Origins of security and insecurity: the interplay of housing systems with jobs, household structures, finance, and social security.

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Insecurity aspects of homeownership in Hungary (Quantitative and institutional analysis)

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1 Introduction

Hungary is the only country in the OSIS project, which represents the transitional countries, and the new members of the European Union. (Hungary joined the EU with nine other countries in 2004.) Homeownership has become a dominant tenure form all over the transition countries, and both the risk and security aspects of homeownership turn out to be relevant justifying the same approach applied in the project. However, there are several social problems which are related to the transition from a centrally planned economy to a democratic market society. This calls for an additional chapter providing the context for the Hungarian case among transitional countries.

The ***first part*** of the study concludes that the restructuring process in the transition countries has common elements, thus the Hungarian case study will contribute to understanding some of the new features of the accession countries. A special emphasis was given to understanding the tenure forms, and the meaning of homeownership versus tenant position.

The ***second part*** deals with the specific features of the restructuring process in the Hungarian housing system providing a background for the quantitative study on both the insecurity and the security elements of homeownership. This part of the study gives the framework of the quantitative analysis, which overlaps with the institutional study (belonging to the other Workpackage 2). The reason we put it in this study was that it seemed to be necessary to understand the related issues for the analysis of the micro data, and Hungary was not part of the HARE project, which preceded OSIS and published a book “as a state of art” . (Doling and Ford, 2003)

The ***third part*** of the study focuses on the insecurity elements of homeownership. Firstly, we deal with the privatization process and try to understand the sociological motivation behind these processes, and evaluate some of the consequences. The main argument is that the “insecurity” of the tenant position was one of the most important individual motivations for the sitting tenants in buying their apartments. The other insecurity issue of housing (both for homeowners and tenants) has been the arrears issue. We analyze the data of national household surveys (1999, 2003) to describe the factors explaining the probability of arrears.

In the conclusion we will reformulate some of the research questions the qualitative analysis has to answer.

2 Homeownership in the transitional countries

2.1 Towards new housing regimes

2.1.1 East-European Housing Model: the legacy

The main characteristics of the East-European Housing model (Hegedüs-Tosics, 1996) was the one-party political control over the housing sector, the subordinate role of market mechanisms, no market competition among housing agencies (bureaucratic coordination), and a broad control of the allocation of housing services (huge, non-transparent subsidies). However, under this model several "sub-models" (versions) emerged as responses of the individual countries to challenges in the process of the development of the socialist economy. (Turner et al, 1992) While the main characteristics of the model could be interpreted as a structural explanation, the divergences of the model were considered theoretically as "policy options" taken by the individual governments.[1] The structural conflicts ("cracks") were managed by different methods, introducing strict control mechanism (Bulgaria, Russia, East-Germany), or allowing quasi market processes (Yugoslavia, Hungary). Differences of the models could be characterized by the tenure structure (state-owned rental, cooperative housing sector and owner occupation), the role of different financial and economic organizations, and by the significance of "self-help housing". (Hegedüs, 1992) Differences were explained partly by exogenous factors, such as the organizational development of the party and the state, the economic and social policy, and partly by the endogenous development of the housing institutions. The outcomes of different policy options – even among countries with the same level of the GDP – were quite different in terms of the quality and quantity of housing. Despite all these, it is important to emphasize the common typically "East-European" elements of the different versions, e.g. the housing estates, the under-maintained public sector, and rationed "elite" houses for the nomenclature, which justify the use of the term "East-European Housing Model".

2.1.2 Transition and welfare regimes

The transition in 1989/1990 brought about the change of the political structure, introduction of the democratic political system[2], which moved away the political constraints of the introduction of the market mechanism. A vast literature has been developed dealing with the transitional issues, which has been dominated by the liberal economic approach.

The transitional paradigm (Mykhenko, 2004) is closely related to the classical liberal theory. The neo-classical tradition states that the introduction of the market institutions parallel with the introduction of political democracy and the downsizing of the role of the state lead to an efficient allocation of scare resources. However, there is a discussion about what the transition (the changes of system) from "socialism to capitalism" means. Kornai (1998, 2000) compares the models ("ideal types") of the socialist and capitalist system. There is a discussion about when the transition process will be over. Kornai (2000) argued that there are three conditions to be fulfilled for transition to be considered as finished (1) the communist party has no monopoly of power; (2) the dominant part of the capital is in private ownership, (3) market coordination has become dominant. According to this definition, the transition has been over for several years (Svejnar, 2002). Gelb (1999) sees the end of the transition when the social and economic problems of transition countries are the same as those of the societies/economies at the same level of development. Svejnar (2002, p. 26) defined the "end of transition as a state when these economies replace central planning by a functioning market system and when they generate rapid and sustainable rates of economic growth that enable them to interact with the more advanced market economies without major form of protection." In our approach, which is closer to Gelb's, transition means specific social issues related to the institutional changes of the economy. Obviously, this is quite a vague definition, as in countries of transition both types of social problems arise, the problems, which are related to the structural adjustment of the organizations and households, and problems of the modern societies.

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[1] This approach could be conceived as a "soft structuralist" approach, which combines a "rational choice" (policy choice or agency choice) type of explanation with structural elements. In my earlier work I followed this argumentation, for example, in the explanation of "self-help" housing in Hungary. (Hegedüs, 1992)

[2] Democratic processes could be blocked, especially in the post-Soviet countries with ethnic conflicts. However, the political systems are under the pressure of the democratic principle (free election, freedom of speech etc.).

Different manifestations of the capitalist system (Kornai, 2000) lead to different institutional models. The convergence theory answers this question by stating that the differences among different versions are not relevant or exist only temporarily; in the long run the differences will become irrelevant or will disappear. The divergence theory emphasizes the differences, and tries to define the main characteristics of the different models. The various regime theories try to explain the differences in the models focusing on the different spheres of the society. The critics of the welfare regime theory (Voorhois, 2002) argue that because of inadequate empirical validation, the regime theory has only heuristic value "as a way of thinking" about the welfare systems. However, what is true for the welfare regime, is not necessarily true for other sectors. The famous Esping-Andersen (1990) typology differentiates among the liberal, conservative and corporative regimes analyzing the different welfare systems.

2.1.3 Different housing regimes in transition

The shift toward the market based housing system[3] took place in different ways at different "speed", and thus resulted in different sub-models. The differences can be explained partly by the exogenous factor, like the strength of the democratic institutions, the structural changes etc., and also by the endogenous factor, i.e. the institutional and legal legacy of the socialist housing system. The challenges the national governments had to respond to had a lot of mon elements. Theoretically there were two basic options after the transition: 1. to use the housing sector as an "engine" of the change ; or 2. to use as it as "shock absorption" (Struyk, 1996). The first option was practically unfeasible, because in the time of the economic decline the under-maintained and under-financed housing sector cannot be totally "marketed" without huge and unmanageable social conflicts.

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[3] Buckley and Tsenkova, (2003, p 19) characterized the market based housing system as one in which the market mechanisms dominate the production, allocation and consumption of housing, there is sufficient competition among agents and institutions in the interrelated markets for housing finance, resources and services, and governments provide subsidies that are relatively transparent, progressively targeted and budgeted in sustainable ways.

Even countries having relatively successful transition strategies (Hungary, Czech Republic, Poland) postponed the structural changes in the public service sector like health, education, and the social sector[4], and focused on the production and financial sector. Housing was in-between, because in certain housing areas there were no basic social barriers to major changes (construction industry, building material), but in the area of housing services (water, heating, etc.) it was not possible to introduce market mechanisms (price liberalization, enforcement) because of the risk of social conflicts. Housing privatization, one of the favourite topics of housing discussion, should be conceived in this framework. The decisions on privatization were not based on the "policy choice" of having the "unitary" or the "dual" model[5], but were more the results of short-term political interests. The real and tough question was (Hegedüs and Tosics,1996b) not the tenure structure, but the "operation" of the housing sector. Private does not necessarily mean market, and the key question is how market mechanism is introduced as a dominant integrating mechanism. The key question in terms of the future direction of the housing models of transition countries is not whether the country has brought about a "fast" or "slow" privatization, but whether it has introduced a change in the property management. The difference between the Bulgarian and Czech "model" does not lie in the privatization, but more in how much role the market mechanisms play in the property management, as Bulgaria did not have a public stock to privatize. In this sense "fast" privatization and "slow" privatization did not represent different models in themselves.[6]

The future model of the housing systems of the transitional countries depends on the policy and institutional options chosen under structural constraints (fiscal pressure, new political system, privatised economy, public sector reformed etc.) The emphases are on both policy and institutional elements of the housing system. It is not enough to deal with policy choices[7] without real institutional background. The task of the research is to find the factors which influence these policy and institutional decisions. A good comparative research first has to understand the real role of the different institutional solutions in a particular housing system, and on the basis of this has to look for the answers why different countries have chosen different options.

2.2 Tenure structure and housing privatisation

2.2.1 Tenure structure before transition

In the socialist housing system four main types of tenure could be differentiated. It was not only the "meaning" of tenure that was not the same in the different countries, but it was changing in time, too. This is the reason why it is not easy to give an overview of the tenure structure before the transition.

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[4] While structural changes were postponed in the social service sector, new elements emerged partly related to the housing sector.

[5] Kemeny's two models (Kemeny, 1995) are frequently used as real policy options.

[6] This problem can be illustrated with the excellent book edited by M. Lux (2003), which had to introduce Bulgaria as a separate model. This raises concerns about the explanatory value of this theory.

[7] The policy options embedded in government papers and government decrees are not sufficient conditions to bring about real changes in the housing system. Without institutional support (banks, local governments, building companies) these attempts will not be successful. Thus the analysis of the housing policies without their institutional background can only give limited insight into the process of transition.

2.2.1.1 Public rental

“Public rental” is a comprehensive title that includes both municipal rental housing and enterprise housing leased to workers. Directly or indirectly, the state paid for the construction and maintenance of both types. The two systems of developing, maintaining, and allocating housing existed side-by-side, which also caused political tension between the territorial and the sectoral principle in the development policy. Enterprise housing was very important in the Soviet Union, but even in Poland it was 13 %, in Slovakia 6 % of the stock (Hajduk, 1996). The privatization of enterprise housing became complicated because privatization of the companies had preceded the privatization of the housing stock.

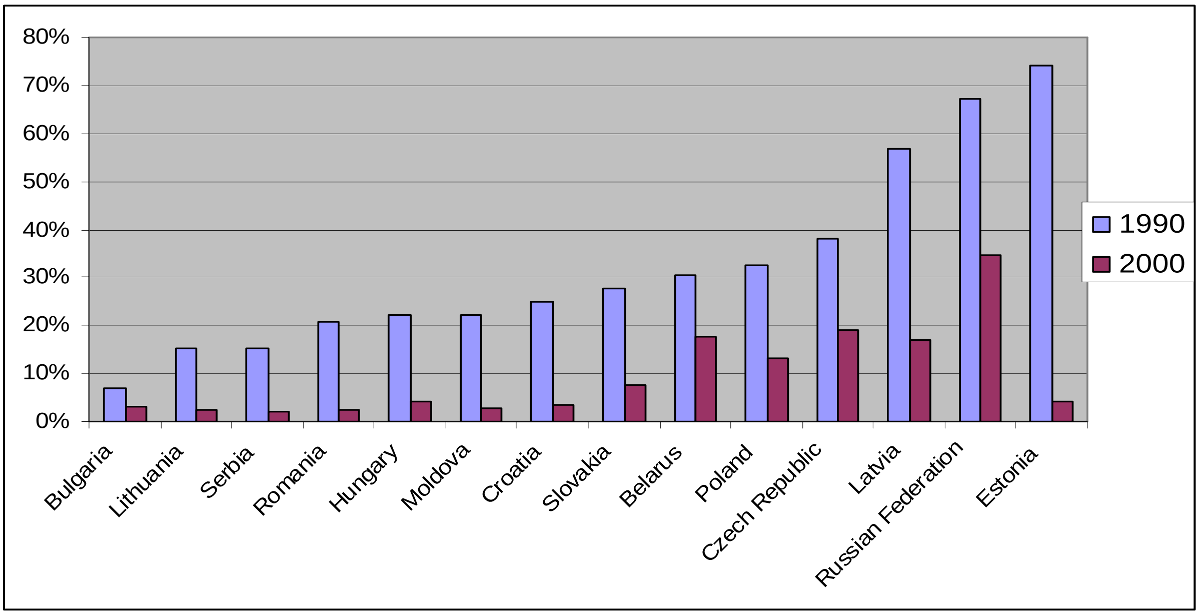

Figure 1 The share of public rental as a percentage of the total stock, in 1990 and in 2000.[8]

The state housing in ex-Yugoslavia (so called “socially owned housing”) represented a special case. The production of socially owned housing was financed by enterprises and municipalities. In Yugoslavia, since the 1960s, construction of multi-family housing was usually organized and carried out by a public enterprise operating under the authority of the municipal governments. A tender would be issued to which various enterprises or municipalities could respond by contracting for purchase of the number of units they could afford and needed for their employees. Construction costs were paid in advance, and could be increased during the construction period to keep up with inflation. After completion of the building, occupancy or tenure rights were assigned to families. Enterprises or municipalities who paid for construction of the building remained the owners. There were no direct central or local government subsidies for construction or management of housing. Enterprises funded construction of housing for their employees from their own income or profits. A central Housing Solidarity Fund was used to finance construction of apartments for persons who had no other access to housing, or for employees of enterprises in "non-productive" sectors (government, education, research) or enterprises with insufficient income to house their employees. The Housing Solidarity Fund was made up of payroll deductions of 6 percent from all enterprise employees.

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[8] Source of data: Lux (2003), ECE(2002), MRI (1996)

Working hostels had important role in the EEHM. They were controlled by the big state owned companies providing shelters basically to the first generation industrial workers migrating from the rural areas. It can be considered as a special type of enterprise housing. After the transition, workers' hostels disappear from the market.

2.2.1.2 Co-operative

Co-operative housing, while heavily subsidized, generally required significant contributions from purchasers. This type of housing occupies a medial group between owning and renting, because in Eastern Europe there was only a slight difference between living in a co-operative and a state rental. Co-operative "owners" had quite limited property rights, including restricted rights of disposition. "Individually owned" units were almost exclusively single-family units in smaller cities, towns, and rural areas.

The diversity in the importance of state housing versus owner-occupation and co-operative tenure resulted from conscious government policies. In all socialist countries the government had the responsibility by constitution to provide for adequate housing for citizens. In the1960s, co-operative housing was introduced in the Soviet Union, and later in other socialist countries. Development of co-operatives became a very important element in the housing strategies in the East European countries, and this is reflected in the comparatively large share of units in this legal form. Especially Poland, Czech Republic and Slovakia had a larger cooperative sector around 20-22% of the stock.

Interestingly enough, it plays very different roles depending on the individual political factors. It is important to emphasize that this type of housing was not so much different from the state public housing, as the construction, allocation, and financing were organized by the organizations under direct state control. However, differentiation between tenants' and owners' co-operatives form did not essentially play any role as for the property rights. Co-operative members, being owners of their co-operative flats, enjoyed the privileges of owners of real estate, with some limitations. They could sell their flats independently, the co-operative being obliged to admit the buyer to co-operative membership. These flats can also be inherited. Building co-operatives (which are not tenure) played some role in Bulgaria, and ex-Yugoslavian countries.

2.2.1.3 Private ownership

Private/individual ownership was typical for the rural areas and outer areas of the cities in the region. Private ownership, in principle, means full right of use, disposing, management and possession of the real estate, referring mainly to the stock of family houses, mostly with one flat, to smaller and less attractive houses, in particular regarding the housing stock built before the nationalization process.

In practice, several constraints were imposed on private ownership. For instance, private ownership over flats was taken away from the owners during the socialist period, where the tenants with tenant's rights enjoyed the right of possession and management in the sense of investing in improvement of housing quality; such flats were then run by the public housing funds, and the owners were responsible for maintenance of the common parts of the building and of the walls.

2.2.1.4 Private rental

Private rental was a part of the “gray” economy, because even in the rental sector the sitting tenants had rights to sublet their apartments, but in most of the countries this tenure was not reported. In some of the countries in the region the share of second homes is extremely high, e.g. in Croatia, Bulgaria, Romania, and Hungary. With the development of tourism second homes have become important economic assets.

The tenure structure by itself does not say too much about the operation of the sector, as the detailed regulation and unwritten rules made significant modification on the effect of the tenure form (Hegedüs-Tosics,1996) For example, in Bulgaria, property rights tied to private (individual) ownership were controlled by several rules, e.g. limitation on selling. In co-operative housing the “members” of the co-operation were not free to choose the maintenance companies, the fees were set by law, etc. Thus, it is very important to note that tenure itself was defined by a wide range of detailed regulations.

The countries in East-Europe demonstrate an enormous diversity in tenure patterns before the transition. On average, around 20 % of the stock belonged to the public sector according to our terminology. On the one hand, one extreme was Albania with 35 % of public stock, and the other Bulgaria with 7 %; the other countries have 15-25 % of the stock in public hands. The extraordinarily high homeownership rates in Bulgaria before the transition are striking, but if we understand the actual operation of the housing sector, this fact did not make much difference in terms of the processes in the sector. The other difference was the role of the cooperative sector. In the pre-transition period it was just another form of state controlled housing, as the cooperative “movements” were under the supervision of the state apparatus. However, after the transition these differences have become important.

2.2.2 Privatization and restitution

Privatisation and restitution were important factors influencing the problems of the housing asset management. The restitution (when former owners of property reclaim assets that were expropriated from them or which their families had been forced to sell) played an important role only in the Czech Republic[9], but it was possible in Albania, Bulgaria, Croatia, and Romania as well. Except for the Czech Republic, restitution has not created a substantial “sub-market”, but it could have a huge influence on the operation of the sector through the uncertainty of the property rights.

Restitution caused several social tensions because the position of the sitting tenants had become uncertain. In some countries the governments obliged themselves by law to provide housing for these tenants, but the process was full of conflicts (Albania, Croatia, Czech Republic, etc.). For example, in Croatia, tenants living in units owned by other physical persons have a “protected tenants” right. In the Czech Republic the regulation of the private rental sector has become one of the most discussed housing policy issues.

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[9] In the Czech Republic the restitution led to a quite substantial regulated private rental sector. By the end of 1993 the process had finished, and only a small number of cases were waiting for court solution. (Sykora, 1996)

In Romania, the law made the restitution possible, but it had not been enforced because of the "opposition" of the sitting tenants. As Dawidson (2003) showed, in Timisoara (Temesvár) – county seat of Timiş (Temes) -- "although the restitution law gave people, who lost private property due to Communist confiscations, the right to reclaim their property, it also entitled sitting tenants to buy the dwellings they occupied. Hence, private property rights have become distorted due to vague delimitations between the ownership rights of former owners and tenants, in the most urbanised areas in particular".

The privatisation in the region followed different methods. In Hungary, a right to buy legislation was introduced, while in the Czech Republic no central regulation was applied. As a consequence, privatization is much slower in the Czech Republic. Some of the observers concluded that the Czech Republic followed another model, namely it tried to keep the universalist model. However, without structural changes in the sector (rent regulation, rent allowance, allocation procedures, and transparent landover-tenant relation) we cannot talk about a new model.[10] In Albania, for example, 90 % of the sector was "transferred" to the sitting tenants by the force of law without any legal, administrative and financial grounding. The privatisation in Serbia had the same problem; at the beginning of the 90s, the majority of the socially owned stock was privatised at 10 % of the market price without the establishment of the organisational conditions of the maintenance and management of the stock. (Habitat, Serbia, 2000). In Croatia, the laws related to privatisation tried to provide the necessary environment for the operation of the privatised stock. Although the process of privatisation has not yet been finished, the countries in the region put more and more effort into the consolidation of the management problems of this stock.

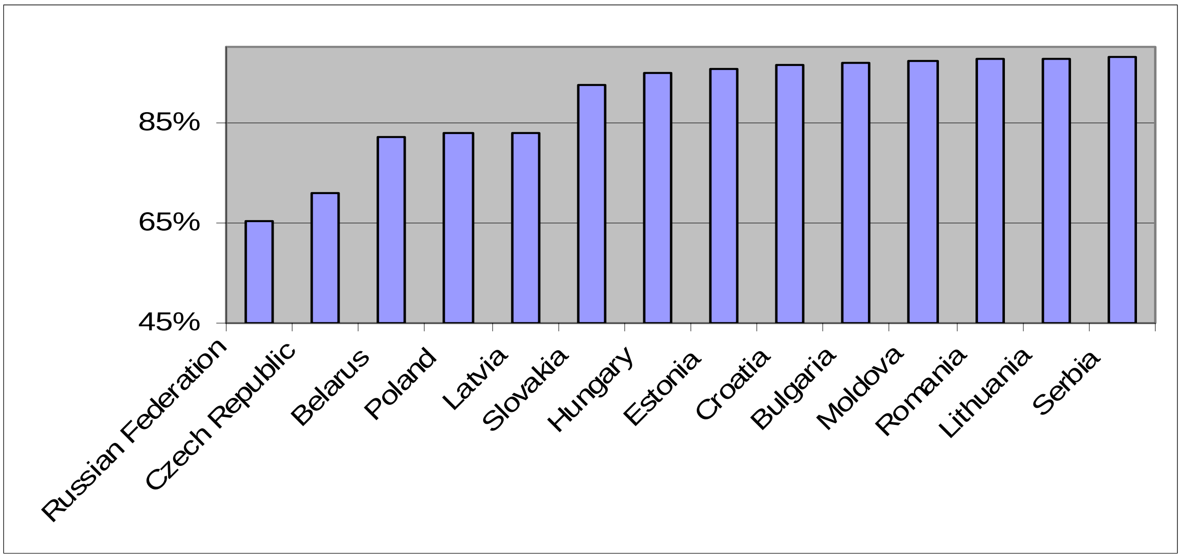

Figure 2 Share of the owner-occupied dwelling 2002 [11]

We should emphasize that beyond the privatisation of the public dwellings, there are different other forms to be considered. The privatisation of construction and maintenance enterprises has an important effect not only on the maintenance and renewal of the privatised stock but on the urban multi-family housing stock as a whole.

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[10] Till now the tenants can sell their right to the tenancy in the Czech Republic, which means the lack of real changes. (Lux. 2004)

[11] Source of data: Lux (2003), ECE (2002), MRI (1996)

Housing privatisation has generated an enormous public debate both in the national and international literature. In the evaluation of the debate it is important to realize that in the socialist public sector the tenants enjoyed a wide range of property rights, which made it impossible to have an efficient social rental sector.

Privatisation made the property rights transparent, and, of course, put the burden of the operational and maintenance cost on the new owners, who were not prepared for it either from the financial, or the management point of view. These “forced owners” today have to face the fact that the maintenance of their ownership has to be financed from own resources. Actually, the state made available the ownership through cheap prices and low rate loans and gave over all other financial and managing responsibilities to the new owners.

The housing policy after privatisation faced a huge affordability problem. The prices of the housing related services (maintenance, water, sewage, garbage collection, district heating, energy etc.) have increased in the time of economic decline. The crucial problem was that the housing structure (multi-unit building, no metering for public services) did not make it possible for the individual household to adjust its consumption to the changed economic conditions. The households’ real income decreased as a consequence of the economic collapse after the transition and the war, and the housing structure was unable to allow for the individual modification of the consumption. Any modification was in itself pointless without proper insulation and individual metering.

It was not that poor families had been over-represented in the multi-family housing stock, but gradually the social composition of the stock worsened as the better off families moved out from this part of the housing sector with declining value. Generally, but especially in terms of the multi-family housing stock, it was difficult for the politicians to let free market regulations (e.g. demand-supply driven prices of communal services and rents, efficient legal sanctions against families in arrears) prevail in the housing sector, as this would lead to the collapse of a significant part of the owner occupied sector. Similarly, financial institutions are very cautious with the owners and do not rush to introduce real mortgage lending in the post-socialist countries. Even if it is by now easy in most countries to verify the market value of an owner occupied unit, many owners have low incomes to repay a mortgage loan and legal sanctions against non-payers, i.e. the legal protection of the borrowers is still weak.

The key question is what happened to the traditional state maintenance companies, which had the task to manage the multi-family building stock both public and in private. In some countries they were municipalized (transferred to the municipalities), divided into smaller units, privatised, or restructured in other ways. The restructuring process in the management has been much slower than in the ownership structure because this includes changes in a variety of sectors of the economy like company laws, construction industry, etc.

2.2.3 Legal issues of the housing security

The legal meaning of tenure has gone through a changing process in transition countries. Marcuse (1996) argued that private ownership in the EEHM did not serve as an capital accumulation, as housing was more a “consumer” good, than a capital “good”. In our approach, housing could not serve as a capital accumulation because of the political control, and not because of the socialist nature of ownership. It is important to realize, that as far as market transactions existed, the capital accumulation through home-ownership was possible.

However, the home-ownership existed under political control (for example the number of properties was maximized). After the transition these controls were lifted.

The introduction of the new legal framework is crucial, but without an efficient enforcement system its effects are questionable. To introduce legal regulations which cannot be enforced could distort the existing legal system as well. It turned out that building up efficient enforcement procedures is more difficult than the creation of the new laws. In the case of multi-unit buildings there is a need for a legal form defining the relation of the individual owners to and among one another. There are two basic legal types of multi-unit buildings: condominiums and co-operatives. In some countries (e.g. in Albania, Moldavia, etc.) there was a legal gap after the privatisation, because no laws regulated the relation among the different owners in the same building.

In the case of condominiums the absolute ownership of a unit is based on a legal description of the airspace the unit actually occupies, plus an undivided interest in the ownership of the common elements, which are owned jointly with the other condominium unit owners. The owner is entitled to a single unit, as well as a share in the common elements such as elevators or surrounding land. A condominium is a form of homeownership that combines individual ownership of one's unit with shared ownership of common facilities. Each owner may have a separate mortgage for his or her individual unit and is individually responsible for making the payments and real estate taxes on it.

Housing co-operative means joint corporate ownership of a housing development made by those who reside on the premises. It could be any type of organization that is owned and controlled by its member-users for a common purpose and that follows the co-operative principles. A co-operative operates for the benefit of its members on a not-for-profit basis in order to provide the goods and services members need at the lowest practical cost. Members/shareholders own the co-operative and participate equally in the governance of the co-operative.

There are different types of co-operatives depending on the specific regulations with respect to the owners' rights and responsibilities. In a tenant housing co-operative, there are two owners, the co-operative corporation and the corporation's owners, who are typically known as tenant-stockholders. The co-operative corporation owns or leases the housing project, including all land, dwelling units and common areas. Its tenant-stockholders, who by virtue of their stock ownership, are entitled to occupy a specific dwelling unit, in turn, jointly own the co-operative corporation. Tenant-stockholders purchase stock — sometimes called shares or membership certificates — in the co-operative corporation. Upon purchasing stock in the co-operative, the tenant-stockholder signs a perpetual lease, called a proprietary lease or occupancy agreement that gives the tenant-stockholder a legal and exclusive right to occupy a dwelling unit as long as all obligations to the co-operative are met. Tenant housing co-operatives were rare in the region, typically building co-operatives were set up just for the construction period.

Both condominiums and housing co-operatives have to set up an organisational framework to manage their responsibilities, to meet financial obligations, to initiate contracts, to manage maintenance and renewal, etc. The organisation passes on the related costs to the individual owners, who pay a single monthly fee or charge to the organisation. One of the questions is the legal status of the organisation. The condominiums are typically not legal persons, thus, behind every contract there are individual owners. Typically, the law defines the "home owner association" as a decision-making body with public meetings and voting procedures, with a common budget and business plans.

The Homeowners' Associations' or the Housing Council's own internal decision-making structure is set up in the relevant Condominium Law. This law regularly differentiates between decisions with low cost consequence and decisions on higher investments, such as renovation or requiring further or higher contribution from the associated owners. The first requires normally a simple majority of votes, the latter a higher share according to the owners' ownership rate (e.g. 67 % in Romania). In case the HoA's have the right to sue the associated owners for non-payments; they possess a tool to enforce the decisions. In cases when they do not, there is no actual possibility to control the common decisions' implementation.

In most countries, land registries are regarded as reliable repositories of records on ownership rights and interests in real property. In the socialist period, land registration was a neglected area, even in countries that in the pre-Second World War period had introduced quite an efficient land registration system at the time.

The typical problem is the slow administration and unreliable records, despite the fact that each country has recently adopted laws and made great efforts to modernise the system including computerization. Efforts are now underway to amend the controlling law and introduce the position of registration clerks. In ex-Yugoslavia and Albania the share of illegal construction is very high, which causes a lot of problems to reach an acceptable level of the quality of land registration.

Courts or Land Offices could administer registration, with filings handled by judges or administrative personnel. Ownership is not transferred until registration is complete, which may take several months. A good titling system would seem important to enforce the payment for the service fees. Banks making loans for purchase of property encounter risks during the period when the borrowers do not have defined property titles.

The building law has an important effect on the housing management. Every observer in the region concludes that the deterioration process of the multi-family housing stock has reached a critical stage when even the life-hazard issue can be raised in respect of the condition of this stock. In principle, the building law should prescribe the basic standards for the housing structures. In the case of the houses that do not meet the requirements, a fine has to be imposed or a compulsory reconstruction process should be initiated.

The new housing (rental) law has become necessary after the transition, especially in countries where new type of rental stock was introduced. In Poland, the TBS (non-profit rental sector), in Czech Republic the restituted private rental, and in other countries the central government supported rental stock (Slovakia, Hungary, Czech Republic) were regulated. (Hegedüs, 2004)

The other key area of the regulation is the foreclosure law and eviction. There is ambiguity related to the security of home-ownership in the case of arrears (mortgage, rent or utility). As the housing cost increased in the transition countries, the social problem of arrears became important.

2.3 Emerging housing finance in the transition countries

After the transition – in contrast to the expectations – housing demand has decreased as a consequence of the macroeconomic decline. Unemployment, inflation, and the decrease of real incomes in combination with the withdrawal of the housing subsidies led to the decline of the housing output. Housing construction declined in each country in the 90s, independently of how successful the economic and social transition was. Figure 3 shows that compared to the output in 1990, the decline reached 80-65 % in countries in transition.

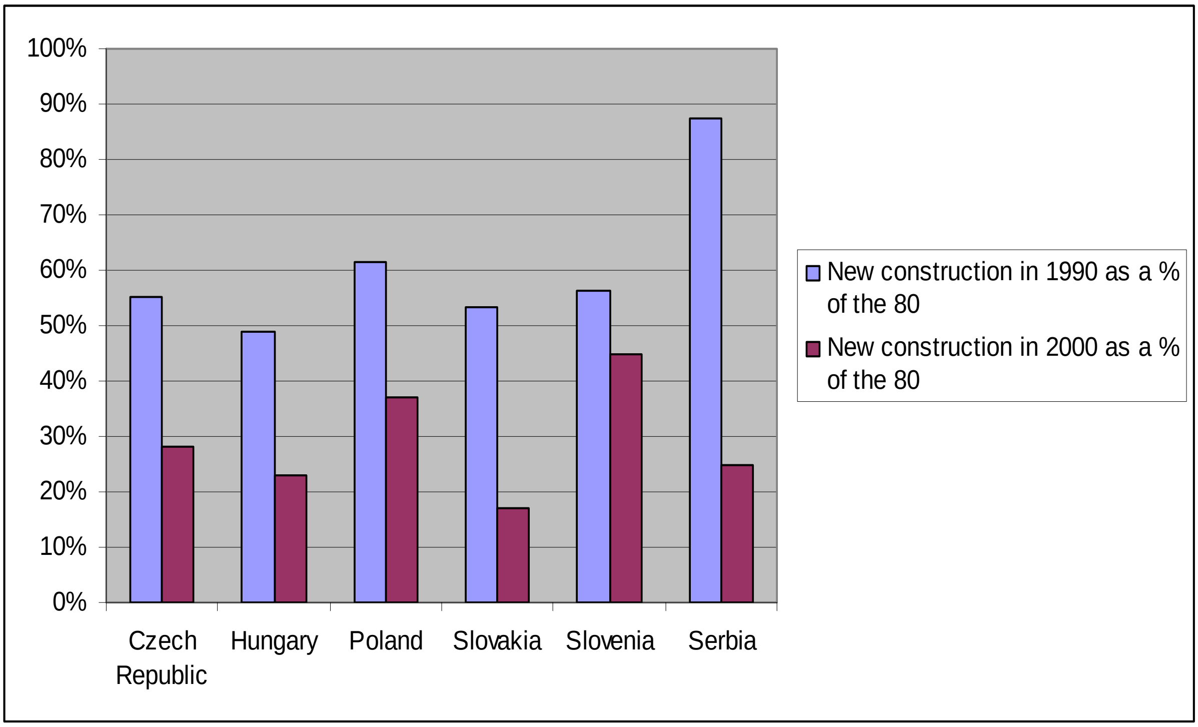

Figure 3 Decline of the housing output between 1990 and 2000 (Source: MRI)

The recovery of the housing systems depends on the new housing finance system. In the 90s the most successful transitional countries restructured and privatized their banking system, and tried to introduce a mortgage finance system. Despite the different institutional solutions, mortgage finance lending started at the beginning of 2000 as a consequence of the stabilization, low inflation, and low interest rate.

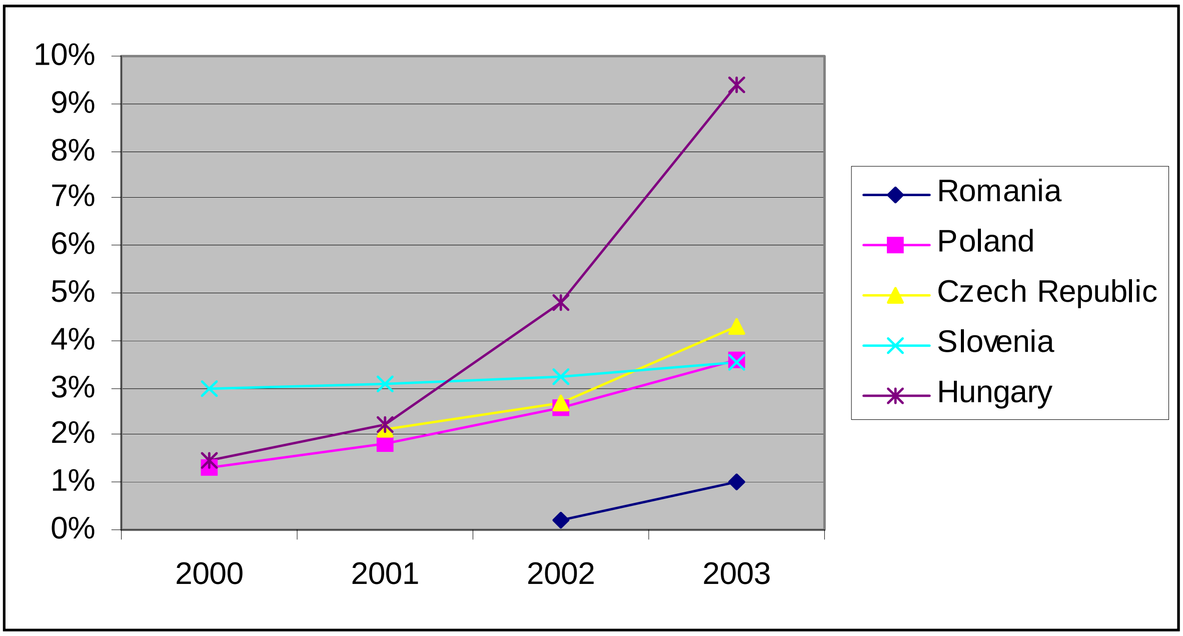

Figure 4 Outstanding loan as a % of the GDP (Source: MRI)

Typically the outstanding loans are at 1-3 % of the GDP, which shows that mortgage finance is in its early stage. Hungary – as we will show – introduced a very costly mortgage subsidy program and increased the outstanding mortgage substantially. However, there are signs of the fast progress in mortgage finance even in countries where the mortgage subsidy is not extremely high, like Poland and the Czech Republic. (See Figure 4)

The new element in these countries is the significance of the foreign currency (typically Swiss Frank or Japanese Yen) based mortgage, where the borrowers bear the exchange rate risk. In Poland the share of denominated loans has been above 50 %, and in Hungary, after downsizing the mortgage subsidies, the foreign currency based loans have increased to a great extent. The significance of the mortgage finance increases the risk of homeownership, but we are still in an initial stage to be able to evaluate its social significance.

2.4 Risk and security elements of the tenure structure in transitional countries

In this chapter we argued that countries in transition have common elements in the process of restructuring, which justify a special approach to their problems. One of the elements is the change in the ***tenure structure.*** Though in countries belonging to the East European Housing model there were quite different tenure structures, the operational logic of the model (the "structure") was basically the same: dominance of the state institutions. Thus in 1990, at the turn of the transition, the tenure structure in Eastern Europe showed a "wide variety". After the transition two things happened: 1. Privatisation process started 2. the "reinterpretation" of tenure started. The first element is quite transparent, and the process could be described and analysed; however, the second element is less obvious. Our argument is that tenure rights in a wider sense (property rights, real estate registration, foreclosure law etc.) went through (and they still are) under a reinterpretation process, which has an enormous significance from the point of view of our project. The security and risk elements of homeownership are closely related to these, not merely legal, processes.

The second common element is the lack of “social housing” not only in the sense of the public ownership, but in the operational sense, that is, housing for people who are facing huge affordability problems. The institutional solutions are under “construction”, and we can talk about different attempts (e.g. the Polish TBS, or the municipal housing in other countries) which point into that direction. It is not easy to evaluate these programs from the point of view of political and financial sustainability. In Hungary, for example, the new rental housing program started in 2000 was stopped owing to financial reasons.

The third common element related to the risk and security of homeownership is the consequence of the hardship paying the increased housing related costs in a “constrained” macroeconomic environment. That is, a relatively wide share of the households is facing the problems of arrears, a huge social and political issue which has to be managed by the transitional countries. This is what we can call structural adjustment: households have to adjust their consumption according to their budget constrains, the increased burden has to be shared in multi-unit building among the tenants and owners, an efficient safety net has to be introduced to help households to manage hardship, the efficiency of the services has to be increased, and a new legal environment of the service sector has to be introduced (consumer protection, etc.).

The fourth common element is the introduction of the new housing finance system. In the 90s, independently of how successful the transition was in a political and macroeconomic sense, the housing sector in terms of the new construction and housing finance got into a deep crisis. Actually, the housing output decreased to 30-60 % of the 90s’ level, and housing finance actually disappeared. At the beginning of the 2000s, the housing output gradually started to increase and new, market oriented hosing finance institutions have emerged and housing finance has started to increase slowly (or in some countries, like in Hungary, at a faster pace). This increase raises the problem of risk, which in nature is not different from the problems in the more developed market societies, but because its close relation to other transitional problems we have to study it carefully in the context of other transitional problems.

3 Hungary: The social and economic changes of the housing system (institutional study)

3.1 Macro-economic changes: employment, etc.

3.1.1 Economic restructuring (privatization, unemployment)

With the transition, the macro-economic situation in Hungary experienced large imbalances. The restructuring of the political structure brought about changes in the economy, the sectors' setup, ownership forms, labour market and social policy as well. With the abolishment of central planning in the economy, processes of the market economy had gained space. This went in line with the decrease of the GDP in the first five years, which was then followed by a slow recovery.

Changes in the labour market due to closing down of many previously state owned companies, and restructuring of the production sector, caused the employment ratio to decrease. The decline mostly affected the North-Eastern region of Hungary and those settlements where heavy industry had dominated. The regional differences between the eastern and western parts of the country are still pertinent, whereas investments and developments slowly stream also to more underdeveloped areas.

Table 1 Changes in employment (1980-2001)

Year	GDP	Employment	Dependency rate	In thousands	Empl. ratio
1980			0,58	5458,2	65,3
1989	100,7	98,2	-		
1990	96,5	97,2	0,51	4880,0	59,0
1991	88,1	92,6	0,50	4520,0	54,4
1992	96,9	90,3	0,49	4082,7	49,0
1993	99,4	93,8	0,49	3827,0	45,8
1994	102,9	98,0	0,48	3751,5	44,8
1995	101,5	98,1	0,48	3678,8	43,9
1996	101,3	99,1	0,48	3648,2	43,6
1997	104,6	100,1	0,47	3646,4	43,6
1998	104,9	101,4	0,47	3697,8	44,3
1999	104,2	103,2	0,47	3811,4	45,7
2000	105,2	101,0	0,47	3849,1	46,2
2001	103,8	100,3	0,46	3859,5	45,4
2002	103,3	100,1	0,46	3883,7	45,6

Source: The Hungarian Labor Market (Review and analyses) ed. by K. Fazekas; J. Koltay; ZS. Cseres-Gergely, Institute of Economics, 2004

Although the nominal income steadily increased throughout the last decade, it could not keep pace with the high inflation of the first half of the nineties. Hence, the real income considerably decreased. The incomes had only recovered by the end of the nineties when the effects of stabilizing interventions had become felt. This could only go along with the rapid economical growth the country experienced, ranging from 3,5 to 5,2 % GDP growth per year from 1997-2001, compared to less than 1,0 % in much of Western Europe.

Table 2 Changes in earnings (1989-2001)

Year	Consumer price index	Gross earnings, HUF	Net earnings, HUF	Monthly average, HUF	Average gross earnings
1980					=100
1989	117,0	10 571	8 165		
1990	128,9	13 446	10 108		
1991	135,0	17 934	12 948		
1992	123,0	22 294	15 628	8 000	36
1993	122,5	27 173	18 397	9 000	33
1994	118,8	33 939	23 424	10 500	31
1995	128,2	38 900	25 891	12 200	31
1996	123,6	46 837	30 544	14 500	31
1997	118,3	57 270	38 145	17 000	30
1998	114,3	67 764	45 162	19 500	29
1999	110,0	77 187	50 076	22 500	29
2000	109,8	87 645	55 785	25 500	29
2001	109,2	103 558	64 915	40 000	39
2002	105,2	122 453	77 607	50 000	41

Source: The Hungarian Labor Market (Review and analyses) ed. By K. Fazekas; J. Koltay; ZS. Cseres-Gergely, Institute of Economics, 2004

The adjustments to the new economic situation not only concerned the producing sector, but also the legal forms of economic activity as a whole. The withdrawal of the state and the privatization process launched the forming of numerous enterprises. The economic climate turned out to be prosperous for establishing smaller (family based) enterprises. Nevertheless, it has to be remarked that in some cases the formation of such small companies meant actually a strategy of assuring alternative income possibilities to those offered in the uneasily accessible job market. The growth of the tertiary sector also contributed to this phenomenon. The result was a change of the employment structure, where the self-employment spread and got stabilized around 10 %, whereas membership in cooperatives practically disappeared and employment in other partnerships diminished.

Table 3 Employed by type of employment - in thousands

	Employees	Member of cooperative	Member of other partnership	Self employed and assisting family member	Total
1992	3 203,4	225,0	257,9	339,4	4 025,7
1993	3 087,6	134,1	197,1	351,5	3 770,3
1994	3 045,2	103,3	174,7	369,3	3 692,5
1995	2 978,9	84,2	167,9	391,8	3 622,8
1996	2 961,2	79,0	151,8	413,1	3 605,1
1997	2 989,7	68,9	137,4	414,3	3 610,3
1998	3 088,5	55,8	132,5	397,9	3 674,7
1999	3 201,3	42,5	111,8	435,9	3 791,5
2000	3 255,5	37,1	129,4	407,1	3 829,1
2001	3 296,3	30,7	119,1	398,4	3 844,5
2001	3 313,6	31,4	118,9	404,4	3 868,3
2002	3 337,2	22,5	109,9	401,0	3 870,6

Source: The Hungarian Labor Market (Review and analyses) ed. by K. Fazekas; J. Koltay; ZS. Cseres-Gergely, Institute of Economics, 2004

The regional differences that emerged during the transition times were amplified with the heavy income stratification process of the society, which resulted in large differences among the income groups. The poorest group's (the lowest decile) relative position to the median income level weakened, the distance between the income of the lowest and the fifth decile grew to 2 by 2001, whereas the highest decile's rose to 3,7 fold by the beginning of the 21st century. The latter group earned twofold the median income in Hungary in 2001. Between 1996 and 2001 the income differences decreased a little, nevertheless the risk of poverty is still high.

The indicators below show that the lowest deciles earn 3,2 % of all households' income, the middle level (fifth and sixth deciles) 17,5 %, and the best positioned group 24,3 %. The remoteness among the groups below and above the average income grew considerably, and the Gini coefficient's value also draws the attention to the heightening of inequalities during the last decades.

Table 4 The inequality if individuals' per capita household income - selected indicators[12]

	1962	1967	1972	1977	1982	1987	1992	1996	2001
P10	-	57	56	61	62	61	60	48	50
P90	175	165	165	161	162	173	183	191	184
P50/P10	-	1,8	1,8	1,6	1,6	1,6	1,7	2,1	2,0
P90/P50	1,8	1,6	1,7	1,6	1,6	1,7	1,8	1,9	1,8
P90/P10	-	2,89	2,94	2,65	2,61	2,81	3,07	3,95	3,70
S1	3,6	4,1	4,0	4,5	4,9	4,5	3,8	3,2	3,2
S5+S6	18,0	18,7	18,6	18,7	18,6	17,9	17,4	17,5	17,5
S10	20,8	19,1	19,7	18,6	18,6	20,9	22,7	24,3	24,3
S10/S1	5,8	4,7	4,9	4,1	3,8	4,6	6,0	7,5	7,7
Robin Hood	18,5	16,0	17,6	15,0	14,9	17,0	18,5	20,7	20,9
Éltető Frigyes	2,09	1,92	1,96	1,84	1,82	2,00	2,13	2,32	2,34
Gini	0,257	0,227	0,236	0,214	0,209	0,244	0,266	0,300	0,304

Sources: The Hungarian Labor Market (Review and analyses) ed. by K. Fazekas; J. Koltay; ZS. Cseres-Gergely, Institute of Economics, 2004

3.1.2 Decentralization (role of local governments)

The former council system prior to 1990 represented a deconcentration of the state administration on three levels. The local level's executive competencies were given to local agents of the current territorial units. Settlements were amalgamated into app. 1,300 councils. The county level – the middle tier – was a powerful level since it was represented in the central government's planning committees and the counties had the authorization to distribute the revenues of and to the local councils. (Teller 2003) The decentralization created a fragmented system of local governance (10 million people and 3,200 municipalities) (Hegedüs, 2003). Local governments enjoy a wide responsibility in the area of housing services (planning, enforcement of building regulations, local public rental sector, utility companies, price setting etc.). The energy sector (electricity and gas services) remained under the central government's control, while other public services such as water and sewage, garbage collection, district heating, rents, etc., thus, most of the housing service provision, became the responsibility of the local governments.[13]

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[12] Notes: The measures are based on the variation of per capita household income of individuals.

P10: Upper break point of the lowest decile, per cent of the median. P90: lower break point of the highest decile, per cent of the median. S1, S10: Income of the lowest/highest decile, per cent of the population's total income. Robin Hood index: Income to be transferred from high-income to low-income deciles in order to archive perfect equality, per cent of the population's total income. High income: decile with a share higher than 1/10. Éltető-Frigyes index: Ratio of incomes above the average to incomes lower than the average. Gini coefficient: Index of concentration ranging from 0 (all incomes are equal) to 1 (all incomes owned by a single person).

[13] Control meant the right of price regulation, the ownership of the service companies and the right to privatize the services.

As a response to these challenges, the safety net has gone through a major transformation after the regime change. Welfare programs have two lines of operation: partly through the programs defined by the central government (parliament), and partly through local government managed (mixed financed) programs. The housing allowance system introduced in 1993 remained a "low budget" program, consequently, utility and rent arrears increased in the 90s. According to the household survey, in 1992 11,7 % of the households indicated that they had real difficulty paying the utility cost and rents. By 1997 their share increased to 15.4 %. (HHP, 1998). Housing surveys of 1999 and 2003 indicated that 6-7 % of the households had arrears (CSO, 2004); but other sources estimated a larger portion of households with arrears problem. Realizing the significance of the social problems related to arrears, from 1997 the government started launching programs to give incentives to local governments to manage the arrears issue. However, no substantial results were accomplished, and in 2003, a new housing allowance scheme was elaborated and an arrears management program was introduced. (Hegedüs-Teller, 2004)

As a result of the give-away privatization, the public rental sector decreased from 20 % (1989) to 4 % (2003), however, because of the residualization, the households "trapped" in the public sector were typically the neediest ones. At the same time, local governments realized the necessity to increase rent to improve cost recovery in the rental sector. In order to make rent increase possible, they started to introduce rent allowance programs. Recently the central government has made a proposal to introduce statewide rent allowance programs to help households to pay the rent for the private rental sector.

The decentralization process was launched in 1990 with the Law on Local Governments. However, the first steps had already been undertaken in the mid eighties, when some economic freedom was given to the councils with the introduction of investment funds; besides that, three targeted subsidies were created for the construction of schools, hospitals and housing. With the tax reform and the property asset transfer the way for decentralization was paved. The pace of the changes that assured the independence of local governments had slowed down by 1994, since by then the institutional setup had been created. The financial "freedom" of the local governments had to be cut significantly due to Hungary's extremely large domestic and foreign debt. The asset transfer to the municipalities enabled local governments to gain own revenues from either selling the properties or imposing property taxes on them. The stabilization program was adopted in 1995, considerably modifying the local governments' financing and lowering the public expenditure in a lot of areas, such as social services, education etc. (Teller 2003) The next phase of the public administration reform aimed at the establishment of effective functioning, forcing the local governments to find incentives for their own development and everyday operation. (Szegváry 2002) Since it is the local level that is responsible for the delivery of public services, and some services cannot be sufficiently financed from the centrally defined normative and targeted grants, one of the most important steps of the reform has been that the local self-governments may impose local taxes and use the revenues e.g. from local business tax for their own purposes. Parallel to this, choosing the way of service provision was left to local governments: they can contract out service delivery and thus provide for economic efficiency (in addition to budgetary institutions, private companies, companies with mixed ownership, municipally owned companies, NGO's can also deliver public services, and some concessions have been awarded to different companies as well). (Teller 2004)

Local public services include social welfare services, education and health services, environmental protection and local development, transport and public utilities. Local self-governments have specific functions connected to the delivery of public services. Since

Hungary introduced a three-tier governmental system, which is based on local self-governments, county self-governments and the central government, there are different responsibilities divided among these tiers. Local governments may take over any duties they prefer to perform for their inhabitants, supposing this does not affect the completion of the obligatory services or violates any legal regulations. In case a municipality is unable to carry out "voluntary" tasks, it may pass these on to the upper tier, namely the county self-government. This body is obliged to take them over according to the regulation that says that certain services have to be carried out only from a minimum size of settlement or number of inhabitants. (Somogyi-Teller 2004) The size of expenditures related to public services varies to a great extent: The largest amount of spending is related to actual costs (including personal wages) and to app. 25 % of the local budgets, capital expenditures. When we take a look at the distribution of the expenditures by different sectors in 1999, it is the education (33 %) and health care (19 %) that are in the first two places of expenditure types; administration stands in the third place (13 %), social welfare is the 4th (with app. 7 %), and housing, water, transportation and communication represent altogether only 7 %. (Teller 2003)

Before the transition, residential consumption prices were kept at a very low level and cross-subsidizing of services was a common tool for equalizing the low revenues and high costs of services. After the transition, the need to rationalize public services had to be combined with the social implication of reorganization and price increase as well. (Somogyi-Teller 2004) This change affected most local governments where the transfer of public utility services occurred. This means that it was not only the households that were concerned with problems of affordable services, but the owning municipalities as well (as providers of costly services). For this, interventions into the social protection system had been launched.

The social services that local self-governments perform are partially set by the law. Nevertheless, in order to reflect the current circumstances of the population and the political goals of the local assembly, a large portion of local self-governments take over non-mandatory duties and provide for a diversity of subsidies to their inhabitants. Typical "local solutions" are occasional family aids (above the obligatory), which would help the vulnerable in emergency situations, or aids concerning housing (heating subsidy or additional housing allowance) that should lessen the burden of the housing expenditures. Housing related subsidies can be divided into three types: aids for those already in arrears, housing maintenance aid (housing allowance) for owner occupiers, aids for those living in public housing (through low rents and rent rebates). While the first two are co-financed (90%) by the state, the latter one is depending on local resources and decision. Housing allowance models are typically widened by larger settlements even at their own costs.

Another feature of the social services derives from the residualization process of the housing owned by the local governments, which makes the municipally owned sector function as housing for the poorest households.

The number of flats that belong to the municipal housing sector in Hungary represent approximately 5 % of the total dwelling stock of the country. This number emerged as the result of the privatisation process in Hungary, which began in the late 80-ies and is still in progress. Along with the Housing Act, in which the turn of 1995 and 1996 was declared as the end of the obligatory privatisation, the privatisation process as such reached its peak. It became common that all those tenants who could afford it bought their flats. Therefore, in the present public rental sector the remaining flats owned by the municipality are in most cases rented by families with lower income and lower social status. (MRI 2002)

Table 5 The number of dwellings owned by the local governments compared to the dwelling stock of Hungary, %

	Number of dwellings owned by the local government	Dwelling stock	%
Budapest	79556	823690	9,7
Other towns	92722	1809501	5,1
Village	16620	1428088	1,2
Total	188898	4061279	4,7

Source: KSH, 2001

Local governments enjoy a wide legitimacy in the decision-making process concerning the regulation of their rental housing stock. They can freely determine the rent, the conditions of selling the dwellings (in accordance with the regulations defined by the Housing Law), as well as the conditions of new rental contracts. All these matters are regulated in the local decrees issued by the municipalities in accordance with the laws and regulations adopted at the national level. The local governments are also eligible to differentiate within the sector of municipally owned flats between social and non-social units (the latter referring to units with market-based or cost based rents) as indicated in their local social and housing policy. In the cities above 50 000 inhabitants, the rate of dwellings owned by the local government is estimated to be app. 4-10 %. In total 58 % of the municipal flats are concentrated in the cities with populations over 100,000, whereas only 20 % of the units are to be found in the towns with populations less than 50,000. (CSO, 2001)

3.2 Housing policy in the 90s

The collapse of the centrally planned economy brought about radical changes in the housing sector. The new housing regime preferred the privatization and liberalization in the housing sector, which increased the significance of homeownership, both as a source of security and as a source of insecurity. The “give-away” privatization of 600 thousand units meant a massive asset transfer. The security aspect of homeownership played a crucial role as a determinant of the household’s motivation to buy the public units. However, privatization resulted in a very unequal distribution of the housing assets, which – partly because of the price liberalization – increased the insecurity aspect of homeownership at the bottom of the income distribution. The legal framework of a market oriented housing system was not in place, which increased uncertainty (risks) related to homeownership. House price information was not reliable, the land and real estate registration were incomplete, etc. The main problem was the gap between the household income and the increasing housing cost, which was not bridged by an efficient housing allowance system. The number of the arrears problem increased the owner-occupiers’ risk; the likelihood to lose their home became more and more real. (Eviction is a new phenomenon in our housing system, and politics is very sensitive to this question.)

Housing lending disappeared by the mid-90s, however, the poor owners, who could not pay off their loans in 1992 at the discounted value faced hardship to pay the market interest rate for their outstanding loans (which were equal to 50 % of the original amount). As regards housing mobility, the new factor was the "downward mobility" (that is to move from higher value home to a smaller value home) in order to match the cash problem. After 2000 the subsidized government loan program (interest rate subsidy, PIT mortgage rate deduction, and mortgage bond subsidy) increased the outstanding loan from 2 % of the GDP to 8 % of the GDP, and in three years around 500 thousand households took loans. Because of the strong competition among the banks and because of the not well established underwriting procedure there is a fear of producing mass arrears in the next future.

3.2.1 Housing privatization

The "engine" of the privatization of the rental stock to the sitting tenants was the insecurity related to the future of the rental sector regulation. An end to the central rent control had been announced, and it actually ended by 1993. The households were uncertain with respect to the future, and the majority of them (80 %) bought the unit with a high price discount.

Logically the discount played an important role, but it is not "enough", as we can see from the example of Russia where even with the "free of charge" privatization they had lower results. Insecurity as the main explanation of the Hungarian housing privatization can be tested against the Czech case. In the Czech Republic the privatization is much slower because the state rent control remained an important element of the regulation. At the time of the privatization (mainly in 1994-1996), the insecurity elements of the homeownership were not so clear.

3.2.2 Legislative framework

The housing law of 1993 made a step towards a system where the social landlords have more rights than before, but some of the important elements of the "old system" remained. The point is that the local government "behaviour" became very important with regards to property rights. The tendency is that in the social sector the tenants are losing their "property" rights. It is becoming more complicated to "sell" the tenancy rights.

The Land Registration has been modernized, but there are several "holes" in the system. Cases have been disclosed when the so-called "housing mafia" grabbed or illegally robbed housing units. (We plan to make a case study analyzing the cases when people lost their home as a consequence of illegal activity.)

The Law on Condominiums (2003) made it possible for the "association of the owners" to put a mortgage on the unit of the "non-paying" owners.

In the middle of the 90s a number of new laws made the creation of a market based housing finance system possible. As a result of these changes in the legal framework, legal tools for securing real estate loans and assuring expeditious access to collateral in the event of default in a mortgage loan were established.[14]

However, the enforcement issue is one the most critical elements of the changes. The utility and rent arrears had increased substantially, and, according to the law, even a foreclosure or eviction process could be initiated. The banks, local governments and the utility companies, however, are cautious to take such actions. In the institutional analysis we will try to map the different interests in these processes.

3.2.3 Housing finance

In Hungary the housing loan portfolio in 1990 amounted to 15 % of the GDP as a consequence of the liberal housing policy in the 80s. This portfolio actually bankrupted the Housing Bank (OTP and the government, which guaranteed the loan), and a huge subsidy was needed to restructure the portfolio. The majority of the borrowers paid off the loan with a 50 % discount in 1992-1993. Nevertheless, several thousand households could not or did not want to pay the loan back, and their interest rates were increased (against the contract made in the 80s), which caused a serious problem for most of them. In 2002 and 2003 a program was introduced to manage these repayment arrears. (We plan to make a detailed case study of this program.)

By the end of the 90s, market based housing finance institutions were built up in Hungary, partly as a consequence of the bank privatization. However, until the end of the 90's there were no housing loans in Hungary[15]. (This was basically the same for other Eastern European countries, too.) This is a very important fact for interpreting our survey data of 1999 and 2003.

Early in 2000 an energetic program targeting the establishment of a housing loan system was launched in the Hungarian housing policy. During four years of subsidised housing loans the housing loan portfolio grew 8 or 9 times in size; whereas at the beginning of 2000 the loan portfolio was approximately HUF 130 billion only; in September 2003 it was HUF 1130 billion. As a result, the loan ratio within the GDP increased from 1 % in 2000 to 7 % at the end of the year 2003. This high increase was facilitated by the fact that the portfolio was at its lowest point at the millennium (previously subsidised loans had been mostly paid back and there was a minimum of new ones), therefore the development started from almost zero level.

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[14] For example: 1. the 1993 Law on Regulation of Rent and Sale of Housing exempts private landlords from the requirement of providing alternative housing to an evicted tenant; 2. amendments to the Civil Code sections on mortgages and liens adopted in 1996 and a 1994 law on court procedures permit foreclosure and repossession without the lengthy judicial proceedings required under previous law; 3. the Civil Code now permits the lender to sell the property itself without court intervention if the parties so agreed in the loan documents; 4. Civil Code amendments provide that for residential real estate, the parties may agree that the borrower must deliver the property empty of occupants in the event of foreclosure; 5. the 1997 Law on Mortgage Banks and Mortgage Bonds changed the priority for payment to a mortgage lender from the proceeds of a foreclosure sale from last place to fourth place, ahead of taxes, social security, and other public debt.

[15] Hegedüs J - Várhegyi, É. : The Crisis in Housing Financing in the 1990s in Hungary Urban Studies, Vol. 37, No. 9, 1610-1641, 2000

3.2.4 Housing expenditures

The most important risk with homeownership until 2002 was related to the increased housing costs. Very few (15 % in 2003) households had loans with an average payment 7-8 % of the household income. Thus the homeownership's risk is related to utility cost and not to the loan repayment. (It will be important in the future as housing loans started to be issued in 2002.)

The local governments set the user charges following a general procedure defined by the laws. The arrears are an important issue in the sector. According to the housing survey (in 2003) 6 % of the households had arrears; other sources estimated that 8-10 % of households have payment problems. This would be the number one risk factor.

The condominiums (housing associations) represent intermediary institutions between the individual households and the service providers. 45 % of the households live in multi-family homes (more than 3 units in a building). It is a very important question how the association of owners can enforce their individual members to payment. (This is what the law on Condominium is about.)

3.2.5 Safety net

A new system of safety net was introduced after the regime change. The housing related safety net has two lines of operation: partly through the programs defined by the central government (parliament), and partly through local government managed (mixed financed) programs. The housing allowances (introduced in 1993) had been financed by the local government until 2004. The total amount of the housing allowances was limited, basically because of the financial disincentives of the local governments (general grants were transferred not tied to housing allowances). In 2004 a major change was introduced.

The housing allowance programs can be evaluated in the context of other social benefit programs. The money transferred through any benefits is fungible, thus we can suppose that a substantial part of the income benefits is spent on housing. In Hungary the share of housing allowances was around 3.6-4.8 % of the total benefit programs through local governments between 1998 and 2002[16].

Table 6 Local government benefit programs

Type of programs	1998	1999	2000	2001	2002
Income benefits through local governments	69.0%	71.8%	71.0%	70.9%	68.5%
Cost compensation (medicine etc.)	23.7%	22.0%	23.1%	23.5%	25.9%
Housing Allowances	4.8%	4.0%	3.8%	3.6%	3.6%
Total expenditures	100.0%	100.0%	100.0%	100.0%	100.0%
% of the GDP	0.8%	0.8%	0.7%	0.7%	0.7%

Sources: König, 2004

The effectiveness of the safety net programs depends on the incentive structure of the local governments. (The local governments own the utility companies, so they are financially interested to manage the arrears problem, especially if the costs are shared with the central government.)

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[16] Other income transfers should be taken into consideration partly, e.g. pension, family benefits, etc.

3.3 Main consequence of the changes

3.3.1 Housing policy regimes after the 90s and institutional changes

After the political changes at the end of the1980s, three stages of the housing policy can be identified. In the first period (1989-1994) the government tried to manage the housing crises related to the economic decline and the “deep subsidy” system of the socialist period. The government “moved out from the housing sector” decreasing the subsidies and diminishing its direct role. The decentralization was part of this process as the local governments were assigned to manage the housing allowance program partly financed from their own resources. The housing policy of this period could be characterized basically as a crisis management. The Housing Law (1993) and the Social Law (1993) made it clear that the government does not take responsibility in housing, but leaves it open for a future intervention. The subsidy system – as it was shown – has been changed in order to decrease the burden on the budget, but no major changes were realized in the concept of the housing policy. The decisions taken in this period made it clear that the politicians did not accept the idea of targeting. Nevertheless, this idea became more and more part of the “white paper” programs.

In the second period (1995-2000) the new institutions were set and the legal background was improved. Meanwhile the level of the subsidies gradually decreased as a consequence of the decreasing housing output. Two basic financial institutions were set up: the contract saving banks and the mortgage banks. The law on contract savings banks was very controversial as the subsidies given to the savers made the housing subsidy system more regressive, and there was no direct relation between the subsidies and the increase in housing investments. The changes in the legal background of housing finance were an important element of this period. The attempt to tackle the problem of the inflationary environment and changes in the subsidy system had a temporary effect on the housing sector. The housing policy concept declared the need for the reform in the subsidy system, but changes mainly served the purpose of reducing the budget burden. From 1998 a new rhetoric was presented in the housing policy, namely the need for the support of the middle-income citizens, but for two years nothing important had happened.

In the third period (after 2000) the government started an active program backed by the positive macroeconomic changes. The program introduced new subsidies primarily into the owner occupied sector, but into the public rental as well. To increase the effect of the program the subsidies were increased step by step, and the new government of 2002 inherited a very controversial system facing the problem how to restructure it.

The new left-wing government elected in 2002 promised in the campaign to keep the subsidies unchanged in the housing sector and even promised increases in some elements of the subsidy system (e.g. an increase in the premiums for the contract savings and in the upfront down payment subsidy for new construction.) The fundamental question is what were the effects of the new program, and what kind of options have been left for the government elected in 2002.

3.3.2 Lack of the rental sector and unemployment

The literature seems to agree that the ownership composition of the housing stock, i.e. the large share of owner-occupied homes is one of the key causes of low housing mobility, which in turn reduces employees' ability to adapt to the uneven regional distribution of jobs. Consequently, there is a correlation between the lack of rental housing and unemployment.

The explanation is that, on the one hand, transaction costs of moving in the owner occupied housing sector are high and, on the other hand, those labour market regions where the jobs exist lack rental housing. A further consequence of the dominance of owner occupied housing may be that employees are forced to accept jobs that are the nearest to their homes even if the job does not pay well and requires less than their professional qualifications; furthermore, the lack of adequate housing supply increases the costs of investment that would create jobs. (Oswald, 1999)

While the share of rental housing had been low (21 %) in Hungary before 1990 by European standards, after the privatisation in the 1990s, just as in the rest of the Eastern European countries, the share of rental housing fell back to 4 % of the overall stock (HCSO, 2003).. Mobility in the private rental sector, however, is extremely high due to chaotic tenant-landlord relations rather than to a healthy mobility.

Housing privatisation, however, cannot be considered to be the primary cause of low mobility as tenants in the council rental sector had quasi ownership rights and could practically freely move (i.e. „sell") home. Although the Housing Act of 1993, which defines the legal frames of the management of the rental housing stock, limited these rights, tenants (and direct descendants living in the same home) dispose of their housing more or less freely[17]. The share of tenants (especially in the private rental sector), who reported that they wanted to change their housing situation within the next five years is twice as large as that of owner-occupiers (47 % and 19 %, respectively). This, however, is the result of the temporal and disadvantageous status of renting rather than of the difference in transaction costs involved in moving.

3.3.3 Significance of local government in the safety net and housing policy

The local government's housing and social policies play an important role in the „transaction costs" of moving municipality. Within the housing assistance system, local governments control 15 to 17 per cent of subsidies (1998-2001). In granting these subsidies, local decrees explicitly prefer local residents. The analysis of local housing decrees suggests that the criteria for the assignment of council rental housing and granting local subsidies are several years' residence or employment in the municipality. Municipalities (39) covered by a recent research project carried out by MRI shows that municipalities provide rental housing exclusively for people who have lived there for several (in about half of the municipalities at least 5) years, probably partly out of the fear that by opening up the possibility of renting for non-residents would lead to heavy inflow of the poor. In the case of local subsidies it is only in five municipalities that eligibility criteria do not include local residence. (Teller, 2003)

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[17] The so called fictitious exchange of housing is a still existing practice, yet it is up to the housing department of the individual municipalities how strictly they enforce compliance with the law.

On the one hand, moving to another municipality involves losing the local housing assistance, and, on the other hand, to meet the criteria of several years of local residence is a serious problem because of the narrow private rental market and high prices. In Budapest in 2002 the average private rent (HUF 935 /m2) was nearly two and a half times as high as rents in other cities or towns (HCSO, 2002). Regional differences thus are reflected in private rents, too. The private rental housing market is a problem not only in terms of high prices but also of legal uncertainties. Research on the private rental sector in Budapest estimated the share of landlords at 30 or 40 per cent who do not let their tenants officially register in the housing (Kis, 2003), which means that such tenants will not become eligible for assistance connected to residence even after several years of living there.

3.3.4 High risks and transaction cost in the housing sector

In international comparison housing mobility[18] (moving house by households) in Hungary is rather low. Annually 3 to 4.5 % of households move whereas in Western European countries the rate is significantly greater. (Hegedüs, 2001). In welfare economics theory, low mobility causes serious negative impacts primarily by undermining the efficiency of programs targeted at reducing unemployment, and inflexible consumption of housing contributes to the under-use of the housing wealth and thus creates additional social costs.

Low housing mobility is often explained by various cultural and social factors, but these explanations lack empirical underpinning and often build on historically ungrounded stereotypes. Here these factors will not be discussed and the focus will be on those that explain households' behaviour, assuming that households – within the constraints of information available for them – make rational decisions.

The first of these factors is that changing housing in the owner-occupied sector is one of the most important economic decisions of a household, fundamentally affecting the household's portfolio. (In Hungary, 96 % of housing is owner occupied). The average value of housing amounts to 5 or 6 times the household's annual income. (The housing price/income ratio in 1999 was 5.9 while in 2003 6.5.) This means that a bad decision on the housing transaction (for instance that a household under-evaluates their housing by 20 % or over-evaluates the new housing by 20 %) may put more than a year's income at risk. This especially constrains mobility, i.e. increases risks, in the case when there is no correct information available on the trends of housing prices.[19]

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[18] Hereafter by housing mobility long-term relocation of a household is meant. In the empirical research, „long-term" means a period of time longer than six months. This definitions is different from the usual definitions of migration mobility, Thus, in the housing surveys by HCSO in 1999 and 2003 housing mobility rates are somewhat lower, yet in several aspects provide a more realistic picture of long-term processes in the housing market. The weight of temporary relocation is probably smaller in the Hungarian housing market as the rental housing stock, which is supposed to make it possible, is practically missing.

[19] The efficiency of the automobile market is greatly increased by highly standardised prices of second hand cars, thus making „ the probability of loss" much smaller than in the real estate market.

Moving housing involves substantial taxation and financial burdens. Duties, the registration fee and the potential hiring of a real estate agent may increase actual transaction costs. In Hungary[20], of direct transaction costs, the duty is the greatest item, though the average duty of 4,5 to 5 per cent is not high in western standards.[21] While many researchers have pointed out the negative correlation between the amount of transaction costs and housing mobility; the actual impact mechanisms, however, are supposed to be much more complex.

Lack of information and knowledge of the housing market is an important factor too. While this factor is naturally interrelated with risks caused by the great value of housing property as an asset, it does play a role in itself. To know prices, of course, is of primary importance but there are several other risk factors that must not be disregarded, such as the reliability of ownership register documents, which can be one of the factors restraining housing mobility[22]. Also, the time requirement of selling housing is part of transaction costs.

Most researchers consider the high rate of owner-occupation as one of the main causes of low mobility as indeed owner-occupation increases transaction costs partly because of the above listed factors.

High transaction costs necessarily reduce housing mobility and the efficiency of the housing sector[23]. Housing mobility, however, is also connected to housing finance and assistance systems. For instance, it is a widely known interrelation that low and controlled rents limit mobility as families are reluctant to resign of the „hidden" assistance (Hegedüs-Tosics, 1992). An underdeveloped housing finance system discourages mobility, as buying housing without affordable loans is not an option even for middle and upper-middle income households.

Factors that impact mobility within the same settlement naturally work in the case of relocation between localities too. Regional mobility, however, is more forcefully influenced by some of these factors. In the communist regime, the lack of a housing finance system led to the strengthening of a self-help system of housing construction in which people, relatives or friends, received and gave help in building their homes both financially and „in-kind"; this system greatly contributed to the conservation of the regional structure of settlements. Current municipal housing policies too contribute to the rigidity of this structure and to low regional mobility.

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[20] The amount of the duty is 2% of the market value of housing in case the price is less than HUF 4 million, and 6% of the value on top of the HUF 4 million band. The law provides two kind of relief: in case of newly constructed housing by a company the buyer is exempted from paying the fee, and first time buyers under 35 are granted a 50% reduction, limited at HUF 40 thousand (if the price of the housing is not more than HUF 8 million).

[21] In France and Belgium the duty is over 10%, but in the UK and Italy it is less than 3%. (Mclennan, 1998)

[22] It is not accidental that in developed countries a separate insurance product, the title insurance, has been developed to reduce risk of loss due to „erroneous" registration.

[23] According to Lruvrnsteijn and Ommeren (2002), a one percent increase in transaction costs reduces the probability of moving within the owner-occupation sector by 8%.

4 The micro study of the insecurity elements of homeownership

4.1 *Privatization and the insecurity issue*

4.1.1 Moving from the “unitary” to a “residual” rental sector

In the pre-transition period the main features of the Hungarian public rental sector was the very low rent level, the huge backlog in maintenance, and the ownership rights of tenants. The share of the public rental sector was around 20 % of the stock, but close to 40 % in urban settlements. The rental sector operated as a “unitary” system (Kemeny, 1985) in the sense of the social composition of the tenants. Moreover, the critical analysis of the socialist housing system points out that access to the public rentals was distributed unevenly among different social and income groups, and the better-off families enjoyed better chances to get into the rental housing (Szelényi 1983, Dániel 1985). However, this fact could be explained partly by the allocation policy (“role of the state”), but partly by market allocation. 30-35 % of the tenants in 1992 accessed their units through private transactions i.e., that they bought their units on the 'gray market'. (Hegedüs, Mark and Tosics, 1994).

Until 1994, the local governments were free to make any decisions on privatization. The majority of the local governments supported the privatization both out of short-term political and longer-term financial considerations. The political reason for privatization on the part of the local governments was to “favour” their residents, and they were supported by “faith” in privatization in general. (Housing privatization was strongly proposed by international donor agencies as well.) There were several financial reasons for privatization, such as the backlog in maintenance, and the continuous operational losses, as the rents did only cover 30-45 % of the actual cost. A key element in the local governments' privatisation decision was what future rent levels could be. The local governments expected high political pressure in the case of rent increase. The facts show that privatization speeded up in the first years of 90s, and after the “soft” right to buy Housing Law of 1993 a new impetus was given to the privatization.

On the household side, direct financial considerations were determining the willingness to buy the units. The main financial motivation was to capitalise the potential 'value-gap' of the rental unit, i.e., to capture the difference in the value of the unit as a rental vs. an owner-occupied unit. Beside the “value gap” the security issue was the most important. It is true that public tenants had enjoyed a high security of tenure in the past forty years, and they had enjoyed low rents, with rent increases below inflation. After the regime change, most of the tenants expected rent increases and the shrinking of their ownership-rights (e.g., the right of tenure swapping or inheritance). The households' opinion on rent increase – whether it would be lower or higher than inflation – indicated the effect of this factor. Strong expectations of high rent increase had pushed the households towards buying their units in order to become a homeowners in a more secure situation. The other security issue was the control over maintenance.

One of the most common complaints of public tenants was the low performance of the public maintenance companies. Households would have liked to obtain decision-making rights in maintenance, including the opportunity to choose the organisation, to have supervision over costs and to be able to direct the maintenance activity toward cheaper solutions.

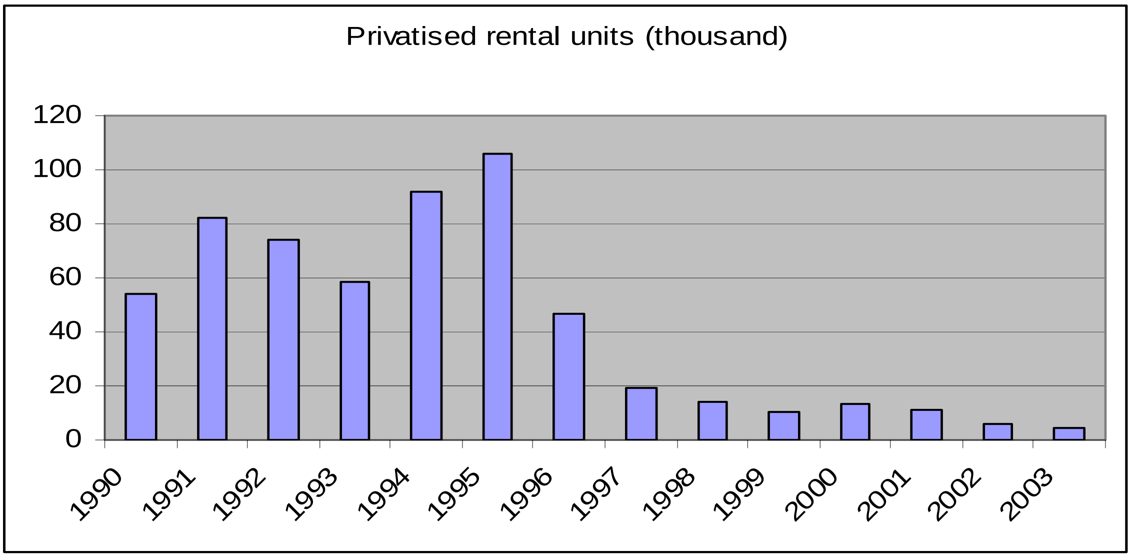

Figure 5 Privatization of the rental units to the sitting tenants (1990-2003)

Altogether 5 % of the stock remained in ownership of the municipalities due to several reasons. A part of the stock - mostly in the cultural heritage areas in old city centres - were disclosed from privatization (if the municipality decided so), another part was kept in the hands of the municipalities in order to assure mobility for personnel in their own organizations (e.g. schools, hospitals managed by the municipalities). Nevertheless, in the overwhelming rest of the flats that could not be sold, the sitting tenants remained as renters of municipal units. This had a number of motives that are connected to the insecurity aspect of homeownership, namely, that in their case buying the flats would not have been possible due to lack of financial resources or existing arrears. They could not have borne the financial burden of paying the rates of credits or even any expenses related to housing maintenance (e.g. those of repair). As a result, the municipal housing stock residualized, which becomes obvious when we explore the composition of households that remained in these units. The control of the municipalities over privatization had diminished by 1993 (since by then a common decision of the renters in the given multi-unit building was required; only buildings with an achieved consensus were sold). Nevertheless, higher value housing had already been sold by that time, and after 1996 40 % of the privatized stock belonged to the lowest value quintile. According to the survey results carried out in 1999, the lower the status of the household is, the more of them are present in municipal housing: 44 % of households where the head of a family is an unskilled worker live in municipal rental, whereas this ratio is only 8,4 % among the white-collar workers. It is an interesting fact that the most active privatizing households by 1999 were those with old (above 60 years) heads. (KSH 2001)

The process of the residualisation can be followed with the help of the Table 7: the average household income in the public rental sector decreased form 86 % to 74 % expressed as a % of household income in the owner occupied sector.

Table 7 Household income (100=hh income in owner-occupied sector)

	1992	1995	1999	2003
Public rental	86%	87%	84%	74%

Source: 1992,1995 HHP, 1999, 2003 Housing Survey (CSO)

4.1.2 Explaining privatization

Housing privatization in Hungary led to a residual rental sector, as households with higher income and stable employment background had better chances to buy their units.

With the data of 1992 (Budapest Rental Survey) we set up a model to explain the probability to buy. In each model, the independent variable of the model is PRIV, which has a value of 1 if the unit has been privatised,[7] and 0 if it has not been sold (see Table 8).

First we set a model (MODEL 1) to test the two hypotheses. The results prove unquestionably that the value-gap has an important role in defining the probability to buy. The expectation of rent increase (REXP), on the other hand, does not have a significant effect. But if we create an interaction variable with both rent expectations and the value-gap, we get an improvement in the model, which indicates that the variable has an effect on the probability to buy. The explanation is that rent expectations play a role in the increase of the value-gap, that is, the 'propensity to buy' is proportional with a compound of expected rent increase and value-gap.

In the second step (MODEL 2) we tested the effect of housing characteristics. The results show that the most important variable is location: that is, households in the better districts (Buda districts and the inner city area) are more eager to buy their units. The size of the flat and the condition variables had a significant effect on the probability function. (This is not a surprise as these variables are correlated with the value of the unit.)

In the third step (MODEL 3) we tested the effect of household characteristics. This model has less explanatory strength, but the income and consumption level has a significant effect. Finally, we introduced all our variables (MODEL 4). The result of the stepwise logistic regression is that the value-gap, rent expectations and the location of the unit explain best the probability of buying.

Following the same logic of model building, we tried to explain the probability of the decision not to buy (see Table 8). The variables in the separate models (MODEL 1 to MODEL 3) behave in the same way, although of course with a negative sign. One interesting conclusion is that the social factors are more significant in the decision not to buy than in a positive decision to buy. However, in the final model housing conditions and the social factor (income) play more important roles than the value-gap and the rent expectations, whose contributions to the model were not significant.

The conclusion of the analysis is that, as we had initially hypothesized, the value-gap and rent expectations are the most important determinants of the purchase, while the location of the unit adds a further incentive to buy. The social determinants of the process are less crucial to the process, but of course there is a positive correlation between the social status and the value-gap. The other result of the analysis is that the negative attitude towards privatisation is less influenced by the value-gap, and more by social position (income, consumption), and really poor housing quality.

Table 8 Estimation of the Probability of Purchase of a Public Rental Unit

	Variable	Model 1	Model 2	Model 3	Model 4
	Constant	-2.4691	-4.5141	-2.0353	-1.9655
		(175.96)	(98.87)	(78.01)	(74.39)
Hypothesis 1-2					
	VGAP	1.82E-06			4.36E-06
		(59.08)			(50.93)
	REXP	*			*
	VGAP x REXP	5.18E-07			6.02E-07
		(6.77)			(74.39)
Background Variables					
Characteristics of the Unit					
	Floor		0.015		*
			(19.48)		
	Heat		*		*
	Bath		6.6198		*
			(4.63)		
	W.C.		*		*
	CONDF		0.2995		*
			(6.18)		
	CONDH		0.389		*
			(12.41)		
Characteristics of the Household					
	INC			1,55E-03	*
				(8.22)	
	PROP			*	*
	CONS			0.6737	*
				(8.13)	
	SCH1			*	*
	SCH2			*	*
	NUM			*	*
	Model Chi-Squared	88,004	84,97	23,508	98,57
	Degrees of Freedom	2	4	2	3
	Significance	0	0	0	0
	Number of Cases	985	985	901	893

*** Variables not significant in the model**

Notes: Logistic regression model with forward step algorithm; Ward coefficient in brackets PRIV - (DEPENDENT variable) equal 1 if the unit was bought, 0 else; VGAP - Market value of the unit minus the selling price; REXP - Rent expectation 1 if rent increase is expected to be higher than the price inflation; VGAP x REXP - the interaction variable between VGAP and REXPC; FLOOR - floor area of the unit in m2; HEAT central heating 1, else O; W.C. - W.C. in the flat 1, else 0; BATH - separate bathroom in the flat 1, else 0; CONDF - condition of the unit in scale 1-S; CONDH - condition of the house in a scale 1-S; KERA - districts on Buda side; KERB - districts of inner Pest; PROP - ownership of a second home, plot: yes 1, no 0; INCOME - monthly households' income; CONS - ownership of the durable consumption goods: yes 1, no 0; SCHl - higher education 1, else 0; SCH2 - grammar school 1, else 0; NUM - members of the family.

On the basis of empirical information we checked which factors played the biggest role in the decisions of individual families to buy or not. In general, there are two strong motives for buying: to acquire the value-gap and to obtain a secure position against changes in rental policy. The tenure security motive was cited by between 36 and 47 per cent of the three groups of respondents, who have purchased or are considering purchase, while the wealth acquisition motive was mentioned in 38 to 44 per cent of the cases. The control over maintenance is much less important and is only seriously taken into consideration by those households that will not buy their units. Only 13.5 per cent of those who have already purchased their unit mentioned it as a motivation, while slightly over 20 per cent of those considering or planning purchase mentioned it.

Table 9 What were the reasons to buy?

	1. place	2. place
Financial	52.2	19.1
Security	41.8	65
Control over the maintenance	6	15.9
Total	100	100
(N)	588	320

Source: Budapest Panel Survey, 1992

4.2 *Household arrears: factors determining the insecurity aspect of the homeownership*

The most important question is what are the main factors determining the insecurity of owner-occupiers in 1999 and in 2003. We will examine the factors influencing the odds to have arrears in 1999 and in 2003 according to a national housing survey conducted by CSO (See Appendix about the data.)

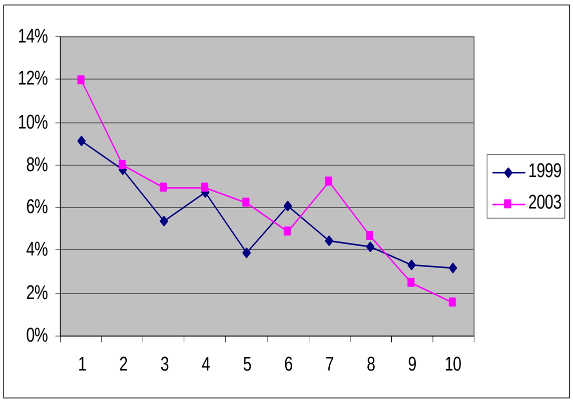

Figure 6 The percentage of the respondents who had arrears in the last years according to the value of their home

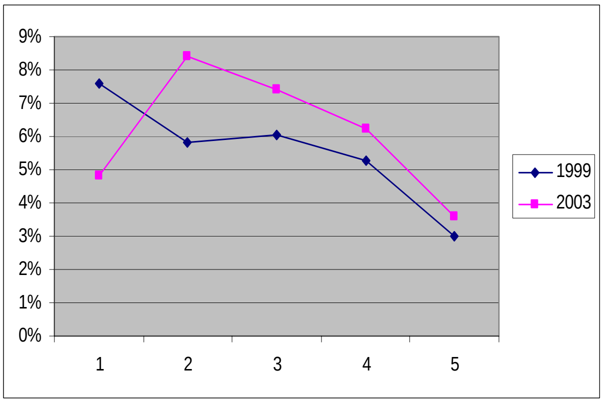

Figure 7 The percentage of the respondents who had arrears in the last years according to the income quintiles

The share of households having arrears[24] decreased from 9 % to 6 % between 1999 and 2003. The trend – as it can be expected – is that both years the odds to have arrears decreasing moving from the lowest income group to the highest income group and moving from households with low-value housing towards the high-value housing.

However, we were more interested in the social and economic factors "explaining" the arrears. Firstly, with descriptive statistics we explored the effects of basic social and demographic variables; secondly we set up a logit regression model to see the relative strength of the different factors.

The most important conclusions of the descriptive statistics are:

The odds to have arrears are higher in Budapest than in the other settlements, but the differences were on the decrease from 1999 to 2003

The households in public housing have arrears with a much higher probability than households in the owner occupation; this trend has become stronger after 1999.

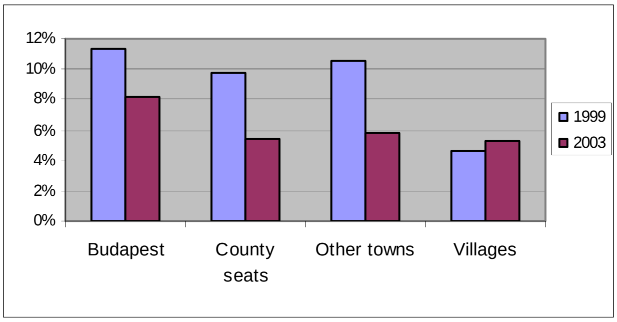

Figure 8 Households in arrears according to settlement type

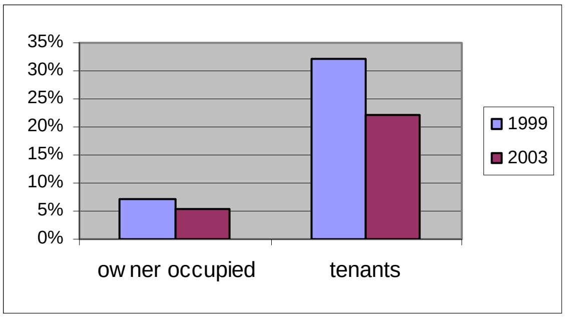

Figure 9 Households in arrears according to tenure type

Housing costs in various settlements differ to a great extent, so the income inequalities contribute to the arrears distribution according to settlement type. Since in most villages housing consumption (e.g. heating) can be better controlled due to the construction type of the houses, fewer arrears emerge. The data prove that the residualized rental sector faces more serious social problems; households in arrears are strongly over represented in this sector.

Households in multi-family units have arrears with higher probability than the households living in one-family houses.

Households living in units with higher value have arrears with lower probability than households living in less valuable units.

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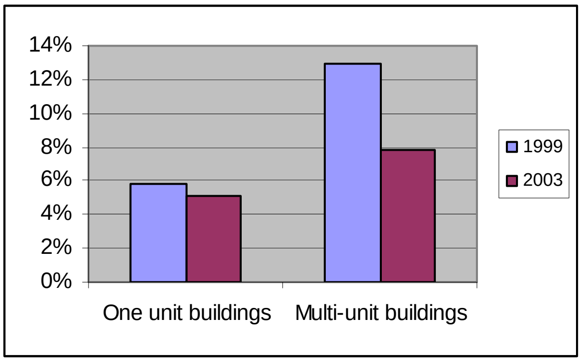
[24] The questions put in the two surveys were: 1999: Did you have any arrears in the past year? 2003: Did you have any arrears for more than 2 months in the past year?



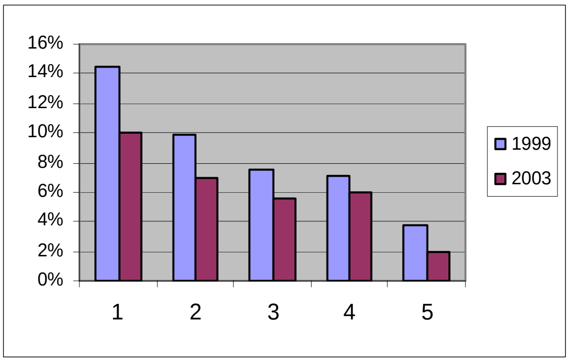


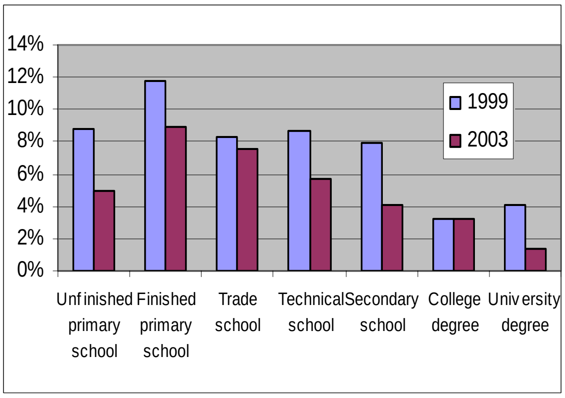
Figure 10 Households in arrears according to building type

Figure 11 Households in arrears according to value of units (quintiles)

As pointed out above, fewer households in single-unit buildings have arrears, which can be in connection with the fact that housing consumption in these buildings can be better controlled. The stratification of the value of the units is connected to the payment capacity of the households living in them. This means that more families in lower value units have arrears than those better-off families living in higher deciles of housing.

Households with higher education have arrears with less probability.

The households with older "head" of household have arrears with significantly less probability.



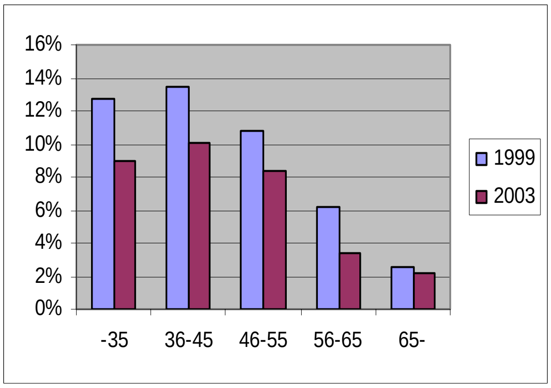


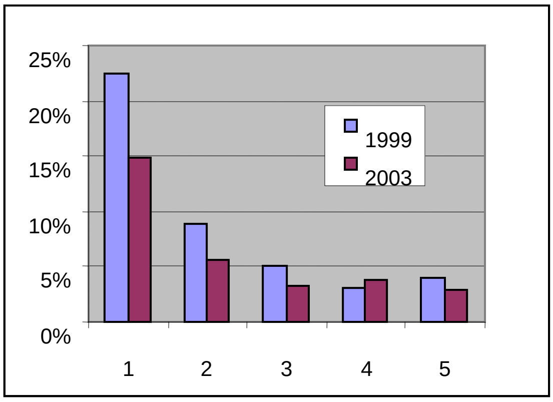
Figure 12 Households in arrears according to education

Figure 13 Households in arrears according to age of the head of the household

Since their position on the job market is more secure, households with members with higher education fall in fewer cases into arrears than those with lower qualifications. Households with older members tend to have less arrears, which is also connected to their housing consumption habits, namely that they are inclined to cover these emerging expenses rather than spend on other consumption. (Also, they have less lasting expenses occurring from labour access, education of children, etc.).

Per capita income has an important effect on the probability to have arrears, the effect of the household is not straightforward

The share of households with arrears is increasing among the one-parent households and bigger families (n of family members)



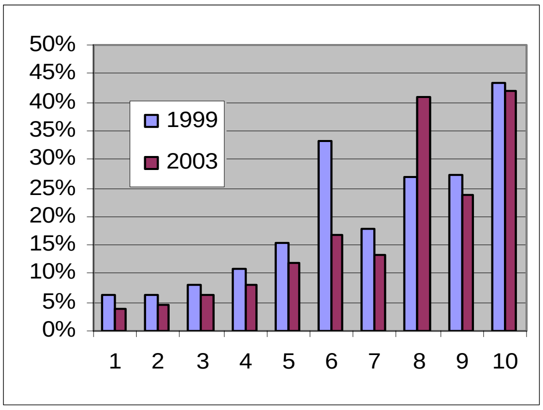


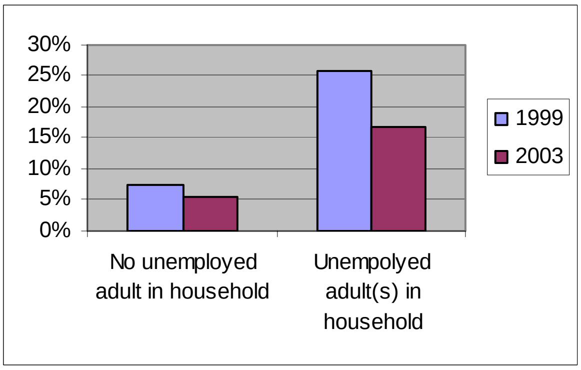
Figure 14 Households in arrears according to per capita income (quintiles)

Figure 15 Households in arrears according to number of family members

Falling into arrears emerges in the case of cash-poor households; hence those in the lowest quintile have five times the chance to have prevailing difficulties with paying the housing costs. Since large families are more vulnerable, they tend to fall into arrears more than those living in small households.

The probability to be in arrears increases significantly among the households who have unemployed adults

The households who have loans have arrears with almost two times higher probability than households with loan repayment burden



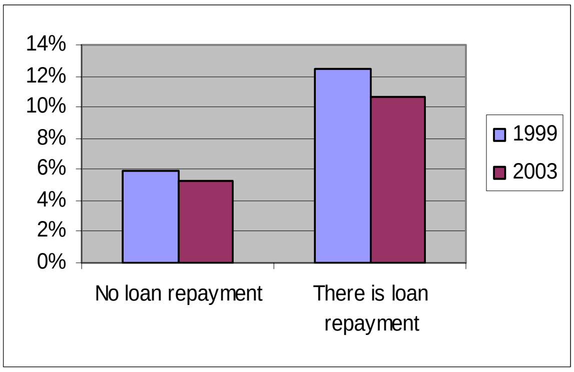


Figure 16 Households in arrears according to unemployed adult family members

Figure 17 Households in arrears according to the existence of loan repayment

Due to the lack of the social net, unemployed people are one of the most vulnerable groups. Since unemployment benefits are provided only for a relatively short period of time, and are only a smaller portion of the previous earnings, households losing one income resource are endangered to fall into arrears. Loan repayment is an expense type that would put additional burden on families, and hence they would rather fall into arrears than those without loans.

We analysed the factors influencing the odds to have arrears in the data set of 1999 and 2003 with the help of the logit model. (See the detailed analyses in the Appendix.)

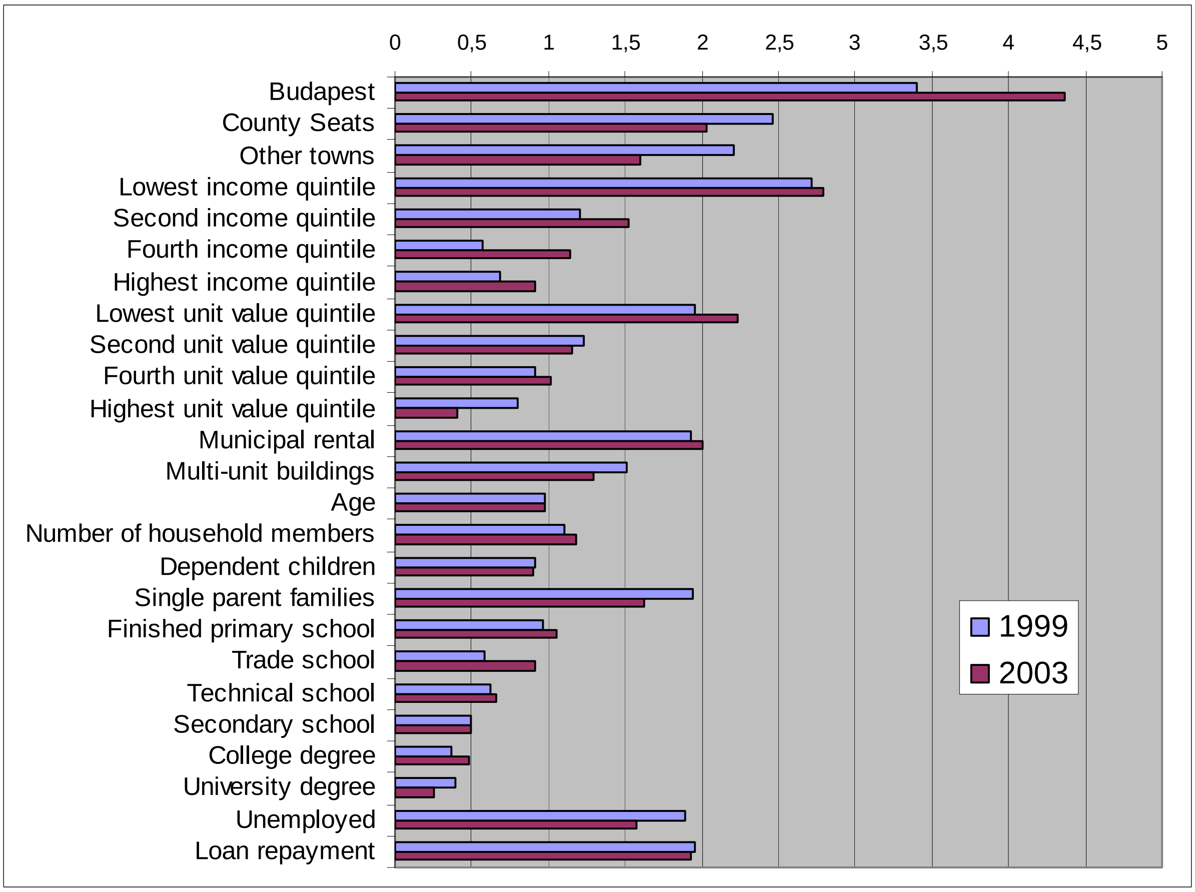


Figure 18 The Exp (B) parameter for the year 1999 and 2003

The conclusion is that the following factors play an important role determining the arrears issue:

- Settlement type (Budapest and the urban settlements)
- Low income (per capita)
- Low housing value
- Public housing
- Unemployment
- Loan repayment (mortgage)
- One-parent households
- Tenure in multi-unit buildings

We can conceptualize these factors:

- Underclass (low-income, big families, low education)[25]
- Unemployed: out of the labour market
- Family problems (one-parent households)
- Limitation of the household consumption

It is worth noting that the structure of the factors is quite stable in time. The relative strengths of the variables have not changed dramatically between 1999 and 2003.[26]

Beside the arrears variable we will check the subjective hardship paying the cost through the years of 1992, 1995, 1998, 2003.

The rent has not increased with the same rate as the inflation in the 90s.

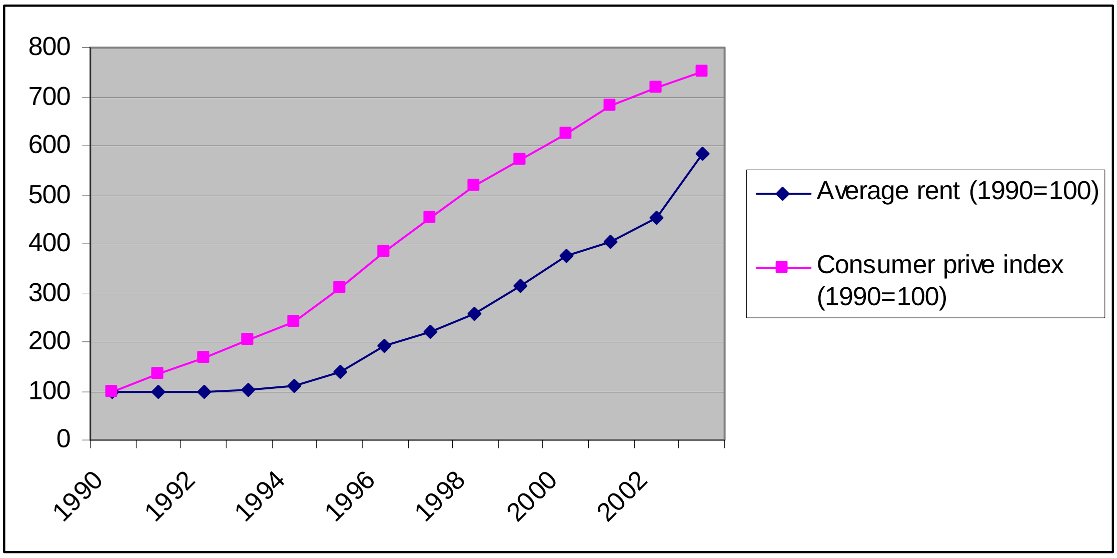


Figure 19 Average public rent and the consumer price index

Source: Housing Statistics CSO, 2003

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[25] In the Rental Panel Survey (1995) 40 % of the roma households had arrears. If we control the other effects of other variables they have 2.3 times higher probability to get arrears problem than the non-roma households.

[26] We have done the same analysis for the Budapest Rental Panel Survey data from 1995. The most important variables explaining the arrears were public rental sector, unemployment and one-parent households.

5 Conclusion

This study has discussed the risk elements of homeownership in the Hungarian housing system using the methods of quantitative analysis. Several issues have been raised which would be relevant for the ensuing qualitative research. (Workpackage 2)

The study concluded that there are common features in the transition process of the housing sector. Thus the conclusions based on the Hungarian cases could be useful for forming hypotheses for the other accession and transition countries.

One of the most important elements of the transition is the change in the tenure structure. This process is partly related to the privatisation of the state/municipal owned housing stock to the sitting tenants (and less frequently to the ex-owner: restitution), and partly to the "redefinition" of tenures. For example, the definition of the property right related to the different tenure forms has been transformed, thus it is not clear what the risk and security elements of the different tenure forms are. The qualitative research will explore the ways of various perceptions of the risk and security elements of the tenure form. For instance, according to the Budapest Panel Survey data, 88 percentage of the households who bought their home thought that the sate should have some responsibility for the rehabilitation of the privatized buildings. This assumption reflects the misconception about tenure.

The Hungarian case study demonstrated that the risk (of the future rent increase) was one of the most important factors determining the household intention to buy. The three basic tenure forms in Hungary (public rental, private rental and owner-occupied) are in transformation in terms of their legal, social and economic nature. For example, the rent arrears legally led to eviction, but practically 30-50 % of the tenants have arrears in the public sector. Or the changes in condominium law redefined the rights of the individual owners in terms of influencing the maintenance and renewal of the multi-unit buildings. The important conclusion is that the qualitative study should provide some insight of the individual perceptions of the risks and security elements of the different tenures.

The most important insecurity element was the problem of arrears mostly related to utilities, not to loan repayments. We identified four factors influencing the odds to have arrears: "underclass" position, unemployment, divorces, and the lack of control over housing cost (multi unit buildings). In the qualitative study we should focus on identifying and separating these factors. The emerging housing finance system will raise the risks involved in the high mortgage activity. This is a new phenomenon, but its significance is increasing, especially with loans based on foreign currency.

The management structure of buildings greatly influences the risks of homeownership. One of the consequences of privatization was the emergence of thousands of condominiums replacing the big state owned management companies. The qualitative research has to highlight what role these intermediaries played.

In the past few years there has been a boom in lending for housing, which has increased the risk element of homeownership. As it is a fairly recent development, our quantitative analysis has not yet been able to capture this phenomenon. The qualitative research will have to deal with this issue.

6 Methodological Appendix

6.1 The data sets

Budapest Rental Panel Survey 1992-1995: The samples were not connected to each other (thus they are not panel, but repeated consecutive surveys). The sample size in 1992 was 987, and in 1995 1003.

Housing Survey 1999: The survey was carried out with the inclusion of 10754 units and the persons living in the flats (28073).

The selection criteria were the following: the households' number should be representative on the county level and according to the settlement type. They were chosen on the basis of the 1996 Micro census. The data set is representative for the whole country.

In order to reflect the lack of information concerning the housing sector that occurred due to the transitional processes (s/a transformation of tenure, drawback of the state from housing, diminishing of housing subsidies), the updated Census data could no longer provide for sufficient data e.g. for decisions made related to housing, access to housing, and the state of the housing stock in Hungary. Therefore, a comprehensive variable set was formed that explored the following topics:

- quality of stock
- tenure structure
- access of housing
- renovations (or enlargement) carried out in the unit
- households' investments into housing
- intention to move (housing history)
- affordability of housing and housing expenditure
- value of housing
- household characteristics

Housing Survey 2003: The 2003 survey explored 12900 units, but the long questionnaires were only filled out if there were some "peculiar" events (renovation, moving), or the inhabitants indicated their intention to move in no later than 5 years. As a result, 8000 full cases were included. The data set is representative for the whole country.

The addresses were taken from the 2001 Census, the observation units were the flats. The sample was structured according to regions, settlement size and settlement development level. The observation units were chosen according to the derived housing characteristics gained from the yearly updated data of the 2001 Census. Since new constructions could not be included, new housing from 1998-2001 was over represented.

The questions explored were in accordance with the topics of the previous survey; in addition, questions related to intention to move to supported rental units were included.

Hungarian Household Panel Survey 1992-1997: The first wave was conducted in 1992, and five further waves have been conducted. The reference population is Hungarian non-institutional households, of which about 2,000- 2,500 have been sampled in each wave. The main variables covered are: social status, wealth, income, economic and financial strategies, employment histories and housing circumstances. The surveys have been undertaken by the Hungarian Social Research Informatics Centre (TARKI) and the Sociology Department of the Budapest University of Economics.

6.2 House prices

The estimation of the market value is based on the respondents' evaluation of their own unit. 40-60 % of those surveyed answered a question asking how much money they could get for their unit if it were private property. Using this data, OLS regression analyses were used to define a hedonic function. The aim of the analysis was to get a good estimate of the real market price. In the first step we selected the outliers (cases in which the market value was set above a certain realistic limits). In the second step, we ran OLS regression models with stepwise method, including all of the variables, and defined the preliminary function. Using this function we dropped again the extreme outliers (the criterion being the distance from the predicted value). We then reran the regression function, but only with the variables, which had been significant in the earlier regression model. For the year 1992, 1995 the HHP data is used, for the years of 1999, 2003 the Housing Survey data is used.

6.3 Logit model: explaining the arrears

The logit model was based on the assumption that there is a variety of aspects that have an influence on the probability of falling into arrears as the most relevant source of insecurity. The evidences gained from previous descriptive analysis were tested by the involving of the following variables (the observations' number is given for the 1999 and 2003 data set):

6.3.1 Settlement type

The survey classified the settlements into four groups: The capital city, Budapest, county seats, other towns and villages.

Table 10 Settlement type, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Budapest	2191	20,4	20,4	20,4	Budapest	785964	20,5	20,5	20,5
	County seats	2131	19,8	19,8	40,2	County seats	771830	20,2	20,2	40,7
	Other towns	2715	25,2	25,2	65,4	Other towns	975254	25,5	25,5	66,2
	Villages	3717	34,6	34,6	100,0	Villages	1293279	33,8	33,8	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumula-tive Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumula-tive Percent
Valid	Budapest	1748	19,9	19,9	19,90	Budapest	771234	20,6	20,6	20,6
	County seats	1500	17,1	17,1	36,99	County seats	666633	17,8	17,8	38,4
	Other towns	2715	30,9	30,9	67,9	Other towns	1123759	30,0	30,0	68,4
	Villages	2818	32,1	32,1	100	Villages	1181568	31,6	31,6	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

6.3.2 Tenure type

The tenure type explored in the survey included all relevant types of housing (owner-occupation, public rental, private rental, and official housing). However, we regrouped these tenure types in order to explore the residualized public tenants' probabilities to fall into arrears.

Table 11 Municipal rental, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	10149	94,4	94,4	94,4	,00	3613565	94,4	94,4	94,4
	1,00	605	5,6	5,6	100,0	1,00	212762	5,6	5,6	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	8410	95,8	95,8	95,8	No	3589057	95,9	95,9	95,9
	Yes	371	4,2	4,2	100	Yes	154138	4,1	4,1	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

6.3.3 Number of units in the building

The survey explored the building types where the households live. The data set had the reported number of the flats in the given unit; we recoded the variable into buildings where there are less than 4 units and where there are more. This differentiation made it possible to control different housing consumption strategies which are connected to the technical setup of the buildings.

Table 12 Number of the unit sin the building, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 3	6651	61,8	61,8	61,8	1 to 3	2370905	62,0	62,0	62,0
	more	4103	38,2	38,2	100,0	more	1455422	38,0	38,0	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 3	5728	65,2	65,2	65,2	1 to 3	2420869	64,7	64,7	64,7
	more	3053	34,8	34,8	100,0	more	1322326	35,3	35,3	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

6.3.4 Value of unit, quintiles

The households were asked about their estimation about the unit’s value. This price was then corrected with several parameters: region, equipment, quality with a regression model.

6.3.5 Age of the head of the household

The households were asked about their birth date. This data was recoded into age groups.

Table 13 Age of the head of the household, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	- 35	1704	15,8	15,8	15,8	- 35	609489	15,9	15,9	15,9
	36-45	1995	18,6	18,6	34,4	36-45	710681	18,6	18,6	34,5
	46-55	2195	20,4	20,4	54,8	46-55	779188	20,4	20,4	54,9
	56-65	1856	17,3	17,3	72,1	56-65	661146	17,3	17,3	72,1
	65-	3004	27,9	27,9	100,0	65-	1065823	27,9	27,9	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	- 35	1641	18,7	18,7	18,7	- 35	544985	14,6	14,6	14,6
	36-45	1637	18,6	18,6	37,3	36-45	643230	17,2	17,2	31,7
	46-55	1884	21,5	21,5	58,8	46-55	808693	21,6	21,6	53,3
	56-65	1588	18,1	18,1	76,9	56-65	737097	19,7	19,7	73,0
	65-	2031	23,1	23,1	100,0	65-	1009191	27,0	27,0	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

6.3.6 Household income per capita, quintiles (RB and HT)

In the survey of 2003, the households were asked to indicate their monthly net income. (5% of the households did not give any answer.) Based on the indicated incomes, a linear regression function was produced with the aim to replace any missing answers. The dependent variable in the model was the e based logarithm of the household income. In order to estimate the income, we ordered the average of the characteristic income to each of the professions (based on their 4-digit FEOR code). In the case of those with income we added up all average incomes and thus we received a well estimated job income. In the model this variable was a continuous variable, which explained 69% of all variance. From the variables in the survey we produced dummy variables and included them in the estimation equation with stepwise method. The weighted reported average income is 120 thousand HUF, the regressed average income 134 thousand HUF. The model fitted well to the observations.

6.3.7 Number of members in the households

The number of household members was asked.

Table 14 Number of the people living in the household, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2747	25,5	25,5	25,5	1	976686	25,5	25,5	25,5
	2	3272	30,4	30,4	56,0	2	1159913	30,3	30,3	55,8
	3	2023	18,8	18,8	74,8	3	723014	18,9	18,9	74,7
	4	1816	16,9	16,9	91,7	4	648937	17,0	17,0	91,7
	5	627	5,8	5,8	97,5	5	221751	5,8	5,8	97,5
	6	191	1,8	1,8	99,3	6	68450	1,8	1,8	99,3
	7	50	,5	,5	99,7	7	17673	,5	,5	99,7
	8	19	,2	,2	99,9	8	6602	,2	,2	99,9
	9	4	,0	,0	100,0	9	1289	,0	,0	99,9
	10	4	,0	,0	100,0	10	1647	,0	,0	100,0
	13	1	,0	,0	100,0	13	365	,0	,0	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	2004	22,8	22,8	22,8	1,00	943754	25,2	25,2	25,2
	2,00	2594	29,5	29,5	52,4	2,00	1152726	30,8	30,8	56,0
	3,00	1626	18,5	18,5	70,9	3,00	671457	17,9	17,9	73,9
	4,00	1664	19,0	19,0	89,8	4,00	662431	17,7	17,7	91,6
	5,00	596	6,8	6,8	96,6	5,00	208704	5,6	5,6	97,2
	6,00	202	2,3	2,3	98,9	6,00	71642	1,9	1,9	99,1
	7,00	54	,6	,6	99,5	7,00	17875	,5	,5	99,6
	8,00	24	,3	,3	99,8	8,00	8049	,2	,2	99,8
	9,00	9	,1	,1	99,9	9,00	3847	,1	,1	99,9
	10,00	5	,1	,1	100,0	10,00	1789	,0	,0	100,0
	11,00	3	,0	,0	100,0	11,00	920	,0	,0	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

6.3.8 Families with dependent children, single parent households and single households

The survey explored the family structure of asked households. There were 25 different categories, out of which different family types were focused on: families with dependent children, single parent families, and single households.

Table 15 Couples with dependent children, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	6000	55,8	55,8	55,8	No	2132357	55,7	55,7	55,7
	Yes	4754	44,2	44,2	100,0	Yes	1693970	44,3	44,3	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	5766	65,7	65,7	65,7	No	2555861	68,3	68,3	68,3
	Yes	3015	34,3	34,3	100,0	Yes	1187334	31,7	31,7	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

Table 16 Single parent households, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not single parents	9650	89,7	89,7	89,7	Not single parents	3435648	89,8	89,8	89,8
	Single parents	1104	10,3	10,3	100,0	Single parents	390679	10,2	10,2	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not single parents	7933	90,3	90,3	90,3	Not single parents	3377102	90,2	90,2	90,2
	Single parents	848	9,7	9,7	100,0	Single parents	366093	9,8	9,8	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

Table 17 Single households, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not single	8061	75,0	75,0	75,0	Not single	2868139	75,0	75,0	75,0
	Single	2693	25,0	25,0	100,0	Single	958188	25,0	25,0	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not single	6814	77,6	77,6	77,6	Not single	2812620	75,1	75,1	75,1
	Single	1967	22,4	22,4	100,0	Single	930575	24,9	24,9	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

6.3.9 Education

The head of the household was asked about his/her highest education level. There are 7 different levels of education: unfinished primary school (less than 8 years at school), finished primary school, trade school (3 years of professional training without A level exam), technical school (4 years of professional training with A level exam, entrance possibility to college or university), secondary school (4 years, A level exam, entrance possibility to college or university), college degree (3 years, BA), university degree (5 years, MA, MSc, MLA).

Table 18 Level of education, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	unfinished primary school	1467	13,6	13,6	13,6	unfinished primary school	516469	13,5	13,5	13,5
	finished primary school	2466	22,9	22,9	36,6	finished primary school	872795	22,8	22,8	36,3
	trade school	2921	27,2	27,2	63,7	trade school	1042560	27,2	27,2	63,6
	technical school	1555	14,5	14,5	78,2	technical school	557779	14,6	14,6	78,1
	secondary school	831	7,7	7,7	85,9	secondary school	295916	7,7	7,7	85,9
	college degree	768	7,1	7,1	93,1	college degree	275073	7,2	7,2	93,1
	university degree	746	6,9	6,9	100,0	university degree	265735	6,9	6,9	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	unfinished primary school	693	7,89	7,89	7,89	unfinished primary school	337606,3	9,02	9,02	9,02
	finished primary school	1694	19,29	19,29	27,18	finished primary school	760541,5	20,32	20,32	29,34
	trade school	2661	30,30	30,30	57,49	trade school	1110100	29,66	29,66	58,99
	technical school	1063	12,11	12,11	69,59	technical school	436996,9	11,67	11,67	70,67
	secondary school	1196	13,62	13,62	83,21	secondary school	503772,4	13,46	13,46	84,13
	college degree	773	8,80	8,80	92,02	college degree	306157,9	8,18	8,18	92,30
	university degree	701	7,98	7,98	100	university degree	288020,1	7,69	7,69	100
	Total	8781	100	100		Total	3743195	100	100	
Total		8781	100				3743195	100		

6.3.10 Unemployment

The households were asked whether there were any unemployed in the family.

Table 19 Unemployed in the household, 1999 and 2003

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	10041	93,4	93,4	93,4	No	3573490	93,4	93,4	93,4
	There are unemployed	713	6,6	6,6	100,0	There are unemployed	252837	6,6	6,6	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	8273	94,21	94,21	94,21		3538971	94,54	94,54	94,54
	There are unemployed	508	5,79	5,79	100		204224,4	5,46	5,46	100
	Total	8781	100	100			3743195	100	100	
Total		8781	100				3743195	100		

6.3.11 Loan repayment

The households were asked whether there were any housing related loan/mortgage obligations connected to the flat they lived in.

Table 20 Housing loan/mortgage (1999 and 2003)

1999

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No obligation	9528	88,6	88,6	88,6	,00	3391529	88,6	88,6	88,6
	Yes, they have mortgage	1226	11,4	11,4	100,0	1,00	434798	11,4	11,4	100,0
	Total	10754	100,0	100,0		Total	3826327	100,0	100,0	

2003

Unweighted sample		Frequency	Percent	Valid Percent	Cumulative Percent	Weighted sample	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No obligation	7317	83,3	83,3	83,3	No obligation	3200305	85,5	85,5	85,5
	Yes, they have mortgage	1464	16,7	16,7	100,0	Loan repayment obligation	542890	14,5	14,5	100,0
	Total	8781	100,0	100,0		Total	3743195	100,0	100,0	

6.3.12 The model

In the logit model we included the above mentioned variable with enter method. All variables were significant in the model. The variables in the model are the following (abbreviations stand for the following content):

Logit model for 1999

```
logistic reg var=hatra
/categorical liskv ttipmszh ehtjovk5 rb_ert5
/method enter  ttipmszh ehtjovk5 rb_ert5 tulonk laksz korev htagok gycsal eszul liskv mnelkn hittart
/contrast (liskv)=indicator(1)
/contrast (ttipmszh)=indicator(4)
/contrast (ehtjovk5)=indicator(3)
/contrast (rb_ert5)=indicator(3)
/save pred
/criteria pin(.05) pout(.10) Iterate(20) cut(.5).
```

Logit model for 2003

```
logistic reg var=hatra
/categorical liskv ttipmszh ehtjovk5 rb_ert5
/method enter  ttipmszh ehtjovk5 rb_ert5 tulonk laksz korev htagok gycsal eszul liskv mnelkn hittart
/contrast (liskv)=indicator(1)
/contrast (ttipmszh)=indicator(4)
/contrast (ehtjovk5)=indicator(3)
/contrast (rb_ert5)=indicator(3)
/save pred
/criteria pin(.05) pout(.10) Iterate(20) cut(.5).
```

In the model we included all variables that showed any relevance according to the descriptive exploration of the phenomenon that is most related to the insecurity issue, namely arrears.

Hence we reflected regional differences, income differences, equity differences, position on the labour market (unemployment and education), tenure type, age, household size and type, and loan repayment obligation.

In the cases of all categorical variables that reflect financial position, we chose the average (or middle quintile) as contrast category. In the case of settlements, we chose the villages as contrast since the arrears in villages are the least likely. We proceeded in the same way with the level of education: those with a university degree are chosen as contrast.

In order to see the similarities and possible changes between the results of the two surveys, we produced comparable variables. Hence it became visible that the structure of the risk for falling into arrears did not considerably change (besides one element, income), meaning that in both years the same aspects show the greatest chance for getting problems with paying the utility costs in the life of the households. It is also true, that the extent of probability changed through the explored period, meaning that the inequalities rose to some extent, nevertheless, some changes show to the opposite direction. (In the table: direction of change:↑=rise ↓=lower ↑↑=great increase ↓↓=great decrease, or got above 1)

Table 21 Change of Exp (B) 1999-2003

	1999 - 2003	B Value in 2003		1999 - 2003	B Value in 2003
Settlement type (contrast: villages)			Municipal rental	↑	2,007542
Budapest	↑↑	4,362109	Multi-unit buildings	↓	1,294882
County Seats	↓	2,035478	Age	↓	0,976246
Other towns	↓	1,594887	Number of household members	↑	1,179483
			Dependent children	↓	0,90555
Income (contrast: middle income quintile			Single parent families	↓	1,629917
Lowest income quintile	↑	2,797556			
Second income quintile	↑	1,519975	Education (contrast: unfinished primary school)		
Fourth income quintile	↑↑	1,140724	Finished primary school	↑↑	1,050195
Highest income quintile	↑	0,918541	Trade school	↑	0,908
			Technical school	↑	0,660034
Equity (contrast: middle quintile)			Secondary school	↑	0,497512
Lowest unit value quintile	↑	2,234363	College degree	↑	0,484759
Second unit value quintile	↑	1,158902	University degree	↓	0,248673
Fourth unit value quintile	0,914691	Not significant			
Highest unit value quintile	↓	0,405026	Unemployed	↓	1,570265
			Loan repayment	↓	1,924366
Constant	0,033376	0,030092			
Variable(s) entered on step 1: TTIPMSZH, EHTJOVK5, RB_ERT5, TULONK, LAKSZ, KOREV, HTAGOK, GYCSAL, ESZUL, LISKV, MNELKN, HITTART.					

Table 22 Variables in the Equation 1999, 2003

1999

Variables in the Equation

			B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)		TTIPMSZH			20994,715	3	,000	
	Budapest	TTIPMSZH(1)	1,225	,009	17890,787	1	,000	3,406
	County Seats	TTIPMSZH(2)	,902	,008	11995,706	1	,000	2,464
	Other towns	TTIPMSZH(3)	,794	,006	15133,248	1	,000	2,211
		EHTJOVK5			41610,650	4	,000	
	Lowest income quintile	EHTJOVK5(1)	,998	,007	18975,985	1	,000	2,714
	Second income quintile	EHTJOVK5(2)	,190	,008	617,081	1	,000	1,209
	Fourth income quintile	EHTJOVK5(3)	-,558	,009	3647,862	1	,000	,572
	Highest income quintile	EHTJOVK5(4)	-,370	,010	1403,359	1	,000	,691
		RB_ERT5			14446,195	4	,000	
	Lowest unit value quintile	RB_ERT5(1)	,669	,007	8599,104	1	,000	1,953
	Second unit value quintile	RB_ERT5(2)	,204	,007	857,510	1	,000	1,226
	Fourth unit value quintile	RB_ERT5(3)	-,089	,008	139,417	1	,000	,915
	Highest unit value quintile	RB_ERT5(4)	-,229	,009	667,884	1	,000	,796
	Municipal rental	TULONK	,660	,007	8125,646	1	,000	1,935
	Multi-unit buildings	LAKSZ	,416	,006	4165,900	1	,000	1,516
	Age	KOREV	-,022	,000	15131,420	1	,000	,978
	Number of household members	HTAGOK	,098	,002	2407,080	1	,000	1,103
	Dependent children	GYCSAL	-,095	,006	228,706	1	,000	,910
	Single parent families	ESZUL	,660	,007	9468,132	1	,000	1,935
		LISKV			13381,671	6	,000	
	Finished primary school	LISKV(1)	-,038	,008	23,738	1	,000	,962
	Trade school	LISKV(2)	-,538	,009	3864,865	1	,000	,584
	Technical school	LISKV(3)	-,472	,010	2277,157	1	,000	,624
	Secondary school	LISKV(4)	-,706	,012	3689,601	1	,000	,494
	College degree	LISKV(5)	-1,011	,014	4892,645	1	,000	,364
	University degree	LISKV(6)	-,932	,015	3858,254	1	,000	,394
	Unemployed	MNELKN	,640	,006	10489,741	1	,000	1,897
	Loan repayment	HITTART	,669	,006	13446,516	1	,000	1,953
		Constant	-3,400	,019	33088,253	1	,000	,033

a Variable(s) entered on step 1: TTIPMSZH, EHTJOVK5, RB_ERT5, TULONK, LAKSZ, KOREV, HTAGOK, GYCSAL, ESZUL, LISKV, MNELKN, HITTART.

2003

Variables in the Equation

			B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)		TTIPMSZH			23786,347	3	,000	
	Budapest	TTIPMSZH(1)	1,473	,010	22910,051	1	,000	4,362
	County Seats	TTIPMSZH(2)	,711	,009	6166,306	1	,000	2,035
	Other towns	TTIPMSZH(3)	,467	,006	5181,070	1	,000	1,595
		EHTJOVK5			24359,451	4	,000	
	Lowest income quintile	EHTJOVK5(1)	1,029	,008	15593,303	1	,000	2,798
	Second income quintile	EHTJOVK5(2)	,419	,009	2384,402	1	,000	1,520
	Fourth income quintile	EHTJOVK5(3)	,132	,009	205,493	1	,000	1,141
	Highest income quintile	EHTJOVK5(4)	-,085	,010	68,562	1	,000	,919
		RB_ERT5			26434,384	4	,000	
	Lowest unit value quintile	RB_ERT5(1)	,804	,008	10901,178	1	,000	2,234
	Second unit value quintile	RB_ERT5(2)	,147	,007	399,779	1	,000	1,159
	Fourth unit value quintile[27]	RB_ERT5(3)	,011	,008	2,280	1	,131	1,011
	Highest unit value quintile	RB_ERT5(4)	-,904	,011	7318,954	1	,000	,405
	Municipal rental	TULONK	,697	,008	7401,725	1	,000	2,008
	Multi-unit buildings	LAKSZ	,258	,007	1366,140	1	,000	1,295
	Age	KOREV	-,024	,000	16830,095	1	,000	,976
	Number of household members	HTAGOK	,165	,002	6257,727	1	,000	1,179
	Dependent children	GYCSAL	-,099	,007	215,880	1	,000	,906
	Single parent families	ESZUL	,489	,008	3670,574	1	,000	1,630
		LISKV			13254,967	6	,000	
	Finished primary school	LISKV(1)	,049	,010	24,483	1	,000	1,050
	Trade school	LISKV(2)	-,097	,010	89,662	1	,000	,908
	Technical school	LISKV(3)	-,415	,012	1173,385	1	,000	,660
	Secondary school	LISKV(4)	-,698	,013	3110,138	1	,000	,498
	College degree	LISKV(5)	-,724	,015	2379,234	1	,000	,485
	University degree	LISKV(6)	-1,392	,020	4962,049	1	,000	,249
	Unemployed	MNELKN	,451	,007	3969,680	1	,000	1,570
	Loan repayment	HITTART	,655	,006	13688,253	1	,000	1,924
		Constant	-3,504	,021	27249,800	1	,000	,030

a Variable(s) entered on step 1: TTIPMSZH, EHTJOVK5, RB_ERT5, TULONK, LAKSZ, KOREV, HTAGOK, GYCSAL, ESZUL, LISKV, MNELKN, HITTART.

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[27] This variable is not significant in the model.

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