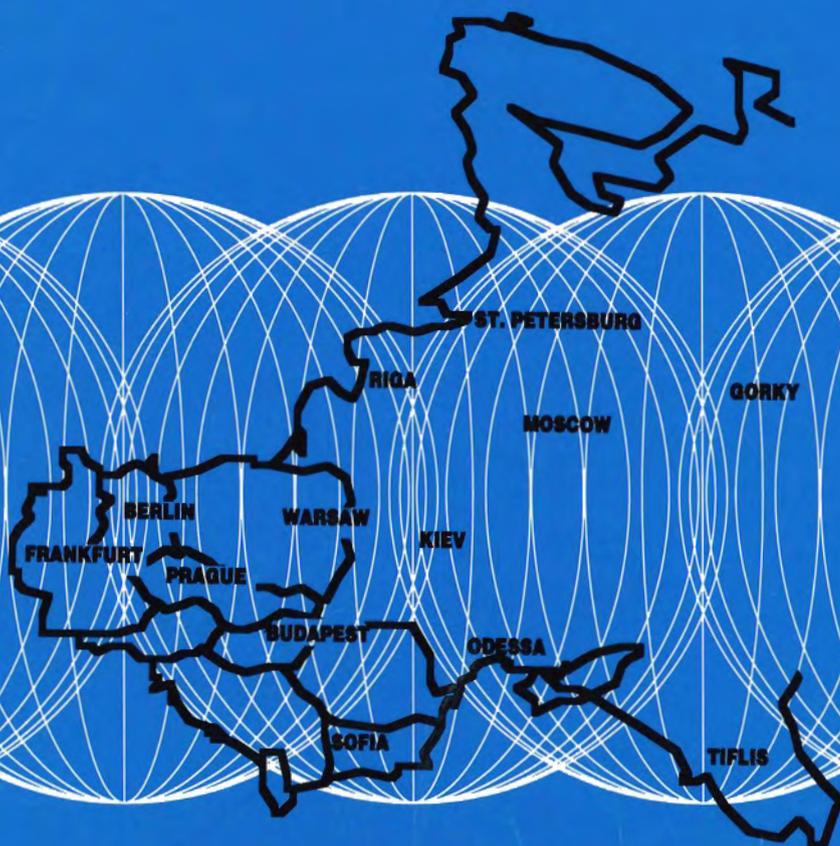


AN INTERNATIONAL ACTIVITIES PROJECT

**FROM PLANNING TO MARKETS
HOUSING IN EASTERN EUROPE**

**RESIDENTIAL MOBILITY IN MOSCOW
DURING THE TRANSITION**



THE URBAN INSTITUTE

Prepared for the Office of Housing and Urban Programs (USAID)

**RESIDENTIAL MOBILITY IN MOSCOW
DURING THE TRANSITION**

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ABSTRACT

Earlier work under the USAID Housing Sector Reform Project documented an increase in residential mobility in Russian cities in the early years of the economic transition—1992 and 1993. This paper extends this work for Moscow by confirming the higher mobility rates in 1994, indicating that the early surge in mobility was not a brief one-off phenomenon produced by pent-up demand. The paper also documents that a large share of the movers are one family nuclei from multi nuclei households. By 1994, the majority of movers were acquiring their new housing through market methods; waiting list procedures for state housing accounted for only about one fifth of new occupant households. The determinants of mobility among market movers are consistent with economic theory, being a blend of dissatisfaction with the current unit (overcrowding) and ability-to-pay, as indicated by current income and assets. Overall, the results show a clear movement of the Moscow housing sector toward operating along market principles.

RESIDENTIAL MOBILITY IN MOSCOW DURING THE TRANSITION

The major restructuring of the housing sector in Russia can be dated from July 1991 when the definitive housing privatization law was enacted. Before this time, Russia had perhaps the most regulated housing sector in the world.¹ In urban areas 79 percent of housing units were state rentals; in the largest cities 90 percent were state rentals (Struyk and Kosareva, 1994; Table 1.2). Intercity mobility was restricted by the system of residence permits. Intracity movement was severely hampered by the pervasive dominance of the waiting list procedures for allocation of municipal, departmental (mostly enterprise) and cooperative housing.² These restrictions interacted with the country's severe housing shortage, probably equivalent to one third of urban households (Kosareva, 1992). Those households who owned their unit had little incentive to sell because state-established appraisals set low mandatory prices and local governments usually identified the purchaser.

This combination of factors would suggest very low residential mobility rates. On the other hand, Russians appear to have devised ways to mitigate the effects of their difficult environment. For example, exchanges of state apartments were officially sanctioned and may have been common. About 95,000 such swaps (equivalent to about 3 percent of dwellings) were recorded in 1992 in Moscow (Khadduri and Puzanov, 1993). There also appears to have been a significant (and very difficult to document³) market for the illegal sublet of state units, often by the families on the waiting list for a state unit. The effects of residency permits were offset by the issuance of "temporary permits," which typically entitled workers (and sometimes their families) to dormitory housing.

Estimates of Russian residential mobility rates during the Soviet era are limited. Long (1991: 137) the "annual rate of moving [of the population] is thought to be between 3 to 4 percent" for the Soviet Union in about 1980. We have been unable to find published mobility estimates by Russian authors for this period. If the 3-4 percent figure is accurate, then mobility during the Soviet era was in the lower international range, according to Long's comparative data. On the other hand, Habitat-World Bank (n.d.) data for 1990 show that annual household mobility rates in Eastern European capitals were uniformly low: Warsaw, 2.5 percent; Budapest, 4.4 percent; and Bratislava, 3.4 percent. In major cities in Western Europe rates were much higher: Munich, 9.2 percent; Paris, 8 percent; Stockholm, 13 percent.

Reforms in the housing sector may well have increased mobility rates in former Soviet bloc countries. Most important was the result of more units on offer than under the old regime.⁴ In Russia, this housing privatization program—under which a sitting tenant in a state rental unit can claim ownership of the unit at practically no cost—had resulted in 36 percent of all state rentals shifting to private ownership; in Moscow 40 percent had been privatized (Kosareva et al., 1995).

¹ For a description of the sector at the beginning of the transition see, for example, Andrusz (1990), Kalinina (1992), Bessanova (1992), and Ruble (1993).

² The allocation of units under the old regime is described in Morton (1980), Matthews (1979), and Hamilton (1993).

³ Hamilton (1993), for example, says that it is "virtually impossible" to obtain information on illegal housing transactions (p. 66).

⁴ Comparative data on housing privatization is given in Struyk (1995), Chapter 1.



Equally important, residential property rights, including the right to sell or rent property, were restored prior to the privatization program being launched.

At the same time, non-market means of relocating are becoming less common. Russian Federation subsidies for housing construction were cut dramatically beginning in 1992. With the total volume of units constructed running at about 60 percent of the 1990 level, the major casualty has been additions to the municipal housing stock. Consequently, fewer households on waiting lists are being awarded units. (Availability of municipal and departmental units was also decreased by privatization since tenants may now bequeath their unit instead of it returning to the state when they die.) Thus, the percentage of households on the waiting list for municipal housing in Moscow who received a unit declined from 13.6 percent in 1990 to 7.6 percent in 1993 (Pchilentsev et al., 1995). The result has been a declining confidence in the efficacy of the state to provide a unit even after a long wait. Indeed, the new constitution has much diluted the state's former responsibility for housing.⁵

In addition, the incentives for staying indefinitely on the waiting list have changed. The government is now committed to a program of increasing rents to cover full operating costs by 1998; the first increases occurred in 1994.⁶ Thus, the rewards of obtaining housing through the waiting have been sharply diminished. As a result, one expects to see a decided shift in the composition of mobility: less mobility associated with households on the waiting list being allocated a unit and more "market" mobility.

In fact in an earlier paper that employed household survey data from seven large Russian cities, Struyk and Romanik (1995) found that mobility rates had risen sharply between 1992 and 1993—from 1.8 to 4.6 percent. (Mobility was computed as the percent of units with a new occupant household.) Similarly, there had been a sharp increase in the share of movers who used market methods to acquire their unit—from 41 to 61 percent of movers.

While these findings are certainly interesting, they can scarcely be relied upon to tell the story of the transition. Was this surge in mobility a unique occurrence or the start of a trend? During the early period covered by these data numerous households with large pent-up demand, such as multi-generational households or those residing in communal flats, were finally given the opportunity to satisfy their wants in the market place. Satisfaction of this demand may have caused the surge in mobility from 1992 to 1993. Similarly, in recent years the large flows of Russians returning home from the "near abroad" and intra-Russia migrants from the economically depressed regions have contributed to this increase in demand for housing in Moscow. Whether or not this migratory trend continues will affect future mobility rates. However, even if in-migration does not abate, the high rates in overall mobility may have already peaked. One can argue that mobility rates henceforth will decline as pent-up demand is satisfied.

It is equally easy to argue that mobility rates will be sustained at comparatively high rates for some years. The regional economic restructuring and its associated mobility is very likely to be a

⁵ For an overview of legislative developments in the housing sector during the reform period, including the provisions in the new constitution, see Struyk and Kosareva (1994), Chapter 2.

⁶ A national housing allowance program was implemented simultaneously with the first rent increases. See Struyk and Puzanov (1995) for a description and early assessment of this program.



sustained process. The growing number of "new Russians," i.e., the new rich, can be relied upon to improve their housing through relocating, since so much of the urban housing is in multi-unit structures where units can not be expanded easily. Dunlop (1994) argues that in-migration from the "near abroad" is not likely to be curtailed and, in fact, will increase in the near future as Russians return home from the increasingly hostile environments in the non-Russian republics of the former USSR. This migratory trend could be further exacerbated by the lure of increasing work opportunities and of improvements in the housing situation in Russia. The Labor Ministry states that "besides the Russian-speaking population, specialists expect many indigenous peoples from the post-Soviet states to move to Russia in search of work."⁷ Moreover, the policy of rent increases, which apply to both privatized units (in the form of a kind of condominium fee) and units that continue as state rentals, will put pressure on low income over housed households to shift to smaller units.⁸

This paper explores several aspects of the evolving pattern of residential mobility in Moscow for the period 1992-1994. Data employed in this study are from a three year longitudinal survey of about 2,200 dwelling units that was fielded annually in December 1992, 1993, and 1994. In particular, we undertake the following:

- To test the hypothesis that the burst in mobility rates between 1992 and 1993 was not a one-off phenomenon;
- To examine the composition of movers, particularly the forming of new households coincident with the move; crowding is often manifest in multigenerational households, who "uncouple" when the younger family obtains a unit of its own;
- To test the hypothesis that mobility is concentrated among "market movers" rather than those receiving a unit through the waiting list process or intra-family apartment swaps;
- To explore the change in housing conditions achieved by relocating for various groups of movers; and,
- To estimate simple logit models of the probability of moving on a "market basis" or of obtaining housing through waiting list procedures.

The paper begins with a brief discussion of the data. Subsequent sections address the issues outlined above: trends in mobility rates; characteristics of movers; methods of search; changes in housing conditions; and the probability of moving. A final section provides conclusions.

⁷ Alaina Lemon, *OMRI Daily Digest*, Part 1 No. 159, August 16, 1995.

⁸ A surprisingly large share of over housed families coexist with the massive housing shortage noted earlier. In Moscow, for example, about 40 percent of households have at least 3 square meters of floor space above the quite reasonable norms used in the housing allowance program. Ten percent of all households have more than 20 square meters above the norm. The housing allowance program only helps pay rents for space within the norm.

The Data

The data come from the Moscow Longitudinal Housing Survey, conducted in Moscow from 1992 to 1994. The survey's objective is to obtain information annually over a period of five years to track the changes in the housing sector in Moscow as it affects individual households. The primary sample was a sample of state rental dwellings, randomly drawn from a listing of residential telephone numbers provided by the Moscow Telephone Network. As of October 1992, 92 percent of apartments in Moscow (and 94 percent of urban families—the difference being attributable to communal flats) had telephones. The great majority of units without telephones in Moscow, however, exists in newly constructed buildings awaiting installation of telephone equipment. Samples were drawn in three of these large, new residential sites from listings of units in each site. Including these areas, 95 percent of all units in Moscow were included in the population from which the sample was drawn, thereby ensuring representative sampling. To restrict the sample to state rentals, interviewers asked occupants whether their unit met the definition for inclusion, i.e. was a state rental as of January 1992.

In the subsequent years, the sample was augmented in 1993 to include the entire housing stock (not just state rentals) and in 1994 to include units constructed in 1993 and 1994 (Lee and Romanik, 1995). By 1993, the state housing stock had shrunk to 59 percent from 90 percent in 1991. (Table A1 in Annex A gives the distribution unit ownership in the samples in 1993 and 1994.)

Attrition rates have been minimal: approximately 95 percent of the sample was successfully re-interviewed in both years. The sample size has varied slightly over the three years, from 2,002 in 1992 to 2,247 in 1994, with the sampling rate held near 0.1 percent. Table 1 gives sample sizes and sampling rates for all three years. The same core questionnaire was employed in all three years with blocks of questions covering current housing conditions, household demographics and plans for improving housing in the future. Respondents were asked how long the household had occupied the unit. For those who had moved into the unit in 1992, 1993, or 1994, questions were asked in 1993 and 1994 about the conditions of the housing previously occupied, methods of searching for and obtaining the current unit, and whether the occupants had moved from outside the Moscow region. With these data we are able to analyze trends among the movers in Moscow during the transition period.

Table 1
Sample Size, Number of Dwelling Units, and Sampling Rate in Moscow, 1992-1994

	1992	1993	1994
Sample size	2,002	2,147	2,247
Number of dwelling units ^a	2,795,400	3,195,300	3,226,500
Sampling rate (percent)	0.1	0.1	0.1

Notes

- a In 1992, units are state rental units only; in 1993 and 1994, entire housing stock is included. Number of units from Pchilentsev, Belkina, and Tcherbakova (1994 and 1995).



Table 2
Mobility Rates: Units with New or Initial Occupants Each Year, Moscow 1992-1994

	1992	1993	1994
Mobility rate for all movers ^a (percent)	2.5	3.9	4.5
All movers (n)	50	84	100
Movers new to Moscow ^b (percent)	7.5	9.9	18.8
Movers new to Moscow (n)	4	8	19

Notes

a Significantly different across years at 0.01 level using chi-square test.

b Not significantly different across years at usual levels of significance using chi-square test.

Mobility 1992-1994

A comparison of mobility rates for years 1992 to 1994 shows that mobility has significantly increased each year (see Table 2 above). The burst in mobility observed by Struyk and Romanik (1995) was not an anomalous event, and the results may suggest that mobility rates would continue to rise or at least remain at these higher levels. Privatization and establishing residential property rights have acted to increase the supply of housing on offer, thereby increasing mobility.

Table 2 also shows the steady increase in the proportion of movers new to Moscow, particularly dramatic from 1993 to 1994. However, a chi-square test shows that this ratio of new movers to Moscow as a percent of total movers is not significantly different from 1992 to 1994. The explanation for this is that the denominator, all movers, has simultaneously increased with the number of movers new to Moscow. On the other hand movers new to Moscow have increased from 1992 to 1994, i.e. the increase of movers new to Moscow as a percent of the entire sample (not only movers) is significant at the 0.01 level.

In fact, the data may underestimate the actual number of movers migrating into Moscow. Moscow has ignored the federal legislation which absolved the necessity of residence permits (*propiskas*).⁹ Fear of worsening housing shortages and crime attributed to excessive in-migration prompted Moscow city officials to continue the old system. Thus, residents in Moscow must have *propiskas* to legally reside here, and those people without these residence permits are subject to expulsion from the city. Hence, often may be the case that illegal residents are reluctant to disclose that they actually moved from outside of Moscow, and a more truthful assessment of these movers would reveal a much higher proportion of movers new to Moscow.

As discussed above, the explanation for this migration of movers into Moscow may rest in the recent influx of returning Russian co-nationals or immigrants from either the "near abroad" or from other regions in Russia to seek opportunities for employment, an overall increase in living standards, or in the case of co-nationals a haven against anti-Russian sentiment in non-Russian republics. Expectedly, if conditions do not improve much in the "new republics" during the next years, the proportion of new movers in Moscow mobility should remain high.

⁹ For a more detailed description of housing developments in Moscow, see Bater (1994).



Composition of Mobility

Characteristics of Movers

Two dimensions of mobility are of particular interest in the case of Russia and other post-Soviet countries. The first dimension consists of relocation by the entire household. The second is cases in which part of the original household moves to a new unit while the balance of the household remains in the original unit, referred to as “uncoupling”. Due to the extreme housing shortage, shared units were often a necessity, and because of the length of time spent on the waiting list—eight to ten years was common in Moscow and other large cities for municipal housing—doubling up with parents was common for young couples. When finally allocated a unit, the two family nuclei separated. Note that even doubled-up families were to meet the standard of having less than five square meters of living space per person in order to qualify for admittance to the waiting list.¹⁰ Without meeting this criteria, these households stayed together in one unit.¹¹

During the waiting period some young couples would (illegally) sublet state units while remaining officially registered at their parents’ apartment. The sublets were frequently of low quality, e.g., a communal flat in which the bathroom and kitchen are shared with several families. Understanding the actual situation for some recent movers is difficult because they are unlikely to reveal illegal rental arrangements. (Subletting a state unit for a rent higher than the official rent remains illegal.)

Also frequently observed is the occurrence of divorced couples living together. The inability to obtain other housing leaves such couples with little choice but to continue residing together. Hence, with the market providing alternative means for procuring housing, an ex-spouse has greater opportunities for finding alternative housing. Undoubtedly, this type of movement would contribute to the increase in overall mobility rates in Moscow. The separation of a divorced couple is also included in those “uncoupling” because the entire household did not move together.

To determine the percent of movers who uncoupled in 1993 and 1994, movers were asked to describe their living situations prior to the move. This information was then compared to the respondents’ post-move situations. However, pre-move information was not available for movers in 1992. The proportion of uncouplers in 1992 was calculated by comparing the number of household members in the current housing to the number in the previous housing. If the number of household members in the previous housing exceeded the number in the current, the household was labeled as an “uncoupler.” Admittedly, this method of calculating uncouplers in 1992 is not very precise, and it likely overestimates the proportion of uncouplers by including households who have lost family members on account of death or a single member moving out. However, comparison of the proportion of uncouplers produced by the two methods in 1993 and 1994 revealed that the two methods produced broadly similar results, thereby giving confidence to the 1992 calculation of uncouplers. The proportion of movers who uncoupled in years 1992 to 1994 are given in Table 3.

¹⁰ In computing living space, the floor area of the hallways, bathrooms, and kitchen are excluded.

¹¹ This rule was not always enforced due to an elaborate set of housing privileges granted to certain groups, such as veterans of the Great Patriotic War, “Hero-Artists”, and invalids. For more information on the actual allocation process, see Morton (1980) and Matthews (1979).



Table 3
Incidence of Uncoupling Among All Movers and Movers New to Moscow

	1992	1993	1994
<i>All Movers</i>			
Uncouplers ^a (percent)	58.0	39.0	47.5
Other movers (percent)	42.0	61.0	52.5
Number of movers	50	63	81
<i>Movers New to Moscow</i>			
Uncouplers ^b (percent)	25.3	85.9	72.3
Other movers (percent)	74.7	14.1	27.7
Number of movers	4	8	19

Notes

- a Not significantly different across years at usual levels of significance using chi-square test.
b Significantly different across years at the 0.01 level using chi-square test.

The large proportion of movers that are uncouplers very much characterizes mobility and the past housing situation in Moscow. Comparison of the distribution of mover composition in Moscow with a similar distribution in other selected western countries shows that the high proportion of movers who are uncouplers is unique to Moscow and probably other Russian cities and countries in the former Soviet bloc. For example, in comparing the proportion of uncouplers in Moscow to that in the United States, it is revealed that the share of uncoupling of overall mobility in Moscow (42 percent) far exceeds the percent of uncoupling averaged among urban areas (22 percent) throughout the U.S. in 1993.¹²

The bottom portion of Table 3 reveals that the share of uncouplers that are movers new to Moscow comprises the majority of these movers in 1993 and 1994. This high proportion of the movers new to Moscow who are uncouplers may be evidence of young wage-earners seeking employment opportunities in Moscow perhaps for the purpose of supporting the household left behind.

To better understand the characteristics of uncouplers, assessment of movers' living situations prior to the move is necessary. Table 4 on the next page gives detailed distributions of prior living situations for uncouplers. By far the most common pre-move arrangement was for the mover to be living with his/her parents. In part, this type of uncoupling can be attributed to the life-cycle transitions: adult children will leave their parents' home to start their own household. However, the life-cycle theory may not fully explain the cases of these young adults moving to another geographic location. The high proportion of this type of uncouplers for movers new to Moscow lends support to the theory that these young uncouplers are also leaving in search of employment opportunities that are unavailable elsewhere.

¹² U.S. Department of Housing and Urban Development, "American Housing Survey for the United States in 1993," *Current Housing Reports*, H 150/93, February 1995.



Table 4
Living Situation Prior to Move for Uncouplers^{a, b} (percent)

	1993	1994
Lived with parents	53.6	71.4
Lived with children	17.9	11.9
Lived with former spouse	21.4	4.8
Lived with former spouse and his/her family	7.1	2.4
Lived with other relatives	0.0	9.5

Notes

a Data are not available for 1992.

b Not significantly different across years at usual levels of significance using chi-square test.

Search Methods

The second important differentiation in the composition of mobility in Moscow is between "market movers" and "non-market movers." The latter include those movers allocated units from the waiting list as well as those obtaining their new unit through inheritance or an exchange of units with members of their extended family. Market movers on the other hand identified their new unit through advertisements, acquaintances, use of real estate brokers or similar means.¹³ Friends and acquaintances are listed as market means because 90 percent of those who use used friends or acquaintances to obtain a unit have either bought or rented a privatized apartment.

Respondents in the household surveys were asked to answer the search method by which they successfully secured their new units. This distribution of search methods is presented on the next page in Table 5. Evidently, methods of searching have continued to evolve, concurrent with the changes in the housing sector. The decline in the use of advertisements by over 10 percentage points and the concomitant increase in the use of a broker from 1993 to 1994 indicates the emergence of a real estate service industry. Securing a dwelling unit through acquaintances jumped 8 percentage points from 1993 to 1994. Perhaps suspicion of increasing crime in Moscow has created greater dependence on the use of friends, acquaintances and established brokers as a means of obtaining housing and has decreased the use of advertisements. As expected, the declining use of the waiting list as a means to obtain housing has continued from 1992. Furthermore, acquiring housing through an exchange with relatives is waning. As the market provides more choices, a swap with relatives may no longer be the only means to obtain alternative housing. On the other hand, the importance of inheritances is increasing as expected, given the high incidence of elderly households privatizing their units (Struyk and Daniell, 1995).

¹³ In principle, one would like to explore the interaction of these two sets of distinctions, e.g., the incidence of uncoupling market movers versus whole household non-market movers. Unfortunately, sample sizes do not permit such analysis.

Table 5
Search Methods for Movers

	1992	1993	1994
<i>Percent Distribution of Search Methods^a</i>			
Market methods			
Advertisements	24.5	23.6	13.0
Broker	3.8	9.7	17.0
Acquaintances	13.2	13.9	22.0
Other	1.9	11.1	10.0
Non-market methods			
Waiting list	39.6	26.4	21.0
Exchange with relatives	—	9.7	5.1
Inheritance	—	1.4	7.1
Other	17.0	4.2	4.8
<i>All Movers Employing Market Methods to Search^b</i>	43.4	58.3	62.0

Notes

- a Significantly different across years at 0.05 level of significance using chi-square test.
b Significantly different across years at 0.10 level of significance using chi-square test.

Housing Adjustments

Comparing various housing characteristics of previous housing against current housing reveals that changing housing type and increasing space are the primary results of moving. The two broadly defined types of housing are self-contained and communal.¹⁴ Typically, self-contained housing is the more desirable of the two because the occupant has exclusive use of kitchen, bathing and toilet facilities; and the opportunity to reside in self-contained housing provides incentive to move. Indeed, Table 6 shows that one-third to one-fifth of all movers moved from communal housing to self-contained housing during years 1992 to 1994. However, the principal motivation driving uncouplers to move may also be the need for privacy from the family members left behind. Not surprisingly, Table 6 shows that a larger proportion of uncouplers than of "other movers" moved from self-contained housing to communal housing in 1993 and 1994.

Table 7 shows that the average mean living space for all movers increased from previous housing to current housing. However, living space need not necessarily increase for the mover's conditions to improve. Households which diminished in size after the move would presumably move into a smaller space suited for a smaller household size. As expected, the table shows that the mean living space for uncouplers decreased in 1993 and 1994. Conversely, for "other movers", an increase in living space provides a great impetus for moving, as supported by data in the table.

¹⁴ Table A2 in Annex A provides information on the distribution of self-contained apartments and communal apartments in our sample for the three years surveyed.



Table 6
Changes in Housing Types from Previous Housing to Current Housing

Percent Distribution of Changes in Housing Types	1992	1993	1994
<i>All Movers</i>			
No change in housing type	60.4	69.4	76.0
Self-contained to communal type	5.7	6.9	2.0
Communal type to self-contained	34.0	23.6	22.0
<i>Uncouplers*</i>			
No change in housing type	56.7	75.9	90.7
Self-contained to communal type	3.3	13.8	4.7
Communal type to self-contained	40.0	10.3	4.7
<i>Other Movers</i>			
No change in housing type	65.2	65.1	64.3
Self-contained to communal type	8.7	2.3	0.0
Communal type to self-contained	26.1	32.6	35.7

Notes

* Significantly different across years at 0.001 level using chi-square test.

Table 7
Changes in Living Space and Household Members[†]

Housing Characteristic	1992	1993	1994
<i>Change in Mean Living Space (square meters)</i>			
All Movers*	3.9	0.4	3.6
Uncouplers	1.3	-3.7	-4.1
Non-uncouplers	7.8	3.2	9.7
<i>Change in Mean Household Members (persons)</i>			
All Movers**	-1.7	-0.8	-1.2
Uncouplers***	-2.9	-1.6	-1.9
Non-uncouplers*	0.3	-0.2	-0.5

Notes

[†] From previous to current housing unit.

* Significantly different across years at the 0.10 level using chi-square test.

** Significantly different across years at the 0.05 level using chi-square test.

*** Significantly different across years at the 0.01 level using chi-square test.

Perhaps more important is to evaluate changes in living space per person. As shown in Table 8, the majority of all movers, both uncouplers and others, gained space per person in all three years. Movers who lost space per person may have done so to achieve other objectives for moving, e.g. the improvement of location or amenities. A decrease in living space per person may be attributed also to the presence of coupling: high market rents may require a family member to move in with other family members. In some cases, for example, a privatized apartment occupied by an elderly person will be rented on the market, and the elderly person will move in with her adult child's family.

Table 8
Changes in Living Space Per Person[†]

	1992	1993	1994
<i>All Movers</i>			
Less than 1 square meter change	17.0	11.1	13.1
Lost space per person	12.8	25.4	19.0
Gained space per person	70.2	63.5	67.9
<i>Uncouplers</i>			
Less than 1 square meter change	13.8	7.1	10.8
Lost space per person	6.9	17.9	21.6
Gained space per person	79.3	75.0	67.6
<i>Non-Uncouplers</i>			
Less than 1 square meter change	22.2	14.3	15.2
Lost space per person	22.2	31.4	15.2
Gained space per person	55.6	54.3	69.6

Notes

[†] Percent distribution of changes in living space per person. None of these measures is significantly different across years at usual levels of significance using chi-square test.

Determinants of Mobility

The literature on residential mobility for market economies posits that households relocate voluntarily within an urban area in response to dissatisfaction with their current unit. Such dissatisfaction arises from changes in the size and composition of the household (mostly life-cycle phenomena) and from changes in their economic situation—higher incomes augment the demand for housing services.¹⁵ The microeconomic model of search and mobility predicts that a household will search for housing if it believes that the present discounted value of search and moving costs are less than the present discounted value of the disequilibrium that could be eliminated. Stated alternatively, a household is likely to search if the net expected gain is positive (Weinburg, Friedman, and Mayo, 1981). Searching is likely to be more intensive the greater the expected gain, i.e., the further the household's initial circumstances are from equilibrium and the lower search and moving costs.

Under the Soviet system, search costs were extremely low if the family relied upon waiting list procedures. Certainly, most households awarded new units experienced a net gain because they were able to improve their housing situation with minimal search costs. However, long stays on the waiting list imposed very large welfare losses. Families who tried to improve their housing through exchanges of flats or illegally subletting a unit had very high search costs because of the difficulty of obtaining information.

¹⁵ Quigley and Weinburg (1977), Goodman (1976), Speare *et al.* (1974), Rossi (1955), Clark and Onaka (1983).

In this section we test the general hypothesis that by 1994 the likelihood of moving for "market movers," $P(m)$, was associated with the extent of the disequilibrium and economic factors, while in the case for the likelihood of moving to state housing, $P(s)$, only the extent of disequilibrium mattered. In summary, we estimate two models of the following forms:

$$P(m) = f(LC, Y, A, AG, MR) \quad (1)$$

$$P(s) = g(LC, YRS, AG, OCC) \quad (2)$$

where:

- LC are living conditions in the initial unit, i.e., extent of disequilibrium caused by overcrowding;
- AG is the age of the head of household;
- Y is income; and
- A is assets.

We hypothesize that the greater the overcrowding, the higher the probability of moving. If a household was previously occupying a unit at market rent, it may experience instability resulting from the unit owner's desire to rent at higher prices. MR indicates that the household was a market renter in its former unit and therefore under possible price pressure to move. Among those movers who used market methods for searching, those with greater economic resources are expected to have a higher likelihood of moving because they can more easily afford the out-of-pocket costs of moving and can sublet a unit from a larger share of all units on offer than lower income families. The age of the household head, AG, is a proxy for the life cycle. In both models the expected sign is negative, given the well-known reluctance of older people to move.

In the state mover model, YRS is the number of years on the waiting list. OCC indicates preferred occupations such as directors or managers. It is speculated that under the Soviet system where everyone was meant to have similar economic resources, occupational status, and therefore social status, played a role in getting preferential treatment on waiting lists. Some of these traditions may remain during the transition. The specifications of all variables are operationalized as follows in Table 9.

The sample for the market mover model includes movers who used market methods to obtain the new unit and all non-movers. The sample for the state movers model includes the movers obtaining their new units through waiting list procedures and non-movers residing in state or municipal housing. Movers coming from outside the Moscow region are excluded because the determinants of these moves involve factors other than those included in these two models. Under these definitions, there are 2,086 and 1,176 observations in the respective samples. The estimated logit models are presented in Table 10.

The signs of the coefficients are consistent with our expectations for each subset of movers, except for age of household head which is insignificant. Much of the theory on residential mobility focuses on dissatisfaction of housing as the impetus for moving. In the regression for market movers, overcrowding as an unsatisfactory element in a housing situation has a significant positive effect on the decision to move. At the mean, the odds of a market move increase by about 32 percent with an increase of 0.5 persons per room (63×0.5), holding other factors constant.

Table 9
Variables in Logit Models: Probability of Moving

Variables	Variable Type	Definition
<i>Dependent Variables</i>		
Market mover (m)	Dummy (0,1)	Mover using market methods to move (1), else (0). P(m) is the probability that mover will move using market methods.
State mover (s)	Dummy (0,1)	Mover obtaining new unit from the Department of Municipal Housing through waiting list procedures (1), else (0). P(s) is the probability that the mover will move to state housing.
<i>Independent Variables</i>		
Living conditions (LC)		
Crowding	Continuous	Persons per room
Communal	Dummy (0,1)	Flat shares toilet, bathroom, and kitchen with others (1), else (0)
Superior building	Dummy (0,1)	Superior building type (Stalin, 1980s panel, or modern brick) (1), else (0)
Income (Y)	Continuous	Household monthly income (in thousands of rubles)
Age of household head (AG)	Dummy (0,1)	Head of household more than 55 years (1), else (0)
Assets (A)		
Private	Dummy (0,1)	Family privatized initial unit (1), else (0)
Car	Dummy (0,1)	Household owned a car in 1994 (1), else (0)
Market renter (MR)	Dummy (0,1)	Initial unit was rented on market terms (1), else (0)
Years on waiting list (YRS)	Continuous	Number of years on waiting list for state housing
Elite occupation (OCC)	Dummy (0,1)	Worker in the family is a director, manager or similar position (1), else (0)

Market movers will be limited by their economic situations; therefore, it was expected that income strongly influences the probability of a move. Similarly, whether or not a household owns a car reflects a household's economic situation by indicating additional assets besides current income. The mean household monthly income for the entire sample used in the market mover model was 658,230 rubles; whereas the mean household monthly income for those actually observed to have moved using market methods was more than twice this amount—1,390,370 rubles. At the mean, an increase in monthly household income by 20 percent increased the odds of relocating by about 9 percent ($0.07 \times 0.2 \times 658$), all else equal. Additionally, if the previous unit in which the household resided was a market rent, it is much more likely the household will move again. This may be explained in part by the volatility of rents in Moscow and the frequent lack of written lease agreements which place renters at some risk of having their "lease" canceled.



Table 10
Logit Model: Probability of Moving

Independent Variables	Market Mover (n=2,086)	State Mover (n=1,176)
<i>Living Conditions</i>		
Crowding (persons per room)	0.63***	1.4***
Communal (0,1)	0.16	0.24
Superior building (0,1)	-0.23	-0.03
<i>Economic Factors</i>		
Income (thousands of rubles)	0.0007***	—
<i>Assets</i>		
Owns a car (0,1)	0.55**	—
Privatized initial unit (0,1)	-0.31	—
Initial unit was market rent	3.6***	—
Age (over 55=1, else 0)	4.8	5.9
<i>Other variables</i>		
Years on waiting list	—	0.04
Elite occupation (0,1)	—	1.9*
-2 Log likelihood	595.5	34.7
Model chi-square statistic	115.1***	18.6**
Mean observed value of dependent variable	0.041	0.067

Notes

- *** Significant at 0.01.
- ** Significant at 0.05.
- * Significant at 0.10.

For state movers, only the incidence of overcrowding and elite occupation positively affect the probability of obtaining housing. A household member having an elite occupation seems to play a part in affecting the probability of moving. The significant role that elite occupations seems to have in obtaining state housing may be indicative of the influence that social status still has in procuring housing as it most likely did during the Soviet times. In a model estimated with all the variables included, income and assets do not influence the probability of obtaining state housing, thus confirming the negligible role of these factors in the allocation of state housing.



Conclusion

The foregoing analyses illustrate the evolving housing market in Moscow during the transition. The reform measures to date in the housing sector are designed to engender a more market-oriented housing sector by increasing household choice and the role of the market in housing allocation. One of the most significant effects of these reforms has been the increase in residential mobility. An increasing number of households in Moscow are exercising their new freedom of choice and improving their housing conditions by moving.

In analyzing the composition of these movers, we observe that the incidence of uncoupling, where only part of the household moves, is much higher in Russia than in the United States. This phenomenon is a direct result of the substantial crowding in Moscow produced by housing shortages of the Soviet era.

Indication of a trend towards market activity in the housing sector is further substantiated by the significant increase in employing market methods to obtain housing. "Market transactions" have become the foremost method for relocating households, and the overwhelming dominance of waiting list procedures of the Soviet era has been eliminated. From 1992 to 1994, movers using broker services increased by four and half times concurrent with a decline in the use of the waiting list by 46 percent.

Moreover, the probability of a household moving to a new unit using market methods is significantly related to the extent of the overcrowding in the initial unit and the economic resources of the household. Those with higher incomes and greater assets are more likely to move. Conversely, the probability of a household moving to a state unit is determined only by overcrowding and by time spent on the waiting list.

An important question which we could not address is the effect of increased mobility on social and economic stratification. Higher income families are distinctly more mobile, but it is unclear whether they are selecting a common set of locations and thereby altering the character of particular regions. Worth emphasizing is that total turnover rates are not high. Hence, several more years will be needed to detect much change in the degree of stratification.



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ANNEX A

ADDITIONAL DESCRIPTIVE CHARACTERISTICS OF THE SAMPLE FROM THE MOSCOW HOUSEHOLD SURVEY

Table A1
Ownership of Current Dwelling Unit in 1993 and 1994

	State	Privatized Units, Individual Homes, Cooperatives	Private Rental
<i>1993</i>			
Percent	58.6	40.0	1.4
Number	1,256	856	29
<i>1994</i>			
Percent	54.6	43.7	1.7
Number	1,221	939	38

Notes

Not significantly different between years at usual levels of significance using chi-square test.

Table A2
Percent Distribution of Housing Types in Sample

	1994	1993	1992
Self-contained	91.2	90.7	88.0
Communal	8.8	9.3	12.0

Notes

Not significantly different across years at usual levels of significance using chi-square test.