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THE PRIVATISATION DILEMMA IN BUDAPEST'S PUBLIC RENTAL HOUSING SECTOR

Introduction

Housing has clearly been defined in Hungary in the last months as one of those areas in which responsibilities and decision making rights have to be shifted from the central to the local level. As a consequence of this, central guidelines and subsidies are disappearing and the new local governments are in the process of becoming the public landlords. This tendency of decentralisation and reliance on the private sector on the part of central policy is also reflected in the draft version of the new Housing Law which is scheduled for parliamentary debate in April 1992.

One of the most difficult decisions the local governments have to make nowadays is about the privatisation of the public rental stock. In most local municipalities with substantial rental stock, overheated debate is going on in which economic arguments are mixed with social and political factors. Local politicians and members of the local assemblies are facing a difficult choice among the options to sell or not, and whether to increase the price or give the stock away. The problem in broader terms is balancing on the one hand the local housing policy itself (what should be the role of the rental sector, how should low income families be protected, how should the rundown houses be improved), and on the other hand the distribution of public wealth among different groups of the local population. At the same time households are also in a dilemma: should they attempt to buy their units at the present low selling price (having very limited information on the real conditions of the building or future cost of maintenance and rehabilitation, for example) or not, facing the uncertainty of future local rental housing policy as tenants.

In this paper we seek to survey the situation and the decision making alternatives of the two major players in the 'privatisation game': local governments and the tenants. The basis of our analysis is an empirical survey on housing privatisation carried out in Budapest in January of 1992 on a sample of the January 1990 tenants as a part of the World Bank/UNHCS Housing Indicator Project with USAID assistance. (This is one of the first empirical surveys in Eastern Europe about the expectations towards and the consequences of privatisation).

The share of the public rental sector was exactly 50 per cent at the beginning of 1990 in Budapest. This figure is higher than the share of the social rental sector in most European metropolises. However, if we take into account that in practical terms there is no private rental sector in Hungary, a stock of 50 per cent for the whole rental sector is not very large.

As characteristic features of the Hungarian public rental sector we can briefly mention the very low rent level, the huge backlog in maintenance, and the ownership rights of tenants - this means that tenants possess capital with their rental unit because they can exchange it almost freely for owner-occupied units.

The transformation of the public rental sector began long before the political changes of 1989-1990. Privatisation in this sector, 'founded' in 1952 through mass nationalisation of private rental houses, became theoretically possible as early as 1969. The first real changes, however, only occurred at the beginning of the 1980s with a gradual rent-increase and the step-by-step modification of the strict constraints on privatisation of larger buildings. This shift was very much in line with the political decision to allow, from the beginning of the 1980s, the development of a private entrepreneurial sector - in fact the private ownership of the means of production was politically a much more sensitive area than the personal ownership of housing. Even so, not very much happened until the end of the 1980s.

Our data are taken from a survey of the Budapest rental sector, conducted in January of 1992, based on a January 1990 sample of public sector tenants.¹ The sample date coincides with the beginning of a rapid increase in the pace of privatisation, as in 1988 and 1989 combined under 2 per cent of the Budapest stock was purchased by tenants. In contrast, our data show that between January 1, 1990 and January 1, 1992 20 per cent of the stock was sold to sitting tenants (of which less than 10 per cent was resold or rented)². Another 5-7 per cent of the stock was in the process of being sold in January 1992, which means that more than a quarter of the public rental units are - or will soon be - under private ownership.

The demand on the part of sitting tenants to buy their units is very substantial mainly because of the uncertain future of the rental sector and the very favourable financial terms of sale. Rental sector conditions - e.g., rent levels, security of tenure, both now favourable to tenants - are to be addressed in the Housing Act, which has been delayed repeatedly since January of 1991, and currently promised for June, although it is not likely to be passed until autumn. This uncertainty about the future of renting is accompanied by strong financial incentives to buy: most public rental units are sold for 15 per cent of their market value (because no 'extensive maintenance' was carried out within the last 15 years) and tenants only have to pay 60 per cent of this if they pay in cash, or 10 per cent in cash and the rest in instalments for 15 years at a fixed interest rate of 3 per cent. Under these regulations less than 30 per cent of public tenants reject the idea of buying, 30 per cent are taking it into consideration, 20 per cent are ready to buy immediately and almost 20 per cent have already bought their units.³

From all these figures it is clear that the Budapest rental stock is now at a very important turning point which will affect the future development of the city's housing policy in the most direct way: depending on the regulation of sales terms, rents and tenants' ownership rights, the rental stock, recently around 40-42 per cent of the total housing stock, can easily drop to a level below 20 per cent within a few years. The question to be answered is whether such a big change is necessary and unavoidable, and what consequences it would have on the housing opportunities of, and inequalities between, different social groups. In this paper we address specifically the efficiency and equity implications of the current privatisation strategy.

I. The Motivations of Local Governments and Households: Theoretical Assumptions

The first part of the paper tries to provide an explanation for the privatisation alternatives both on the side of local governments and on the side of the households. First we analyse the behaviour of local governments; second, the households' motives and behaviour with respect to privatisation.

A. Budapest Local Governments and the Public Rental Sector

The Law on Local Governments passed in 1990 changed the political structure of inter-governmental relations. The autonomy of the locally-elected body replaced the highly centralised decision-making system. The national election held in 1990 was won by the Hungarian Forum (and parties in coalition with them) while local elections gave more power to the opposition parties (Free Democrats and Young Democrats), which led to the well-known political situation in which the conflict between the local and central level has a political significance as well.

In the case of Budapest the political situation is even more complicated as the city is divided into 22 district-level governments which enjoy almost the same degree of autonomy as towns. This is a source of conflict between the Budapest City Government and the local district governments, as the most important housing policy related decisions are in the hands of the local district governments.

The Property Transfer Law gave the ownership of the state rental stock (400,000 units in 1990, 50 per cent of the total stock) to the local governments, more precisely in the case of Budapest to the district governments. This is an asset whose value (at the beginning of 1990) was about 625 billion forints, and which generated about 4.6 billion forints rent revenue per year while the cost could be estimated as up to 7 billion forints for operating and basic maintenance. According to current regulations, local governments can freely decide about almost all aspects of privatisation (except for the terms of instalment payments, which must be fixed rate loans at an extremely low interest rate), but they cannot yet set rent levels. For these reasons - costs, low rents, political pressures - this asset is sometimes regarded as more of a liability for the local governments.

To address the pressing privatisation problem, district governments currently face two options: (1) give away the majority of the stock (present privatisation strategy) or (2) change the "giveaway" policy (either stop the present privatisation strategy by bureaucratic action or slow it down by increasing the sales price). Their choices are determined by financial and political factors.

1. Political Gains and Losses

Privatisation at a low price is, on the one hand, a 'favour' to district residents which will give political strength to the present local officials and representatives, although since it is now perceived only as a continuation of past policy, it is losing some of its political advantage. On the other hand, privatisation at a low price works against future housing policy, because (a) without public housing the possibilities for social housing policy are reduced, and (b) the remaining part of the public sector will become highly segregated with only the poorest families and insufficient resources. This consideration varies among the local governments according to the tenure structure of their housing stock.

The problem of deferred maintenance is likely to remain a political problem even for privatised units, as many families will most likely be unable to meet the heavy financial burden of covering renovation costs in addition to their newly acquired maintenance responsibilities. There is strong confidence on the part of households that the cost of the renewal has to be shared with the government. Ninety-four per cent of the respondents claimed that some cost should be charged to the government, and one-third think that the

major renovation should be the task of the government after privatisation. At the same time, with the sale of the rental stock, Budapest would no longer be able to charge the central budget to pay the approximately 100 billion forint bill for deferred maintenance, and it is questionable whether the districts and households can exert enough political pressure to obtain this money from the budget.

2. Financial Reasons

Under present regulations there is a negative return on this asset as rents fall short of covering expenditures. This loss is currently financed from the rent income of non-residential rental units and from privatisation revenues. Only a few local governments have plans for increasing rents which seems to be difficult to achieve even if connected to the introduction of housing allowance schemes protecting the poorest strata of the population. The belief that it will continue to be impossible - either for legal or for political reasons - to raise rents to levels that would adequately cover the cost of maintenance certainly contributes to the local governments' desire to sell the housing stock as quickly as possible.

Choosing to privatise units will bring a cash inflow for the district budget even with a huge capital loss - although it has been estimated that in some cases the privatisation transaction only breaks even.⁴

3. Expectations about Rents

A key element in the local government's privatisation decision is what future rent levels will be, which will depend both on what the Housing Act will decide with regard to tenants' rights and rent levels, and on the actions of the local government itself. As expected rent levels also play a role in tenants' desire to buy their units, the district's rent policy will influence its own privatisation decision through its effect on the political pressure it will face as well. In addition, expected higher rent levels can contribute to public willingness to pay higher sales prices.

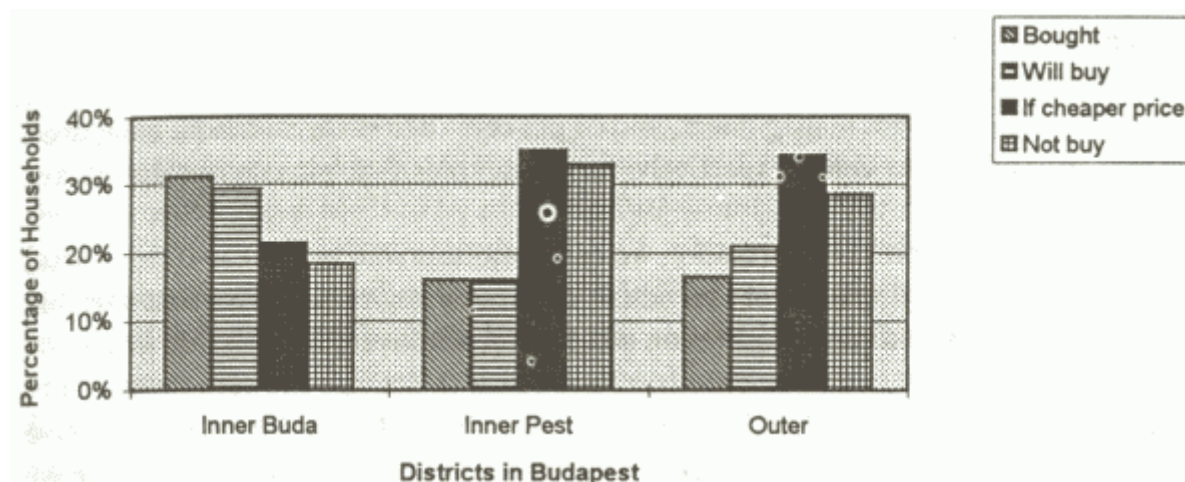
In sum, the districts' decision will depend on weighing the following factors: financial considerations (based on expected returns from rents minus costs on the one hand and revenue from sales on the other); policy considerations (providing housing for the poorest families, obtaining resources from the central government, and ensuring adequate maintenance and rehabilitation for local housing stock, both district- and privately-owned); and political pressure from citizens (in turn a function of expected rents and costs).

B. Household Behaviour

On the basis of the rental sector survey we have information on the plans and future expectations of 1990 tenants concerning the possibility of purchasing their units. As described above, tenants can be classified into four groups: those who already bought their units, those who were willing to do so, those who say they would buy if the sales prices were lower, and finally those who would never purchase their units (Fig. 1). Theoretically such a decision could be regarded as a 'normal' consumer decision which is mainly influenced by financial considerations, but besides these also by some 'softer' factors such as lifestyle.

In the present Hungarian (and East European) situation, however, motivations for buying are not so simple to explain. The decisions of the households are in most cases rational choices; the rationality of the decisions is, however, not only based on the normal motivating factors but in substantial part on the uncertainty about the regulation of the right-to-buy policy as well as regulations affecting the rental sector. This means that in fact many families force themselves into the direction of purchasing the unit (by overvaluing the pro-buying motivations against the counter-motivations) just because they are afraid that the recent favourable regulation will change soon. Changes are most probably and more quickly to be expected regarding the price and other financial circumstances of the sale than regarding the general rent policy (rent increase or the withdrawal of the ownership rights of tenants).

Fig. 1. Privatisation of Budapest Public Rental Stock



According to our hypothesis, in the present situation it is not the usual difference between owning vs. renting a housing unit that most influences the households' decision on buying but rather the following three groups of factors:

i. Financial Considerations. The main financial motivation is 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. Related aims are to ensure that the value of the housing unit keeps pace with inflation and to make the transfer of the unit to other members of the family cheaper.

Among the listed factors we have only been able to operationalise the value-gap. We defined it as the difference between half the market value of the flat and the down payment the family has to pay to buy their unit, minus the value of deferred maintenance. (See Methodological Appendix for complete definitions of the basic terms.)

ii. Security of Tenure. Tenants have been used to a high security of tenure in the past forty years, and they enjoyed low rents, with rent increases under inflation. They now may feel that they face rent increases and shrinking of their ownership-rights (e.g., the right of tenure swapping or inheritance). The households' opinion on rent increase - whether it will be lower or higher than inflation - indicates the effect of this factor. Strong expectations of high rent increase can push the households towards buying their units in order to become a home-owner in a more secure situation.

iii. Control Over Maintenance. One of the most common complaints of public tenants is the low performance of the public maintenance companies. Households would like 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.

Potential variables to measure control considerations include the level of satisfaction with the maintenance of the house and the willingness to pay more for better service. The fact that two-thirds of the privatised households have already changed management companies is also indicative of the desire to improve maintenance. As a preliminary observation, over 25 per cent of the households that have already bought their unit expressed satisfaction with management, and 35 per cent their dissatisfaction; compared to 7 per cent and 77 per cent, respectively, for households that plan to but do not yet own.

On the basis of empirical information we can try to test which of these factors plays the biggest role in the decisions of individual families to buy or not. The first variable under examination is a direct question on what factors motivate households to buy.

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.

In order to get an overview of the motives of those households that will not buy their units, we had to analyse the answers to the question regarding the factors that dissuade them from buying, since their reasons for buying should clearly not be given very much weight. We could identify two main groups of motives: one emphasizes the lack of financial means (either in connection with the sales price or with the future maintenance costs); the other concentrates on the rundown physical condition of the house, in other words on the low-value of the value-gap. Within the group of non-buyers the first motivation is somewhat stronger (almost 50 per cent) compared to the second (around 40 per cent). The financial difficulties refer in most cases not to the sales price (which is low in all considerations) but to the uncertainty about the future maintenance costs. Rundown housing conditions mean extremely low-value flats in buildings where the average assessed value of the condition of the building was (on a scale of 1 to 5) only 1.89, far below the average.

II. How Privatisation Plays Out: Empirical Findings

A. Determinants of Privatisation - A Logistic Regression Model

The procedure for privatisation is initiated by the tenants, who have to put forward an application to the IKV (the Real Estate Management Company), which passes it to the local council (or government) if the share of the applicants in a building reaches a certain minimum (it differs between districts, but is usually between 35 and 75 per cent). In principle the tenants have the right to buy, but for different technical and political reasons the process has been blocked by some local governments.⁵ The actual privatisation, that is, which households

actually buy their units, has been influenced by several factors, both on the household side and on the council side. This section of the paper will examine the results of the actions of both the households and the local governments.

We start by looking at the factors that determine which units are sold and which families buy their flats. The results can be seen in Figures 2-7, where the housing unit and household characteristics are shown. The tendency is clear: the better housing units were bought, and the buyers and those who intend to buy have higher education and higher income. But the one-dimensional description can easily be misleading if one does not control the effects of interrelated variables. With logistic regression we have tested two hypotheses.⁶

Hypothesis 1. The households with the highest value-gap are most interested in buying their unit, and they exercise the highest level of effort to achieve their aim. Hypothesis 2. The households with highest rent increase expectations are most interested in buying their unit. The expectation was measured by a question asking whether the interviewee expected rents to increase more than the average prices. A definite 'yes' got a 1 code; other answers were coded 0.

Fig. 2. Market Value of the Unit

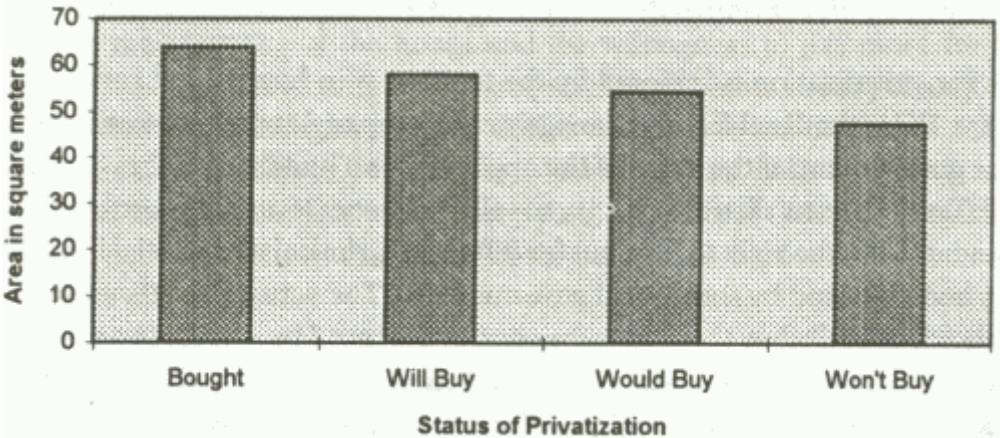


Fig. 3. Size of Unit

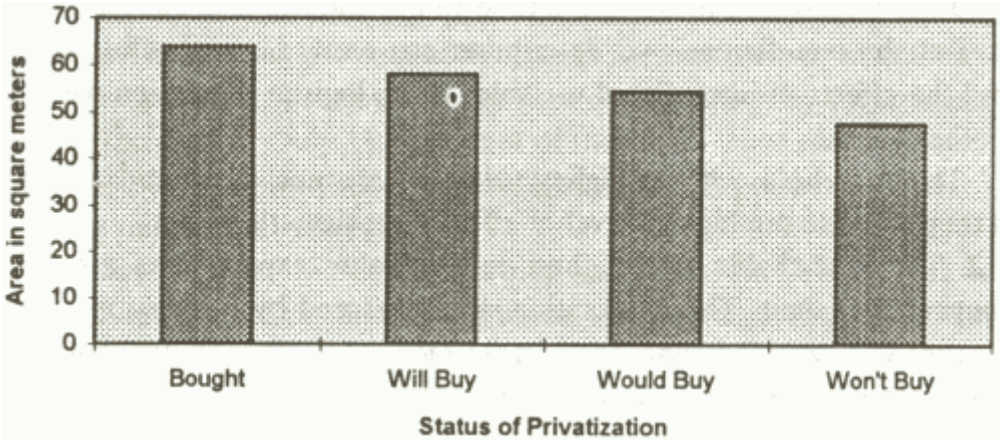


Fig. 4. Type of Bathroom

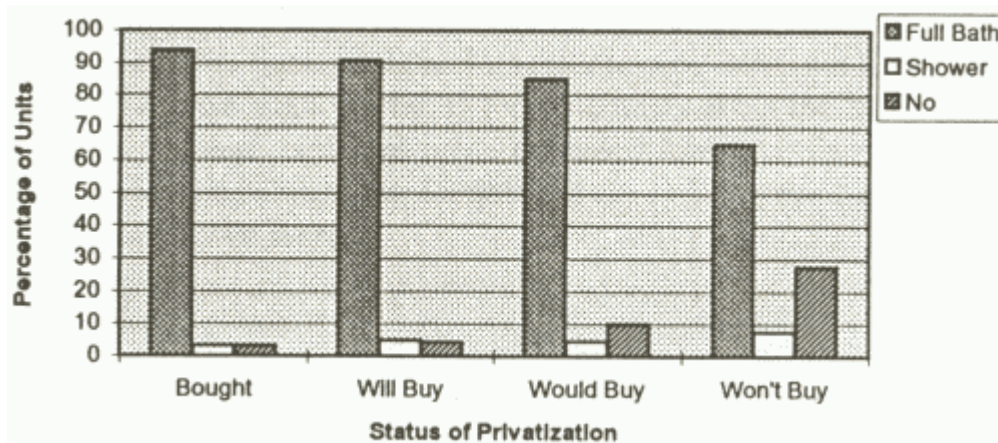


Fig. 5. Work Status of the Head of the Household

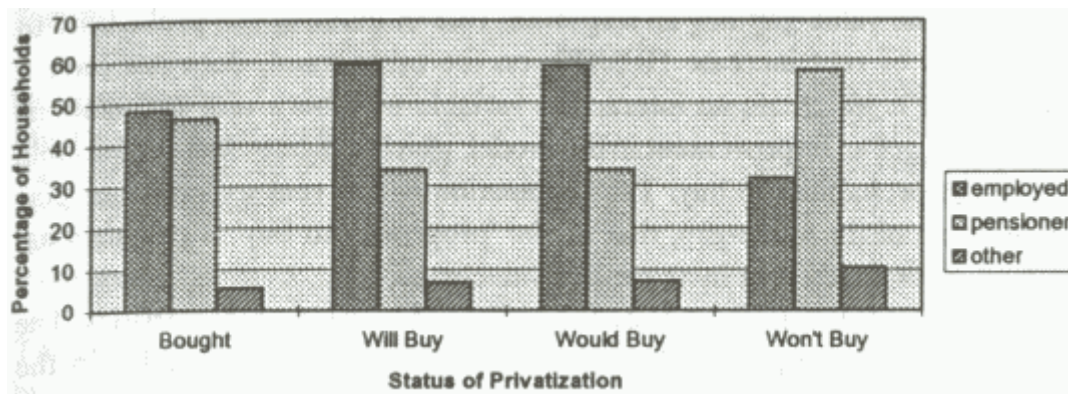


Fig. 6. Schooling of the Head of the Household

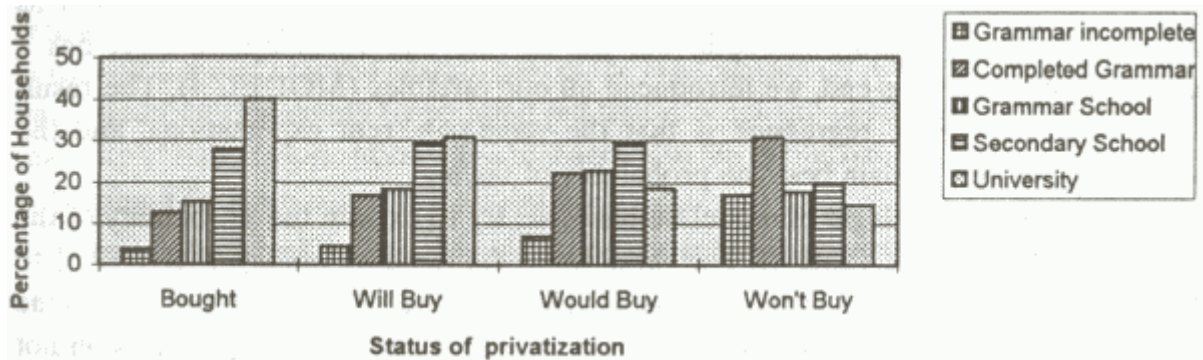
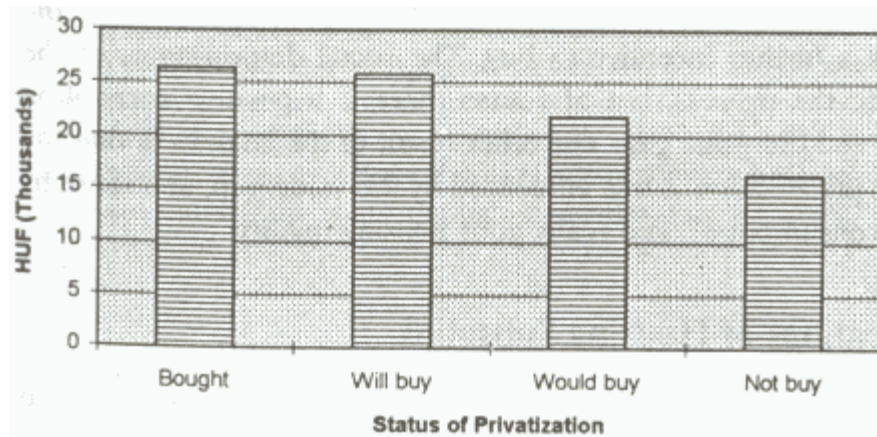


Fig. 7. Average Monthly Income of the Household



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 1).

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. At the end, 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 try to explain the probability of the decision not to buy (see Table 2). 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.

B. The Equity Implications of Housing Subsidies

The privatisation strategy of a local government is in many ways a decision about two housing subsidies, the rental subsidy and the value-gap: choosing how big a subsidy each is to be, and whom it will benefit. This section looks carefully at the effect of this decision on different social groups.

According to our estimations based on the survey, the Budapest public stock (of January 1, 1990) can be characterized by the following data:

Number of units	400,000
Market value of the stock	625.0 billion Ft
Value of the deferred maintenance	95.5 billion Ft
Total rent revenue	4.6 billion Ft
Rent subsidy	21.3 billion Ft
Value gap	168.8 billion Ft

To understand the magnitude of the two housing subsidies, the interest rate subsidy paid by the central budget in 1989-91 was 200 billion forints. It is important to note that the value-gap in Budapest alone comes to almost as big a sum - although of course the value-gap is not a cash subsidy but a transfer of assets.

The efficiency and social functions of the East-European public rental sector have been questioned (Szelényi 1983, Dániel 1985). The argument is that access to the public rentals was distributed unevenly among different social and income groups, and the better-off families enjoyed a larger part of the housing subsidy. Other housing researches have modified this theory by pointing out that it is not the public sector that enjoys the majority of housing subsidies,⁸ and that access to the public flat has not been exclusively determined by state controlled allocation.⁹

However the present tenants gained access to their flats, they now enjoy a substantial subsidy. We can define two kinds of subsidy related to the public rental sector: (1) budget and off-budget sources actually spent on the stock (it was estimated as 6 billion Ft in 1990); and (2) rent subsidy which is the difference between potential market rent and the rent actually paid.

This paper focusses on the second definition of the subsidy, which is relevant from the point of view of households. To operationalise this term is not a simple task, as there is only a very narrow private market, dominated by well paid, mostly foreign renters. We based our estimation on the 'fair rent' idea: what would be the equilibrium rent if there were not a large shortage on the market.¹⁰

The distribution of this subsidy is considered to be regressive, that is, the higher income groups enjoy the larger part of the subsidy¹¹ (Dániel 1985, Dániel-Semjén 1987, Hegedűs-Struyk-Tosics 1991).

According to our survey data, the upper income group (having income above 75 percentile) receive 32 per cent of the rent subsidy, while the low income group (those in the lowest 25 per cent income range) receive 21.6 per cent of the rent subsidy, less than their weight in the population. The question is how privatisation modifies this regressive distribution of the subsidies, both within a decreasing rental sector and by distributing the value-gap subsidy to the buyers. 'Giveaway' privatisation generates a huge equity problem related to the difference between the market value and the discounted selling price. This is a 'once in a lifetime' type subsidy (or grant), and can be conceived as a capitalization of the inequalities. Based on survey data we defined the stages of privatisation:

Stage A: 1 January 1990 status

Stage B: 1 January 1992 (the current situation)

Stage C: 1992-1995 - units purchased by every household that wants to buy under present conditions

Stage D: 1992-1995 - units purchased by every household that would like to buy under more favourable terms

Stage E: every household buys

Stages C-E are, of course, hypothetical, showing alternate scenarios which could take place if the current privatisation policy continues. Our question is how these hypothetical stages influence the equity issue. The results of the analyses are shown in Table 3.

In Stage B the value-gap was distributed even more unevenly than the rent subsidy, which follows from the fact that the units in the best condition were bought first: 40 per cent of the total value-gap (estimated up to 40 billion forints) went to the upper income groups, while low income groups obtained 17 per cent of the value-gap. In other words, the average value-gap for the low income groups was 32 per cent less than for the higher income groups. The last two years of privatisation have thus just followed the distributional pattern of the rent subsidy and transferred the position in the rental stock into a position in the private sector.

As the privatisation process goes on, the gap between the low and upper income tenant is decreasing: the upper income tenant has left the rental sector, and enjoys consequently a smaller share of the rent subsidy. Of course, the total sum of the rent subsidy decreases from 20 billion forints to 5 billion forints in Stage D. The price to achieve this lower level of inequality is the 140 billion forints value-gap given to the tenant in a regressive way.

Two methods can be used to decrease the regressivity of the distribution of rent subsidy and value-gap: one is to increase the rent level and introduce a housing allowance system, and the other is to increase the selling price up to the point when the value-gap becomes zero.

III. The 'Privatisation Game': The Interaction Between the Options of The Local Government and the Households

Each local government has to decide on a privatisation strategy, more specifically to decide whether to continue with the current 'giveaway' sales terms or to raise the price of sales. This

strategy, in combination with changes in rental conditions, will have important and lasting effects on the housing sector.

The privatisation decision the local government makes must be analysed within the context of actual rental conditions: clearly the continuation of serious rent control and excessive tenants' rights instead of market rents and reasonable possibilities for the eviction of delinquent renters will affect the results of the privatisation strategy. For this analysis we look at four possible policies:

1. Privatisation Terms:	A. at giveaway prices B. at higher prices
2. Rental Conditions:	C. rent control (present regulations) D. market rents (with housing allowances)

These choices result in four possible outcomes, which can be depicted in matrix form.

A. Some Characteristics and Evaluation of the Four Outcomes

1. Independence of the Individual Options. The individual local governments are not independent from each other but, at the same time, there is little coordination among them. Each individual local government owns only a part of the stock, and cannot dominate the market - that is, no one local/district government can determine the future of the stock.

2. Continuous Rather Than Discrete Choices. The cells of the matrix represent only 'typical' outcomes, that is, there are no strict divisions between the choices, but rather each decision and each result is on a continuum. For example, a price increase could be modest or it could be very drastic. Similarly, the resulting value-gap will vary in size.

3. Timing. The order in which measures are taken (increasing the selling price on the one hand, increasing the rent on the other) is important. The rent increase has an effect on the propensity to buy, and increasing the selling price slows down the privatisation and influences the rent increase strategies.

4. Efficiency and the Housing Finance Sector. Decisions made at the local level have a crucial effect on the whole housing market. A viable rental sector is an essential element of the sector. Therefore housing policy should aim to create a healthy rental sector regardless of whether the rental units are public or private. Choosing to move to market rents means the creation of a system in which the cost of the sector should be covered by the rent plus subsidies, provided the subsidy is designed to be sustainable by the central and local budget. Having costs adequately covered will result in easy access to the rental sector (i.e., no large shortages), providing an important condition for the improvement of the housing finance sector by solving the foreclosure problem.

At the same time it makes investment in the rental sector profitable.

5. Housing Allowances. The rent increase option assumes a parallel introduction of a housing allowance system. The present rent-to-income ratio is 5-6 per cent, but with the cost of

utilities included it reaches the level of 27 per cent. This makes a rent increase very complicated politically.¹² According to the survey data, with a 100 per cent rent increase 32 per cent of tenants will face a difficult situation, while a further 13 per cent of the tenants will be obliged to seek assistance from the local government. With a 200 per cent rent increase 36 per cent of the tenants reported a serious situation, and another 36 per cent of the tenants would apply to the council for help. This shows that a rent increase will necessitate the introduction of a housing allowance.

6. Size of the Public Rental Stock. The different outcomes of course affect the future size of the sector. The analysis has shown that the motivations of households were much influenced by macroeconomic expectations (e.g., inflation and rent increase). The uncertainty of the last two years strengthens this process. On the basis of the survey data we estimated the possible size of the sector in percentage of the Budapest housing stock for each of the four outcomes (see Fig. 7). Outcome II will result in the smallest rental sector (an estimated 10-15 per cent), as both higher rents and the low sales prices will encourage departure from the sector. Similarly, Option III will result in the largest sector (30-35 per cent), as high sales prices and subsidized rents discourage ownership. In the middle positions, outcomes I and IV have been estimated at 15-25 per cent, with their relative positions depending on the relative magnitude of the increases in price and rent levels, and on the strength of each effect.

Fig. 7. Options for Privatisation Strategy: Estimation of Public Rentals as a Percentage of Total Housing Stock

- 1. Privatisation: A Giveaway price
B Higher price
- 2. Rent regulations C Low rent
D: Market rent + housing allowance

	C: Low rent	D: Market rent + housing allowance
A: Giveawayprice	I. (15-25%)	II. (10-15%)
B: Higherprice	III. (30-35%)	IV. (15-25%)

A Preliminary Evaluation

We present here a summary evaluation looking at some of the implications already noted and discussed in our analyses of the four outcomes.

First, bearing in mind the financial and equity implications of the different subsidies, we can rank these four outcomes by the magnitude of each subsidy:

Fig. 8

Outcome	Value Gap	Rent Subsidy
I	2	2
II	1	4
III	4	1
IV	3	3

N.B. 1 = largest; 4 = smallest

Outcome I will clearly have the largest combined subsidy - requiring most resources, and also likely to have the most inequitable results. In those terms it becomes the least desirable of the four outcomes. Outcome IV results in the smallest subsidies, and is for those reasons the most desirable.

To judge between Outcomes II and III requires more careful evaluation. In Outcome II, combining giveaway privatisation with market rents, there is a large value-gap to be countered by reduced rental subsidy, and low sales revenues, countered by higher rental revenues. These two sets of criteria, however, are not easy to compare. Not only are revenues. These two sets of criteria, however, are not easy to compare. Not only are the magnitudes difficult to estimate, but the two sectors are not independent, e.g., rent levels will affect sales.

But there are other criteria to be included in these evaluations. Two are mentioned above. One is the efficiency benefits brought to the housing finance sector by an improvement of the rental sector. This will result from Outcomes II and IV. Another is the size of the rental stock which will have an effect on policies within each district as well as on the claim of the local government on the central budget for possible assistance. As discussed above, the size of the sector will vary considerably among the four outcomes.

A final and essential factor is political feasibility. Although Outcome IV has many positive features, it requires, for example, two actions on the part of the local government which may be politically unpopular: raising rents and increasing sales prices. Each local government will need to gauge carefully how much political capital it has at its disposal, how many difficult actions it can take, and how it can use timing and presentation of its policies to make a sensible strategy politically palatable.

B. Two Options for the Budapest Local Governments, and the Associated Risks

In evaluating the privatisation issue we have to take into consideration that the process is already well underway, and has a history which started in the old system. In Budapest 100,000 units - the best quality part of the stock - have already been sold, and about 100,000 units will probably remain property of the districts (unevenly distributed among them). We are therefore talking about redesigning the privatisation process of the other 200,000 units. As we evaluate the options formulated in the first part of the paper, it is this part of the stock which forms the target group.

What Politically Feasible Options are Available to the Local Governments? *Option A: Increase the Sales Price and Increase the Rents*

The local governments could raise the price of the units and introduce a special scheme in which the loss of the future buyer is partly compensated by reinvestment in the stock. If they follow a scheme suggested in a recent Working Report,¹³ there would be a revenue of more than 24 billion forints for the sector, one third of which would go back to the buyers as a fund for rehabilitation over the next 10-15 years.

This price increase will encourage hesitant tenants to give up their intention to buy, which in turn will result in a required 11 billion forint actual rent subsidy level (the difference between the 'fair' rent and the actual rent). The sector remains too big to maintain this level of subsidy without rehabilitation; so the local government should increase rents and increase investment in the sector. With increasing the rent a large portion of the population will need housing allowances, which should be introduced, along with gradual changes in the property rights.

This scheme raises equity issues in four ways. On the one hand, the scheme is more equitable because (1) rent subsidies are more accurately targeted; (2) as the value-gap is reduced, the inequity of this generally untargeted subsidy is decreased. On the other hand, the scheme is regressive in two ways: (3) the decrease in privatisation is likely to be at the expense of households with lower incomes so that they will decide against buying; and (4) the higher sales prices are inequitable to present buyers who are likely to be poorer than those who have bought quickly under the original and more advantageous sales terms. It should be, however, remembered that this group of buyers will be compensated by the planned reinvestment into the newly privatised housing. While these conflicting results should be evaluated carefully, it is probably fair to say that the benefits of the increased targeting of both the rent and value-gap subsidies in combination with the efficiency effects of introducing improved rental conditions are likely to outweigh the inequities.

Risks Associated with Option A. This strategy is based on the principle that it is better to stop a strategy which creates equity problems and introduces huge distortions into the system, even if it is unfair to the social groups which would be the next beneficiaries of the previous system. The social benefit of stopping the system, however, depends very much on the time factor, and it is therefore important to determine at what point it is possible to stop the process.

This 'time factor' is the first risk: the later the turning point, the less the benefit and the higher the cost. There is a certain point at which it will be too late to stop the process, when changes in the system cause more cost than benefit.

The second risk is an elastic demand curve: the increased selling price (i.e., the reduced discount) may cause households to stop buying altogether, so that privatisation comes to a complete halt. With a large constituency in the public rental sector, the households then can use their political clout to block the attempts of the local government to increase rents and introduce the housing allowance system. This risk could in the first place be mitigated somewhat by scheduling the raise in rents to coincide as closely as possible with the change in sales terms. In the second place, it seems likely that as long as there is a non-zero value-gap, privatisation will continue in some form.

Option B: Same Privatisation Strategy, Market-Oriented Rental Sector

The second option is to continue privatisation with basically the present conditions (with some changes that could be made without any problem, such as raising the interest rate on instalment payments), while simultaneously increasing the rent levels and introducing a housing allowance system targeting the poorest households. This will force the higher income and better housed households to leave the social rental sector, and speed up the privatisation process. At the end of the process there will be a small (100,000 units) social rental sector.

The disadvantage of this option is the huge value-gap loss. The problem with this solution is not only its strongly regressive effect (i.e., higher income groups get the bulk of the value-gap). An equally important negative fact is the 'take-out of the property value' of this sector. This means that a disproportionately high share of the property value of the total rental stock is located in those (the best) parts of the stock which are currently for sale. If sales prices are extremely low, the buyers of these units receive a huge value-gap, i.e., the local government practically gives away the best part of the stock, the only part which could have created some income to serve as a basis for renewal for the lower quality parts of the stock.

The departure from the rental sector of higher income households reduces the feasibility of a housing allowance system. It may make it impossible for the system to be self-financing; moreover, there will be a threshold after which it would only be worth introducing allowances if private rentals were included, since such small income levels will remain within the public rental sector.

On the other hand, the indirect positive effect of the higher rent levels in this option is the gain in efficiency and a possible development of the private rental sector. If we assume that just from the privatized 300,000 units minimum 10 per cent are resold or rented on the private market, we can estimate a minimum of 50-100,000 units on the private rental sector if the landlords' property rights are strengthened. The condition of this possibility is a fair rent policy for the public sector and a carefully designed housing allowance system which incorporates the private rental sector as well. The price of this alternative is a loss on the value-gap side, but a gain on the efficiency of the housing system.

Risk Associated with Option B. If the rent structure and property rights cannot be changed, the social sector will be larger and mixed, that is, the present system will be reproduced with a larger private sector. Rehabilitation of the stock may then be stopped because under present regulations no financial instrument can be introduced.

Methodological Appendix: Defining the Key Variables for the Analysis *Determining the Market Value*

The estimation of the market value is based on the respondents' evaluation of their own unit. Forty per cent 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 50 million forints). The reasoning was that this value represented the demand for office spaces, and including this valuation in the regression would distort the results.

In the second step, we ran OLS regression models with stepwise method, including all of the variables (except of course the contrast), and defined the preliminary function. Using this function we dropped 38 cases as 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. The results can be seen in Tables 4 and 5.

The other set of information about the privatized unit is the price set by the IKV (Real Estate Management Company) which we used to check the validity of our estimated market price. We ran the same OLS regression using the stepwise method to estimate the parameters of the function and found a close correlation with the market value. In an earlier study we used another estimation of the market values based on a formula, where the parameters were estimated by real estate agents (see Hegedís-Struyk-Tosics 1991). We used this simpler solution as well to check the other calculations.

In some cases the market value was negative or unrealistically low (under 50,000 Ft). For these cases, we took the lowofthethe IKV estimation and real estate market estimates.

Deferred Maintenance

The deferred maintenance was calculated on the basis of experts' estimates of the colt of renewal.

On the basis of Table 6, we calculated the total deferred maintenance and renewal cost for the sample and estimated the size of the colt for Budapest. From other sources we knew that the total deferred maintenance is estimated at 200 billion forints for the whole rental sector, and taking the proportional Budapest figure, we defined the total Budapest deferred maintenance colt as 100 billion forints. On the basis of this hypothesis we modified the deferred maintenance function.

Value Gap

The value-gap was calculated on the basis of the present privatisation practice taking into consideration the property rights issues and deferred maintenance. We took 50 per cent of the market value and subtracted from it the colt of the estimated deferred maintenance, and 10 per cent of the selling price estimated on the basis of the IKV regression function described above. (The 10 per cent represents the downpayment that households pay when they buy their unit.)

When the value-gap became negative (in 16 per cent of the cases), we substituted the value of zero. (This may have occurred because of an overestimation of deferred maintenance.)

Market Rent

The market rent estimation is based on the question of how much the rent for this unit would be if it were rented to a private person. (The response rate was 34 per cent.)

In the first step we smoothed out the upper outliers, but did not drop any in order to maintain the number of cases. (If the rent was higher than 30,000 forints, we took only 50 per cent of the amount above 30,000 forints.)

In the second step we ran the OLS model (with results shown in Table 4). The problem with the market rent estimation is that Budapest has a very narrow private rental sector, where the supply is very limited. The rent level is determined by the demand of high income groups, looking mainly for the best location.

The rent level given by the respondents (and even by the real estate agents in 1990; see Hegedűs-Struyk-Tosics) was much higher than households could afford to pay. To operationalize the magnitude of rent subsidy is, however, not a simple task, as there is only a very narrow private market, dominated by high income foreigners. We based our estimation on the 'fair rent' idea: what would be the equilibrium rent if there were not a large shortage on the market. We supposed that about 20-25 per cent of the household income could be spent on rent, so we took 25 per cent of total household income (5,430 Ft from 21,733 Ft household monthly income) - taking the upper limit because of the underreporting problem - as the total rent revenue. The average rent level based on the 'fair rent' idea was 38.1 per cent of the predicted market rent.

The market rent was calculated using the regression function.

Rent Subsidy

The controlled rent was calculated for the whole sector, even though at the time of the survey 20 per cent of the units were already private property. We used a simple formula to estimate the officially controlled rent in the case of a unit already sold. The rent subsidy was defined as the difference between the market rent and controlled rent.

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Table 1. 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			155E-05	*
				(8.22)	

	PROP			*	*
	CONS			0.6737	*
				(8.13)	
	SCH1			*	*
	SCH2			*	*
	NUM			*	*
	Model Chi-Squared	88,004	84,970	23,508	98,570
	Degrees of Freedom	2	4	2	3
	Significance	0,0000	0,0000	0,0000	0,0000
	Number of Cases	985,00	985,00	901,00	893,00

* 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 0; 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; SCH1 - higher education 1, else 0; SCH2 - grammar school 1, else 0; NUM - members of the family.

Table 2. Estimation of the Probability of Intention Not to Buy

	Variable	Model 1	Model 2	Model 3	Model 4
	Constant	-.1345	1.6864	.6449	1.808
		(1.373)	(20.86)	(11.62)	(25.54)
Hypothesis 1-2					
	VGAP	-2.2E-06	#	#	*
			(70.6)		
	REXP	#	*	#	*
	VGAPxREXP	#	*	#	*
Background Variables					
Characteristics of the Unit					
	Floor	#	-0.0117	#	*
			(8.72)		
	Heat	#	*	#	*
	Bath	#	-.7366	#	-.8676
			(12.25)		(17.59)

	W.C.	#	*	#	*
	CONDF	#	-0.3204	#	*(7.68)
	CONDH	#	-.2779	#	-.4563
			(5.95)		(17.18)
	KERA	#	*	#	*
	KERB	#	.4987	#	.3648
			(10.17)		(4.61)
Characteristics of the Household					
	INC	#	#	-4.SE-05	-3.9E-05
				(28.09)	(20.98)
	PROP	#	#	-.6067	*
				(5.91)	
	CONS	#	#	-.8356	-.4924
				(20.18)	(5.79)
	SCH1	#	#	*	*
	SCH2	#	#	*	*
	NUM	#	#	*	*
	Model Chi-Squared	82,110	118,101	96,471	139,100
	Degrees of Freedom	1	5	3	5
	Number of Cases	968,00	985,00	901,00	883,00

* Variables not in equation because the parameter was not significant
Variables not included in the model

Notes: Logistic regression model with forward step algorithm; Ward coefficient in buckets 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 0; 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 1-5; CONDH - condition of the house in a scale 1-5; 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; SCH1 - higher education 1, else 0; SCH2 - grammar school 1, else 0; NUM - members of the family.

Table 3. Privatisation process and the equity issue in the Budapest public rental sector

	Stage A 1. January 1990	Stage B 1. January 1992		Stage C* 1993-1996		Stage D* 1998-2000		Stage E* Not realistic
	Rent subsidy	Rent subsidy	Value gap	Rent subsidy	Value gap	Rent subsidy	Value gap	Value gap

Low income (Below 25 Prct)	per unit (Ft)	46200	44244	483955	41868	454988	37572	364785	283637
	Sum (b. Ft)	4,6	3,7	7,3	2,9	13,2	1,5	21,5	28,2
	% of total	21,6	22,7	16,5	25,3	15,6	31,3	15,6	16,7
	N of units	99432	84449	14983	70375	29058	40409	59024	99432
	N of sample	219	186	33	155	64	89	130	219
High income (Above 75 Prct)	per unit(Ft)	66048	63312	707509	61956	642079	63672	600472	587753
	Sum (b. Ft)	6,7	4,9	17,7	3,0	34,4	0,8	53,7	60,0
	% of total	31,7	29,6	40,3	25,8	40,5	16,7	38,9	35,6
	N of units	102157	77185	24972	48581	53575	12713	89444	102157
	N of sample	225	170	55	107	118	28	197	225
Total Sector	per unit(Ft)	53208	50496	596138	47904	542250	43728	477073	421980
	Sum (b. Ft)	21,3	16,5	43,8	11,7	84,9	4,8	138,0	168,8
	% of total	100	100	100	100	100	100	100	100
	N of units	400000	326447	73553	243360	156640	110783	289217	400000
	N of sample	881	719	162	536	345	244	637	881
	% rental/sold	100,0	81,6	18,4	60,8	39,2	27,7	72,3	100,0

Stage C: Everyone buys who wants under present terms
Stage D: Everyone buys who would like under more favourable terms
Stage E: Everyone buys
Condition: No change in present sale terms and rent subsidy

Table 4. OLS Regression Models Determining the Market Price and Market Rent

	Variable	Market Price	Selling Price	Market Rent
	Constans	-1063610	-127712	-8004
		(05905)	(-0.781)	(-358)
Size of the unit	FLOOR	21536	20423	170
		(8.19)	(1292)	(8.45)
	ROOMS	233636	*	*

		(2.90)		
Comfort Level	HEAT1	*	*	*
	HEAT2	#	#	#
	HEAT3	*	#	*
	BATH1	*	351257	*
			(2.19)	
	BATH2	*	*	*
	WC1	*	*	*
	WC2	*	*	*
	FTYP	*	*	*
	PHONE	*	204725	*
			(2.40)	
	COMF1	*	*	*
	COMF2	#	#	#
	COMF3	#	#	#
Condition	CONDF	194207	*	2391
		(4.18)		(3.58)
	CONDH	154980	*	1416
		(3.32)		(2.34)
	BREAK1	*	*	*
	BREAK2	*	*	3362
				(2.62)
	BREAK3	*	*	*
	BREAK4	*	*	*
	BREAK5	*	*	*
Location, Type	HTYP1	*	*	*
	HTYP2	-172061	*	*
		(2.37)		
	HTYP3	*	*	*
	HTYP4	#	#	#
	KERA	376623	264704	5320
		(4.92)	(3.25)	(4.73)
	KERC	#	#	#
	Other	MONTH	#	*
	Multiple R	.76843	.79583	.58436
	R Square	.5905	.6333	.3415
	F Statistic	88.16	66,50	33,90
	Significance	0,0000	0,0000	0,0000

	Number of Cases	985,00	985,00	901,00
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* Variables not significant in the model

Variables not included in the model

Note: T statistic in brackets

Description of Variables:

FLOOR: number of floors of the unit; ROOMS: n of the rooms; HEAT1: central heating = 1, else 0; HEAT2: individual "modern" heating = 1, else 0; BATH1: separate bathroom = 1, else 0; BATH2: shower = 1, else 0; WC1: two W.Cs in the unit = 1, else 0; WC2: 0 in the unit = 1, else 0; FTYPE: type of floor material, parquet = 1, else 0; PHONE: in the unit = 1, else 0; COMF1: bathroom + central heating = 1, else 0; COMF2: bathroom + no central + hot water = 1, else 0; COMF3: bathroom + no central + no hot water + 1, else 0; COMF4: no bathroom; CONDF: condition of the unit in scale 1-5; CONDH: condition of the house in scale 1-5; BREAK1: breakdown W.C., yes = 1, else 0; BREAK2: breakdown electricity, yes = 1, else 0; BREAK3: breakdown house electricity, yes = 1, else 0; BREAK4: breakdown leakage, yes = 1, else 0; BREAKS: breakdown water, yes = 1, else 0; HTYP1: tenement = 1, else 0; HTYP2: housing estate = 1, else 0; KERA: better districts (I, II, V, XI, XII) = 1, else 0; KERB: inner districts (VI, VII, VIII, IX, XIII, XIV) = 1, else 0; MONTH: number of months from privatization.

Table 5. Summary Table of the Key Variables

Variable	Mean	Std Dev	Minimum	Maximum	N Label
MRENT-1	14260	579855	100	37761	985
MRENT-2	14276	8925.85	1872	63700	994
ORENT	972	554,85	22	3590	990
RSUBS	4459	1853	0	11912	985
MVALUE	1563777	802747,35	56406	5004603	985
IKVMV	1441852	622341,48	75409	4367834	985
KVALUE	2415855	1510528,39	316800	10780000	994
DMAIN	238640	267401,69	0	1775000	968
VGAP	424411,4	324412,38	0	1835387	968

Description of Variables:

MRENT-1: market rent estimated from the survey, MRENT-2: market rent estimated using Housing Allowance Study real estate agents' valuation; ORENT: official, controlled rent; RSUBS: rent subsidy, MVALUE: market value estimated using the respondent's valuation; IKVMV: market rent estimated using IKV valuation; KVALUE: market value estimated using Housing Allowance Study real estate agents' valuation

DMAIN: deferred maintenance

VGAP: value gap

Table 6. Summary table of the key variables

	Type of House	Cost of Operation (Ft/month/m2)	Cost of Maintenance (Ft/month/m2) Condition (1 - 5)					Cost of Rehabilitation (Thousand Ft/month/m2) Condition (1 - 5)				
			1	2	3	4	5	1	2	3	4	5
01	peasant	3-6	15	...	8	...	3	20	15	10	-	-
02	family	3-6	15	...	8	...	3	20	15	10	-	-
03	villa apartments	8	15	...	8	...	3	30	18	12	-	-
04	suburb	8	15	...	12	...	4	30	18	12	-	-
05	old rowhouse	8	15	...	12	...	4	30	18	12	-	-
06	new rowhouse	8	15	...	8	...	3	-	-	-	-	-
07	one level tenement	8	20	...	8	...	4	30	20	10	4	-
08	multi-level	13	40	...	25	...	4	45	25	10	3	-
09	terrace house		40	...	25	...	56	30	20	10	3	-
10	old multi-level		20	...	10	...	5	30	20	10	3	-
11	new unbroken rows		12	...	6	...	4	-	-	-	-	-
12	new multi-level		12	...	6	...	4	-	-	-	-	-

prices indicate with elevator/without elevator

1. The survey was undertaken with USAID assistance under the aegis of the World Bank/UNHCS Housing Indicator Project.

2. Not enough time has passed to have a clear and reliable picture about what happened with privatized units. The data below only show the beginning of a market process. Of privatized units identified in the survey (N=200), their current uses are divided as follows: owner occupation 184, private rental 7, moved 4, used as office 5.

3. These figures were taken from answers to a question in the rental survey addressing occupants' plans. It should be noted that the 20 per cent who are "ready to buy" include some who have already started the privatisation process as well as those who plan to buy "as soon as possible".

4. For the least expensive flats, the downpayment may just cover the one per cent transaction fee, the appraisal, and the legal costs of arranging the sale.

5. For example, every district has a prohibition list, set up under different political considerations, and from which exemptions are granted on a case by case basis.

6. A third hypothesis - that households with highest demand for control over the maintenance of their unit wanted most to buy their unit - was not tested because we could not measure this variable in the survey results.

7. This includes cases where the privatisation process has already started, but the contract has not yet been signed.

8. To reach general conclusions about the state-socialist housing system based on the rental sector is a mistake, because most of the subsidies were given to the 'private sector' through the state built and allocated owner occupied units ('housing estates'), and even in Hungary the whole subsidy system favoured the top part of the private market. In 1989, according to a World Bank study (R. Buckley et al. 1991) only 25 per cent of the recognized budget subsidy went to the rental sector.

9. In an earlier paper (Hegedűs-Tosics 1990), we had an estimation based on a national household survey of 1982, that 30 per cent of the families were living in the public rental stock. According to our survey data, 35 per cent of the families that moved to their unit later than 1952 had a 'market' access to their unit (which accounts for 87 per cent of the sample). Basically they bought their unit on the 'grey market'. Another 58 per cent of the families accessed it in other way (inherited, moved to the spouse, etc.). In practical terms this fact questions the methods and validity of the studies which ascribe the social composition of public housing tenants directly to the effects of state policy. In addition, because a substantial number of public tenants entered the sector through the market, Alexeev (1988) argued that the subsidy is a return of the price the tenant had paid to get access to the sector.

10. We supposed that about 20-25 per cent of the household income could be spent on rent, so we took 25 per cent of total household income - taking the upper limit because of the underreporting problem - as total rent revenue. This gave a monthly rent level of 5,430 Ft from a household income of 21,733 Ft.

11. The inequality of the subsidy distribution ought to be discussed in two steps: the opportunity to get access to the sector, and the opportunity to have access to the subsidy. We are focusing now on the second question, how the rent subsidy is allocated among the different income groups.

12. This is part of the game between the central and local government: the price of utilities was increased before the rent level adjustment could be done legally, so there is now less 'space' for the local governments to increase rents.

13. Struyk-Hegedűs-Heller-Mark-Tosics (1992).