

## REGIONAL DEVELOPMENT TRAP: WHAT IF RESIDENTIAL MARKET IS THE PRIME SUSPECT?

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**Abstract: Purpose** – Residential market is firmly established in former post-communist parts of Europe. Its performance relies on a competition differentiating between socio-economic regimes separated by persistent development gaps despite long-term redistributive efforts in European-level policies. We question political implications of a transition in housing sector correlating with the financial mechanism enabling to store private capital into residential property. **Design/methodology/approach** – We use a level panel model specification detecting relationships between financial affordability of housing, intensity of started and completed dwellings in construction sector, while controlling for economic cycle and migration balance. Models expect spatial structure by their econometric design. Our time series cover the period 2002-2019. **Findings** – Results describe a development process in regions locked in a positive feedback loop between housing starts and completions. Construction and financial elements directly affect each other, development process depends on the region's economic condition. Migration modifies density and human capital basis leading to more polarity. **Originality/value** – We see how market competition, as now experienced, undermines foundation for housing as a service and contributes to development gaps. Liberal market housing has limited ability to support local communities, aiming at avoiding excessive social disparities on economic grounds. Active approach to shaping residential sector is a potentially more effective target of policies seeking more equal society and economic landscape.

**Keywords:** polarization, real estate cycle, regional development, residential construction, Slovak Republic

### 1 INTRODUCTION

Fulfilling the need for shelter is a basic prerequisite for sustainable life strategy. Its availability and quality strongly influence the standard of living and achievable goals in the socio-economic dimension. Housing intimately connects members of family, creates conditions for integration into the neighborhood community and signals the place in a broad social structure. Without stable housing, it is not possible to build social networks that consist of small repetitive interactions, random daily con-

tacts with people we can meet in one place. Through housing, a person is free to expand their relational identity in specific place (Coulter et al., 2015), shaped by purposeful interventions according to unique features of their lifestyle.

It is also clear that housing is of fundamental importance for the state and development of society. Formal and informal processes arise around housing (Svidroňová et al., 2020). Personal identification associates with the permanent residence by which we engage with institutions. Housing and employment opportunities interact through impulses between real estate and labour market. People usually prefer jobs that allow them to live and work within a realistic commuting distance. Regional economies become structured in a constant flow of traffic between places of housing, work and use of services. Busy nodes with concentrated production and consumption opportunities contrast with periphery, and the spatial interaction-based settlement system of regions forms.

The economic dimension of housing at aggregate level unfolds from availability of human capital for development of enterprises, of cities and regions. Residential sector uses housing as a subject of market exchange, linking supply of residential real estate in a place with demand generated by households in exchange for rents. Social classes of tenants and landlords arise, distinguished through property ownership. Real estate market also creates an investment dimension of housing, allowing to serve as a repository of surplus capital. In modern society, property values stabilize otherwise extremely volatile prospects of profitability, compared to other non-virtual alternatives. Resulting competition affects the lowest income classes, for which housing becomes completely inaccessible, in terms of ownership and increasingly even as an essential service (Elsinga, 2020; Stephens, 2020)

Housing as an economic resource enters into quantifying prosperity and growth distributed through territories, it shapes practical opportunities for inhabitants. Although neoclassical model of the housing market assumes that the imbalance manifested by unavailable commodity for entire social segments will over time be corrected by market mechanism, in practice a strong differentiation in wealth persists. Gaps emerging from housing situation interact with other dimensions of socio-economic status, including professional or ethnic. Households in more favorable conditions have always enough power to win in free competition, become residents of attractive neighborhoods, where the value continues to increase.

Property capital accumulates over time, strengthening the competitiveness of its owners. Owners can also acquire more housing, intended for recreation use or generating higher income from renting. Historical dimension of property ownership becomes locked in a positive feedback with an inter-generational overlap. People coming from the class of property owners inherit advantageous starting point for further rounds of competition in their generation, and the accumulation process continues. Market volatility then may affect their pool of wealth, but has zero effect on the existential side of their life. Property ownership is a historically advantageous life strategy, which offers high level of economic security (Yates and Bradbury, 2010).

On the opposite side of polarity are those residents, who are facing volatile housing market as a service (Parkinson and Parsell, 2018). Market rents, linked to

the cyclic course of commoditized housing prices strongly influence career decisions, prospects of mobility and migration. Psychological limits extend to personal identity with an uncertain place of living, instability erodes opportunities in social networks of local community. Ultimately, these features negatively impact potential of whole society. Due to lack of resources, certain classes do not take part on increasing prosperity and effectively loose on the market.

Advanced societies recognize negative side of market polarization and take a number of steps in favor of desirable compensations. Various historical trajectories (Blackwell and Kohl, 2019) allowed them to experience both periods of prosperity and crisis. They have developed politically under unique combinations of political forces, which have included the initiatives of leaders (Huber and Montag, 2020). Institutional actors engage in otherwise free market, thereby shifting balance collectively in desired direction, usually contributing to wider supply of residential real estate (Szalay and Topolčanská, 2014). For several decades, the state redefined housing into social sector in East Europe's communism. Without profit motive, housing production suffered a chronic shortage redistributed across society. Such extreme regime also brings damage to the system's sustainability.

In this paper, we focus on Slovakia's regionalized housing sector and its early stage market. We put it in the space-time context of the market explanation by the neoclassical economy and its equilibrium model. We expect that the model can prove analytically useful starting platform. Our main concern is hypothetical, a direct positive linkage between market production and spatial development of inequalities – represented by standard measure of unemployment rate. Besides, we also pay attention to temporal and spatial pattern coded in accessible experience of the last three decades of evolving post-communist society.

## **2 THEORY AND LITERATURE REVIEW**

Defining feature of the market is pairing between transaction partners, their search, negotiation and exchange of values. Without ongoing transactions market ceases to exist. A static idea of the market state is a metaphor capturing a moment in process of constant transformation. From this point of view, equilibrium model of real estate market is a generalization. Market is inevitably moving in direction towards restoration of equilibrium. In practice it is in vital imbalance, creating new stages on the mismatch left by the preceding stage.

Geographic differences in the housing sector relate to regional development gaps through a link not easy to decipher (Isebaert et al., 2015). The nature of housing, the costs of construction and maintenance, variability and quality in space relate directly to economic development. Housing within regional markets reinforces spatial segregation on the economical foundation (Dietz and Haurin, 2003; Sunega and Lux, 2018). According to their competitiveness, socio-economic groups disperse across different neighborhoods, accumulating wealth or poverty. Better quality environment attracts higher income groups exercising their economic power (Gallin,

2006; Lux et al., 2017). Spatial differences become endogenous, differentiated by market competition. Real estate market, by the nature of exchanging subject itself, deals besides physical structure of land, house or apartment also with a unique place in context of other places.

In equilibrium spatial model of housing market inequality in accessibility modifies demand and prices in reaction to varying transport costs (Jin et al., 2013). As a result of different housing costs, disproportion in the structure of supply regime in city centers and at their periphery is different. Market competition between users systematically differentiates among places according to preferences and economic possibilities of users. Socio-economic status, quality of natural environment, the remnants of historical urban form, transport infrastructure of the current and earlier technological stages together decide where active development occurs and where downward spiral trajectory unfolds.

With concentration of wealth in the most attractive places, entire metropolitan regions become inaccessible to lower-income classes (Hulse and Yates, 2017). In addition to standard market competition, shared economy actors rapidly infiltrated residential buildings with short-term accommodation service, originally part of tourism sector. Conversion of residential properties in rented apartments introduces, in addition to owners non-residents, another powerful actor, who never considers their property in service for housing. In such situation competition becomes economically unbearable for many residents. Middle income class absorbs disadvantage to the extent that they afford living far beyond the borders of the metropolitan regions, because they no longer can secure their living space with reachable income. Living in the affected neighborhoods of the city centers becomes also unbearable with the conflicting regime of everyday life, which necessarily differs between residents and tourists.

Many attractive cities or regions have realized the paradox of devastating impact of economic success based on tourism and are trying to put effective regulation barriers in the way (Campbell et al., 2019). Shared economy in real estate disadvantages normal functioning city to the point when it disintegrates from within. However, disintegration is already present – at the heart of a competitive housing market. Similar pressure that shared economy now exerts on attractive city centers has long been present in the gentrified neighborhoods, and in the suburban zones of the municipalities around large cities. In these cases, new residents chose residential places on the basis of their special character, high quality environment or good transport accessibility, and relatively favorable housing costs compared to other parts of cities.

Market creates a unique spatial regime, which reproduces a characteristic morphological structure with a significant gradient between center and periphery. Housing prices and rents correlate with population density. Functions complementary to residential is also changing along the gradient. Suburbanization finally dissolves structured territory into large semi-urbanized regions with a hierarchy of central cities instead of single urban core. This dynamic is systemic, depending on the progress of the market stage, where savings from lower transport costs to a denser network of suburban centers compensate for higher housing prices. And so we return to

the profits of participating actors, the primary motivating factor in a market-based environment.

### **3 STUDY SETTING IN SLOVAKIA'S RESIDENTIAL SECTOR**

Thirty years ago, economy inherited a housing stock which manifested a complicated socio-economic development through recent history. In terms of shaping new market, much emphasis was on differentiating between the pre-socialist built environment and centrally planned neighbourhoods. Dominating discourse on post-socialist transition (Gajdoš, 1998; Ferenčuhová, 2016) organized content around renewal of markets effective across society, gradual restoration of society on more sustainable foundations.

The non-market supply of housing has become an enormous burden for the new institutions. Disruption of interaction flows effectively stopped ongoing construction of housing estates in cities. Supply side of the new market could only dispose of the existing housing stock, where the process of differentiation and a return to market gradients (Rehák and Káčer, 2019) suppressed by the former, now dead organizational regime. Property in city centers and attractive neighborhoods regained soon its economic value, and in contrast, a gradual decline should cut the value of housing in modernist estates from the recent past. In the end no such decline ever occurred.

Demand for housing, perhaps except the least developed regions in the East and South Slovakia, has never decreased to the point of decline. Urban structures remained many years preserved through absence of free capital and financial intermediation that participated in developing capitalist economies. The fastest recovery took place near large cities, where construction of suburban residences began to concentrate, fulfilling expectations of a more generous housing than the prefabricated standard could support. Majority of population stayed in place, privatizing their long-term rented housing stock and transitioned into owner-occupied sector.

By changing its approach to housing, state's approach shifted from one extreme to another. Instead of monopoly rental housing provided collectively by public institutions, society accepted a new monopoly of housing owners, with individualized responsibility for providing housing according to their own economic power (Broulíková and Montag, 2020). This collective step was not surprising. Property ownership has been and still is rightly perceived as a prominently secure life strategy, especially at a time of uncertain future prospects, when costs of market volatility will be asymmetrically paid by those to whom no value feedback mechanism leads, the renters (Hulse et al., 2019).

Market activity gradually increased as the commercial institutions needed to secure capital and construction itself and their business stabilized. A conditional necessity in free capital became available in the same time, as private commercial sphere overtook service economy towards the end of 1990s. Larger developments began to appear, with commercial banks directly involved in the process. Trust

between stakeholders gradually materialized in a standard loan financing. Loan channels, together with private sector's revenue growth, and an improved condition at the labor market contributed to many new projects saturating supply side of the market, slowly closing the gap from unsatisfied demand side.

Shortly after the recovery of housing development on commercial grounds, the established market slowed down in effect of the global economic crisis. New and ongoing projects suffered some delay, but the condition recovered quickly to the original levels of all indicators and the market grew again over the next decade. Now freely operating market, especially in the capital city region, created a structure with intensified development and a suburban zone extending across national borders. Under influence of globalization trends, new phenomena penetrated market, such as closed residential areas and central high-rise condominiums, which materialized the urban form gradient less typical in usually strictly regulated Europe (Tsenkova, 2014).

Experienced development corresponds with the hypothetical model market, where the neoclassical mechanism links demand with its use, creating investment opportunity and finally, closing the conceptual cycle, construction adapting supply side according to the signals coming from demand side. As the economy created more and higher value jobs, housing demand generated a mismatch detected and exploited by investors with free capital. Construction soon responded by resuming development allowed by coordinating local planning authorities. Since developments of public infrastructure lack such market signaling, large cities now suffer from massive daily traffic flows connecting them with suburban belts, which developed densities and extents never anticipated in the past regime preferring opposite asymmetry.

Residential property prices react flexibly to the changing situation by reducing the rate of price growth, which in turn signals caution for the investors and construction sector in prepare and implementation of new development projects. Despite a short tradition, the market proved functional (Cár, 2009) with flexibility known from more standard environments. An essential part of environment is the dominant segment of owner-occupied housing, detached from direct influence of public institutions.

A more pronounced spatial differentiation appeared in the interregional differences in development (Gajdoš, 1996; Baláž, 2007). Simultaneously with the intensifying economic performance in metropolitan centers, their housing markets also expanded faster. Bratislava region is exceptional among other regions. Significant migration flows in Bratislava together with neighbouring Trnava region. Prices in this region reach orders of magnitude higher than remaining parts of same country. Territory is heavily affected by suburbanization (Sika and Vidová, 2017). Country outside the capital region is polycentric, organized mainly around six other regional centers. Suburban zones with underdeveloped public infrastructure and intensified urban centers also appear, replicating the same patterns known from Bratislava on a lower level and delayed.

## 4 METHODS AND DATA

Interested in an empirical verification of the systemic ordering through the market process changing the housing situation in Slovak regions, a panel econometric model (Ortalo-Magne and Rady, 2006; Ferreira et al., 2010; Holly et al., 2010) proves suitable as a tool. Its basic need is to have a structured dataset continuously monitoring relevant dimensions by territorial units. We find such opportunity in the residential property prices aggregated by eight regions, and published by the National bank of Slovakia relying on collected transactions seen by real estate agents, members of a major professional association.

The residential price is an average value per square meter of property. Time series covers 18 years 2002–2019, providing 144 observations. Given developing income context of differentiated regional economies, we prefer the real estate prices in a relative form per average monthly income, thus obtaining a measure of housing affordability in the region, which adjusts for the impact of changing real value of income.

Variation in real estate price in time and space is endogenous as the market generates it on the basis of internal mechanisms linking mismatched demand and supply. On supply side, a pair of variables records the dynamics of construction development. The number of started dwellings counts building permits of local authorities. The number of completed dwellings derives from approvals ending construction work. The time series of these two variables reflecting supply side necessarily correlate, but in details their courses differ.

While at the beginning of construction we expect a direct connection with expected appreciation variation of investment in housing, completions include varying delay of time until actual use of housing. Therefore, completions are in contact with saturated demand side, correcting equilibrium in market model cycle. Similar to prices, we standardize the number of started and completed dwellings. Divided by population size of the regions in thousands of people, rate of construction intensity becomes comparable between regions of different size.

We add the impact of the economic cycle through the unemployment rate. The labor market is closely linked with demand side in our model. In the growth phase, the regional economy thrives and is more competitive, firms create jobs and hire more employees. In the phase of decline, the situation runs in reverse and regional unemployment may rise as production stagnates. Economic cycle is region-specific, links to the structure of local industry. Employees will find new jobs in another region and the regional system will gradually rebalance as migration probably has a major role in process (Henley, 1998).

Substantial part of cycle is however global. Whole economy regularly finds itself in crisis, when unemployment will rise proportionally everywhere. The regional unemployment rate will be our exogenous variable, potentially inducing an impact of the economic cycle on housing market. Given the role of migration in balancing of labour market and demand side of housing market, we extend the model with

relative migration balance, capturing the asymmetry between two directions of migration flows connecting region to other source and destination territory.

We construct panel models aiming to detect relationships between three log-transformed variables of interest, which are financial affordability of housing (*Price*), intensity of started dwellings (*Started*) and completed dwellings (*Completed*). Control variables included are economic cycle (*Unemployment*) and migration balance (*Migration*):

$$Price \sim Started + Completed + Unemployment + Migration$$

$$Started \sim Price + Completed + Unemployment + Migration$$

$$Completed \sim Price + Started + Unemployment + Migration$$

Panel model for the regions has a clear theoretical spatial structure. Housing and labor markets connect in a network of daily mobility, even if we assume significant concentration of commuting inside region's territories. Presence of spatial auto-correlation in dependent variable or residuals is in focus of Lagrange multiplier tests in the "splm" package in "R" version 4.0.3 here used for all computing (Millo and Piras, 2012; Baltagi et al., 2003; Kapoor et al., 2007).

Each region has a special socio-economic character linked to the historical development of their settlement and industry structure. In some regions metropolitan functions thrive, while others remain primarily industrial. Some are developing more dynamically and others are lagging. Over time, we also expect specific global effects of unobserved trends or events that may change the situation at housing market. We test unobserved complex qualities with a spatial panel Hausman test with fixed effects for the regions and years, against an alternative with random effects.

In the first, housing affordability model, higher property prices are hypothetically associated with higher level of construction. The effect of the expected parameters for started and completed dwellings is sensible positive and more significant for started dwellings. External factors on demand side contrast the price of real estate. Higher prices connect through a signal from higher demand as low unemployment and region's attractiveness in migration. Since unemployment in our model represents economic cycle, we also perceive its indirect impact on prices through the capital, which, if more readily available, can increase investors' willingness to choose financial commodity in housing. The effect of unemployment appears logical negative and the effect of migration positive.

In the second and third models, we are in a less transparent situation, where economic and regulatory motives interact unpredictably in realm of local politics. However, the mechanism of the response of construction to market mismatch can in principle be expected in a similar way as in the case of dynamical prices. More building permits appear with higher price level, when housing is a profitable investment choice. The price should have a positive effect. Certain connection should exist with intensity of completions, by which the market saturates temporary market disequilibrium. Due to time lag in the construction, our expectation of the direction or significance remains unclear. We expect more development activity started in the



growth phase of economic cycle and under pressure of immigration. Similar to earlier model, negative value for unemployment and positive value for migration appears in line with remaining context.

## 5 RESULTS

Panel database summarized in Table 1 was first tested for the most suitable model specification. Hausman tests in Table 2 potentially show necessity to include fixed effects for observation unit's space and time categories or whether we may use random variable approximation. In the case of price models, random specification seems proper, but not so in the case of models for two dimensions measuring development process. Test versions robust for spatial auto-correlation in data also suggest to keep fixed effects in the models.

**Table 1** Description of model variables, 2002–2019. Prices – number of average monthly wages needed for one square meter of residential property, Started – number of building permits per thousand inhabitants, Completed – number of approved apartments per thousand inhabitants, Unemployment – registered unemployment rate in percent, Migration – number of migrants moving in per one inhabitant moving out of region ( $N = 144$ )

	Mean	SD	Min	Max
Price	1.17	0.28	0.69	2.9
Started	3.52	2.34	1.15	13.24
Completed	3.7	1.97	1.3	9.66
Unemployment	10.75	5.78	1.98	24.26
Migration	1.13	0.52	0.58	2.88

**Table 2** Hausman tests for panel models. Lagrange multiplier tests and robust variants for assessing specifications with spatial structure in dependent variable (*Lag*) or residuals (*Error*). Statistical significance: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

	Price	Started	Completed
Hausman	1.206	15.704***	33.140***
Hausman lag	0.096	24.819***	2.557
Hausman error	4.396	7.900*	13.241**
LM lag	76.592***	15.611***	9.613***
LM error	61.048***	16.949***	11.201***
Robust LM lag	18.056***	0.333	0.313
Robust LM error	2.512	1.671	1.900

Dealing with spatial auto-correlation between observations requires to use spatial panel models, either as expecting spatial structure in the dependent variable

(Lag) or in the structure of model residuals (Error). Indices for choice between the alternatives are in the Lagrange multiplier tests in Table II., which, however, do not point simply to either of the alternatives. For price model, the lag specification appears suitable, and for the construction models the error is superior. We therefore decide to use three models in both versions.

Parameter estimates for the models with spatial structure in residuals in Table 3 show that each region influences surrounding area in a diffusion process. The spatial structure is found with negative auto-correlation. The growth in one place accumulates the consequences of positive feedback, competing between regions and drawing activity from its neighbors across the border between regions. This applies to both diffusion through the demand side channel (tendency to move, or commute to work and using, using services), and through the supply side channel (tendency to invest and develop new properties).

**Table 3** Models with spatial structure in residuals ( $\rho$ ) and dependent variable ( $\lambda$ ). Statistical significance: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

Spatial error	Price	Started	Completed
$\rho$	-0.247 (0.099)**	-0.225 (0.099)**	-0.234 (0.099)**
Price	-	0.366 (0.136)***	-0.059 (0.126)
Started	0.132 (0.049)***	-	0.299 (0.071)***
Completed	-0.026 (0.055)	0.362 (0.087)***	-
Unemployment	-0.003 (0.054)	-0.166 (0.090)*	-0.151 (0.081)*
Migration	0.006 (0.063)	-0.128 (0.105)	0.264 (0.093)***
Spatial lag	Price	Started	Completed
$\lambda$	-0.228 (0.098)**	-0.184 (0.095)*	-0.233 (0.095)**
Price	-	0.344 (0.134)**	-0.048 (0.123)
Started	0.124 (0.048)***	-	0.282 (0.070)***
Completed	-0.019 (0.054)	0.343 (0.086)***	-
Unemployment	0.000 (0.054)	-0.177 (0.089)**	-0.164 (0.080)**
Migration	0.000 (0.061)	-0.097 (0.102)	0.260 (0.090)***

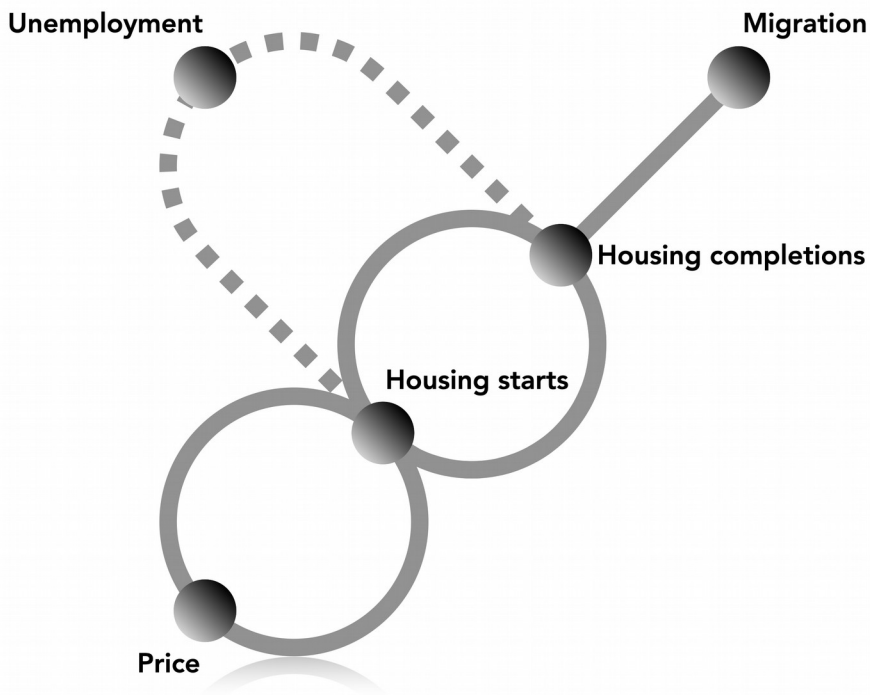
Significance of each explanatory variable appears in a differentiated structure. The price of real estate is systematically increased by housing starts intensity. More construction activity allocated in the region correlates with more expensive housing on the market considering average income. Correlation is positive, as expected. From the demand side, however, there is not a strong enough signal found, except housing starts linked by a positive feedback to affordability according to the price model. In addition, housing starts are also positively correlated with developers' project completions. Their mutual connection is found with a positive feedback. Housing starts develop under no significant influences from theoretical external factors, economic cycle and migration. We however find the effect between migration and housing completions.

The second panel of Table III. includes a different kind of spatial structure. The auto-correlated dependent variables suggest that regions influence their neighbours, except in the case of construction starts. The spatial structure is always with a negative sign ( $\lambda$ ) signaling a competitive regime. Given the resulting spillover effects between neighboring regions, each variable can't be directly interpreted. Table 4 shows iterative interpretation process. The model for auto-correlated price shows that the impact of housing starts intensity is the only systemic element, which does not exceed the borders between regions. The model for auto-correlated housing starts confirms that it relates with prices and completions, but local economic cycle becomes also statistically significant and the effect is, as we expected, negative. Higher levels of unemployment correlate with a lower intensity of the housing starts due to pessimistic expectations of investors and developers' sector. Finally, third model for auto-correlated completions illustrates a functional signaling channel on the demand side. The effect of prices is lost, but there is a positive correlation with migration, which, in addition to the negative connection with unemployment, meets again theoretical expectations. A direct influence on housing starts repeats itself, although only as an indirect effect between neighboring regions in contrast with negative effect within region's borders. More starts lead to declining completions in the surrounding area.

**Table 4** Direct, indirect (between neighboring regions) and total effects in models with spatial structure independent variable. Statistical significance: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

	Price		
	Direct	Indirect	Total
Started	0.126 (0.049)**	-0.025 (0.014)*	0.101 (0.041)**
Completed	-0.019 (0.053)	0.004 (0.011)	-0.015 (0.042)
Unemployment	0.000 (0.056)	0.000 (0.012)	0.000 (0.045)
Migration	0.000 (0.059)	0.000 (0.012)	0.000 (0.048)
	Started		
	Direct	Indirect	Total
Price	0.348 (0.133)**	-0.057 (0.034)	0.291 (0.115)**
Completed	0.346 (0.080)***	-0.057 (0.029)*	0.290 (0.073)***
Unemployment	-0.179 (0.089)**	0.029 (0.021)	-0.150 (0.076)**
Migration	-0.098 (0.105)	0.016 (0.020)	-0.082 (0.088)
	Completed		
	Direct	Indirect	Total
Price	-0.048 (0.131)	0.010 (0.028)	-0.039 (0.105)
Started	0.287 (0.073)***	-0.058 (0.027)**	0.229 (0.059)***
Unemployment	-0.167 (0.070)**	0.034 (0.020)*	-0.133 (0.056)**
Migration	0.265 (0.086)***	-0.054 (0.027)*	0.211 (0.069)***

Presented model variants clearly describe a situation, which consists of several elements in mutual functional interaction in Figure 1. Property development process in regions appears as internally consistent, supporting itself in a positive feedback loop between housing starts and completions. If the development locally spirals upwards, allocated value of properties accumulates, region becomes more wealthy in a non-linear fashion, which is often the case in similar economic processes involving multipliers. Construction and financial element of the market directly affect each other. Development process links with regional economic conditions. More competitive economies induce demand and more construction unfolds. Migration finally modifies territorial density pattern further strengthening human and social capital basis, possibly positively impacting competitiveness.



**Figure 1** Positive residential market feedback loop connects with labour market and migration flows. Solid lines illustrate positive effects, dashed lines illustrate negative effects

A contrasting situation of the complex mechanism is in economically least dynamic regions, where the same relationships between housing market elements and

its external correlations unfold in a mutually corresponding opposite direction. The positive loop now generates financial disadvantage for investors, forcing commercial development process to freeze, allowing only a low intensity of construction. Region also becomes losing its human capital through asymmetric migratory flows in cost of other regions of earlier type.

If we started this paper with observing shelter as a basic prerequisite for sustainable life strategy, an extended meaning also seems to affect whole regional communities. Without a stable market offering scale and quality of housing, it is not possible to build any meaningful networks of social capital, on which regional economy can search for a competitive endogenous development strategy. Regional development gaps remain in place and interregional sorting process continues, creating winners and losers among different parts of the same country.

## **6 CONCLUSION AND POLICY IMPLICATIONS**

We addressed the issue of space and time dimension in development at the residential market in Slovakia during the last thirty years. The housing market gradually redefined historical experience. The new system has introduced a strong individualization in housing security and commercial financing instruments, which maximize profitability of capital investment in real estate. Transition period in society and economy has created a significant deficit at the supply side of the market, which was gradually reduced in more recent conditions.

Differentiated according to market rules, supply primarily thrived in regions, cities and municipalities integrated with the labor market, regional and local economy. Within the country, this developmental phase reflects in a rapid and steady increase in spatial differentiation. Price and density gradients between attractive neighborhoods, including city centers and the periphery appear. Wide suburban zones developed around large urban centers accumulating closely related practical difficulties in mobility repeating daily.

Real estate ownership creates preconditions for intergenerational capital transfer. Differences in its quality will decide which social segments will have better starting positions in the competition for future realization, similarly to long-term market environments developing on foundation of capital. In opposition to this trend, which necessarily leaves some disadvantaged groups at a downward spiral towards poverty and dependence on market mechanism volatility, there is a range of housing policy options available. State is aware of these possibilities and declares co-responsibility for access to adequate housing for all inhabitants. At the same time it explicitly transfers the primary responsibility for housing and economic coverage of costs. It reserves support functions for the public sphere and the core of a fair transparent market competition.

The motive of profitability completely devalues housing as a service provided to users. It turns out that pure market-based environment can't support local communities with the effect of creating strong social networks between its members,

which in turn are essential for reproducing democratic and community relations of society – not subject to growing social polarization and stress about any private space at all. Leaving the market mechanism as well as a more active approach to shaping housing conditions could be a suitable ambition for further improvement of the housing market in Slovakia, whose attention is still escaping the market of “less successful” social groups, communities and regions where simply producing new housing in other than on an individual basis is not sufficiently profitable but harms society in all other dimensions.

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## **Pasca regionálneho rozvoja: Čo ak je hlavným podozrivým rezidenčný trh?**

### **Súhrn**

Naplnenie potreby bývania je základným predpokladom stratégie udržateľného života. Jeho dostupnosť a kvalita výrazne ovplyvňuje životnú úroveň a dosiahnuteľné ciele v sociálno-ekonomickej dimenzii. Bývanie spája členov domácnosti, utvára podmienky pre integráciu do komunity a signalizuje miesto v širokej sociálnej štruktúre. Bez stabilného bývania nie je možné budovať sociálne siete, ktoré pozostávajú z opakujúcich sa interakcií, náhodných každodenných kontaktov s ľuďmi, ktorých môžeme stretnúť na jednom mieste. Prostredníctvom bývania môže človek slobodne rozširovať svoju vzťahovú identitu na konkrétnom mieste.

Príležitosti na bývanie a zamestnanie sa vzájomne ovplyvňujú prostredníctvom impulzov medzi nehnuteľnosťami a trhom práce. Ľudia zvyčajne uprednostňujú prácu, ktorá im umožňuje žiť a pracovať v realistickej dochádzkovej vzdialenosti. Regionálne ekonomiky sa štruktúrujú v neustálom toku dopravy medzi miestami bývania, práce a využívania služieb. Vytvárajú sa sidelné systémy regiónov založené na priestorových interakciách. Bývanie ako ekonomický zdroj vstupuje do kvantifikácie prosperity a rastu distribuovaného v území, formuje praktické príležitosti pre obyvateľov. Hoci neoklasický model trhu s bývaním predpokladá, že nerovnováha prejavujúca sa nedostupnosťou komodít pre celé sociálne segmenty bude časom korigovaná trhovým mechanizmom, v praxi pretrváva silná diferenciácia bohatstva. Bytová situácia interaguje s inými dimenziami sociálno-ekonomického postavenia. Domácnosti vo výhodnejších podmienkach majú vždy dostatok síl uspieť vo voľnej súťaži, stať sa obyvateľmi atraktívnych štvrtí, kde hodnota rastie.

Ich majetok sa časom hromadí, čím sa posilňuje konkurencieschopnosť vlastníkov. Majitelia si môžu zaobstaráť aj ďalšie bývanie, určené na rekreačné využitie alebo generujúce vyšší príjem z prenájmu. Historický rozmer vlastníctva nehnuteľností sa uzamyká v pozitívnej spätnej väzbe s medzigeneračným presahom. Ľudia pochádzajúci z triedy vlastníkov nehnuteľností zdedia vo svojej generácii výhodné východisko do ďalšej súťaže a proces akumulácie pokračuje. Nestálosť trhu potom môže ovplyvniť ich bohatstvo, ale nemá žiadny vplyv na existenčnú stránku ich života. Vlastníctvo majetku je historicky výhodná životná stratégia, ktorá ponúka vysokú mieru ekonomickej istoty.

V tomto článku sa zameriavame na slovenský regionalizovaný sektor bývania a jeho rozvíjajúci sa trh. Zasadili sme ho do kontextu vysvetlenia trhu neoklasickou ekonomikou a jej rovnovážnym modelom. Očakávame, že model sa môže ukázať ako analyticky užitočná štartovacia platforma. Našou hlavnou obavou je hypotetická, priama pozitívna súvislosť medzi trhovou produkciou a priestorovým rozvojom nerovností – reprezentovaná štandardnou mierou nezamestnanosti. Okrem toho venujeme pozornosť aj časovým a priestorovým vzorcom zakódovaným v dostupných skúsenostiach posledných troch desaťročí vyvíjajúcej sa postkomunistickej spoločnosti.

Vlastníctvo nehnuteľností vytvára predpoklady pre medzigeneračný transfer kapitálu. Rozdiely v jej kvalite rozhodnú o tom, ktoré sociálne segmenty budú mať lepšie východiskové pozície v súťaži o budúcu realizáciu, podobne ako dlhodobé trhové prostredie rozvíjajúce sa na kapitálovej báze. V protiklade k tomuto trendu, ktorý nutne ponecháva niektoré znevýhodnené skupiny na zostupnej špirále smerom k chudobe a závislosti od nestálosti trhových mechanizmov, je k dispozícii celý rad možností bytovej politiky. Štát si je vedomý týchto možností a deklaruje spoluzodpovednosť za prístup k adekvátnemu bývaniu pre všetkých obyvateľov. Zároveň explicitne prenáša primárnu zodpovednosť za bývanie a ekonomické krytie nákladov. Verejnej sfére vyhradzuje iba podporné funkcie.

Motív ziskovosti znehodnocuje bývanie ako službu poskytovanú užívateľom. Ukazuje sa, že čisto trhové prostredie nedokáže podporovať lokálne komunity s efektom vytvárania silných sociálnych sietí medzi svojimi členmi, ktoré sú zasa nevyhnutné pre reprodukciu demokratických a komunitných vzťahov spoločnosti – nepodliehajú rastúcej sociálnej polarizácii a stresu o vôbec nejaký súkromný priestor. Opustenie trhového mechanizmu, ako aj aktívnejší prístup k formovaniu podmienok bývania by mohli byť vhodnou ambíciou pre ďalšie skvalitňovanie trhu s bývaním na Slovensku, ktorého pozornosť stále uniká trhu „menej úspešných“ sociálnych skupín, komunit a regiónov, kde sa jednoducho produkcia nových bytov na inom ako individuálnom základe nie je dostatočne zisková, ale zato poškodzuje spoločnosť vo všetkých ostatných dimenziách.