



W14 – East European Housing & Urban Policy

Regional differences in housing availability and affordability in the Czech Republic and in Croatia

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Keywords:

/Abstract/

This paper presents results of comparative research of current housing issues in two transitional counties, in the Czech Republic and in Croatia. In the first part of the paper authors outline briefly housing policy programmes and housing policy framework as a background for analysis and comparisons. Relationships, division of power between central and local housing policy authorities and the extent of local policy measures are part of analysis.

The analytical part of the paper aims to answer the questions whether there is any significant difference in physical housing conditions and in access to housing (i.e. in housing availability) between Prague and the rest of the Czech Republic, and similarly, between Zagreb and the rest of Croatia. The differences in housing affordability in these capital cities and in the regions of both countries were also examined. For the purpose of analysis of housing availability, housing affordability and regional differences we used 'standard' indicators, such as the number of existing dwellings per 1.000 inhabitants (in Prague and in the Czech Republic; in Zagreb and in Croatia); average dwelling floor space per inhabitant; average number of rooms per inhabitant; the comparison of size of the households; the structure of existing housing stock according to the number of rooms; price-to-income ratio, price-to-earnings ratio and others. The results for both countries were compared and discussed.

Preliminary findings show that housing availability in other regions of countries is similar to capital cities. Affordability is more important issue in capitals then in regions. In case of Croatia in some costal areas affordability is emerging issue. In case of the Czech Republic the affordability of housing in Prague is significantly lower than in other regions despite the higher income level of households living in the capital.

Introduction

Comparative research as one of the well-established research method provides in generally information about similarities or differences of phenomena or processes at miscellaneous levels (i.e. time-based comparisons, comparisons among different geographical locations etc.). Information based on comparative research is usually easy to interpret and present to broader public and such information is therefore often demanded from journalists, politicians and other public and private bodies. Such demand could be stronger in areas that are not subjects of international coordination (or even unified legislation) and may show lack of comparable data. That is the case of housing as the area in almost exclusive jurisdiction of EU countries. The importance of comparative research in housing could be supported by effort of many national or international institutions to gather comparable data about housing stock (UN, World Bank, CECODHAS, Eurostat, national “housing” ministries¹ etc.), residential property prices (European Central Bank, OECD, Bank for International Settlements), mortgage “industry” (European Mortgage Federation), building savings “industry” (European Federation of Building Societies) and other areas connected with housing. Despite such effort some studies (e.g. Borio & Lowe 2002, Artur 2006, Tsenkova, 2006, and others) stress the lack of comparable data disposable for more effective housing research.

The information based on reliable comparative housing research was and still is very important for housing policy-makers in transitional countries. The transition from state-controlled to more or less market-oriented economic system was in most of the post-communistic countries shaped by combination of ‘good examples’ adopted from developed countries and applied more or less successfully to specific national conditions and unique approaches developed by housing policy practitioners ‘in site’. The demand for above mentioned ‘good examples’ was naturally strongest in the beginning of 1990s due to the lack of experience and the need to establish “some” system and gradually decreased during the later stages of the transition process. One of the reasons of such decrease was the knowledge that simple transfer of instruments ‘out of context’ led often to unexpected and even undesirable outcomes (e.g. introduction of housing savings scheme in the Czech Republic).

The significant differences in legal, economic, societal and other conditions between the developed and transition countries led in the late 1990s and in the beginning of 2000s in transitional countries to growing demand for comparisons among countries with more relevant context, i.e. among transitional countries². Whereas it is possible to find a range of comparative studies addressing different issues connected to housing for developed countries, the comparative housing research in transitional countries was especially in 1990s rather limited. Existing studies or articles were limited in the scope and/or in their geographic range (studies comparing some issue among more than three countries were rather exceptions). The reasons were quite obvious – missing comparable data, continuous changes in housing policy conditions, emerging housing research connected with the lack of publications available in English (i.e. useable for the purpose of comparisons), missing international research networks etc.

The latest comparative studies in housing research (especially for transitional countries) stress more or less the importance of appropriate context information (similar information in different context could mean something completely different³), the need for individual openness

¹ Publication ‘Housing Statistics in the European Union 2004’ prepared by the National Board of Housing, Building and Planning in Sweden in cooperation with the Ministry for Regional Development of the Czech Republic could be mentioned as one example.

² Following latest comparative studies could be stated as examples: Lux (ed.) 2003, Donner (2006), Hegedüs and Struyk (eds.) 2007 etc.

³ We can state as example the data about the extent of social housing sector in the Czech Republic. According to some sources almost 20% of the total housing stock in the Czech Republic could be considered for social housing. They include to social housing all municipal rental flats with regulated (i.e. not market) rent and some of them also flats owned by co-operatives. If we will understand under social housing sector only part of the housing stock: a) that was built with the use of public finance, b) where some kind of rent regulation is applied (either cost-based rent or income-related rent), and c) flats are allocated according to the social need of potential occupants (i.e. not through market-based mechanisms), then the share of social housing in total housing stock in the Czech Republic (CR) will be significantly

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(avoiding of trying to prove conclusions formulated beforehand), the need of international networking and reliable local informants, etc.

We aimed to keep all the above mentioned trends in mind by drawing this paper. The goal of this paper is to describe the differences in housing availability and affordability between capital cities and other regions in Croatia and in the Czech Republic. The description is extended in relevant contextual information about the background and factors explaining the above mentioned differences.

It is apparent from Table 1 that GDP per capita in PPS in the Czech Republic is 24% higher than in Croatia. Unemployment rate of 11.2 in Croatia is significantly higher than 7.1 in Czech Republic. These two indicators influence housing market dynamic in different aspect. Inflation in Croatia is higher for 0.7 than in Czech Republic. While, there is no bigger difference in share of housing expenditure from the state budget.

Table 1: Macroeconomic indicators – Croatia and Czech Republic

	Croatia	Czech Republic
GDP per capita in PPS (current prices), 2005	13,137	17,285
Unemployment rate (%), 2006	11.2	7.1
Inflation rate (%), 2006	3.2	2.5
Interest rate (Lombard rate, Czech National Bank), %, 2007	7.5	3.75
Share of housing expenditures from the state budget on GDP (%), current prices, 2006	0.7*	0.8

*Estimation without accurate figure of housing money of the war victims.

Following text is divided into three chapters. First chapter contains basic description of methodology used to evaluate housing availability and affordability in regions of Croatia and the Czech Republic.

In the second chapter are first briefly outlined the most important changes in housing policies that each country undergone during the 1990s and in the beginning of 2000. This chapter provides also information about institutional structure and competences of central and local governments in the housing policy. Following sub-chapters deal with the evaluation of housing availability and affordability in capital cities and whole countries.

The last chapter concludes and presents basic comparison of results for both countries.

Methodology

In a number of developed economies the concept of housing affordability has gradually become an useful instrument used to evaluate the housing conditions. While in the post-war period housing policymakers emphasised the issue of the availability of housing, after the resolution of the housing shortage and subsequent redefinition of housing targets the interest of theoreticians and practitioners shifted toward the affordability of housing. One of the most frequently quoted definitions of financial affordability of housing says that “Affordability is concerned with securing some given

lower than the above presented figure. Most of the municipal rental flats in the CR were allocated before 1989 without proving of the social need of their occupants. According to reserach studies (Lux et al. 2003) in municipal rental flats with regulated rents were represented to the same extent households with lowest income per consumption unit (household from the lowest income decile; consumption unit were calculated according to OECD equivalence scale) and households with highest income per consumption unit (households from the highest income decile). For social housing according to the above mentioned definition could be considered only existing municipal housing, that was vacated and rented out again during the transition for regulated rents to those in need (by very rough estimate about 6,000 flats), only that new municipal housing that was constructed since 2003 when the programme of the Ministry for Regional Development stopped to be abused (about 7,000 flats), supported housing (2,568 flats) and housing with social care (7,500 flats). So its share on the total housing stock is marginal (less than 1 percent).

standard of housing (or different standards) at a price or a rent which does not impose, in the eyes of some third party (usually government) an unreasonable burden on household incomes.” (MacLennan and Williams 1990:9, quoted in Hui 2001)

In the analytical part of the paper we will focus first on the availability and second on the affordability of existing owner-occupied housing in the Czech Republic and in Croatia. We aim to analyse the differences in availability and affordability of housing between capitals and other regions in both countries and to discover factors lying behind these differences.

Housing availability can be characterised by set of quantitative indicators of the housing stock like number of dwellings per 1,000 inhabitants, number of dwellings per household, average number of persons per 1 room, average total or living area per person etc. Other indicators are related to the quality of the housing stock (e.g. share of dwellings equipped by basic amenities, share of dwellings according to the year of construction or reconstruction etc.). Calculation of such indicators is usually based on the Census data or data gathered through similar large-scale surveys of the housing stock. The disadvantage of similar large-scale surveys is the fact that it can be repeated only after quite long time period. The information based on the surveys is therefore rarely up-to-date.

Affordability issue is often studied using specific indicators which measure the costs of the acquisition of new or existing owner-occupied housing (usually they take the form of credit repayments for the acquisition of owner-occupied housing) and the income level of households. Thus, they do not address the actual ratio for households living in the ownership sector, instead measuring the affordability of owner-occupied housing for households entering the owner-occupied housing market.

The following indicators have been used to measure the affordability of existing owner-occupied housing and its development in the Czech Republic and in Croatia:

- the value of the ratio between the average price of existing dwelling and the total net annual income of a household (**price-to-income ratio**). The indicator is often used for comparative purposes and states how many annual incomes (or average net earnings) a household needs to acquire average existing housing (flat).
- the value of the ratio between the average price of existing dwelling per square metre and the average net monthly earnings (**price-to-earning ratio**). The indicator states the multiple of average net earning person needs to acquire 1 square meter of an average existing dwelling.

Housing policy changes and state-of-the-art of the housing policy in Croatia and in the Czech Republic

Following chapter provides basic information about cardinal changes of housing policies in Croatia and in the Czech Republic during transition period as a background for further analysis. The institutional structure, division of power between central and local governments and most important housing policy programmes are mentioned.

Croatia

The most significant segment of the housing reform in 1990s in Croatia, is like in the other transitional countries (Hegedüs, Mayo, Tosics, 1996) with certain exceptions of the Czech Republic and Poland (Lux ed., 2003) the sales of public housing. This project was initiated in mid 1991, when 25% of households were holders of tenancy rights in public housing.

By the end of 2004 the overall number of 317,831 apartments with tenancy right were sold. Out of this number 197,852 (62.2%) were sold by instalments and 116,305 (36.6%) with one-off payment. The average sold apartments were 59 m² and have been purchased at 10% of the market prices.

The process of sales of the public housing was a long-lasting and conflict process without adequate follow up or evaluation. The sales of public housing was not a segment of housing policy taking into account that the funds received are actually used for purposes provided by the law. The funds received were directed in construction of social housing only by a lesser number of towns. By amendments to the law the various social groups benefited from this in a socially non transparent way.

The sales of public housing resulted in significant changes of the housing tenure structure (Table 1). In the beginning of 1990s the share of public/social housing was 24%, mostly located in larger towns. In Zagreb share of that stock was even 45%.

Table 1: Housing Tenure Structure in Croatia and in Zagreb 2001

Housing Tenure	Croatia		Zagreb	
	Households 1,477,377	100.0%	Households 275,464	100.0%
Homeownership	1,225,235	82.9	222,697	80.8
Private renting	49,259	3.3	11,742	4.3
Social housing	42,195	2.9	9,630	3.5
Renting part of the flats	12,570	0.8	2,630	0.8
Housing with relatives	110,008*	7.5	23,375	8.5
Others	38,110	2.6	5,731	2.1

Source: Census, 2001.

*Professionals from Statistical Office think that 60% of these are on the private rental market.

The Croats have become a nation of homeowners with an extremely low share of households living in social housing, in fact housing with controlled rent. The tenure structure is similar in country with capital. In the existing structure of social housing some 4,500 households have a particularly unfavourable status, because they were previously holders of tenancy rights in privately owned flats, however they were not able to buy the apartments. Their position of socially excluded people, they are under the pressure of owners to live these flats, is related to unwillingness of the government to deal with such hot issue.

The institute of housing allowance in Croatia was inherited from the socialist period. Only 1.8% of households in Croatia are beneficiaries of the housing allowances, and if the fuel allowance is included, as a separate program administrated on the level of counties, it can be assessed that some 2.4% of households exercise these rights (Bezovan, 2006). This housing policy instrument has in Croatia is not so spread if compared with the other Central and Eastern European transitional countries (Hegedüs, Teller, 2005), (Lux, Sunega, 2006).

In general, the share of social housing in the housing stock is marginal what contribute to the fact that housing allowance programme is residual. Apart of it the rents for these apartments are very low. By the end of 2005 they amounted to HRK 1.56/m², they were raised by the Government to HRK 2.36/m² (0,32euro). The low rents are not sufficient even for maintenance of these apartments. Some towns consider the sales of these apartments what would make social housing programme additionally marginal. The housing allowance system is a very marginal part of social care system, purely designed evidently to provide assistance to needed households and to secure decent living standards to them. It is a part of the safety net on the local level very much dependent on political will of local politicians.

The system of housing savings was introduced in Croatia in 1998 with foreign technical support. A citizen is entitled to the annual premium amounting 25% from the deposit up to maximum limit of HRK 1,250 for the deposited HRK 5,000. Due to previous unfavourable experience with savings in national currency and high inflation the citizens, concerned for the value of deposits, rarely chose the housing savings. Since mid 1998 the hard currency clause, saving is in

HRK recalculated in Euros, was introduced in the housing savings system. After that the number of savers in housing savings banks considerably increased.

Following the discussions of efficient use of the State Budget funds in 2005 the state incentives were reduced for all contracts in 2005, amounting to 15%, i.e. HRK 750 per saver having HRK 5,000 annually deposited in the bank. There were no debates about efficiency and effectiveness of this programme in terms of its contribution to housing demand and policy of meeting the needs of households.

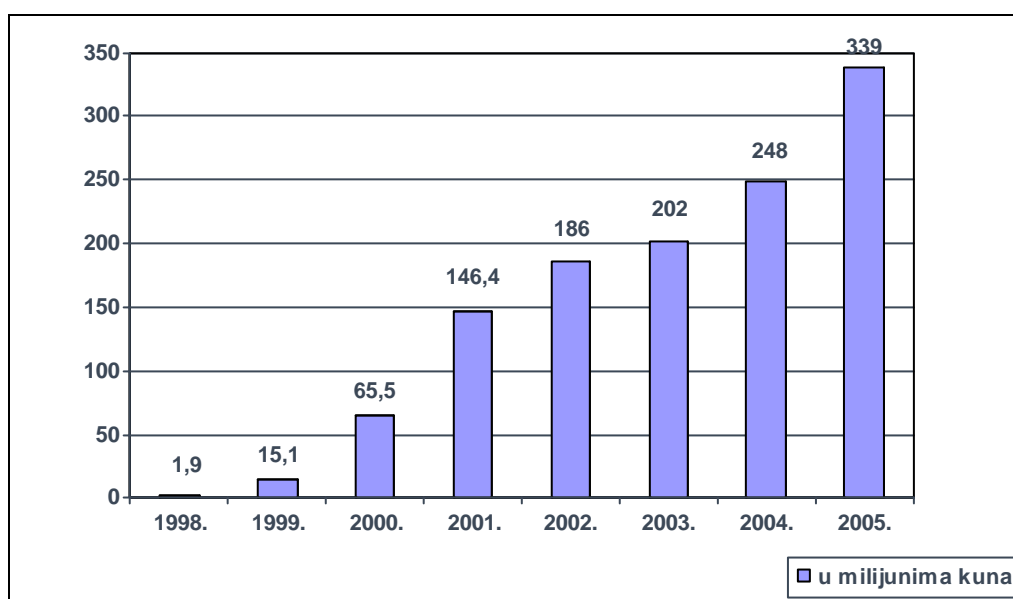
The savings loans are granted for purchasing of apartment or family house, construction of apartment or family house, reconstruction, adapting or repair of apartment or family house, purchasing and utility installation on the building site. The amendments of the Act from 2005 extended the use of the loans also for acquiring of the equipment of the apartment or the family house.

Upon the certain savings period and achieved savings amount the housing savings banks approve loans having in mind the debt servicing capability of savers and also the purpose of the loan needs to be positively assessed.

In early 2007 five housing savings banks were operating in Croatia. The first housing loans under this programme were approved during 2000. The amount of the state subsidies for housing saving shows an upward trend (see Figure 1). Ending with 2005 the amount of HRK 1,203.9 million was allocated from the State Budget for housing savings in total.

In the period of adoption of the Act the loans provided by housing saving banks were with respect to the interest rates competitive with the loans provided by the commercial banks. However, the housing loans provided by commercial bank soon achieved the same or even lower interest rate, achieving thus the priority in housing financing (Tepus, 2006). By the end of 2004 the overall numbers of 631,097 housing saving contracts were concluded in Croatia. The savers mostly raise small amount loans for the purpose of reconstruction and adaptation of housing facilities. By the end of 2004 the housing savings banks have approved only 1.7% of the overall approved housing loans in Croatia. According to research carried out by Tepus (2006) the potential housing savers complained over the long compulsory savings period from two to five years, the citizens would like to take the loan as soon as possible. The citizens complained over the high fees, which are not regulated, imposed for concluding a housing savings contract. Apart of it the citizens emphasize that the low standards of living and low incomes do not provide for housing savings.

Figure 1: Amount of state subsidies for housing saving from the State Budget (millions of kunas)



Source: Ministry of Finance

In early 2000 the Government has launched the Programme of State Supported Housing Construction with the maximum price of apartments amounting to EUR 910/m². The local governments provide the building land under this project and bear the costs related to utility infrastructure and connection to infrastructure. The local government may provide or finance the funds for coverage of the part of building costs. The overall share of local government may not exceed 30% of the respective building costs in the sales price of the apartment.

The investor in this project is the Agency for Transactions and Mediation in Real Estate, i.e. the Government of the Republic of Croatia. The buyers of the apartments provide their down payment, amounting to the minimum amount of 15% of the value of the apartment, 45% is provided by the loans of commercial banks, the remaining 40% from the funds of the State Budget and the local government.

In purchasing the apartments built under the Programme the priority is given to first-time buyers who will use the apartments for the purpose of housing. The buyers of apartments must have debt servicing capability for raising the housing loans.

The loan repayment period may not exceed 31 years. Buyers pay the interest on the value of public funds comprised in the price of the apartment is calculated at the interest rate of 4-4.5%.

By the end of 2006 the overall number of 3,491 apartments have been built under this programme. Out of this number of apartments 41.5% were built in Zagreb, 7.7% in Zadar, 5.9% in Varaždin, 5.4% in Rijeka and 39.5% in the remaining 59 places in country. The possibility was provided to support the building of family houses under the programme, however due to the complex administrative procedure no demand for such loans was recorded.

Top-down approach dominantly marked this programme in preparation and implementation. Recently government changed legislation offering partnership to local authorities in case if they set up non-profit organisation for implementation of the programme.

In early 2007 the Government has initiated the procedure of amending the Act by which the prices of apartments were increased to EUR 970 due to the land prices increase. The amendments to the Act were proposed, according to which the buyers of these apartments would be liable to repayment to the state of the subvention amounts up to the market price of the apartment during the 10 years period in case of the sales of these apartments.

The bigger towns build a restricted number of social housing under ad hoc programmes or distribute existing social housing units for this purpose. Under by-laws social criteria, like, level of income, number of children and disability of family members provide lists of households entitled to get social housing. As an example, during the last 15 years city of Zagreb annually provided about 100 social housing units.

The crisis relating to refugees and displaced persons was mostly connected with the issue of providing the housing for this population. These groups became later the returnees facing the issue of housing as the major issue. Also, war veterans got certain privileges related to housing. In the period since 1997 to august 2006 the overall numbers of 5,473 apartments for Homeland War victims have been built. The public scandals were frequently recorded referring to low quality of building standard under this programme, as well as to the clientelistic features of this programme. This programme, in one way, we can consider as a part of social housing programme. .

The housing tax incentives were introduced in Croatia in recent years. Not earlier than in 2003 the tax incentive i.e. 5% exemption for tax on property transactions was introduced for first-time buyers of apartments used for the purpose of housing.

The tax incentive was introduced by which the investment in purchasing or building of a house or apartment or investment maintenance of the housing, including the interest of special purpose housing loans were recognized as tax deductible expenditures for income tax.

The incentive for payment of market rent is stipulated as well. That is, the physical persons (residents) are also entitled to tax benefits if they pay income tax on the base of evidence paid market rent. All these and other tax deductibles are limited to overall amount of HRK 12,000 per year.

The above mentioned housing programmes in Croatia, i.e. sales of public housing, housing savings, state supported public housing construction and tax benefits are mostly designed for middle classes (Bezovan, 2004.). Real power for design and implementation of the programmes are in the hands of the Government and housing policy making process doesn't involved relevant stakeholders.

Housing allowance and social housing, as instruments for low-income population, are very marginal parts of housing policy. For vast majority of towns these responsibilities are perceived as a task of without political priority.

Institutional framework and division of power between central and local governments

Housing policy infrastructure, in terms of existence of efficient and responsive state administration on different levels dealing with housing, is underdeveloped. Having in mind capacity of respective ministry (Ministry of Environment, Urban Development and Construction) dealing with housing issues and readiness of city administration to take incentives in local housing policy, for the first in land policy and urbanisation issues, it can be stated that state has a problem to build up a framework for the modern housing policy. Housing allowance system, as a part of social care, is under the responsibility of Ministry of Health and Social Care.

Housing market outputs

The number of newly built apartments in Croatia shows declining trend since 1981 and low number of apartments built during the 1990-es will have a long-term impact on the housing standards. The decelerated increase of the newly built apartments is connected with the issue of denationalization of the building land, as well as the inefficient urban development planning.

Table 2: Number of newly built flats for permanent housing in Croatia and in Zagreb in period 1991-2005

Year	Croatia		Zagreb	
	Number of flats	Index	Number of flats	Index
1991	12,623	100	4,740	100
1992	7,767	62	2,813	59
1993	8,343	66	2,162	46
1994	9,710	77	2,417	51
1995	7,359	58	1,906	40
1996	12,624	100	1,784	38
1997	12,516	99	2,118	45
1998	12,557	99	2,245	47
1999	12,175	96	2,482	52
2000	15,988	127	2,530	53
2001	12,580	100	2,580	54
2002	18,047	143	3,341	70
2003	17,877	142	4,627	98
2004	18,763	149	4,015	85
2005	19,995	158	4,771	100.6

Source: Statistical Year Books.

Increase of the number of newly built housing units since 2002 is result of more active policy of banking sector providing more favourable housing loans in term of repayment conditions and interest rate level. Outstanding housing loans are 15% of GDP and from 2000 it increase it high then increase of GDP.

State supported programme of housing construction also contribute to increased housing production. Increased housing production is connected also to the attractiveness of investment in real property especially at the coastal area.

Housing availability in Croatia and in Zagreb

Table 3: Number of dwellings and Dwelling Space of Permanently Occupied Housing and Housing Standard in Croatia and in Zagreb, 2001

Permanently Occupied Housing	Croatia	Zagreb
		1,421,623
Flats with Families	1,409,039	264,905
Dwelling Area per Unit in m ²	74.6	66.7
Households Number	1,455,116	272,920
Number of Households Members	4,355,359	746,171
Number of Occupied Housing per 1,000 people	326	363
Average Area per Person in m ²	24.1	23.7
Number of Rooms per Dwelling		2.5
Number of Household Members per Flat	3.1	2.8
Number of Dwelling per 100 Households	97.7	99.4
Housing Units Temporary Inhabited	12,584	6,278
Other Inhabited Places which are not Housing Units	2,812	386
Number of Households in these units	2,823	372
Total number of persons	7,494	790

Source: Census 2001, Statistical Year Books.

From the Table 3 it is clear that housing units are smaller in Zagreb then in the country. It is connected with the structure of housing stock in Zagreb where we do see big proportion of smaller flats. Number of occupied housing per 1,000 inhabitants is higher in Zagreb then in Croatia. In fact, there is no difference for the indicator of average area per person. Household size is significantly lower in Zagreb 2.8 the in Croatia 2.8. Comparing basic indicators from Zagreb with Croatia there is no problem with housing availability.

There is no difference between the structure of ownership of permanently occupied housing in Zagreb and in Croatia, Table 4. Housing stock in ownership of legal persons, in fact the local authorities, are very small flats, and 19% of that stock is located in Zagreb. Beside that, average space of these units in Zagreb is rather small and according to the figures from company responsible for maintenance critical issue is a poor living standard in this part of housing stock. Related to the room numbers of housing stock situation in the country is better then in capital. One and two rooms flats in Zagreb makes 56.7% of housing stock, while for Croatia it is 45.6%. In average, housing units in Croatia is a bigger for 8.4 m² then in Zagreb.

Table 4: Ownership and Room Number of Permanently Occupied Housing in Croatia and in Zagreb, 2001

	Croatia			Zagreb		
Permanently Occupied Housing – Total	Number of Housing Units 1,421,623	Average in m ² per Units 74.4	Percent 100.0%	Number of Housing Units 271,183	Average in m ² per Units 66.2	Percent 100.0%
Ownership:						
Physical Person	1,365,650	75.2	96.1	260,547	66.9	96.1
Legal Person	55,973	55.2	3.9	10,636	49.8	3.9
Room numbers:						
1-room	178,852	34.1	12.6	47,693	32.3	17.6
2-rooms	468,813	54.2	33.0	106,134	53.2	39.1
3-rooms	396,831	74.6	27.9	70,069	72.8	25.8
4-rooms	269,449	103.7	19.0	33,241	102.6	12.3
5-rooms	77,519	144.6	5.4	9,982	144.5	3.7
6-rooms	22,458	164.0	1.6	3,002	170.0	1.1
7-rooms	4,459	210.0	0.3	628	222.5	0.2
8 and more room	3,132	277.3	0.2	434	293.8	0.2

Source: Census 2001, Statistical Year Books.

Table 5: Equipment of Permanently Occupied Housing in Croatia and in Zagreb, 2001

Permanently Occupied Housing- Total	Croatia		Zagreb	
	Housing units 1,421,623	100.0%	Housing units 271,183	100.0%
Housing units with:				
– WC	1,272,344	89.5	266,529	98.2
– Bathroom	1,256,698	88.4	262,942	97.0
– kitchen	1,409,247	99.1	267,009	98.5
Housing units with:				
- WC, bathroom, kitchen	1,229,976	86.5	259,422	95.7
- kitchen, WC, without bathroom	26,846	1.9	2,772	1.0
- only kitchen, without bathroom and WC	121,973	8.6	3,441	1.3
- without kitchen, bathroom and WC	4,986	0.4	844	0.3
- other combinations	37,842	2.7	4,704	1.7
Housing units with facilities:				
– electric power	1,414,274	99.5	270,877	99.9
– water-supply	1,331,431	93.7	268,404	99.0
– sewers	1,318,594	92.8	268,921	99.2
– central heating	514,386	36.2	192,102	70.8

Source: Census 2001, Statistical Year Books.

As it was expected, equipment of permanently occupied dwellings in capital is on higher level than in the country. In the country 11.6% housing units are without bathroom, while in Zagreb it is mark for 3% of housing units. In Croatia 10.5% of housing units are without WC and in Zagreb 1.8%. In two counties share of housing units without bathroom are double higher than in the country average and in only six counties this share is smaller than country average. It seems that urban housing stock is of better quality.

Equipment of housing stock (WC, bathroom, kitchen) is significantly better in Zagreb 95.7% than in Croatia 86.5%. Apparent differences are in equipment of housing stock between Zagreb and Croatia in following facilities: water supply (Croatia 93.7%, Zagreb 99%) sewerage (Croatia 92.8% Zagreb 99.2%) central heating (Croatia 36.2 Zagreb 70.8%).

According to the survey, (Target, 2005) about 20% of population need more housing space, 31% have worn out door, windows or floors, 19% have problems with humidity and 10% can't afford appropriate hitting of housing space.

Table 6: Permanently Occupied Housing in Croatia and in Zagreb, by the Year of Construction

Occupied housing - from that constructed	Croatia		Zagreb	
	Number of Housing Units 1,421,623	Percent 100.0%	Number of Housing Units 271,183	Percent 100.0%
- before 1919	129,901	9.1	13,932	5.1
- 1919 – 1945	104,333	7.3	31,390	11.6
- 1946 – 1960	154,672	10.9	28,127	10.4
- 1961 – 1970	285,451	20.1	64,958	24.0
- 1971 – 1980	329,028	23.1	55,461	20.5
- 1981 – 1990	244,908	17.2	43,350	16.0
- 1991 – 1995	47,911	3.4	10,074	3.7
- 1996 and after	70,817	5.0	14,597	5.4
- unknown	49,603	3.5	404	0.1
- in construction	4,999	0.4	8,890	3.3

Source: Census 2001, Statistical Year Books.

When we compare the housing stock in capital and in the rest of the country according to the year of construction we can state that there are some differences. In Croatia there is a bigger share of stock built before 1919 than in Zagreb and bigger share of stock built in Zagreb from 1991 to 1945 what was period of prosperity in Zagreb. Same reason is explanation for bigger share of housing stock in Zagreb from period of 1961 to 1970. In general, disinvestment in housing during the 1990s, from the longer point of view, will negatively effect “age” of housing stock in the whole country and also housing quality.

Comparisons of housing availability for Croatia and Zagreb shows that average country is better in average space of housing unit, while average area per person in Zagreb is very close to the level of Croatia. There are more units per 1,000 inhabitants in Zagreb and also more units per 100 households than in Croatia. Housing availability in Zagreb is very comparable to the country in average.

Housing affordability in Croatia and in Zagreb**Table 7: Relations between Average net Earnings and Flat Prices in period 1997 – 2006 in Croatia and in Zagreb, Affordability Ratio**

Year	Croatia			Zagreb		
	Average net Earnings	Achieved price kn/m ²	Affordability Ratio	Average net Earnings	Achieved price kn/m ²	Affordability Ratio
1997	2,377	5,074	2.1	2,715	7,506	2.8
1998	2,681	5,717	2.1	3,053	8,474	2.8
1999	3,055	6,182	2.0	3,510	9,224	2.6
2000	3,326	7,220	2.2	3,832	9,340	2.4
2001	3,541	7,274	2.1	4,131	8,815	2.1
2002	3,720	7,142	1.9	4,374	9,010	2.1
2003	3,940	8,186	2.1	4,680	9,823	2.1
2004	4,173	9,204	2.2	4,929	10,646	2.2
2005	4,376	9,742	2.2	5,228	11,136	2.1
2006	4,603	10,643	2.3			

Sources: Republic of Croatia – Central Bureau of Statistics: Statistical Yearbook of the Republic of Croatia 2003; First releases – Employment and Wages - Average Monthly Paid net Earnings of Persons in Paid Employment, 2000 – 2007. Croatian National Bank, www.hnb.hr: Exchange Rate Statistics - Midpoint Exchange Rates of the Croatian National Bank (end of period).

Price-to-income ratio (defined as the ratio of average price per square metre of dwellings sold in a given year on the market and average net earnings) seems to be stable during last five years in the country and in the capital. Moreover, there is no significant difference between the country and capital ratio, as is clear from Table 7. Having in mind income inequalities, relative poverty line 18% and instability of labour market, rate of unemployment is 11.2%, it is obvious that a part of population, especially in larger towns have a problem to afford to decent housing.

Analysing disproportion of housing prices and income the role of grey economy should be mentioned as important source of income for larger part of population. In some branches of industry, like handcraft, it is very common practice that owners pay minimum income, according to the legislation, to employees and the rest they give in cash. This practice has very negative influence in sustainability of social welfare system in general.

Incomes from grey economy and from honorary work are higher in Zagreb then in average of country. Beside that, GDP in Zagreb is twice higher that in the average country.

It is important to mention that affordability is an emerging problem for the inhabitants in attractive places at the cost. Still, there is no appropriate empirical evidence to see performance of local housing markets and position of the local people. Issues of housing affordability for local people are more and more political issues and representatives of several local authorities expressed concern with such development looking for some new housing policy instruments, like social housing programmes, to meet the local housing needs.

This issue can be more clear with the evidence from Real Estate Stock on prices increase from 1997 to 2006 for the costal area, Zagreb and Croatia.. In that period prices of flats at the costal area increased by 277.7% and family houses by 240.5%. While increase of flat price in Zagreb by 164.2% and family houses by 130.4%. For Croatia it was 198.6% and 182.3%. Increase of prices in costal area contribute to the average increase for country more than increase in Zagreb.

Czech Republic

As in other sectors of the economy, after 1989 the housing sector began to undergo a transformation from a centrally planned and an administrative flat allocation system to a system based on market principles. Key events in housing policy during the transformation period were the restitution of part of the housing stock, the free-of-charge transfer of the unrestituted portion of the former state housing to municipal ownership, the privatisation of the municipal rental housing stock, the introduction of new housing subsidies, and the introduction of housing savings scheme and mortgage loans. Another important step was the initiation of very gradual rent deregulation, which began in 1992.

Restitution began in April 1991 and applied to the portion of the housing stock that had been confiscated by the state or became the property of the state between 1948 and 1990 under circumstances that were disadvantageous to the original owner. If the legal terms for the restitution of property were satisfied, the property was returned to the original owner, or to their heirs or immediate relatives. The process of decentralisation of power included the transfer of the remaining public housing stock from state to municipal ownership. The municipalities were cast in the role of administrators of the housing stock, responsible for creating local housing policy. However, the transfer of the housing stock was not accompanied by any increased financial contributions to the municipal budgets.

It was assumed that the municipalities would privatise some of the newly acquired housing stock. However, there were no nationally applicable recommendations to the municipalities as to what part of the housing stock they should privatise, no recommendations relating to the prices the housing stock should be sold at. All these matters were left to the discretion of the municipalities, which inevitably meant that the conditions under which privatisation proceeded varied considerably. The start of the privatisation process dates back to 1991, but despite the absence of exact statistical data it can be said that the volume of privatisation reached its peak in the second half of the 1990s.⁴ Unlike other transition countries (Sýkora 2003), in the Czech Republic tenants did not acquire the right-to-buy that would have enabled them to request privatisation of their rental flat and which the municipality would have had to comply with. As a result, the sector of municipal rental housing is still relatively large (see below).

Privatisation also had an effect on the co-operative housing sector. Through a law enacted in 1994 members of a housing co-operative acquired the right to sell their flats (or more precisely, to transfer their co-operative shares) at a market price and the right to the free-of-charge transfer of a co-operative flat to their full ownership. The co-operative housing became, in fact, part of the owner-occupied housing sector. All the aforementioned processes (restitution, transfer of the housing stock from state to municipal ownership, and privatisation) were reflected in a significant change in the tenure structure (see Table 8). A marked increase in the percentage of privately owned flats (by more than 10 percentage points) and conversely a reduction in the share of rental dwellings (by almost 11 percentage points) are clear.

Table 9 compares tenure of the Prague's housing stock between 1991 and 2001. In comparison to the total housing stock (see Table 8) lower share of family houses and higher share of rental flats is apparent. The above mentioned processes (restitution, privatisation) were manifested in similar way in Prague like in the rest of the Czech Republic. There is only one exception – the share of co-operatives decreased in Prague more significant than in the Czech Republic (more than 6 percentage points in comparison to 4 percentage points).

⁴ In particular based on data from a survey conducted by the Institute for Regional Development (ÚÚR).
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Authors: Petr Sunega & Gojko Bezovan

Table 8: Changes in tenure of the occupied dwelling stock between 1991 and 2001 in the Czech Republic

	1991		2001	
	abs.	in %	abs.	in %
Privately owned house	1,367,027	36.9	1,371,684	35.8
Privately owned flat	31,164	0.8	421,654	11.0
Municipal Rental	1,242,664	33.5	649,656	17.0
Private Rental ^{e)}	222,567	6.0	443,294	11.6
Member of a housing co-operative	697,829	18.8	548,812	14.3
Member of a tenant co-operative ^{*)}	-	-	103,216	2.7
Other (gratuitous use, caretaker and staff, other and undetermined)	144,430	3.9	289,362	7.6
Permanent-residence housing units	3,705,681	100.0	3,827,678	100.0

Note: *) Member of a legal entity founded by tenants for the purpose of the privatisation of their tenement building.

e) Estimates.

Source: Census 1991, 2001 – Czech Statistical Office

Table 9: Changes in tenure of the occupied dwelling stock between 1991 and 2001 in Prague

	1991		2001	
	abs.	in %	abs.	in %
Privately owned house (family houses)	53,732	10.8	55,893	11.2
Privately owned flat	4,236	0.9	54,796	11.0
Rental	327,360	66.0	234,599	47.2
Co-operatives	96,574	19.5	64,737	13.0
Member of co-operative established by former tenants for the purpose of privatisation	-	-	60,646	12.2
Other	13,902	2.8	26,269	5.3
Permanently occupied dwellings in total	495,804	100.0	496,940	100.0

Source: Czech Statistical Office, Census 1991 and 2001.

In spite of the restitution of properties or transfer of rental housing to the municipal ownership the state decided to hold main principles of “old” rent control and tenant protection from the previous regime. The state kept the monopoly to direct the process of rent deregulation in the whole country. Rent deregulation started at the beginning of the 1990s. The maximum monthly regulated rent has gradually increased in relation to the quality of a flat, the size of the municipality and the inflation coefficient. Next to it, market rents were allowed for new tenancies. The regulated rents remained however still far below their market levels and were not high enough to allow the necessary housing stock modernization and refurbishment. The prices of utilities were liberalised far more resolutely, which resulted in a situation where the rent made only one third of the total housing expenditures of an average tenant household, the remaining two thirds of housing expenditures covered the utility payments. The rent deregulation process has been almost stopped in 1999 when social democratic government decided to increase rents only by inflation (the regulated rents were thus frozen in real values). The judicial actions of both private and municipal landlords against the State led to the formal abolishment of rent regulation by the Constitutional Court in 2000 (in force as at 2002). Since that time there has been, however, no new Act defining further rent deregulation and because rents could not have been increased unilaterally they were frozen at 2002 levels during 2002-2006; this time not only in real but also in nominal values. This created ground to strong tensions between landlords and tenants and landlords started to charge the Czech Republic before the Court for Human Rights in Strasbourg. In 2006 a new Act on Unilateral Rent Increase and Changes in Civil Code was passed. The Act came into effect in January 2007 and allows during 5-year transitional period (i.e. until December 2011) increase rents (i.e. previous regulated rents) to ‘target’ rent level.

According to the law ‘target’ annual rent was set up to 5% of average price of flat in given locality. ‘Target’ rent level for certain attractive localities (e.g. some central parts of Prague) was set to lower level (3-4% of average price of flats in locality) because it was assumed that rental yield in such localities hasn’t to be so high like in other places because of higher capital yield (price appreciation). For each year in the transitional period will be set a maximum (percentage) limit of possible rent increase (different according to locality and quality of dwelling). Landlords will have an option to increase rents up to this limit.

In January 1996 the Act on State Social Support, which defined the past (valid until the end of 2006) form of the housing allowance, came into effect. The housing allowance was intended for households in which household income was less than 1.6 times the subsistence minimum (to 1998 only 1.4 times the subsistence minimum), the amount it was set at depends on the household’s level of income, its size and its composition. The housing allowance did not take into account real but only normatively fixed (tariff) housing costs. Such tariffs were computed from the level of rents in rent-controlled housing. It was tenure neutral – it was paid to both tenants and home-owners. The level of allowance did not reflect existing regional differences in housing costs and/or the difference in housing costs between households living in the rent-controlled housing and households paying market rents.

The Act on State Social Support and the Act on Subsistence Minimum were significantly amended in 2006 (changes came into effect in January 2007). Until December 2006 the subsistence minimum in the Czech Republic consisted of two components: the sum required to secure needs of each person in household and the sum required to secure the necessary expenses of the whole household. The first part of the subsistence minimum was therefore applied to the basic personal requirements of each household member, which includes food, clothing, footwear, other industrial consumables, services and personal development. The second part of the subsistence minimum served to cover other common household costs, i.e. mainly housing costs and related services. Since 2007 the subsistence level consists only of the first mentioned component. The second part related to housing costs and other ‘common’ household expenditures was “abolished” because of growing differentiation in housing expenditures (also in connection with the rent deregulation – see above). Besides, the calculation of the subsistence minimum was redesigned in order to take into account economies of scale (i.e. the fact that marginal household expenditures are falling with each additional household member). The subsistence minimum therefore takes into account order of members in a household (for the purpose of subsistence minimum calculations are household members ordered descending according to their age).

The new housing allowance remains tenure neutral, but the applicants have to meet two basic conditions: a) their housing expenditures have to be higher than 30% (35% in Prague) of their (net) income and b) 30% (35%) of the household’s income should not exceed the amount of normative housing costs. Normative housing costs are set by the law and differ according to the household size (number of household members) and the municipality size (only in case of rental flats, in case of co-operative flats or owner-occupied dwellings the normative housing costs are uniform with respect to the size of municipality). New housing allowance (HA) formula has the following form:

$HA = \min(RC, NC) - 0.3 * \max(Y, SM)$, where

- HA* - housing allowance,
- RC* - real housing costs,
- NC* - normative housing costs,
- Y* - household (net) income,
- SM* - subsistence minimum.

For calculations of housing allowance amount for applicants living in Prague the coefficient 0.3 is replaced by the coefficient 0.35. New housing allowance takes into account real housing costs (up to the normative (tariff) housing costs) and there is no explicit income ceiling (unlike the previous form of housing allowance valid till the end of 2006). However, the normative housing costs were set quite strictly (tightly) especially with respect to the level of rents paid by households living on the market (i.e. paying 'market' rent).

Neither social housing nor non-for-profit housing associations were legally defined in the Czech Republic. The government however started to support new municipal rental housing construction since 1995 through grants covering, a bit later on, about one third to one quarter of average dwelling construction costs. Due to the fact that there were no bidding cost or income ceilings (targeting) for dwelling allocation and mainly the fact that the program has been transformed in a way that allowed speculation and abuse, it was highly criticized and, finally, largely amended in 2003. The original program allowed for creation of housing co-operatives between municipality and participants (future "tenants"): a municipality, with the help of commercial developer, often only secured the state subsidies and remaining costs of house development were covered from down-payments of future "tenants" and commercial mortgage loans. The share in housing coop could be liquidated under valid legislation immediately. Many flats constructed from this program were therefore soon sold or rented out by participants profiting from state subsidies; moreover, some of flats were constructed only as a secondary homes and some as luxurious dwellings. Since 2003 the coop form is forbidden, cost and income ceilings were introduced, floor space of newly built dwellings supported by this program was limited; on the second side the subsidy was increased.

Another programme in the field of supply-side subsidies has been a programme aimed at supporting the construction of so-called supported housing for people who have a disadvantage in access to housing, particularly owing to health reasons (people with disabilities) or age (the elderly). Supported flats also include flats in halfway houses and "start-up" flats. The subsidy (grant) recipient is a municipality or group of municipalities. The municipality must retain a majority share and is not allowed to ask for any financial contribution from future tenants. The privatisation of flats into the tenants' ownership, the subleasing of flats, the sale of flats to a third party, or the mortgaging of flats for credit (with the exception of credit to acquire flats) are banned in the programme.

It is necessary to mention that the above mentioned programmes were chosen only as examples of subsidies provided from public funds to housing. State Housing Fund provides also: low-interest loans for young married couples or alone parents acquiring owner-occupied housing (for housing purposes), low-interest loans for young married couples or alone parents for reconstruction of their owner-occupied housing, interest subsidies for commercial loans on reconstruction of panel (large real estate) housing, subsidies for new co-operative housing construction etc. We will omit these subsidies with respect to limited space and the scope of this paper.

Owing to the sharp withdrawal of the state from financial co-involvement in housing construction, it became necessary to establish conditions conducive to the introduction of standard financial market instruments that would enable households to obtain the necessary financial resources to build or buy a flat or home. The first such instrument was the housing savings scheme, introduced in 1993, which represents a combined savings and credit product. The state supports the saving part of the scheme by state premium – its amount decreased in 2004 when the system has been partially reformed. The value of state premium amounts to 15% of annual deposit up to the limit of CZK 3.000 (25% of the sum of annual deposit up to CZK 4.500 before 2004). Clients are entitled to be granted a "regular" housing savings loan at least after two years of the saving period.

Mortgage credit is clearly the most common mean used to finance the construction or purchase of a flat or house in developed countries. In the Czech Republic the necessary legislation for the extension of mortgage loans was passed in 1995. Mortgage financing did not spread as quickly as it was previously expected (Figure 2). This was mainly due to the macroeconomic situation, particularly inflation and high nominal interest rates on mortgage loans (in 1995 the nominal interest rates were around 11%, and in 2000 they were still around 8.2 – 8.6 %), but there were also psychological reasons: people were wary of taking on a large debt for a long term, the future course of interest rates was uncertain, and there was still a feeling that living in debt is somehow immoral (Lux et al. 2005). The state contributed to the spread of mortgage lending by interest subsidies for mortgage loans on new housing - since 1995 to 2001 the interest subsidy amounted to four percentage points, since 2001 to 2002 it amounted to two percentage points and since 2002 to January 2003 to one percentage point. With respect to the fall of interest rates the subsidy was cancelled in 2003. In 1995 tax relief on interest on housing savings loans and mortgage loans has been also introduced.

Institutional framework and division of power between central and local governments

In principle four institutions are responsible for allocating state housing expenditures in the Czech Republic: the Ministry for Regional Development, the State Housing Development Fund, the Ministry of Finance and the Ministry of Labour and Social Affairs. Although the Ministry for Regional Development is directly responsible for the strategy and implementation of housing policy, the largest part of the total state subsidy is distributed by the Ministry of Finance⁵. In the Czech Republic it has not been possible yet to ensure elementary institutional conditions consisting in the creation of one centre responsible for fulfilling the basic goals of the housing policy that would bring together experts on housing policy with sufficient research support. The existing fragmentation of jurisdiction results in the fact that incompetent officials are often responsible for housing issues in individual departments, that measures adopted by individual departments are not sufficiently co-ordinated and crucial differences in opinion remain between individual departments, amplified by the political affiliation of individual ministers.

Most of the subsidies and programmes in the Czech Republic is set on the state level, i.e. the municipalities has no or very limited power to affect conditions under which these subsidies are granted. However, the municipalities have almost unlimited decision power in the management of municipal housing stock, i.e. they set the rules for allocation of the municipal housing stock, the extent and conditions of privatisation of municipal housing stock, they decide about the rent level (up to the limit given in the law – see above), about the use of funds gathered from the municipal housing stock (i.e. funds collected from privatisation and rents), about the application for subsidies targeted on municipalities within one or more of the above mentioned programmes etc.

Housing availability in the Czech Republic and in Prague

Following Tables show selected housing availability indicators for the Czech Republic and Prague based on the Census 2001 data.

It is clear from Table 10 that the number of dwellings per 1,000 inhabitants is significantly higher in Prague than in the Czech Republic. Also the number of permanently occupied dwellings per 100 households is higher in Prague than the average for the Czech Republic, but the difference is very small. The reason is that the average household size (average number of household members) is significantly lower in Prague (2.3) in comparison to the average for the Czech Republic (2.6). It is

⁵ This applies even when we do not include in the total state housing expenditures the losses to the state budget following from the tax relief, losses from the exemption of the interest from constructing savings plans from the income tax and the hidden subsidy for tenants living in regulated rental housing.

not very surprising because of more frequent cohabitation of households in other (especially Moravian) regions and higher average number of household members in other regions than Prague. From the basic overview of the housing availability indicators shown in Table 10 it doesn't appear that there should be a problem with housing availability in Prague in comparison to the overall situation in the Czech Republic.

Table 10: Number and Dwelling Space of Permanently Occupied Housing and Housing Standard in the Czech Republic and Prague (2001)

	<i>Czech Republic</i>	<i>Prague</i>
Dwellings in total	4,366,293	551,243
Permanently Occupied Dwellings	3,827,678	496,940
Average Living Area per Permanently Occupied Dwelling in m ²	49.5	43.0
Average Total Area per Permanently Occupied Dwelling in m ²	76.3	66.7
Households Number	4,235,692	544,986
Number of Households Members	10,101,302	1,157,802
Average Living Area per Person in m ²	18.6	18.3
Average Total Area per Person in m ²	28.7	28.3
Number of Rooms (with 4 m ² and more of total floor area) per Dwelling	2.72	2.47
Number of Household Members per Flat	2.64	2.33
Housing Units Temporary Inhabited	76,227	19,594
Other Inhabited Places which are not Housing Units	n/a	n/a
Number of Households in these Places	n/a	n/a
Total number of persons	10,101,302	1,169,106
Number of dwellings per 1,000 inhabitants	432	472
Number of permanently occupied dwellings per 1,000 inhabitants	379	425
Number of dwellings per 100 households	103.1	101.1
Number of permanently occupied dwellings per 100 households	90.4	91.2

Source: Czech Statistical Office, Census 2001.

Tables 11 and 12 show the structure of the housing stock in the Czech Republic and in Prague by type of owner and number of rooms in existing dwellings. The most obvious difference is higher share of dwellings owned by private physical persons in the Czech Republic in comparison to Prague. The difference can be explained by the fact, that majority of dwellings in ownership of private persons comprise dwellings in family houses and its share is higher in rural areas and smaller towns than in Prague. On the contrary the share of municipal (or state) housing stock is higher in Prague than in the Czech Republic. Another significant difference is in higher share of housing stock owned by legal persons established by former tenants for the purpose of privatisation in Prague (16.2%) than in the Czech Republic (4.3%). Also this difference can be easily explained due to tenure structure of the housing stock in Prague (higher share of rental flats in municipal ownership, lower share of privately owned family houses) in comparison to the Czech Republic. The differences in the structure of the housing stock according to the size of flats (by the number of rooms) between Prague and the Czech Republic are also expected. Smaller flats (with one or two rooms) form larger part of the housing stock in Prague in comparison to the Czech Republic.

Table 11: Ownership and Room Number of Permanently Occupied Dwellings in the Czech Republic (2001)

<i>Permanently Occupied Housing – Total</i>	<i>Number of dwellings</i>	<i>Total Dwelling Space m²</i>	<i>Average total area in m² per Dwelling</i>	<i>Percent</i>
	3,827,678	289,462,000	76.3	100.0%
Ownership:				
- private physical person	1,760,173	163,410,000	92.8	46.0
- municipalities, state	675,837	39,210,000	58.0	17.7
- co-operatives	541,812	34,316,000	63.3	14.2
- foreign owner	3,759	248,000	66.0	0.1
- legal person established by former tenants for the purpose of privatisation	163,694	9,927,000	60.6	4.3
- other legal person	156,281	9,883,000	63.2	4.1
- combination of owners	512,922	31,914,000	62.2	13.4
- other	13,200	553,000	41.9	0.3
Room numbers:				
1-room	522,101	20,726,248	39.7	13.8
2-rooms	1,171,440	71,551,638	61.1	30.9
3-rooms	1,358,867	107,411,768	79.0	35.8
4-rooms	456,935	48,632,345	106.4	12.0
5 and more rooms	282,879	41,140,068	145.4	7.5

Source: Czech Statistical Office, Census 2001.

Table 12: Ownership and Room Number of Permanently Occupied Dwellings in Prague (2001)

<i>Permanently Occupied Housing – Total</i>	<i>Number dwellings</i>	<i>Total Dwelling Space m²</i>	<i>Average total area in m² per Dwelling</i>	<i>Percent</i>
	496,940	32,777,197	66.7	100.0%
Ownership:				
- private physical person	130,536	10,271,000	78.7	26.3
- municipalities, state	123,286	7,388,000	59.9	24.8
- co-operatives	72,890	4,610,000	63.2	14.7
- foreign owner	1,733	109,000	62.9	0.3
- legal person established by former tenants for the purpose of privatisation	80,395	4,889,000	60.8	16.2
- other legal person	21,976	1,394,000	63.4	4.4
- combination of owners	62,762	3,931,000	62.6	12.6
- other	3,362	185,000	55.0	0.7
Room numbers:				
1-room	115,089	4,659,616	40.5	23.2
2-rooms	157,036	9,238,334	58.8	31.6
3-rooms	167,036	12,793,513	76.6	33.6
4-rooms	37,167	3,759,543	101.2	7.5
5 and more rooms	15,196	2,326,191	153.1	3.1

Source: Czech Statistical Office, Census 2001.

We will not present here detailed tables with comparison of the equipment of the housing stock between Prague and the Czech Republic, because the results are as expected. The equipment of permanently occupied dwelling is on higher level in capital in comparison to the rest of country. The share of first-category flats (i.e. flats with central heating and basic amenities – bathroom and toilet) is highest in Prague (94.0%) in comparison to other Czech regions and to country average (88.5%). The share of worse equipped dwellings (without central heating and without bathroom or toilet or both) is higher in family houses than in flats in multi-dwelling buildings. It was already mentioned above that the percentage of family houses comprises much smaller part of the housing stock in Prague (and other major urban areas) than in the Czech Republic. Most apparent are differences in the level of equipment of permanently occupied dwellings between Prague and the Czech Republic in following amenities: gas connection (Prague 73.9%, Czech Republic 64.1%), sewerage (Prague 96.9%, Czech Republic 74.8%), toilet (Prague 97.7%, Czech Republic 95.4%).

It is apparent from Table 13 that structure of the housing stock by the year of construction (or reconstruction) in Prague differs from the structure in the Czech Republic. Average “age” of dwelling in Prague is with 46.9 years the highest among other Czech regions and significantly higher than the country average (41.2). From Table 13 is obvious that in Prague is in comparison to the country average higher share of dwellings built in periods of 1920 – 1945 and 1900 – 1919.

Table 13: Permanently occupied dwellings in the Czech Republic and in Prague, by the year of construction

Permanently occupied dwellings - from that constructed	Czech Republic		Prague	
	Number of dwellings	Percent	Number of dwellings	Percent
- before 1899	203,920	5.3	25,760	5.2
- 1900 – 1919	214,084	5.6	38,975	7.8
- 1920 – 1945	561,934	14.7	123,529	24.9
- 1946 – 1960	392,526	10.3	37,187	7.5
- 1961 – 1970	614,696	16.1	61,545	12.4
- 1971 – 1980	861,718	22.5	86,347	17.4
- 1981 – 1990	627,486	16.4	82,653	16.6
- 1991 – 2001	313,769	8.2	34,658	7.0
- unknown	37,545	1.0	6,286	1.3

Source: Czech Statistical Office, Census 2001.

It is possible conclude that housing availability in Prague is comparable (or even better) in comparison to other regions of the Czech Republic (or to the “average” of the Czech Republic). Number of dwellings per 1,000 inhabitants and number of dwellings per 100 households is higher or at least comparable with the country average. The average floor area of dwellings in Prague is generally smaller than the average for the Czech Republic, but the average floor space per person in Prague is close to country average (due to smaller size of households in Prague). It would be also interesting to compare the structure of the housing stock with the structure of households (to what extent the size of dwellings corresponds to the size of households), but such comparison is already beyond the scope of this paper.

Housing affordability in the Czech Republic and in Prague

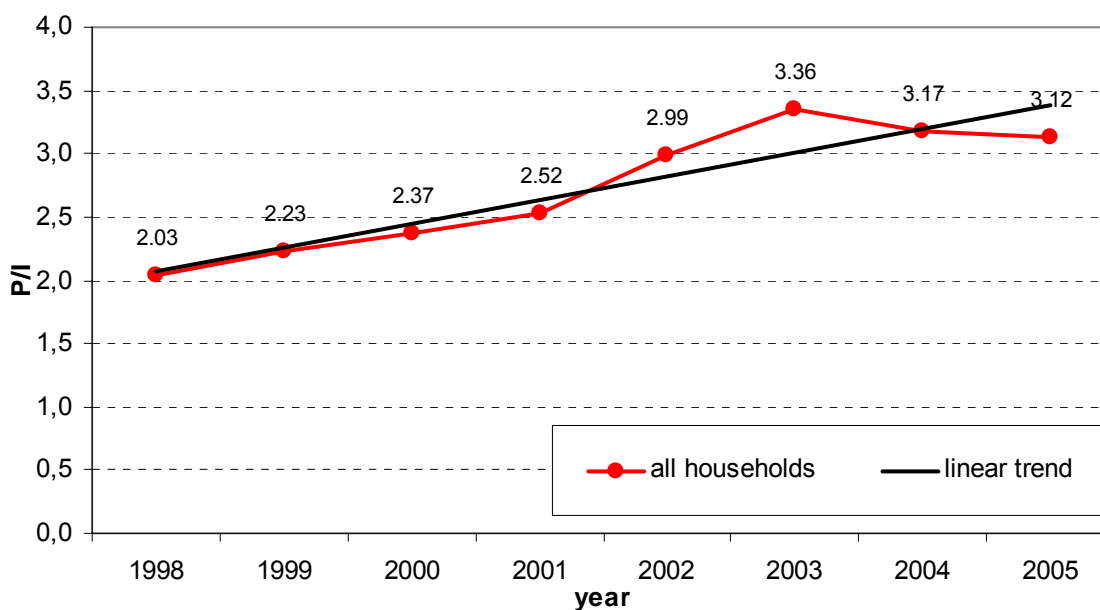
In previous chapter it was concluded that housing availability in Prague is comparable to the housing availability in other regions of the Czech Republic. In this chapter we will examine the

question if there are significant differences in housing affordability between Prague and other Czech regions. We will focus on the affordability of owner-occupied housing from the following reasons: owner-occupied housing plays dominant role in the housing stock of both countries (Czech Republic and Croatia), most of existing subsidies in the Czech Republic are targeted on this part of the housing stock, there are lower distortions inherited from the previous regime (in comparison to the rental sector).

Development of price-to-income ratio in the Czech Republic and in Prague

For the calculations of *price-to-income ratio* (P/I) values were used residential property prices (average price of existing flats) published by the Czech Statistical Office⁶ (the data are collected by the Ministry of Finance and are based on property transfer tax returns) and average household incomes (after tax, net incomes) calculated from the *Family Budget Surveys (FBS)*. Figure 2 shows P/I values for the Czech Republic in 1998 – 2005 (data for 2006 are not available yet) and “trend line” (linear trend). Average P/I increased from 2.0 in 1998 to 3.1 in 2005, i.e. by 54%. In comparison to the growth of P/I values in other selected countries it was medium increase. The absolute value of P/I in the Czech Republic is among the lowest in comparison to selected developed countries, although the international comparison of P/I values is very difficult in due to unavailability (or incompatibility) of existing property price and income data.

Figure 2: Price-to-income ratio in the Czech Republic



Source: own calculations, Czech Statistical Office.

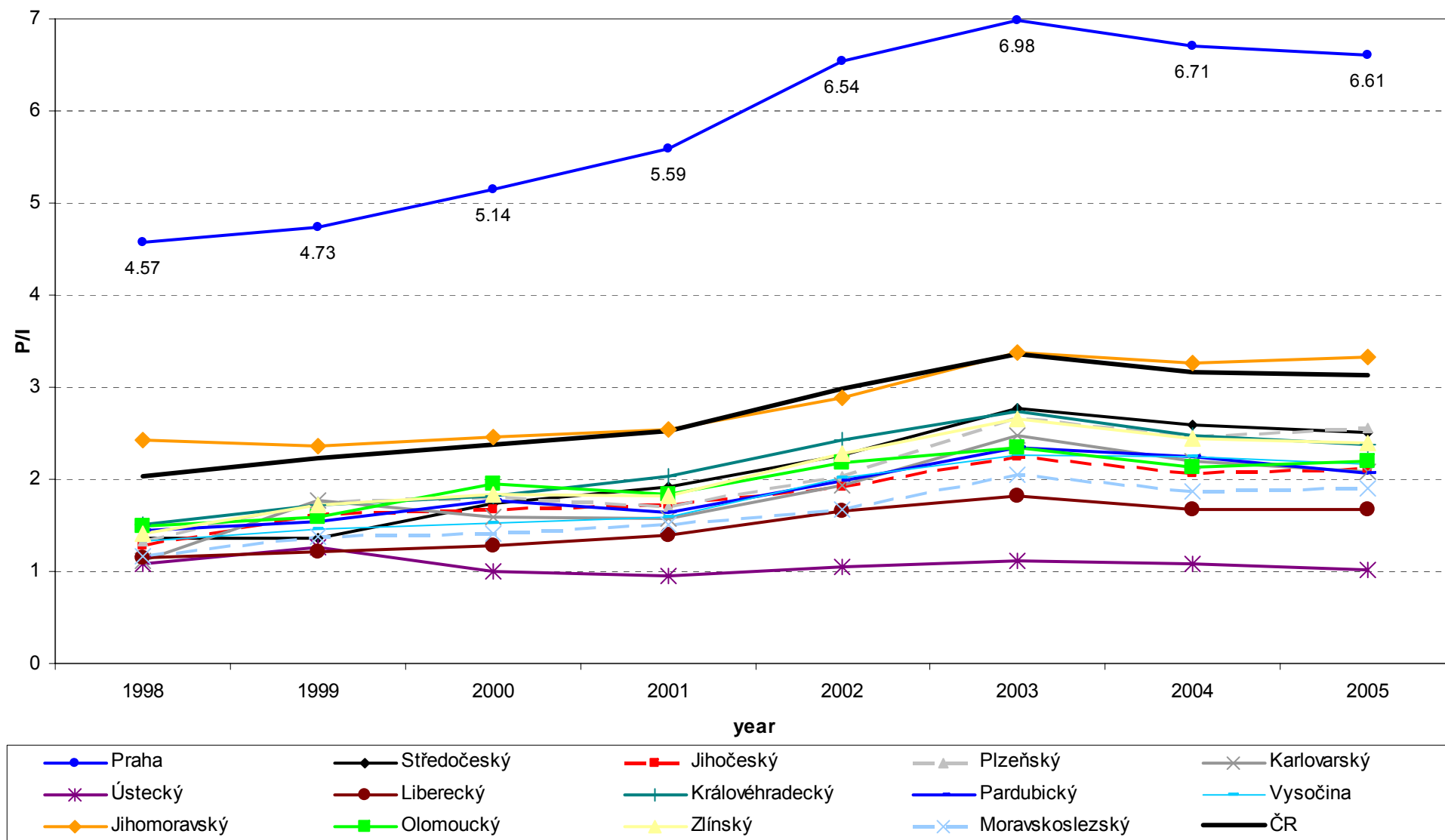
Figure 3 shows P/I values for the regions of the Czech Republic. It is apparent from the Figure that P/I values in Prague were during the whole period highest in comparison to P/I values in other Czech regions and in comparison to the country average. It can be stated (with caution due to limited data sources) that the Czech Republic belongs to countries with the highest difference between capital P/I value and country P/I value (see table 14), the P/I value in capital was in 2005 more than double of the country average. According to P/I values was the affordability of owner-occupied housing in Prague much lower than in other Czech regions.

⁶ The residential property price data are officially recorded and published since 1998.

We are trying to discover what is behind the disproportion in capital and country P/I ratio, therefore we focus on following selected demand-side factors that could contribute to explanation of high P/I ratio in Prague:

- Preference for owner-occupied housing is very high among Czech population. The results of the *Housing Attitudes 2001* survey show that deficit of owner-occupied housing could amount 20 percentage points. The value of the ‘deficit’ was calculated as difference between the share of people who consider owner-occupied housing as the ideal tenure and share of people actually living in own flat or house. Such ‘deficit’ doesn’t represent exactly effective purchase demand, but could to certain extent explain high demand for owner-occupied housing in the Czech Republic. About the reasons behind the preference of owner-occupied housing in the Czech Republic we can only speculate (it could be uncertainty connected with living in rental sector, significant increase in residential property prices in recent years etc.).
- Higher economic performance of Prague in comparison to other Czech regions. GDP for Prague is almost twice higher than the average country GDP. Also average wages are in Prague much higher than in other Czech regions across different industries (branches). One of the reasons behind the difference in average wages is the fact that in Prague are overrepresented occupations requiring highly qualified workforces.
- Higher incomes from grey economy in Prague than in other Czech regions. The estimations of incomes flowing from grey economy are extremely difficult but some partial attempts were already made in the Czech Republic. However, it doesn’t seem that there should be significant difference between Prague and the rest of country that could contribute to explanation of high P/I ratio in Prague.
- Higher share of foreigners living in Prague in comparison to other Czech regions. From existing data it is possible to conclude that the structure of foreigners according to the country of origin is significantly different in Prague (in comparison to other Czech regions). Foreigners from developed countries are overrepresented in Prague (in comparison to other regions), however this influence is to certain extent compensated by higher share of foreigners from less developed countries with lower occupational status and lower wages. So, it is impossible to make clear conclusion that foreigners living in Prague contribute to higher P/I ratio.

Figure 3: Average price-to-income ratio for regions of the Czech Republic (1998 – 2005)



Source: Czech Statistical Office, own computations.

Rok	USA – country	USA – metropolitan area	SWE – country	SWE – Stockholm	NED – country	NED – Amsterdam	AUS – total	AUS – metropolitan area	NOR – country	NOR – Oslo	FI – country	FI – metropolitan area	AT – country	AT – Vienna
1987	3,28										2,81	3,50		
1988	3,32										3,37	4,36		
1989	3,26										3,67	4,65		
1990	3,21										3,14	3,73		
1991	3,43								3,07		2,68	3,07		
1992	3,40								2,77		2,32	2,55		
1993	3,25				4,10				2,60		2,12	2,49		
1994	3,22				4,37	5,23	6,73		3,01		2,29	2,86		
1995	3,15		3,57		4,47	5,33	6,81		3,20		2,14	2,68		
1996	3,13		3,62		4,80	5,72	6,75		3,34		2,19	2,78		
1997	3,15		3,70		5,12	6,18	7,20		3,59		2,46	3,12		
1998	3,19		4,04		5,45	7,17	7,65		3,78		2,63	3,27		
1999	3,20		4,04		6,12	8,49	6,42		3,94		2,73	3,44		
2000	3,21		4,06	7,51	6,76	9,63	5,62	3,02	4,23		2,76	3,41	2,83	
2001	3,31		4,49	9,82	6,81	9,94	6,26	3,36	4,52	7,11	2,69	3,33	2,80	
2002	3,63		4,62	11,19	7,02	9,57	7,18	3,72	4,42	6,39	2,81	3,72	2,87	
2003	3,81	3,28	4,91	10,97	7,22		8,14	5,50	4,35	6,30	2,86	3,87	2,92	
2004	4,06	4,13	5,18	11,61	7,44		8,44		4,58	6,05	2,93	3,89	2,82	3,40
2005		4,94			7,87									
2006		4,89			8,18									

Notice.: USA – country: existing home prices, mean sales prices, not seas. adjusted / gross mean income

USA – metropolitan area: existing single family homes, median sales prices, not seas. adjusted, metropolitan areas (MSA): Washington-Arlington-Alexandria (National Association of Realtors) / HOUSEHOLDS: HUD estimated median family income; Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area

Sweden – country: price of one- or two- dwelling building for permanent living / net (after tax) income

Sweden – Stockholm: purchase price for one- and two-dwelling buildings, average, Stockholm / household disposable income, mean

Netherlands – total: average transaction price / average disposable household income

Netherlands – Amsterdam: average transaction price (€) / mean spendable income (€)

Australia – country: weighted average median price for 6 largest urban areas (cities) / median gross household income

Australia – capital territory: median price (\$) / annual gross median income, Australian Capital Territory

Norway – total: transfer of dwelling properties with building, voluntary sale; average purchase price per transfer, NOK / average net (after tax) household income, NOK

Norway – Oslo: transfer of dwelling properties with building, voluntary sale; average purchase price per transfer, NOK / after tax household income, all households, mean, NOK

Finland – total: all dwellings / disposable household income

Finland – metropolitan area: all dwellings (€) / metropolitan area (Helsinki and Greater Helsinki), average income (€), disposable income

Austria – country: all owner occupied flats, 60 m2, 20 years old, average location, € / average net household income,

Austria – Vienna: all owner occupied flats, 60 m2, 20 years old, average location, € / disposable (net) household income, mean

Conclusions

The Czech Republic and Croatia have undergone in the 1990s the transition from a state-controlled to more or less market-oriented economic system. The transition process was accompanied by significant changes in housing policies in both countries. One of the most apparent milestones was the privatisation of the former state (later municipal) housing stock into the hands of sitting tenants for price far below the real market price of the privatised flats. However, the scale of privatisation differed between the Czech Republic and Croatia. Whereas in Croatia the tenants acquired right-to-buy, in the Czech Republic local governments (municipalities) decide what part of the housing stock should be privatised and under which conditions. Different institutional arrangements could be one of the reasons why Croatians are considered for the nation of owners whereas in the Czech Republic the rental sector plays still important role. Although the privatisation process was one of the most important topics of the housing policy in the Czech Republic during 1990s, it was not dominant topic like in Croatia.

In the analytical part of the paper we focused on assessment of housing availability and housing affordability in the regions of both countries, especially on the difference in housing availability and affordability between the capitals and the rest of the country. We discovered that there is no significant disparity in availability of housing in capitals in comparison to other regions in both countries. The dwellings in capitals are in average better equipped than dwellings in other regions, usually smaller size resided by smaller households (by the average number of household members). No evidence was found that would support the thesis about the housing shortage in capital cities of both countries.

The results stemming from the assessment of housing affordability differ between the Czech Republic and Croatia. For the evaluation of housing affordability of owner-occupied housing we used price-to-income ratio (or price-to-earnings ratio). The affordability ratio (achieved price per square metre divided by the average net earnings) is in Croatia almost the same as in Zagreb. Besides, the ratio was very stable in recent years despite the increasing residential property prices. The situation in the Czech Republic seems to be completely different. We used slightly different measure for assessment of housing affordability in Prague and in the Czech Republic (price-to-income ratio was defined as the ratio between the average price of existing flat and average net household income). Whereas the country average was close to 3 in 2005, the corresponding value for Prague was close to 7, i.e. twice higher. Owner-occupied housing seems to be much less affordable in Prague in comparison to other regions of the Czech Republic. We briefly discussed selected demand-side factors that could explain the difference.

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