Development of Costs of Living in the South Moravian Region of the Czech Republic, and Affordable Housing

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Abstract. The paper focuses on analysis of the development of the costs of living of the South Moravian households in the period of 2008–2014, throughout which there was noted an apparent increase. The paper analyses the structure of costs, changes of the shares of the partial components (rent, electricity, gas, heat and hot water), and comments on the changes. Taking into account the development of incomes of the households the paper presents a calculation of the impacts of possible governmental support for two key social groups requiring attention of the society – young people below 35 years of age, and retired people over 65 years of age. This calculation comes from the current structure of costs, and compares the conditions of two different levels of mortgage (100 % and 70 % of the price of a flat) without any support, with the development of costs under the conditions of governmental support in the form of subsidy for "entry housing" currently amounting for CZK 600 thous. (EUR 22 thous.), which shows to be on the edge of comparability with rental housing.

Keywords: Housing policy · Costs of living · Household incomes · Affordable housing · Structural changes of costs of living · Entry housing

1 Introduction

Strategic goals set forth by the Lisbon strategy [1] include "modernizing the European social model, investing in people and combating social exclusion". This is further addressed by country strategies, and also projects into the approaches regional and municipality representatives adopt in order to achieve this goal, and to promote social inclusion.

Housing represents one of the key issues for young people and their families, i.e. those without a credit history or sufficient savings for a down payment. As far as the right to adequate housing is included (even though indirectly) in the basic human rights [2], the European social charter [3] binds national governments to "support economic, legal, and social protection of family life through such measures as family subsidies, tax measures, providing housing for families, support of newlyweds, and other suitable measures".

This paper aims on examination of the real situation related to this right looking at the situation of NUTS III region of South Moravia, where it examines the income and living costs conditions, and shows the impacts of the current policy on the availability of affordable housing. Considering the potentially endangered groups (young people below 35 years of age with the income lower than 0.8 multiple of the median income in the country), the population in South Moravian region represents about 24 % of households (43 thousand).

Compared with other European countries, the situation of the Czech Republic is not bad. Looking at the overcrowding indicator, Czech Republic ranked 22nd within the EU countries, in 2012 [4]. What represents certain risk, though, is the structure of costs households spend, and share of the rents on the total costs of living, where there are some notable differences.

Rents represent the major part of the housing costs in the EU, but in the Czech Republic they only account for some 21 % [5].

Czech households spend about 18 % of their income on direct costs connected with housing [5], but concerning the overall housing costs, they are on the top of EU (together with Slovakia), spending 26 % of their incomes [6].

Table 1. Structure of housing costs of South Moravian households [CZK per month per household]

	2008	2009	2010	2011	2012	2013	2014
Household net incomes	23 418	24 793	27 762	29 424	29 370	30 206	30 368
Housing costs of which:	4 333	4 824	5 006	5 199	5 398	5 596	5 574
- rent	917	1 047	1 141	1 179	1 207	1 230	1 147
- electricity	1 164	1 294	1 341	1 389	1 434	1 486	1 433
- gas	784	911	857	898	960	1 015	1 394
- heat and hot water	598	644	700	715	738	762	602
- Other	870	928	967	1 018	1 059	1 103	998
Hous. c. [% of income]	16.2	16.5	16.7	17.3	18.2	18.6	17.8
Rent as % of hous. c.	21.2	21.7	22.8	22.7	22.4	22.0	20.6

Source: CZSO [5]

According to the McKinsey Global Institute [7], the accessible housing policy has to come from a rational set of criteria – their setting on a high level can rather deepen the problem than solve it.

Another complicating factor is that the housing market has to be approached as a whole due to the fact, that a transfer of higher income groups to new flats/houses opens the housing capacity for the lower income groups [8]. Job distance and service availability can also represent a risk factor – the policy should not lead to creation of isolated communities of lower-income citizens [9].

2   Materials and Methods

Given the aim of the paper, the author comes from the data on the housing costs in South Moravia, current governmental support of accessible housing, and current interest rates of mortgages in the Czech Republic, projecting it to the reality of households, and their spending under selected model situations.

This study comes from the generally defined and used standard of total costs of housing amounting for max. 30 % of the household income [7]. Given the data in Table 1, this standard is met in the current situation of an average South Moravian family.

Criteria used in the model (see Tables 1 and 2):

– Maximum monthly income of the target group (0.8 multiple of the income median) – CZK 24 294.
– Actual monthly housing costs – CZK 5 574.
– Acceptable share of housing costs on the household income – 30 %.
– Acceptable monthly costs of housing – CZK 7 288.
– Average price of new flat – CZK 34 759 per square meter.
– Target area of a new flat – 40 m^2.
– Mortgage interest rate – 3.00 % [5].
– Governmental support – CZK 600 000 [3].

Table 2. Input data

Average price of new flat [CZK.m^{-2}]	34 759
Median income [CZK per month]	30 368
80 % of the median income [CZK per month]	24 294
Acceptable costs of housing [CZK per month] (30 % of income)	7 288
Average interest rate of mortgage [%]	3

Source: CZSO [5]

Based on these indicators, there is calculated the projection of the current conditions into the situation of the households, and compared with the target values of the maximum acceptable housing costs for the target group. Modelled situations include:

1. Full mortgage.
2. Necessary mortgage with the governmental subsidy for accessible entry housing currently amounting for CZK 600 000 [3].
3. Entry housing subsidy minimum – calculated as the amount, under which the monthly costs of a 30-year mortgage still enable to keep the housing costs on the target level (30 % of the household income).
4. Entry housing subsidy maximum – calculated as the amount, under which the monthly costs of a 15-year mortgage still enable to keep the housing costs on the target level (30 % of the household income).

After this analysis, there is done a projection of the development of the income and cost situation in the next two years (till 2016), under the conditions of their continual change amounting for the geometric average of the development in the previous 7 years (2008–2014), and the situation is re-considered.

3   Results and Discussion

Description of the current situation based on the model criteria is given in Table 3. This shows that the current level of governmental support of entry housing (CZK 600 000) does not reach the level of accessibility required by the given criteria of keeping the costs under 30 % of the household income for a 40 m^2 flat, unless the households have at least CZK 112 thous. (711 567 – 600 000) of their own savings for a down payment. Given the average price of new flats in 2013 (CZK 34 759 per square meter of a new flat [5]), the current support represents a significant help, but does not enable to reach the set targets even under the conditions of a 30-year mortgage. This would be reached only if the support is increased by 18.6 % - to CZK 711 567, as shown in Table 3.

Table 3. Resulting situation of the model application under different mortgages

	40 m^2 * 34 759 CZK. m^{-2} = CZK 1 390 360			
Repayment period [years]	15	20	25	30
Full mortgage	CZK 1 390 360			
Monthly repayment	9 602	7 711	6 593	5 862
Total costs of housing	15 176	13 285	12 167	11 436
Difference against acceptable costs	7 660	5 769	4 652	3 920
Entry housing subsidy of CZK 600 000	CZK 790 360			
Monthly repayment	5 458	4 383	3 748	3 332
Total costs of housing	11 032	9 957	9 322	8 906
Difference against acceptable costs	3 516	2 442	1 806	1 391
Entry housing subsidy minimum (CZK 711 567)	CZK 678 793			
Monthly repayment	4 688	3 765	3 219	2 862
Total costs of housing	10 262	9 339	8 793	8 436
Difference against acceptable costs	1 826	903	358	0
Entry housing subsidy maximum (CZK 975 953)	CZK 414 407			
Monthly repayment	2 862	2 298	1 965	1 747
Total costs of housing	8 436	7 872	7 539	7 321
Difference against acceptable costs	0	−563	-896	−1 114

Source: Own calculations

Given the average growth of household incomes of 4.43 % in the previous 7-year period, and the average growth of the housing costs in the same period reaching 4.29 %, the situation should be slowly improving (given that the incomes are expected to grow faster than the costs). Therefore, the minimum level of support required to reach the set conditions would decline to less than CZK 647 thous. in 2016 – see Table 4.

This calculation comes from the stable costs of new flats, which is not realistic, though. Development on the construction market, on the other hand, is difficult to predict, as far as the number and character of the variables is further complicated with potential influence of regulatory forces and public administration measures in connection with construction of blocks of flats designated for the entry housing.

Described situations represent impacts of a selected set of criteria, which have to be discussed. When determining the needed amount of support, governments have to come from the income situation, calculate the acceptable share of housing costs, and based on the market conditions decide on the minimum required support. This is influenced by the type of housing, its construction or purchase costs, and the overall situation on the market, considering also a possible involvement of the governments in the house construction and facility management. There are numerous ways how to approach this issue, and the calculations in this paper can serve as a model providing methodology of a part of the calculations.

Table 4. Expected development in 2016

Flat price	$40 \text{ m}^2 * 34\ 759$ $\text{CZK. m}^{-2} = \text{CZK } 1\ \ 390\ 360$			
Repayment period [years]	15	20	25	30
Entry housing subsidy minimum (CZK 646 745)	CZK 743 615			
Monthly repayment	5 135	4 124	3 526	3 135
Total costs of housing	11 197	10 186	9 588	9 197
Difference against acceptable costs	2 001	989	392	0
Entry housing subsidy maximum (CZK 936 379)	CZK 453 981			
Monthly repayment	3 135	2 518	2 153	1 914
Total costs of housing	9 197	8 580	8 215	7 976
Difference against acceptable costs	0	−617	−982	−1 221

Source: Own calculations

4 Conclusion

This paper focused on examination of the situation in affordable housing in South Moravia, where it examined the income and living costs conditions, and showed the impacts of the current policy on the availability of affordable housing. It concluded, that the current governmental support of initial housing does not assure meeting the

conditions of enabling the target group to reach affordable housing under the conditions of housing costs lower than 30 % of their household incomes.

When determining the target group of support beneficiaries, there are four necessary steps governments have to take [7]:

– Defining target group – in this paper the young people below 35 years of age with the income lower than 0.8 multiple of the median income in the country.
– Defining eligibility criteria – not considered in this paper.
– Defining ranking mechanism – not considered in this paper.
– Determining the support beneficiaries obtain – main focus of this paper.

Determination of the amount of support is shown under the described assumptions, which can be easily changed and "re-modelled". One of the key components of a smart city – smart living [9] – also has a dimension of enabling an affordable housing, which was addressed in this paper.

When looking at the technical issues and innovations, we cannot forget about the socio-economic impacts of the new solutions, and their possible (and very welcome) assistance in addressing the emanating problems. As far as the customer focus is very much applicable also in these conditions, innovative approaches to addressing the mentioned issues become a very important opportunity – technological opportunities enable closer involvement of customers in designing the solutions, so that an overall satisfaction is reached. In this connection we can mention an apparent connection of housing policy with other items of smart cities [10] – Smart government (Information, communication and technology enabled government; Participation and corporation of citizens to the government), Smart utility (Efficient use of utilities), Smart economy (Public private partnership, Highly productive and sustainable economy), Smart environment (Renew and recycle), Smart living (intelligent living).

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