Public Rental Housing as Middle-Class Entitlement? Economic Analysis of the Slovak Public Rental Housing Policy

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ABSTRACT *The article explores economics of public rental housing policy in Slovakia. Our principal research question is: why has construction of such housing not succeeded in activating rental market and labour mobility? The secondary question is: does the policy ensure that public housing projects are economically meaningful and well-targeted? Four case studies were examined to determine who bears the costs of housing construction and whether disadvantaged groups benefit from the public housing subsidies. We show that there are no constraints pushing for targeted allocation to lower-income families. With proper calculation of costs, municipalities allocate housing, but share only a small percentage of the costs and bear risk of rent non-payment. The current framework thus provides incentives for local governments to prefer indefinite leases to middle-class tenants. Therefore, it is simply owner-occupied housing in disguise, but there is a substantial subsidy compared to market cost of housing – approximately 50%.*

KEY WORDS: Housing policy, social housing, Slovakia

JEL CLASSIFICATION: H23, H42, H53

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Introduction

Shelter is, together with food and clothing, one of the essential material needs of any human being (Nussbaum, 2000). It is therefore not surprising that governments tend to be heavily involved in housing provision – directly or indirectly. In practice, efficiency and effectiveness of government housing policies is a common problem. For example, mortgage interest rate subsidies in many countries (usually delivered through the tax code) have been criticized (e.g. Duca *et al.*, 2010) as both wasteful (redistributing to middle- and upper-income households) and malignant (fueling the price bubble).

Slovakia is a small nation in Central Europe that was, until 1989, part of the Communist bloc. During the 1990s, as a part of the transition from communism to market democracy, the Slovak government sold nearly the entire rental housing stock to its current inhabitants with the result that only a fraction (2-4%) of housing stock became public rental housing (Whitehead & Scanlon, 2007, p. 91; Pittini & Laino, 2011, p. 72 -73). This extremely low ratio has implications not only for social inclusion, but also for the labour market. International organizations, such as the European Commission (EC) or the Organisation for Economic Co-operation and Development (OECD), have repeatedly urged Slovakia to ensure better supply of rental properties to stimulate labor mobility (OECD, 2012, p. 117; Vagac, 2013).

While the Slovak government has, in the last two decades, subsidized various housing schemes, the longest and most consistent policy is the provision of subsidies to municipalities to build public rental housing (Suchalová & Staroňová, 2010). As we will see, public rental housing has represented 10-30% of new housing units built in Slovakia over the last decade. Nonetheless, there are no easily observable effects on supply of rental housing or mobility. In this paper we are going to explore this puzzle and conduct a first in-depth analysis of how the policy actually works.

We find that as soon as public housing rental units are finalized, they are essentially taken off market by indefinite leases to individuals or families with a right to purchase at the end of a 30-year rental period. Why would municipalities pursue such a seemingly self-defeating policy: using their own as well as government funding to provide what is, from an economic point of view, essentially a publicly subsidized owner-occupied housing rather than a true rental?

Using four case studies of specific central government-subsidized projects of public rental housing built by municipalities, we demonstrate that once a true accounting of all

explicit and implicit costs is taken into consideration, municipalities tend to have surprisingly little of their 'skin in the game', with central government and tenants bearing the brunt of the cost. Other incentives faced by municipalities point them to permanent 'safe' middle-class tenants. We also show that, at least in one case, it would make more economic sense to convert existing properties to rentals rather than build new property.

The paper consists of six sections. After this introduction, we briefly present relevant information from the literature on public rental housing policy and the brief overview of the Slovak public rental housing policy. Explanation of research methodology follows, together with presentation of data and their analysis. The conclusion brings it all together.

Public Rental Housing Policy

The housing market usually consists of several submarkets, among which publicly subsidized housing exists. Government regulations of the private market or the creation of a separate market aim to ensure that certain households have access to housing at prices that are below market value (Shing, 2011). Government attempts to influence the affordability of the shelter can have various effects. There is a research that examined the effect of the residential mobility of poor families and school mobility. Crowley (2003) on the US case shows that the lack of affordable housing for the lowest-income households contributes to housing instability, resulting in frequent moving and changing schools, which has serious implications for students' academic performance. Similar results were found by Nichols & Gault (2003). Epple *et al.* (2010) argue that the production function for housing has a central role in urban economics and local public finance and contributes significantly to the explanation of how households and firms sort in an urban economy.

As for the affordability of housing, Quigley & Raphael (2004) states that it arises from two factors – income and house prices and rent. The rent can be influenced by the quality (including the effectiveness of the construction and maintenance) and/or quantity of housing provided by the government, as well as by the type of financing (e.g., the amount of the public subsidy). As far as the financing is concerned, Whitehead & Scanlon (2007) define the following three sources:

- rental income from current tenants,
- borrowing, which both incurs current interest costs and must be repaid in the future; and
- payments from others – including other tenants past and present; owners of housing and/or land; employers; and particularly government.

The applied form of financing usually influences the level of rents in the public rental housing, although it might not be the only criterion to set the level of rent. Four approaches can be identified in this area (Whitehead & Scanlon, 2007):

- rents according to the real rental costs, i.e. the ‘cost-based’ approach;
- rents according to the utility value of the dwelling;
- rents according to the income level of the tenant;
- rents in relation to rents in other sectors.

An overview of rent determination methods in selected European Union (EU) countries is indicated in the following table.

Table 1. Rent determination methods in selected EU countries^a

Country	Social Housing	Private Housing
Austria	Cost-based.	Also cost based; private are at least 10% higher than in social sector.
Denmark	Cost-based. 3.4% of building cost + bank charges. In 2005, average costs represented €6.67/m ² /month.	The rent in private sector is also regulated. On average, it reaches the value of €6.83/m ² /month.
Germany	In some regions the level of rent varies with household income. The average rent is €4-7/m ² /month.	Landlord can freely determine the level of rent, but its increase is regulated.
France	Cost based related to estate or owner; central government decrees maximum rents (vary by region).	Landlord can freely determine level of rent, but its increase is regulated. The rent in private sector is on average 30-40% higher than social rents.
Sweden	Set by annual negotiation between landlords and tenants.	The level of rent in private housing is limited by the level of rent in social housing. However, in general private is slightly higher.
Netherlands	The level of rent depends on dwelling value and target household income level. On average it reaches €353/month.	The level of rent in private sector is controlled and on average reaches the value of €419/month.
Hungary	Local authorities decide the level of rent.	Market based.

Ireland	Tenants pay certain percentage of income as rent. The average value of rent is €155/month.	Market based.
United Kingdom	The level of rent depends on tenants' incomes and the dwelling value, under the condition that the rent must cover outgoings.	Market determined for properties let since 1988.

Note: ^aWhitehead & Scanlon (2007).

Ivanička (2006) distinguishes two types of rent. European Union countries use either so-called equilibrium, or economic rent, or cost rent (France, Sweden, Finland, the Netherlands) or socially regulated rent (Germany, Spain). The equilibrium rent corresponds to total costs related to the operation of an estate (the total costs of owning and renting out the real estate) plus the return from the capital invested into the estate. The socially regulated rent does not suffice to cover the operating costs of the housing project because it is regulated in order to be accessible for lower-income segments of population. The operation of the housing project depends on subsidies. Some countries use the combination of both approaches (Belgium, Luxembourg, Portugal). Rent determined by market prices is relatively rare (Italy, Austria). The level of market rent is set by negotiation between landlords and tenants and it also reflects the relationship between demand and supply as well as the quality of housing.

In Slovakia, the main financial instrument to support building of public rental housing is the State Fund for Housing Development (SFRB). Created in 1996, it has stepped up its activities since 2000 when the government approved a set of specific housing programs (SFRB, 2013). In 2003, it survived a culling of state funds as one of only two state funds. The currently relevant official government document is the Housing Development Program (Ministry of Construction and Regional Development of the Slovak Republic, 2006b),¹ but the basic outlines of public rental housing policy have not changed much since 2000. The program is a part of the complex housing policy. It sets the basic goals of the state in housing stock development. The program specifies the rules for providing subsidies for the acquisition of rental housing units, preparation of construction sites and the construction of technical facilities as well as the removal of systemic defects of apartment blocks. The Ministry of Construction and Regional Development of the Slovak Republic² and the State Fund for Housing Development are the main subsidy providers on the level of the state. The entities that can apply for a subsidy include municipalities, city districts or non-profit organizations

established by the state. The subsidies are financed by the state budget and their provision is conditioned by the fulfillment of specified criteria, such as that the apartment's tenants bind themselves not to exceed the income ceiling at the level of the triple of the subsistence minimum over the duration period of the tenancy agreement, or they are demonstrably a severely disabled person.³ The municipalities are responsible for the construction of public rental housing units.

According to Kremský (2009), 2000 to 3000 municipal rental apartments are built in Slovakia annually. It is approximately 13% of all new-built apartments. A basic overview of the public rental housing units in Slovakia is provided by the following table.

In January 2011, the Act on subsidies for the development of housing and social housing came into force in Slovakia. It defines social housing itself as well as persons eligible for social housing.⁴

Table 2. Proportion of municipal rental housing units out of the total number of those completed, 2001–2009

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Proportion of municipal rental housing units in % ^a	10.4	16.9	28.4	12.1	13.7	14.8	19.1	15.3	12.2

Note: ^aMinistry of Construction and Regional Development of the Slovak Republic (2009).

Social housing is legislatively defined here as acquired with the use of public subsidy and intended to provide adequate housing that preserves human dignity for persons who cannot afford housing by their own means. Such housing must fulfill basic housing functions. The definition also includes housing provided on the basis of the Act on social services or the licensing Act.⁵

According to the Outline of the rental housing policy valid until 2015 (Ministry of Construction and Regional Development of the Slovak Republic, 2010), the social housing category includes:

- rental apartments in public rental apartments sector including small-sized apartments intended for young families. Only households with the defined level of income can apply for the housing;⁶

- apartments and other forms of housing for households with low income and for groups with special needs, such as apartments for people in social hardship with severe disability, single parents that take care of minors, families with multiple children, persons after institutional or protective care, people who have problems with social inclusion, and homeless people;
- lower standard apartments intended for marginalized groups of residents;⁷
- apartments for the elderly; the funding options and selection of future tenants will take their income level into consideration.

The aforementioned shows that the Slovak definition of public rental housing has a rather wide scope and does not precisely define the low income social categories that are eligible for subsidized shelter and the system of the rent setting. It allows for a broader group of citizens to apply for public rental housing and it also allows local governments to exercise the power to set the rents and select the tenants.

Research Questions and Methodology

There are a number of state government programs that provide housing subsidies in some form in Slovakia; despite their importance, no empirical economic analysis has been performed to evaluate the success of such programs. Our principal research question is: why has all the construction of public rental units not succeeded in activating rental market and mobility? The secondary question is: does the government housing policy ensure that public housing projects are economically meaningful and well-targeted? To answer both questions, we researched four specific issues:

- Are public housing expenses targeted at those who are otherwise incapable of securing their own housing?
- Who carries the costs of the house construction – Slovak taxpayers, inhabitants of the given town or the tenants themselves? In other words, what is the allocation of costs among these groups?
- How significant is the benefit of public rental housing that the tenant receives in comparison to the market prices?
- Does the housing project fulfill the criteria of minimal economic meaningfulness? In other words, is the market price of the new-built house at least at the level of the construction costs?

The given questions will be answered on the basis of economic analysis of specific rental housing projects in four Slovak municipalities – Bratislava, Šamorín, Liptovský Mikuláš and Levoča. In each, one construction project of a public housing was identified and the three questions stated above were answered both holistically and partially (for individual groups of housing units within).

The data collection was carried out within the theses supervised by the authors on the basis of unified methodology. This study evaluates and compares the collected data.

Question 1 regarding the choice of the tenants and rent determination is answered on the basis of:

- The analysis of the individual municipalities' criteria for the tenants and the process of selection.
- The identification of the pattern used by individual municipalities for determining the rent in public rental houses.

Other questions were analyzed on the basis of determining the total costs of the projects and their division among individual actors. In general, the analysis follows the principle of including the opportunity costs besides the explicit costs. For example, if the municipality uses its own piece of land, its market price is considered at the time of construction. The principle of the time value of the money is applied as well.

When analyzing the construction costs and the input of individual actors, we use the relation:

$$TC = C_N + C_S + C_O \quad (1)$$

Where: TC = total costs; C_N = tenants' costs; C_S = state's costs; C_O = municipality's costs

The total costs of the rental housing procurement in our analysis TC include all costs related to the preparation and construction of the housing units. Key items include:

- The costs of acquiring the land: the purchase price paid by the municipality for the land on which the object was built or the market price of the land for if it was owned by the municipality
- The costs of construction and installation of the distribution networks. If they are already in place, their market price is included in the land price. If they did not exist yet, the construction and installations costs were calculated.
- Preparation of the project design documentation

- Construction costs up to the final building approval, including the costs put in by the provider (municipality), if they can be quantified.

On the other hand, the maintenance costs of the housing units/housing projects and the services linked to housing were not considered, since in all the analyzed cases, such costs are covered by the tenants in the full amount – there is no subsidy from either side.

After determining the total costs, the investment of the tenants C_N was calculated as the sum of all discounted future payments of the basic rent during the time of the presumed rental period (30 years; after 30 years, tenants are entitled to purchase the housing unit for the residual value):

$$C_N = \sum_{i=1}^{30} N/1 + (1+r)^i \quad (2)$$

Where N = rent value and $r = 5\%$

The total state's costs C_s are determined as a sum of the explicit subsidy S_{SFRB} and the subsidies arising from low interest rate of a state loan for the municipality. The subsidy arising from the favorable interest rate will be calculated as the difference between a discounted value of the loan by the State Fund for Housing Development and a discounted value of all payments of the municipality back to the fund.

$$C_S = S_{SFRB} + \sum_{i=1}^{30} \frac{\frac{L_{SFRB}}{\langle \{1 - [1/(1+i_D)^n]\} / i_D \rangle} - \frac{L_{SFRB}}{\langle \{1 - [1/(1+i_{SFRB})^n]\} / i_{SFRB} \rangle}}{(1+i_D)^n} \quad (3)$$

Where i_D = interest rate of the subsidy on the market; i_{SFRB} = state discount rate; S_{SFRB} = explicit subsidy by the state; $S_{SFRB} = L_{SFRB}$ = loan from the State Fund for Housing Development; n = number of rent payments.

In all four cases, the state provided an explicit subsidy for the construction of an apartment house as well as a subsidized 30-year loan with the interest rate of 1%. According to the calculations, the interest rate subsidy represents the larger part of the total state subsidy.

The municipality's costs C_O are calculated by subtracting the state's C_s and tenants' costs C_N from the total construction costs of the rental housing facility. The total amount of public subsidy is the sum of the subsidies by the state and the municipality.

$$C_O = TC - (C_N + C_S) \quad (4)$$

In order to answer the questions about the relationship of the market value and the living costs, an estimate of the market price of the apartment houses and parcels must be obtained. The estimated prices of apartments/land in the area issued by the local real estate companies were used for this purpose. The price of land is calculated as a multiple of the price per square meter and the total area. The price of the apartment house is calculated as the price of individual types of housing units multiplied by their respective number in a given housing project. The benefit for the tenants in public rental housing can be determined as a difference between the market rent in the area and the total rent that is paid in the apartments.

In order to compare the present-day and the future incomes/costs, the time value of the money must be taken into account. Standard methodology was used to recalculate all revenue and costs to the current value through discounting to obtain the model of the net present-day value. Determining the optimum discount rate for the public investments, as the economic theory lacks consensus on the issue was a more difficult task.

The authors of early studies (Arrow & Lind, 1970; Samuelson, 1964; and Vickrey, 1964) argue that the discount rate for public investments equals the interest rate for risk-free assets. Their key argument is that the systemic risk of the public investment is zero from the point of view of the society as a whole. The government also invests in a high number of various projects and it is, therefore, able to diversify risk to a larger extent than the private investors.

However, more recent studies, such as Bazelon & Smetters (1999), Lucas & Phaup (2007), Sandmo (1972) argue that the costs and yields of the public investments should be discounted by the market interest rate, which was used for similar private sector investments. Since the market interest rate reflects individual preferences with respect to preferences of time and risk, discounting by a different interest rate for the public investments would lead to investing in the projects of lower quality (in terms of the recovery of investment).

Looking at the examples of the practices used by the decision-makers, the U.S. federal government used a discount rate of 10% up to 1992 and has been using a discount rate that equals the interest rate for the government bonds with the date of maturity identical to the investment horizon of the project ever since. In the Slovak case, following problems with the application of this method are listed below:

- 30-year bonds, which would correspond to the investment horizon of the rental housing units, have not been issued by the Slovak Republic. The longest bond

maturity is 20 years (bonds issued in 2006) and 10-year bonds are much more common.

- The interest rate of government bonds over the last five years has shown a considerable volatility due to the world financial crisis as well as the limited size of Slovak market.

Consequently, we decided to choose the discount rate arbitrarily, taking the interest rates of the state bonds with various terms of maturity and a presumed flat profit curve into consideration. Discount rate was set at 5% for the time interval of 30 years. The rate is a little lower than the interest rate for the given time interval would be (which is another reason the state never issued them).

Case Studies – Data and Analysis

The research is conducted on the cases of four public rental houses in four Slovak towns – Bratislava, Šamorín, Liptovský Mikuláš and Levoča that were built between 2006 to 2009. The four cities represent all four regions of Slovakia (the capital, Western, Central and Eastern Slovakia) and they also represent cities of different size and prosperity.

As the most dynamic and the biggest housing market in the Slovak Republic, the capital Bratislava has a significantly low share of public housing. The analyzed project is one of the exceptions. It is placed in one of the more prominent residential areas (Dlhé diely), at Hany Melíčkovej street 11. Its construction was completed in 2007. The part of the house with housing units has 90 flats (58 one-room, 20 two-room, and 12 three-room) (Bognárová, 2010).

Levoča is a historical town (registered on the UNESCO world heritage list) with 14.5 thousand inhabitants. The town is located in a severely deprived region of North-East Slovakia. We analyzed a rental house built in 2009 at the Rozvoj city quarters. It has 20 housing units and spans 1429.92 m² overall (Bonková, 2010).

Šamorín is a town 25 kilometers from Bratislava that recently became a suburban area. The construction of the rental house studied in Šamorín was finished in 2006. The house has 12 housing units with a total floor area of 679 m². It is located on municipality-owned land.

Liptovský Mikuláš is a town with 32.5 thousand inhabitants placed in Central Slovakia. The town's social-economic situation had been decent until the crisis began. A rental house with 22 housing units built in 2007 at the Pltnícka street was analyzed there (Paulínyová, 2010).

Allocation of Public Rental Housing

We commence with our analysis of the decision-making process for allocating public rental housing and the rules for rent determination.

We analyzed the methods of rent calculation (on an annual basis). The results are shown in Table 3. We found that the uniform method for calculation used resembles the ‘cost-based’ model where the rent is calculated from the construction price of the particular building. However, it has been discovered that this price does not include costs such as the price of the land if it was owned by the municipality. The rental cost is 2.5% – 3.75% of the official construction price on annual basis, which should generally lead to repayment of most or all of the cost of construction during the period of 30 years of rental (of course ignoring interest costs).

Table 3. Method of rent calculation

Town	Method of rent calculation
Bratislava ^a	2.5 % of the official flat construction price
Levoča ^b	3.75 % of the official flat construction price
Šamorín ^c	3 % of the official flat construction price
Liptovský Mikuláš ^d	2.73 % of the official flat construction price

Notes: Authors based on data from ^aBognárová (2010).

^bBonková (2010).

^cBizub (2010).

^dPaulínyová (2010).

The criteria that have to be met by the applicant to gain access to the rental housing were also examined. While the criteria differ somewhat, there are some common features:

- Emphasis on young people/starters (explicit age census in Levoča, criterion of not owning or renting housing in their own name in other cities)
- upper limit on income (triple of minimum wage – equivalent to 120-130% of the average wage)
- exceptions to the upper income limit in case of people who contribute to the city development – a vague and wide-ranging exception (Bratislava, Liptovský Mikuláš)
- bottom limit on income or assets (120% of minimum wage in Bratislava, need to deposit 7 monthly rents as a permanent deposit in Levoča, no debt vis-à-vis municipality in Šamorín)

- In Bratislava and Liptovský Mikuláš, potential applicants do not have to be socially dependent. However, in Levoča and Šamorín, the conditions are stricter and the municipality targets the local socially dependent groups.

Finally, our analysis has shown that the examined towns use an identical method when allocating public rental housing. Specifically, the mayor makes the decision based on the recommendation of a relevant committee of the city council (different cities have different committees – housing or social committees, which consist mostly of councilmen, can also have external members elected by the council). Therefore, there are essentially no limits on discretion of the city officials.

We now continue with the financial analysis, starting with the question: How do various actors contribute to the cost of housing provision? We include three types of actors: tenants, the municipality and the state. The answers differ, but some common patterns arise (Table 4).

Table 4. Distribution of the investment costs

Subject	Bratislava ^a		Levoča ^b		^c Šamorín		^d L. Mikuláš	
	Sum/ €	% share	Sum/ €	% share	Sum/ €	% share	Sum /€	% share
State	924434	13.2	592018	47.9	195493	39.1	364380	46.3
Towns	476873.5	68	15453.6	1.2	56317	11.3	-	-2.6
Tenants	1307194.1	18.7	629040	50.9	248111	49.6	443725	56.3
Total	6978501.6		1236511.6		499921		787522.9	

Notes: Authors based on data from ^aBognárová (2010).

^bBonková (2010).

^cBizub (2010).

^dPaulínyová (2010).

Except for Bratislava, the cities have a small share in financing, even though they are the owners of the houses and decide on the allocation of the housing units. The tenants contribute with approximately half of the housing costs in Šamorín, Liptovský Mikuláš and Levoča, but the contribution is much lower than half in Bratislava. In other words, while municipalities take on the ownership and management risk by borrowing from the state, building the housing and then letting it to tenants, they do not bear the subsidy cost of the project if they can find the tenants. Given the difficulty of dislodging non-paying tenants,⁸ this strengthens the incentives of the municipalities to minimize rent-paying disruptions and find middle-classed tenants that are guaranteed to pay (Suchalová & Staroňová 2010).⁹

From the tenants' point of view, if tenancy is granted on an indefinite basis (prevailing situation in the four case studies Bonková, 2010; Bizub, 2010; Bognárová 2010; Paulínyová 2010), there is a legal right to purchase the apartment after 30 years (Ministry of Construction and Regional Development, 2006).

From an economic rather than a legal point of view, tenants essentially become partial owners since they:

- Can use the apartment
- Their tenancy cannot be terminated if they pay the rent
- Have a right to purchase after 30 years

From an economic point of view, the only limitation on their property rights is inability to sell the apartment balanced by the fact that they do not have to make any down payment, but only pay a stream of rents during the 30-year period (Ministry of Construction and Regional Development, 2006).

What is the Actual Subsidy to Individual Tenants?

What is the actual subsidy to tenants? There are two potential approaches to the issue. The first is based on the costs of the construction. Table 5 shows that all the rental houses were built using a public subsidy. However, the share of the subsidy in the total cost per square meter differs for each case. The highest subsidy was received by the inhabitants of the Bratislava dwellings (€1037) and the lowest by the inhabitants in Liptovský Mikuláš (€289). The difference is caused not just due to the difference in the rent but also due to the difference of subsidies donated by the particular municipalities. For instance, Liptovský Mikuláš has not contributed with a subsidy. This situation can arise due to the discrepancy between the interest rate paid by the town to the state and the discount rate used in the present analysis. The state

subsidy per square meter is not precisely the same, but it is less volatile in comparison with the municipalities' subsidies.

The second point of view is based on the paid rent. Tenants in the rental houses pay lower than market rents, as the following table demonstrates. The highest benefit in comparison with the free market was received the tenants of public rental dwellings in Bratislava.

In Bratislava, tenants bear approximately half of the costs while their rent corresponds to 36% of market rent price of a 1-room flat, 48% market price of a 2-room flat and 62% of 3-room flat. In Levoča and Šamorín, tenants bear approximately half of the costs and their rent represents approximately half of the market price of the rent. For Liptovský Mikuláš, the rent is between 30 and 50% of the market rent, but the construction subsidy is around half of the overall budget.

Table 5. Public subsidies

Town	State subsidy (€)	Town subsidy (€)	Public subsidy (€)	Public subsidy (€) per m ²	State subsidy (€) per m ²	Town subsidy (€) per m ²
Bratislava ^a	924 434 (13.2%)	4 746 873 (68%)	56 713 075	1239	201.9	1037.1
Levoča ^b	592 018 (47.8%)	15 453 (1.2%)	607 471	424.8	414	10.8
Šamorín ^c	195 493 (39.1%)	56 317 (11.3%)	251 810	370.9	287.9	82.9
Liptovský Mikuláš ^d	364 380 (46.3%)	- 20 582 (-2.6%)	343 797	289.9	307.2	-

Notes: Authors based on data from ^aBognárová (2010).

^bBonková (2010).

^cBizub (2010).

^dPaulínyová (2010).

On average, it appears that the public subsidy and the difference between market and regulated rent are around 50% of the total, but there are wide differences (Table 6). Therefore, tenants are recipients of significant public subsidies regardless of the methodology used.

Does it Make Economic Sense to Construct Public Rental Housing?

Another relevant question is whether construction of new public housing makes sense as an efficient way of providing public rental housing. We want to check whether it would make more economic sense to convert existing properties to rentals rather than build new property.

We specifically ask the following questions: Does construction lead to destruction of resources? In other words, does it lead to a situation in which the market price of the built housing project is lower than its construction costs?

Table 6. Public rent benefit in comparison with the market prices per month

Flat type	Rent in the public housing (€)	Market rent (€)	Subsidy (€)
Bratislava ^a			
1-room	133.9	365.1	231.2
2- room	205.3	431.5	226.25
3- room	310.4	497.9	187.5
Levoča ^b			
1- room	110	220	110
3- room	172.37-184.61	350	165.39-178.51
Šamorín ^c			
2- room	109.13	185.5	76.37
2- room	117.36	199.5	82.14
3- room	132.8	225.75	92.95
Liptovský Mikuláš ^d			
1- room	59.68	220	160.32
2- room	113.26	290	176.74
3- room	152.79	300	147.21

Notes: Authors based on data from ^aBognárová (2010).

^bBonková (2010).

^cBizub (2010).

^dPaulínyová (2010).

Table 7. Influence on the market price of public rental housing

Town	Market price of the rental housing project	Total construction costs	Difference	Destruction of the value
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Bratislava ^a	8 320 000	5 934 020.1	2 385 979.9	No
Šamorín ^b	689 185	438 278	250 907	No
Levoča ^c	831 028.58	1 226 613.43	- 395 584.85	Yes
Liptovský Mikuláš ^d	1 377 879.50	787 523.04	590 356.46	No

Notes: Authors based on data from ^aBognárová (2010).

^bBonková (2010).

^cBizub (2010).

^dPaulínyová (2010).

Results are presented in Table 7 above. We see that, for 3 out of 4 cases, the market price of the housing is higher than total construction costs and with a significant margin. However, in Levoča, the market price of the building was significantly lower than the costs of its construction at the moment when the construction finished. The market value represented $\frac{2}{3}$ of the construction costs. The total sum of costs for construction of this rental housing project was €1 236 613.43, whereas the market price was €831 028.58 (Bonková 2010).

In other words, if the decision-maker had wanted to offer similar housing to particular families, he or she could have saved $\frac{1}{3}$ of the costs through purchasing an existing apartment building on the real-estate market.

Conclusion

Subsidizing construction of public rental housing has been a keystone of Slovak housing policy for over more than a decade, with the intention to spur labor mobility and social inclusion through better availability of more rental properties. There does not appear to be any evidence of the policy's success. To the best of our knowledge, we conduct the first analysis of how the policy actually works in practice, which explains what happens and why.

The analysis used four case studies of municipal rental housing built in the Slovak Republic in 2006-2009. The public housing projects were selected to represent different types and sizes of settlements, geographical location and social-economic situation. Their common characteristic is the financial subsidy provided by the state.

Our principal research question is: why has all the construction of public rental units not succeeded in activating rental market and mobility? The secondary question is: does the government housing policy ensure that public housing projects are economically meaningful and well-targeted? To answer both questions, we researched four specific issues:

- Who is eligible for public rental housing and what is the decision-making process?

- Who bears the costs of the house construction – national government, local government or the tenants themselves?
- What is the actual subsidy to individual tenants?
- Does it make economic sense to construct public rental housing rather than purchase / rent existing housing stock? In other words, is the market price of the new-built house at least at the level of the construction costs?

Overall, we found that the current set-up provides incentives for local governments to prefer indefinite leases to stable middle-class tenants and limited constraints counterbalancing these incentives. The primary incentive is that municipalities bear the risk of non-payment by tenants and eviction difficulties, but they share only a small percentage of the overall cost if the rent is paid.

The level of subsidy compared to market cost of housing is significant and, on average, represented around 50% of the cost. Combined with the right of purchase by tenants, this policy effectively provides highly subsidized de facto owner-occupied housing for lucky middle-class individuals and families.

In one out of four case studies, there was a perverse outcome with construction costs considerably higher than the market price of the newly-built housing. This indicates that distorted incentives can lead to decisions that do not make economic sense since it would be more efficient to purchase or rent existing housing.

Notes

- ¹ The program was approved in September 13, 2006 by the Slovak government resolution no. 752 (Ministry of Construction and Regional Development of the Slovak Republic, 2006). It was supplemented by a resolution No. 1000 in November 12, 2007 (Ministry of Construction and Regional Development of the Slovak Republic, 2007).
- ² During the abrogation of the Ministry the competence was shifted to the Ministry of Economy (SME, 2010).
- ³ The Housing Development Program allows exceptions in allocation of housing to the specified target groups. For instance, 10% of the flats will be assigned to individuals whose monthly income is higher than a triple of the minimal living wage if these individuals conduct communal, healthcare, cultural, economic or social work for the municipality.
- ⁴ The Act no. 443/2010 about Subsidies for Development of Housing and about Social Housing, The National Council of the Slovak Republic (2010).
- ⁵ *Ibid.*
- ⁶ The Act no. 443/2010 defines a person eligible for the social housing according to the income level as ‘a person living in a household with a maximum monthly income up to triple the amount of the subsistence minimum’ or a person living in a household with maximum income up to quadruple the amount of the subsistence minimum, if 1. member of the household is a person with severe health disability; 2. it is a household of a lone parent with a dependent child; 3. at least one member of the household secures healthcare, education, culture or protection for the residents of the municipality. Furthermore, a person whose institutional care, substitute personal care, foster care or special guardian care ended up according to specific legislation; if the person is not more than 30 years old or a person

- living in a household with a substitute apartment for an apartment issued given out according to a specific legislation; if the person is not older than 30 years; person who receives housing substitution for the dwelling obtained according to a specific act (National Council of the Slovak Republic, 2010).
- 7 According to the Outline of the rental housing policy valid until 2015 (The Ministry of Construction and Regional Development of the Slovak Republic, 2010), marginalized groups are indicated by 'complete social exclusion as a consequence of loss of home, long-term unemployment, drug addiction, insufficient social adaptability etc.' In a Long-term housing policy for marginalized groups of inhabitants issued on the basis of resolution of the Slovak government no. 397 (Government of the Slovak Republic, 2004), members of a marginalized group are indicated by 'complete social exclusion due to several factors such as loss of home, long-term unemployment, drug addiction, insufficient social adaptability, membership of a certain ethnic group in regions with high unemployment rate, marginal position of the whole settlement etc. Considering all the social signifiers including housing, members of excluded Roma communities are the most numerous and specific marginalized group in Slovakia.
 - 8 For instance, the owner of the housing unit is obliged to find alternative housing for the dislodged tenant. See the National Council of the Slovak Republic (1992), Law no.189 on the regulation of some conditions associated with renting apartments and housing refunds).
 - 9 The ability of tenants to pay the housing costs is the second most frequent requirement of Slovak municipalities (Suchalová & Staroňová, 2010). For complete statistics of tenants' selection criteria in the Slovak Republic see Suchalová & Staroňová (2010). As mentioned earlier, municipalities are entitled to allocate an apartment to tenants whose monthly income is higher than a triple of the minimal living wage according to the Decree of the Ministry of Construction and Regional Development of the Slovak Republic No.V-1/2006 on grant allocation for housing development (2006).

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