Geographicae*. 44(2), 137-147.

DUBOIS, H. a NIVAKOSKI, S., 2023. Unaffordable and Inadequate Housing in Europe: Living Conditions and Quality of Life, Eurofound. Ireland. Online. Dostupné na: [<https://coilink.org/20.500.12592/9xmghj>]. [cit. 2025-05-10].

EGNER, B. a KRAPP, M. C., 2025. Housing in Crisis: Policies and Challenges in Europe. Cham: Springer Nature Switzerland.

EUROSTAT, 2024. Housing in Europe – 2024 edition: House or flat – to own or to rent. Luxembourg: Publications Office of the European Union. Online. Dostupné na: [<https://ec.europa.eu/eurostat/web/interactive-publications/housing-2024>]. [cit. 2025-05-10].

- FILČÍKOVÁ, L., 2025. Dedenie je dnes skoro tak dôležité ako práca. *Trend Magazine*. Online. Dostupné na: [<https://www.trend.sk/financie/dedenie-je-pre-uspech-takmer-rovnako-dolezite-ako-praca-okrem-byvania-ovplyvnuje-aj-vztahy>]. [cit. 2025-05-10].
- HABITAT FOR HUMANITY, 2023. Housing policy in Slovakia: Addressing affordability challenges. Online. Dostupné na: [<https://www.habitat.org/emea/housing-policy-slovakia>]. [cit. 2025-03-05].
- HAVEL, V., 1978. The power of the powerless (P. Wilson, Trans.). In: KEANE, J. (ed.). *The power of the powerless: Citizens against the state in central-eastern Europe*. Routledge, 23–96.
- IZÁKOVÁ, K. a STOLÁRIKOVÁ, P., 2024. Vnímanie versus dôvera poistenia hypotekárneho úveru. *Acta aerarii publici*. 21(2), 54–63.
- KIM, S., 2008. Spatial inequality and economic development: Theories, facts, and policies. In: *Urbanization and growth*. 133-166.
- LIČÁK, M. Who can still afford a home in Slovakia? Mostly couples with two incomes.
- LUX, M., KUBALA, P. a SUNEGA, P., 2023. Why so moderate? Understanding millennials' views on the urban housing affordability crisis in the post-socialist context of the Czech Republic. *Journal of housing and the built environment*. 38(3), 1601-1617.
- LUX, M. a SUNEGA, P., 2020. "Using path dependence theory to explain housing regime change: The traps of super-homeownership." *Critical Housing Analysis*. 7(1), 25-35.
- Ministry of Transport and Construction of the Slovak Republic, 2021. Výročná správa 2021. Online. Dostupné na: [https://www.mindop.sk/uploads/extfiles/vyrocnespravy/mindop_vyrochna_sprava_2021_2022-02.pdf]. [cit. 2025-03-05].
- MURRAY SVIDROŇOVÁ, M., KUVÍKOVÁ, H., MIKUŠOVÁ MERIČKOVÁ, B. a NEMEC, J., 2020. Can social innovations in housing save public money? The case of Slovakia. *International Journal of Public Administration*. 43(9), 770-779.
- MURRAY SVIDROŇOVÁ, M., MIKUŠOVÁ MERIČKOVÁ, B., NEMEC, J. a KUVÍKOVÁ, H., 2017. Social housing provided by the third sector: The Slovak experience. *Critical Housing Analysis*. 4(2), 67-75.
- OECD, 2024. Addressing housing market challenges in the Slovak Republic. Online. Dostupné na: [<https://oecdecoscope.blog/2024/03/18/addressing-housing-market-challenges-in-the-slovak-republic/>]. [cit. 2025-03-05].
- PITTINI, A., KOESSI, G., DIJOL, J. a GHEKIERE, L., 2017. The State of Housing in the EU 2017. Brussels. Online. Dostupné na: [https://docs.wixstatic.com/ugd/d41ae6_1bb58df0aa4b4cfaadfc2575748e196e.pdf]. [cit. 2025-03-05].
- PITTINI, A. et al., 2023. The State of the Housing in Europe 2023. Brussels. Online. Dostupné na: [<https://www.housingeurope.eu/the-state-of-the-housing-in-europe-2023/>]. [cit. 2025-05-10].
- POWER, A., 2012. Social inequality, disadvantaged neighbourhoods and transport deprivation: an assessment of the historical influence of housing policies. *Journal of Transport Geography*. 21, 39-48.
- RODRÍGUEZ-POSE, A. a STORPER, M., 2020. Housing, urban growth and inequalities: The limits to deregulation and upzoning in reducing economic and spatial inequality. *Urban Studies*. 57(2), 223-248.

STATISTICAL OFFICE OF THE SLOVAK REPUBLIC, 2024. Housing market statistics and trends in Slovakia. Online. Dostupné na: [<https://slovak.statistics.sk/wps/portal/59b4a166-623b-4df6-bd8f-2641817f40fe/>]. [cit. 2025-04-07].

STATISTICAL OFFICE OF THE SLOVAK REPUBLIC, 2021. Housing statistics visual report. Online. Dostupné na: [https://disem.scitanie.sk/SASVisualAnalytics/?reportUri=%2Freports%2Freports%2Fcde26e62-9248-4771-bf7e-bd26e4637920§ionIndex=0&sso_guest=true&sas-welcome=false&language=en]. [cit. 2025-04-07].

STESSL, M. a LISKA, A., 2023. State-supported rental housing in Slovakia: A step forward in addressing affordability. Online. Dostupné na: [<https://www.dlapiper.com/en/insights/publications/real-estate-gazette/real-estate-gazette-living-capital/9-slovakia-state-supported-rental-housing-in-slovakia>]. [cit. 2025-03-05].

ŠPIRKOVÁ, D. et al., 2009. Bývanie a bytová politika. Vývoj, determinanty rozvoja bývania a nové prístupy v nájomnej politike na Slovensku. Bratislava: STU v Bratislave.

TALLEN, E., 2010. Affordability in new urbanist development: Principle, practice, and strategy. *Journal of Urban Affairs*. 32(4), 489-510.

TALLIS, M., 2019. Large Panel System technology in the second half of the twentieth century: Literature review, recycling possibilities and research gaps. *IOP Conference Series: Materials Science and Engineering*. 9, 092058. Dostupné na: [<https://doi.org/10.1088/1757-899X/471/9/092058>].

TAYLOR, O., LOUBIÈRE, S. a AUQUIER, P., 2020. Homelessness, housing first, and the right to housing—confronting right and reality. *Human Rights Review*. 21(4), 373-389.

The Global Economy, 2024. Slovakia: Mortgage interest rate. Online. Dostupné na: [https://www.theglobaleconomy.com/Slovakia/mortgage_interest_rate/]. [cit. 2025-06-05].

The Global Property Guide, 2024. Slovakia: Price history. Online. Dostupné na: [<https://www.globalpropertyguide.com/europe/slovakia/price-history>]. [cit. 2025-05-10].

The Prime, 2023. Bratislava learns number of empty flats from electricity data. Online. Dostupné na: [<https://theprime.cz/news/leases/bratislava-learns-number-of-empty-flats-from-electricity-data/>]. [cit. 2025-04-07].

The Slovak Spectator, 2023. Online. Dostupné na: [<https://spectator.sme.sk/c/who-can-still-afford-a-home-in-slovakia-mostly-couples-with-two-incomes>]. [cit. 2025-05-10].

TREMBOŠOVÁ, M. et al., 2023. Quantifying of objective poverty in the districts of the Banská Bystrica Region (Slovak Republic). *Problems and Perspectives in Management*.

VARTAŠOVÁ, A. et al., 2024. Engineering Structures and Their (non) Taxation by Slovak Real Property Tax (in the V4 Context). *Gdańskie Studia Prawnicze*. 1(62), 82-97.

VÝBOŠŤOK, J. a ŠTEFKOVIČOVÁ, P., 2023. "Housing affordability, quality of life, and residential satisfaction in the Austrian cross-border suburban region of Bratislava, Slovakia." *Moravian Geographical Reports*. 31(1), 2-13.

WANG, Q., LIN, B. a TAN, C., 2024. A modified spatial house price to income ratio and housing affordability drivers study: using the post-LASSO approach. *International Journal of Housing Markets and Analysis*. 17(6), 1443-1460.