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THE MACROECONOMIC ASPECTS OF THE CROATIAN HOUSING MARKET

This study analyses structure and driving forces of the housing market in Croatia. The first part of the paper deals with the theoretical analysis of the microeconomic nature of a housing market. The analysis is based on the definition of the object of trade on the market, on the heterogeneity of the housing unit as a good and on the controversial definitions of the stocks and flows on to the housing market.

The second part of the study is the microeconomic analysis of the demand and supply function on the housing market. Theoretical model of equilibrium on the housing market is econometrically tested with the data for Croatian housing market between 1965 and 2003.

The third part of the study analyses the features of Croatian economy which can render conventional economic analysis. The unofficial economy, the non-transparent cadastral books, the opportunity costs, the structure of costs and the role of tourism industry are included in the extended theoretical analysis of the housing market in Croatia.

The fourth part addressed issues of the macroeconomic consequences of the insufficient and suboptimal economic infrastructure on the housing market and the last part of the study has formulated certain policy regulations which could move housing market equilibrium towards better allocation of resources.

Key words: housing market, economic infrastructure, inefficient markets

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Introduction

In the analysis of housing market the starting point is housing unit and their characteristics. In order to make the analysis possible, certain distinctiveness of housing units should be willingly omitted. Houses are assets which are demanded for the flow of services they produce over their lifetime. Thus, the starting point for an analysis of housing is the demand for housing services. These are bought either by buying the asset or by renting it. Therefore the demand for houses for purchase and the demand for rented accommodation are derived demands. Furthermore, housing gives a diverse bundle of services associated with shelter and comfort, independence and privacy, status and, like all durables, services of security and investment. Also, each service can be bought in varying quantities, from necessitates to luxuries. Therefore, ability to buy housing services in varying combinations and to various degrees implies that housing is a heterogeneous commodity (Charles, 1977, p. 7). This heterogeneity in housing presents measurement problems. Since the flow of services dwellings provide will vary with the attributes of each house, merely counting the number of houses demanded and supplied is a very poor measure. The quantity of housing services demanded, for instance, will determine the quantity and the quality of houses demanded. An ideal measure would be in terms of quality adjusted units of housing (Charles, 1977, p. 18). This has been attempted in some studies (Byatt, Holmans and Laidler, 1973; Clark and Jones 1971; Leeuw, 1971; Kirwen and Ball, 1975). According to that, analysis in which measurements of demand and supply is in terms of quantity only, should be of lesser quality. Unfortunately, the methodological problems usually permits quality adjusted analysis and therefore in most studies the adjustment is willingly omitted (Charles, 1977, p. 18).

Another interesting issue on the housing market is definition of stocks and flows over housing market. According to Charles (1977, p. 10), the housing stock is the number of dwellings in existence at any point in time, while the flow of houses is the number of houses whose owners are looking for buyers and renters. The supply on the housing market comprises out of the flow of housing and it is not correlated with the stock of housing. On the other side, according to Harwey and Jowsey (2004, p. 46), the new flows on to the market are small or insignificant in comparison to supply coming to the market from existing stock of dwellings. Therefore, on the housing market, existing stock of housing, along with demand, is a main determinant of price. In our analysis, the latter definition of stocks and flows over market will be used. Therefore, the newly build dwellings will be regarded as the flow over market, while the number of houses whose owners are looking for buyers and renters will be regarded as supply on the housing market.

Microeconomic Analysis of Housing Market in Croatia

In the analysis where quality issue is willingly omitted formulation of microeconomic model can be attempted. The demand on a housing market is determined by a price (p), number of households (n), income (y), availability of credits (a) and wealth (w). The supply is determined by prices (p), costs (c) and availability of credits (a) (Charles, 1977, p 14-28.).

$$D = f(p,n,y,a,w)$$
$$D_y > 0; D_n > 0; D_a > 0; D_w > 0; D_p < 0 \quad (1)$$

$$S = f(p,c,a)$$
$$S_p > 0; S_c < 0; S_a > 0 \quad (2)$$

The empirical analysis of the housing market in Croatia is rather difficult task due to the fact that data for certain variables needed for construction of function of demand and supply is not available and frequency of publishing is such that use of econometric tools is not possible.

The data for prices on the Croatian housing market is not available,[1] only the data for the prices of the newly built and sold dwellings is published on regular terms by Croatian Bureau of Statistics. Therefore in construction of demand function any possible difference in prices between primary and secondary housing market must be omitted. The data for the newly built dwellings is published on the yearly bases[2] and the data for the stock of housing is published in population survey. If combined they can represent stock of housing on yearly bases. The number of households is available in the survey data and estimates are also available on yearly bases. The data for aggregate economic activity is available as social product during 1965-1990 and as GDP during 1990-2003 as quarterly data and yearly data. Average wages, as well as price levels are available on monthly data. The availability of credits to households and construction industry can only be qualitatively estimated as an interest rate, in a way that the interest rate is inversely correlated with the availability of credits. The data for the interest rate is available since 1992. Therefore, in the pre 1992 analysis, the data for the interest rate will be omitted. The wealth variable was also omitted due to lack of data.

[1] The internal revenue service has data for the secondary housing market, but unfortunately the data is not subject to any form of publishing.

[2] The data for the newly built dwellings is published on the quarterly bases only recently.

Accordingly, the demand function was estimated as:

$$D = -a_0 p + a_1 n + a_2 y - a_3 i \tag{3}$$

And supply function was estimated as:

$$S = b_0 p - b_1 r + b_2 s \tag{4}$$

Therefore, in equilibrium price will be equal to:

$$p = \frac{1}{-a_0 - b_0}\left(-a_1 n - a_2 y + a_3 i - b_1 r + b_2 s\right) \tag{5}$$

p – Price of newly built and sold square meter of dwelling
n – Number of households
y – GDP and/or average net real wage
i – Average interest rate on mortgage loans for households
r – Average interest rate on mortgage loans for industry
s – Existing stock of housing

The regression analysis for the 1992-2002 resulted with the following results:

$$\begin{array}{l} \hat{p} = -15193591 + 5.66n + 0{,}20ygdp + 7{,}03yrw + 419.27i - 211.96r + 4.09s \\ \quad (8540073.1)\ (3.12)\ \ (0.20)\ \ \ \ (4.81)\ \ \ (420.74)\ \ (411.97)\ \ (2.37) \\ R^2 = 0.90 \qquad\qquad s.e.e. = 1198.97 \qquad\qquad D.W. = 1.8 \end{array} \tag{6}$$

The coefficient of determination is rather high and F statistics is significant at 5%. Stock of housing, number of households and the average real net wage have significant t statistics at .100 levels. Further more the two significant coefficients, number of households and average real net wage have positive sign which is logical due to the fact that population and wages operates through demand. On the other hand, current stock of housing has positive sign although it operates through supply and it must be excluded from any further analysis. Therefore, according to the post-transitional data, only two variables are significant for the formation of prices on the primary housing market in Croatia.

The regression analysis for 1965-2003 resulted with the following results:

$$\begin{array}{l} \hat{p} = -23258.94 + 0.01n - 0.12ygdp + 0.09yrw + 0.02s \\ \quad (10315.65)\ (0.01)\ \ (0.04)\ \ \ \ (0.43)\ \ \ \ (0.01) \\ R^2 = 0.45 \qquad s.e.e. = 1545.32 \qquad D.W. = 2{,}1 \end{array} \tag{7}$$

Due to the lack of data for the interest rates for the entire period of 1965-2003, the variable of interest rates was omitted from the model. The regression analysis resulted with rather modest coefficient of determination. The F statistics was also significant at 5% and two coefficients had significant t statistics: GDP and the existing stock of housing. Nevertheless, both significant variables have wrong signs and as such they are not usable in further estimate. Smaller significance of this model highlights the fact that in the pre-1992 period, prices were not driven by market forces as much as they were after transition.

Table 1.

THE DATA FOR THE HOUSING MARKET IN CROATIA

Year	Number of dwellings	Real GDP 1997 prices (Kn)	Number of households	Real aver-age net wage 2000 prices	House-holds interest rate	Industry interest rate	Real average price of newly built and sold square meter of dwelling (kn) 2000 prices
1965	1086282	31782	1214838	2903	n.a.	n.a.	5766
1966	1102724	34639	1226947	3300	n.a.	n.a.	5714
1967	1119415	38059	1239176	3537	n.a.	n.a.	6655
1968	1136358	40868	1251527	3655	n.a.	n.a.	6775
1969	1153558	41984	1264002	3899	n.a.	n.a.	6627
1970	1171018	46509	1276601	4151	n.a.	n.a.	6623
1971	1188743	50902	1289325	4426	n.a.	n.a.	**7901**
1972	1206736	52438	1302186	4404	n.a.	n.a.	7986
1973	1225001	56303	1315175	4214	n.a.	n.a.	7550
1974	1243542	58235	1328294	4398	n.a.	n.a.	7960
1975	1262365	60864	1341543	4330	n.a.	n.a.	7079
1976	1281472	65473	1354925	4461	n.a.	n.a.	7833
1977	1300868	70022	1368440	4635	n.a.	n.a.	8741
1978	1320558	75699	1382090	4887	n.a.	n.a.	9000
1979	1340546	77787	1395876	4847	n.a.	n.a.	8915
1980	1360836	80880	1409799	4558	n.a.	n.a.	8251
1981	1381434	87947	1423862	4463	n.a.	n.a.	**7760**
1982	1399726	90510	1435466	4317	n.a.	n.a.	7825
1983	1418260	94382	1447164	3860	n.a.	n.a.	7074
1984	1437039	102434	1458958	3620	n.a.	n.a.	6088
1985	1456067	110215	1470848	3643	n.a.	n.a.	6221
1986	1475347	116811	1482835	3943	n.a.	n.a.	5956
1987	1494882	118259	1494919	3631	n.a.	n.a.	7044
1988	1514676	119988	1507102	3435	n.a.	n.a.	7835
1989	1534732	118415	1519384	4082	n.a.	n.a.	6464
1990	1555053	116591	1531767	3340	n.a.	n.a.	7547
1991	1575644	119075	1544250	2645	n.a.	n.a.	**11051**
1992	1583945	105151	1537429	1486	21,41	21,41	17184
1993	1592290	96742	1530638	1520	25,59	25,59	11507
1994	1600678	102449	1523876	1711	13,89	13,89	7911
1995	1609111	109466	1517145	2397	15,42	15,42	8671
1996	1617588	115971	1510443	2567	10,95	13,05	8894
1997	1626110	123811	1503771	2884	11,54	13,62	8824
1998	1634677	137604	1497129	3058	11,57	13,00	8577
1999	1643289	141579	1490516	3367	11,21	10,99	9922
2000	1651946	152519	1483932	3411	11,62	10,46	8914
2001	1660649	162909	1477377	3541	11,16	8,21	**8306**
2002	1669398	176429	1470851	3625	6,8	6,8	8154
2003	1678193	189883	1464354	3753	6,31	6,31	8627

*Until 2001 all Croatian citizens abroad were considered as part of population, in 2001 census only citizens which often visit Croatia were considered as part of population.

Source: Državni zavod za statistiku, 2002; Sirotković, 2001, p.352.-354. ; CNB 2004; DZS 2004; SYB-1978, p. 44.; SYB-1992, p.135. ; SYB-1998, p. 171.; SYB-1999, p. 182.; SYB-2000, p.77. , p. 174., p. 279.-280; Calculation by author

Statistical insignificance of our analysis makes further analysis difficult, but having in mind all the problems with formation of data series, the final results are not surprising. Despite the fact that significant model cannot be constructed certain market peculiarities are evident. The fact that total number of households is smaller than the number of dwellings and prices are increasing is rather controversial (Table 1). Similar case has been noticed by Kožar (2002, p. 1) in Slovenia, where according to 2002 survey there are 688 000 households and 775 000 dwellings, with increasing prices as well. It is still hard to say is this a transitional pattern or price bubble, but the market position is definitively controversial. In attempt to clarify the issue several explanations must be addressed considering economic infrastructure.

Economic infrastructure and the housing market

Having in mind that microeconomic analysis of the housing market in Croatia can not provide statistically significant explanation of price movement, further formalization will be done in the framework of economic and institutional infrastructure in Croatia.

The unofficial economy induced demand for housing

In the regression analysis the number of households was used as a proxy for the demand. According to official definition of Central Bureau of Statistics (SYB-2000) of the Republic of Croatia "a household is any family or other community of people who declare that they live together and who share their income to cover the basic cost of living irrespective of whether all members live permanently in the settlement where household resides. A household is also considered every person who lives on its own or with other persons but does not share income with them and is not a member of another household." Due to the fact that sharing of income is key criteria for definition of household, it is possible for unofficially employed people to distort real number of households. During the survey, unofficially employed people are reluctant to state that they have income and that they do not belong to the community of people which share the legal income. In that way survey data will underestimate the number of households in the economy for the extent of share of unofficial economy in the total economic activity.

Several studies have attempted to estimate the share of unofficial economy in Croatia (Ott, 2002). According to them share of the unofficial economy in the GDP in Croatia is estimated up to 30% (Ott, 2002). Furthermore, the unemployment

rate in Croatia is officially much larger than the unemployment rate according to ILO methodology. According to National Bank of Croatia (2003) registered unemployment during third quarter of 2003 was 18.3%, while unemployment according to ILO methodology was 14.1% in first six month of 2003.

Along with the number of illegally employed people and illegally formed households, the demand on the housing market should also be enlarged by the number of students outside of dormitories. Substantial amount of students in Croatia lives in rented accommodation and although they do not represent household they are creating demand for housing on the market.

Therefore, it is obvious that the number of households as demand driving factor in the analysis should be enlarged for the upper mentioned population groups. Such improvement to the model could shed more light on our ignorance about housing market in Croatia.

The cadastral books

The supply side of the housing market is strongly affected by nontransparent situation in cadastral books. Substantial amount of dwellings is not registered in the cadastral books and as such they do not exist as object of trade on the housing market. A majority of 360 000 dwellings that were privatized in the early nineties had been unregistered in cadastral books at the time. Therefore, total supply of dwellings should be decreased for the number of dwellings without transparent ownership.

In combination with increased demand coming from illegally employed people, this effect decreases potential supply of houses on the market and pushes the price further up.

The opportunity costs and residential investment

Croatia has long history of hyperinflation and fragile financial system with history of several major banking crises. Since residential investments have lower inflation and risk, throughout the time, the most of the private investment has been directed towards housing capital. The goal of such private investment is preservation of wealth.

Verification costs of a residential investment, compared to an entrepreneurial enterprise, are much lower and sum up to ownership control and building permit

control. If there is no capital market for entrepreneurs to raise capital (under stock market rules they have to minimize verification costs of their own enterprise) greater investment share will go to safer, residential type investment. In such conditions, it will not be the most profitable projects financed, but the safest ones, regardless of profitability. This situation makes economic growth slower, thus lowering efficiency of an economy (Diamond 1984). The problem also lies with the fact that most investors in residential market invest in dwellings not in order to rent but simply to withdraw from the market as a safe investment. Such dwellings can be considered as "bonds" or some other kinds of "financial derivates" rather than a housing unit. In the environment where property tax does not exist and where majority of people do not perceive opportunity costs of real estate properties, upper mentioned behavior becomes a profit maximizing behavior. The effect is even more magnified if we know that profit tax in Croatia is 25%; while housing rent imputed or non-imputed is usually unreported and overlooked item in the income tax.

Therefore, certain amount of dwellings in Croatia does not participate as supply on the housing market which compared to our initial model decreases supply furthermore and creates additional pressure on prices.

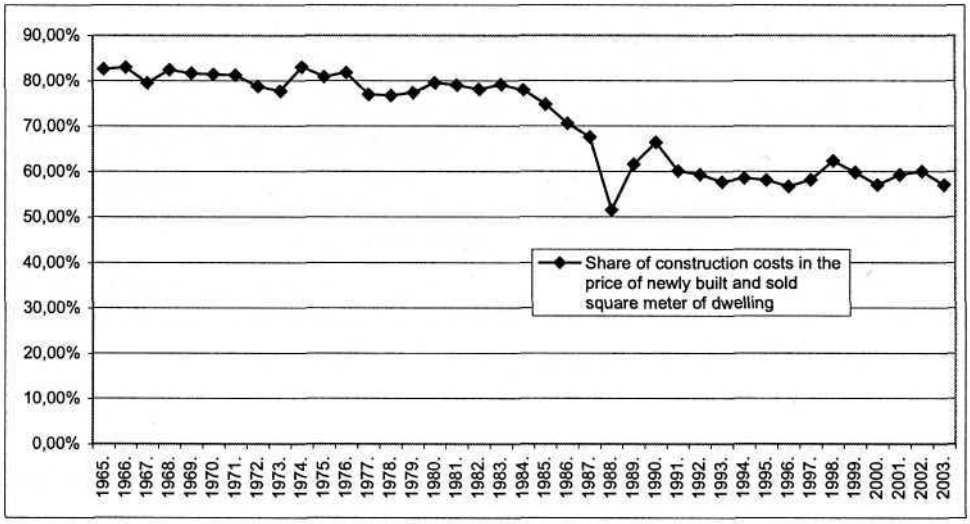
The structure of costs in the construction industry

Throughout last twenty years structure of costs in construction industry have changed drastically. The share of non-construction costs have increased from 10 to 40% during eighties and nineties. The most important factor of increase of non-construction costs is public sector and price of land. An increasing cost has resulted with upward push of supply curve and prices in general.

The problem is especially emphasized in urban areas where solely the contributions to the local authority can amount up to 30% of the dwelling's price, which also shifts the supply curve upwards creating additional rise in prices. The share of construction costs in the price of square meter is the indicator of the efficiency of housing system and even the indicator of the housing market itself, regarding the supply side. Therefore, the conclusion imposes that the macroeconomic events from the middle of 1980s until today have affected the housing market in such a manner to sustain constantly increasing inefficiency of the overall housing system and the housing market, even though, it has never, not even before the beginning of the negative trend, been efficient in a market sense.

Figure 1.

SHARE OF CONSTRUCTION COSTS IN THE PRICE OF NEWLY BUILT AND SOLD SQUARE METER OF DWELLING



Source: Table 2

Table 2.

THE SHARE OF CONSTRUCTION COSTS IN THE PRICE OF NEWLY BUILT AND SOLD SQUARE METER OF DWELLING

Year	Average price of newly built and sold square meter of dwelling (Dinar, Croatian dinar, Kuna)	Average costs of construction of newly built and sold square meter of dwelling	Share of construction costs in price of newly built and sold square meter of dwelling
1965.	101,500	83,800	82,56%
1966.	1,233	1,023	82,97%
1967.	1,526	1,213	79,49%
1968.	1,637	1,349	82,41%
1969.	1,742	1,421	81,57%
1970.	1,953	1,589	81,36%
1971.	2,735	2,221	81,21%
1972.	3,262	2,568	78,72%
1973.	3,671	2,851	77,66%
1974.	4,651	3,861	83,01%
1975.	5,192	4,199	80,87%
1976.	6,430	5,257	81,76%
1977.	8,215	6,321	76,94%
1978.	9,709	7,447	76,70%
1979.	11,740	9,083	77,37%
1980.	14,082	11,196	79,51%
1981.	18,569	14,677	79,04%
1982.	24,679	19,266	78,07%
1983.	31,366	24,828	79,16%
1984.	41,140	32,045	77,89%
1985.	73,522	54,960	74,75%
1986.	135,575	95,694	70,58%
1987.	357,050	241,195	67,55%
1988.	1,172,811	605,170	51,60%
1989.	12,566,208	7740,784	61,60%
1990.	10,183	6,762	66,40%
1991.	33,431	20,111	60,16%
1992.	381,544	226,408	59,34%
1993.	4,053	2,340	57,73%
1994.	5,773	3,382	58,58%
1995.	6,581	3,826	58,14%
1996.	7,041	3,993	56,71%
1997.	7,272	4,230	58,17%
1998.	7,520	4,686	62,31%
1999.	9,004	5,387	59,83%

2000.	8,688	4,958	57,07%
2001.	8,306	4,928	59,33%
2002.	8,366	5,023	60,04%
2003.	9,055	5,167	57,06%

*denomination 1966. 1:100, 1989. 1:10000 and 1993. 1:1000.

Source: Jelinić, 1994, p. 161.; DZS 2004; SYB-1992, p. 289.; SYB-1993, p. 298.; SYB-1994, p. 311.; SYB-1996, p. 253.; SYB-1997, p. 273.; SYB-1998, p. 282.; SYB-1999, p. 299.; SYB-2000, p. 285.

The lack of housing units in urban areas and surplus of housing units in rural areas

The rural vs. urban analysis is rather difficult since it requires data on local levels on housing units and number of households. Nevertheless, analysis on local level of Croatian counties is easily feasible.

The Grad Zagreb County occupies urban areas only, whereas the Osjecko-baranjska County, the Splitsko-dalmatinska County and the Primorsko-goranska County can be regarded as mostly urban areas of Croatia. Comparison of the upper mentioned areas of Croatia with mostly rural areas can reveal the fact that the housing units are in excess over the number of households in all counties of Croatia; regardless of urban, mostly urban or rural characteristics of the county.

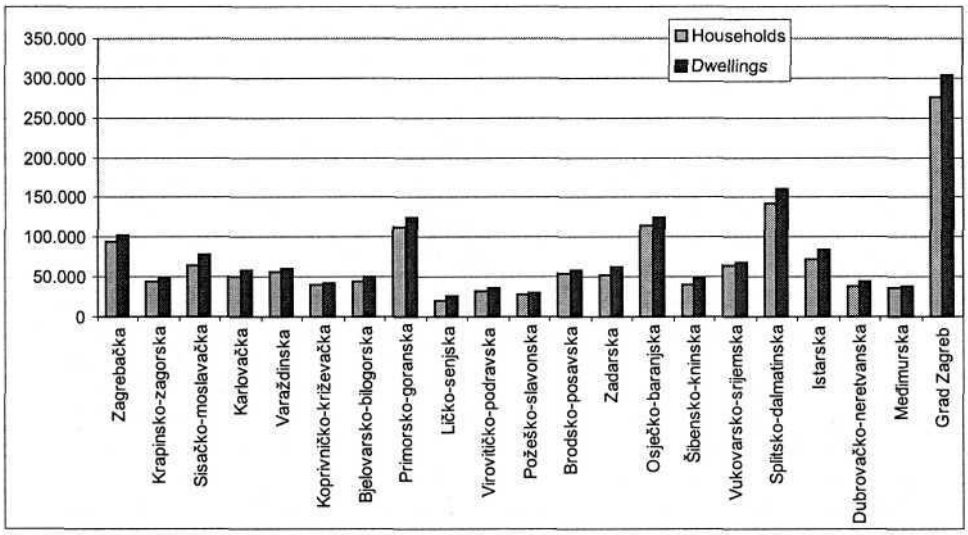
In conclusion it can be stated that the argument that the lack of housing units in urban areas and excess of housing units in rural areas can explain increase in prices is rather questionable.

The tourism industry as an generator of additional demand

The tourism industry in Croatia is substantial part of GDP. Every summer more than 7 million tourists visit Croatia and spend more than 16 million of days in Croatia (Družić Sirotković 2002, p. 414). Huge majority of the tourists visits the counties which are in the coastal area of Croatia, the Istarska County, the Primorsko-goranska County, the Ličko-senjska County, the Zadarska County, the Splitsko-dalmatinska County and the Dubrovačko-neretvanska County. Therefore, increase in prices in these counties can be attributed to additional demand coming from the rest of the world as export of services. Nevertheless, tourism can not explain the problem consistently due to the fact that increasing prices in the environment of excess of housing units over the number of households is nationwide phenomenon.

Figure 2.

THE NUMBER OF HOUSEHOLDS AND DWELLINGS
IN COUNTIES IN 2001.



Source: Table 3

Table 3.

POPULATION, HOUSEHOLDS AND DWELLINGS IN COUNTIES IN 2001.

Counties	Population	Households	Dwellings
Zagrebačka	314,887	94,447	102,263
Krapinsko-zagorska	144,928	43,904	48,047
Sisačko-moslavačka	188,961	65,134	79,385
Karlovačka	146,340	49,701	57,456
Varaždinska	187,628	56,344	59,570
Koprivničko-križevačka	126,539	39,693	43,066
Bjelovarska-bilogorska	134,864	44,159	50,792
Primorsko-goranska	315,761	111,705	124,293
Ličko-senjska	53,899	19,576	26,361
Virovitičko-podravska	95,059	31,682	35,744
Požeško-slavonska	86,644	27,308	30,551
Brodsko-posavska	179,181	54,767	58,756
Zadarska	165,593	52,145	61,785
Osječko-baranjska	341,180	113,697	123,948
Šibensko-kninska	116,159	39,332	48,006
Vukovarsko-srijemska	203,228	64,754	68,014
Splitsko-dalmatinska	467,899	142,982	160,708
Istarska	210,026	72,967	83,540
Dubrovačko-neretvanska	125,033	39,149	44,588
Međimurska	121,544	35,743	37,879
Grad Zagreb	809,701	275,109	302,847
TOTAL	4,535,054	1,474,298	1,647,599

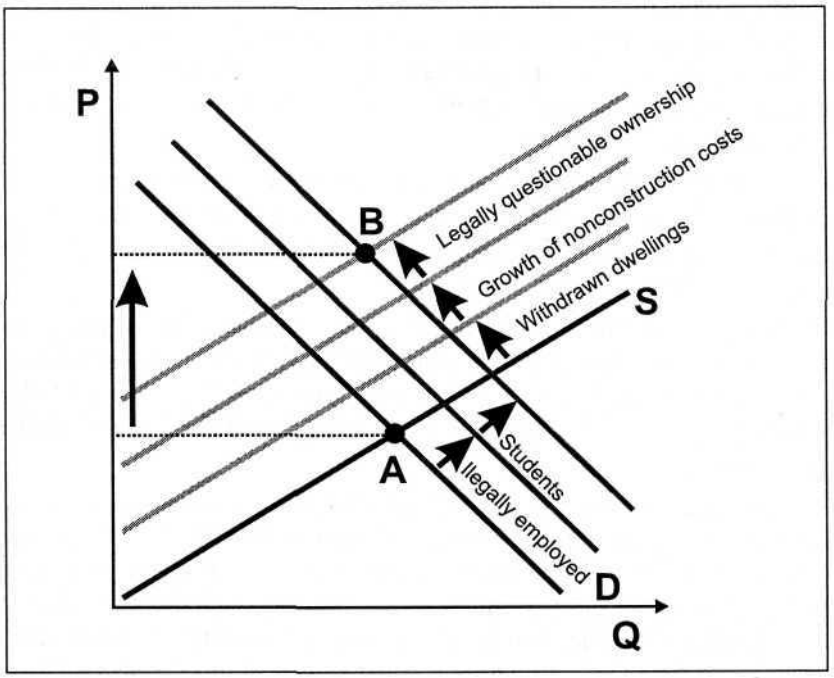
Source: Državni zavod za statistiku, 2001, p. 1.

Combined Result of Economic Infrastructure on the Housing Market in Croatia

Therefore, due to the unofficial economy, legal insecurities and verification costs, history of economic instability and increase of public sector, prices on the housing market are increasing although there is not any substantial excess of households over stock of housing.

Figure 3.

SUPPLY AND DEMAND IN THE FLOW-MARKET
AND STOCK-MARKET



At the same time, while the demand for resources exists, they are being withdrawn from the market and become unutilized. This way, instead of market allocating the resources, the economy doubles resources and building dwellings that are in fact abundant and lacking in demand, while the prices keep rising (Tica 2002). Basically, the housing market in Croatia is example of deviant market structure in which institutional framework has directed "invisible hand" into the equilibrium which is not optimal.

Macroeconomic consequences of the economic infrastructure of the housing market

The housing market affects labor market as well as the growth performance of economy. The linkages with labor market works mostly through costs of living. Increasing housing costs decrease real wage of households. As a result, syndicates push wage demands in order to preserve their standard of living which leads to increase in general price index. Increasing prices in the environment of fixed nominal exchange rate result with appreciation of real exchange rate, which decrease the competitiveness of the economy.

Analyzed in the framework of NAIRU (Non Accelerating Inflation rate of Unemployment), increase of housing prices in the small open economy with fixed exchange rate will increase unemployment in the real business cycle models as well as in the models with nominal shocks.

The effect of housing market on the competitiveness of economy is rather similar to Samuelson-Ballasa effect. Unfortunately, in this case, the rise in prices is not a result of less than average rise of productivity on the housing market, but it is the result of economic infrastructure that forms suboptimal equilibrium on the housing market.

The linkages with growth performance of economy operate through accumulation of capital. The hysterisis of macroeconomic instability and lack of any form of taxing at the housing market diverts investment away from the most profitable towards safest projects. Since housing capital is the safest way of preservation of wealth under conditions of economic instability and since it is tax free, majority of private investments is targeted towards housing capital. Therefore, economic infrastructure diverts structure of private investments in Croatia. There is an overinvestment in housing capital and underinvestment in non-residential capital. In the long run this phenomenon will result with increased share of rents in GDP and decreased share of wages and profits in GDP, creating some kind of pseudo-feudalistic economy in the 21st century.

The policy recommendations for the Croatian housing market

The key problem in the housing market defined in this paper is the fact that a certain number of dwellings represent savings and not supply. Besides, additional price pressure is caused by the fact that all existing dwellings do not exist in a legal sense (due to not formalized ownership rights in the cadastral books and land-registry offices) and by the growing fiscal pressure in the housing market.

It is evident that there are three problems associated with a role of the government in the housing market. Withdrawal of dwellings from the market is seen as a consequence of high verification costs, meaning legal insecurity and low levels of confidence in the economy. High administration costs of building are the consequence of high public expenditure (fiscal burden). Non-updated ownership rights in the cadastral books and land-registry offices further reduce supply of housing.

Problem of withdrawal of dwellings from the market and high administrative costs (e.g. costs of legal preparation of land for building) are interconnected and can be solved with a common economic policy only. Dwellings withdrawal can be discouraged with property tax or imputed rental income tax which should force owners of unused dwellings to offer them on the market. Property tax/imputed rental income tax can, on the other hand, be a source of fiscal revenue which can replace revenues on legal preparation of land and abolishment of any kind of taxes and fees on building.

Chaos in the cadastral books has started to clear and according to four year plan legal insecurity in the market should be lowered.

Results of proposed measures should be bigger supply due to the property tax/imputed rental tax (all unused resources would be offered on the market), updated ownership rights in the cadastral books and land-registry offices would generate more dwellings in formal and legal sense shifting supply further right, and abolishment of administrative costs and taxes for building would lead toward lower prices of dwellings.

Restructuring of the role of public sector in the housing market would lead to a downward pressure on prices of living, according to supply and demand without budget alterations, and with positive effect on total economic activity in the sense of a higher standard due to lower costs of living.

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MAKROEKONOMSKI ASPEKTI STAMBENOG TRŽIŠTA U HRVATSKOJ

Sažetak

U ovom istraživanju se raščlanjuje struktura stambenog tržišta i aporije koje ga pokreću. U prvom dijelu rada se teoretski raščlanjuju osnovne postavke stambenog tržišta, raščlamba se bazira na definiciji predmeta tržnje na stambenom tržištu, na heterogenosti stana kao ekonomskog dobra i na kontroverzi u teoretskim definicijama zaliha i tijekova na stambenom tržištu.

Drugi dio istraživanja se bazira na mikroekonomskoj analizi funkcija ponude i potražnje na stambenom tržištu. Teoretski model ravnoteže na stambenom tržištu je ekonometrijski testiran s podacima za hrvatsko stambeno tržište u razdoblju od 1965. do 2003.

Treći dio istraživanja se sastoji od raščlambe čimbenika koji standardnu ekonomsku analizu na stambenom tržištu u Hrvatskoj čine manje efikasnom. Neslužbeno gospodarstvo, netransparentna katastarska evidencija, oportunitetni trošak, struktura troškova i uloga turističkog sektora su uključeni u proširenu teoretsku analizu stambenog tržišta.

Četvrti i peti dio istraživanja se sastoje od identifikacije makroekonomskih posljedica nedovoljne i neoptimalne ekonomske infrastrukture na stambenom tržištu i teoretskim preporukama za uklanjanje elemenata ekonomskog okruženja koji su prouzročili neefikasnu alokaciju resursa.

Ključne riječi: stambeno tržište, ekonomska infrastruktura, neefikasno tržište