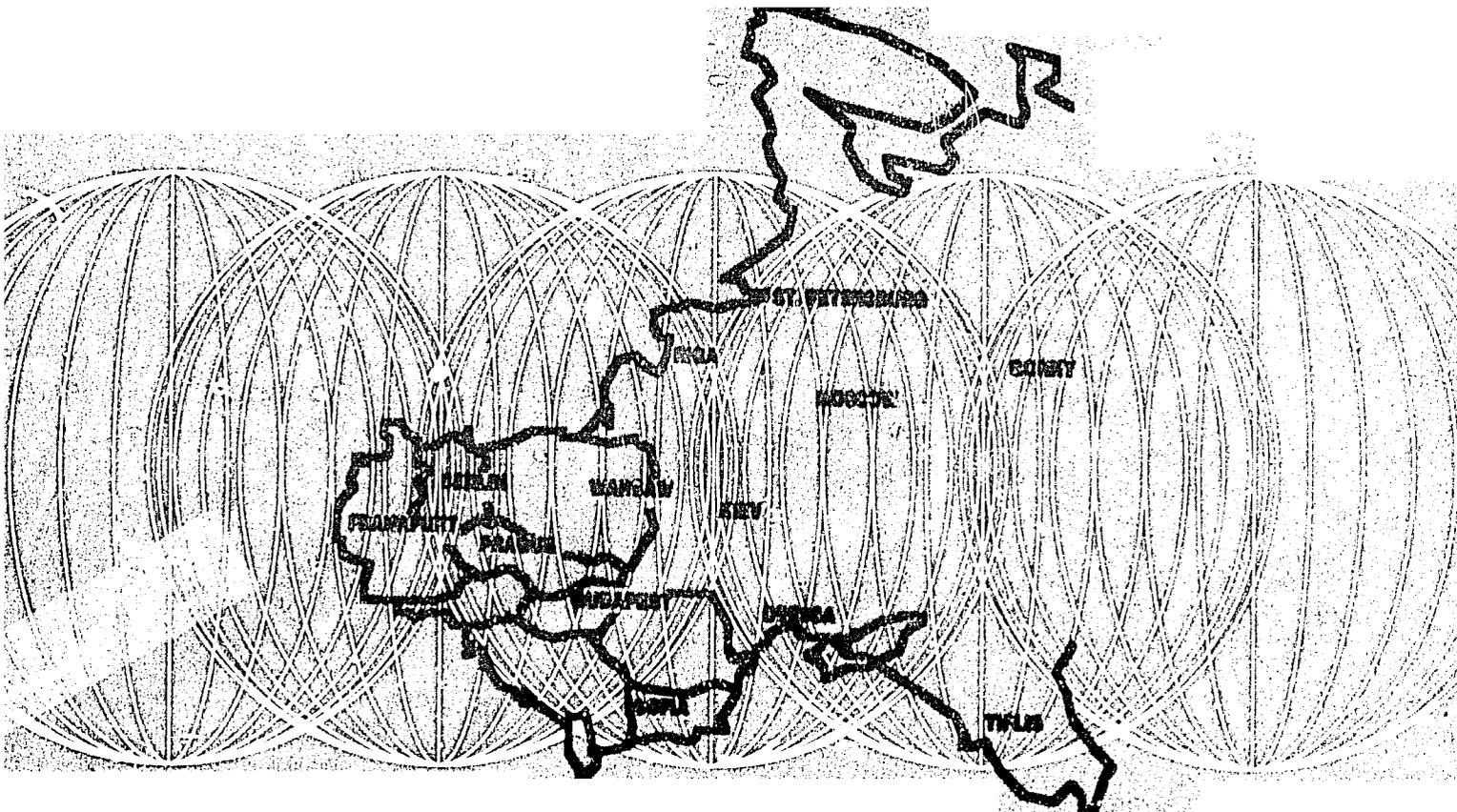


**AN INTERNATIONAL ACTIVITIES PROJECT**

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



**Initial Evaluation of Private Maintenance  
for Moscow's Municipal Housing Stock**

by

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## EXECUTIVE SUMMARY

Since the housing stock in Russia is still predominantly state owned, reform of the state rental sector is fundamental to overall housing sector reform. Privatization of the state rental stock is proceeding with surprising speed, but nothing has been done on the Federal level to improve the maintenance services for state housing units including those in buildings in which substantial privatization has occurred. Data from a December 1992 survey of 2,002 State rental housing units in Moscow confirm that the quality of maintenance provided by state maintenance companies (RAiUs) is poor. Reform is needed in this area not only to improve the quality of life for Russian citizens, but to ensure that further reforms in the housing sector are successful.

Officials in the City of Moscow recognized the need for improving maintenance and, in March 1992, signed an agreement with the U.S. Agency for International Development under which 2000 municipal units in the West Administrative District, in packages of about 650 units, were placed under the management of private maintenance firms. This report presents the results of the first stage of the evaluation of the effectiveness of this pilot program.

In March 1993, the private firms, which were selected through a formal bid solicitation process, became responsible for management and maintenance tasks for the buildings in the program. They are not, however, responsible for other tasks, mostly of a social service nature, which are typically done by the RAiUs. Funding for the project was provided from the city's overall budget for housing maintenance and included funds for routine maintenance but not for any rehabilitation.

Data from the following three surveys were used for a three-part evaluation of the program: a December 1992 survey of 2,002 randomly selected state rentals in Moscow; a February 1993 survey of 300 randomly selected households in the pilot program buildings; and a May 1993 follow-up survey of the same 300 households in the pilot program buildings. The evaluation includes a rough comparison of the pilot units with those of the overall municipal housing stock, a comparison of the cost of the private firms with that of the RAiUs, and, most importantly, a comparison of conditions before and after the introduction of maintenance by the private firms. For the third part of the evaluation, we predicted that we would observe little change in the short ten-week evaluation period, because the firms' activities were mainly restricted to routine maintenance and repair.

The results of the first part of our analysis indicate that, prior to the start of the demonstration, the buildings included in the demonstration could not be considered better maintained than the average municipal building. Although it is too early to determine definitely, the second part of our analysis suggests that the private firms are not costing the city more than the RAiU would cost if RAiUs were given the funds necessary to perform their tasks properly.

Contrary to our working hypothesis, results from the "before and after" analysis showed a substantial, overall improvement with respect to the condition of public spaces, certain conditions in the flats, the reoccurrence of breakdowns in services, and the speed and quality of repairs. Not only were the common areas kept cleaner and apartments more pest-free, but services, such as water and elevator services, were more reliable. For example, in May, 50 percent of the respondents in the pilot program survey reported that their elevator was always functioning, whereas in February, under the RAIUs, only 27 percent could report continual functioning of their elevators. Also, the private firms did a better job than the RAIUs in setting concrete times for making repairs and they did a better job of keeping their promises. In February, under the RAIUs, only 42 percent of the respondents reported that repairs had been made within the promised time, while in May the percentage jumped to 59.

Our results clearly indicate that the pilot program thus far has been successful. For the next six months, we will continue to monitor the program and, at the end of the period, will conduct another survey of the same 300 households to evaluate the program a final time.

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## 1. INTRODUCTION

At the beginning of Russia's transition away from a centrally planned economy, the state rental sector was an important component of Russia's housing stock. In 1990, state rental housing comprised two-thirds of all housing; in cities, the share was 79 percent; in Moscow, 90 percent. The dominance of state rentals sets Russia sharply apart from other countries of Eastern Europe. For example, in Hungary the state sector accounted for only 20 percent of the housing stock in 1989; in Bulgaria, 9 percent; and in Poland, 34 percent.<sup>1</sup>

Given its importance, reform of the state rental sector--housing owned by municipalities, departmental housing<sup>2</sup>--is fundamental to reform of the overall housing sector. The system under the old regime can be characterized as follows:

- allocation is through bureaucratic procedures in which favoritism plays a large role, with connections and Party status being more important than money income in obtaining high quality housing;<sup>3</sup>
- the prices charged for housing bear no relationship to the costs of producing the services, not to mention market prices; in most cities, maintenance fees have not been raised since 1928;<sup>4</sup> in Moscow in the fall of 1992, tenant payments for maintenance and communal services accounted for about 3.5 percent of full costs;
- the consequences of low fees are that the system embodies massive on- and off-budget subsidies; moreover, because of the extraordinarily low rents, households once allocated a unit have no incentive to shift to a smaller unit as family size or income declines;
- maintenance of the stock is poor; incentives for good maintenance are weak, as state maintenance firms enjoy a monopoly in the district where they provide services; their budgets are administratively set, with little concern for the true cost of good maintenance.

The Russian Federation has adopted a two-track strategy for improving the sector: privatizing the stock and reforming the pricing and delivery of services in

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<sup>1</sup> Baross and Struyk (1993), Table 1.

<sup>2</sup> Departmental housing is units owned and controlled by enterprises and government agencies.

<sup>3</sup> For an analysis of the distribution of housing quality by income and other attributes see Daniell, Puzanov, and Struyk (1993).

<sup>4</sup> In April 1992 local soviets were given the power to increase rents but few did so. As noted later in the text, the major housing reform law, passed in December 1992, now requires that rents be increased on a step-by-step basis to cover operating costs at a minimum.

those units that remain in the public inventory. The rate of privatization has been impressive, with over five million units privatized by the end of April 1993, a figure including about 20 percent of all municipal units. The Law on Fundamentals of Housing Reform passed in December 1992 mandates an increase in rental payments to cover full operating costs by the end of a five-year period and the introduction of housing allowances to protect poor families living in state rental housing.<sup>5</sup>

### **Housing Maintenance Reform**

Little progress, however, has been made in improving maintenance services. The need for such improvement is evident to even a casual observer and is confirmed by newly available data. A December 1992 survey of 2,002 Moscow units that were state rentals at the start of the year provides the most detailed, systematic information to date on the conditions under which Muscovites live (Daniell et al., 1993). The survey generated data on two types of outcome: (a) building conditions and interruptions in services (e.g., heat), and (b) the experience of tenants when they requested help from a state maintenance company (RAiU), which typically provides services to about 7,000 municipal units, or a departmental maintenance company, which maintains housing belonging to an enterprise. Obviously, the outcomes are the product of both the manner in which tenants treat public spaces and their apartments and the quality of maintenance provided, i.e., all problems cannot be attributed unequivocally to the RAiUs or departmental maintenance staff. Still, the general patterns suggest extraordinarily poor quality of services provided by the companies:

- Both interviewers' observations and tenants' opinions agreed that the entryways in 14 percent of the buildings were in such bad condition as to require full rehabilitation; about another one-third need some rehabilitation. Combined, nearly one-half of the entryways in state rental housing are in such poor condition as to need at least partial rehabilitation.
- In the two months prior to the survey, lights were reported not working in public spaces most of the time in most buildings; about 40 percent of respondents reported lights were off for a whole month. The situation is even worse for security systems (numeric code systems or a concierge to watch the door): three-fourths of all systems were simply not working.
- Thirty percent of respondents reported frequent accumulation of rubbish in the halls or stairways, and about the same share reported frequent breakdowns in lift services, i.e., either a whole month or 3 or more

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<sup>5</sup> Those living in state rentals must be eligible to receive housing allowances but local governments can make other groups eligible if they wish.

breakdowns or 1-2 weeks without service in the 2 months prior to the survey.

- Ten percent of tenants reported that their heat was off frequently in the preceding two months—3 percent were without heat for a whole month. Similarly, 9 percent reported that their toilets leaked most of the time.
- A quarter of all respondents who reported having a problem that should have been corrected by the maintenance company did not even bother to report it.
- Looking at cases in which tenants asked for assistance from a maintenance company, the repair was eventually made in 55 percent of the cases (35 percent of the time the repair was made more or less on the schedule promised by the maintenance company). In 39 percent of these cases the repair was never made.

Given these conditions, improving maintenance is critical for two reasons: to improve the quality of life of the average citizen and to make payment of higher rents acceptable to the population. Without improvement, the overall reform program could founder.

Thus far the Federal office responsible for improving services has not shown much initiative. To our knowledge the Committee on Municipal Economy of the Russian Federation has advanced no concrete proposals to improve service delivery. Indeed, it has expended considerable energy trying to prevent RAIUs from losing their monopoly positions for maintaining municipal housing.<sup>6</sup> In this environment, the initiative to improve services must come from local officials.

### ***This Report***

In March 1992 the City of Moscow and the U.S. Agency for International Development signed an agreement for a cooperation program in housing reform. At the top of the list of joint work to be undertaken were activities to improve the maintenance of the municipally-owned housing stock.<sup>7</sup> The agreement specified that

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<sup>6</sup> For example, the committee in drafting the amendments to the privatization law inserted language making it impossible for condominium associations to use a management company other than the RAIU for the building proper, although they permitted owners to engage private firms for their individual units.

<sup>7</sup> USAID signed a similar agreement with the city of Novosibirsk about the same time to carry out a similar housing management demonstration program. This program placed 2,200 units under private management in April 1993.

experiments with private management would be undertaken with U.S. assistance, beginning in the West Administrative District. On behalf of the City the agreement was signed by then-premier Yuri Luzhkov and was confirmed by the Chairmen of the Department of Municipal Housing and the Department of Engineering and Communal Services (which is responsible for building maintenance), and the Prefect of the West Administrative District.<sup>8</sup> Work began in earnest during the summer of 1992 on developing a pilot project to place maintenance of municipal housing under private contractors. By March 1993, 2,000 municipal units were being maintained under private contract, in three packages of about 650 units.

This report presents the findings of the first stage of the evaluation of the pilot project's effectiveness. This is a very early reading of experience: information as collected just 10 weeks after the new companies took over responsibility for maintenance. Such a quick assessment was undertaken for three reasons. First, the project team needed to know if there were major problems which required immediate correction before they became so serious that they undermined the whole demonstration program. Second, some aspects of the program may have needed fine-tuning, and these adjustments could be made before more buildings were shifted to private management. Third, the City wanted some rigorous feedback before making large additional commitments of buildings and budget to the program.

The balance of this document consists of five parts. The first part gives an additional description of the pilot program. The second part outlines the method used in the evaluation. The third part examines the characteristics and condition of the buildings included in the pilot program before new management took over. The fourth part presents data on changes in building conditions as perceived by the tenants and interviewers. The final part states our conclusions.

## **2. THE MAINTENANCE PILOT PROGRAM<sup>9</sup>**

The primary goal of the pilot program is to demonstrate the feasibility of providing competitive, high quality, private management and maintenance to municipally-owned housing. Additional objectives are to reduce operating costs and to enhance the tenants' quality of life through improved maintenance.

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<sup>8</sup> Moscow is divided into ten prefectures, each with a population of about one million.

<sup>9</sup> A detailed description of the development of the pilot program is in Olson (1993).

## **General Description**

Two thousand units in the West Administrative District were selected for inclusion in the pilot program: 600 in the Kutusovsky sub-prefecture, and 1,400 in the Fili-Davidkova sub-prefecture. The Kutusovsky units are in central Moscow, and the Fili units are in the suburban part of the city. The units vary in terms of age, construction type, and building type (high-rise versus mid-rise).<sup>10</sup> The sample includes most building types in Moscow, and should help to insure that the pilot is easily replicable on a city-wide basis.

The "Board of the Unified Customer" (or DEZ), an office at the municipal district or sub-prefecture level, acts as the owner for the purpose of the pilot.<sup>11</sup> There is one DEZ for each sub-prefecture, and the DEZ chiefs signed the management and maintenance contracts for the municipality. As part of the AID-financed technical assistance program, personnel from the DEZs and the prefectures were trained in real estate management and maintenance techniques. The training consisted of sixteen classroom sessions conducted from October 1992 to December 1992. In addition to the classroom training, three representatives of the owners attended a one-week study tour to learn how management works in the United States.

The pilot program concentrates on management and maintenance tasks; it excludes non-management tasks with which the RAiUs were encumbered, such as passport control, communal service charge calculations (these include heat, gas, and water), follow-up of rent delinquencies, and draft registration. This specificity allows the private managers to concentrate on the management areas needing the greatest improvement such as: security; routine and emergency maintenance response times; rubbish and snow removal; common area upkeep; removal of hazardous conditions; preventive maintenance; and landscaping.

The procurement of contractor services was patterned after an American-style "Request For Proposals" (RFP). To solicit bids, advertisements were placed in Moscow newspapers of wide circulation. Twenty-three expressions of interest were received, and eleven formal proposals. Proposals were formally scored by a committee established to conduct the competition, and all firms in the competitive range were interviewed by the committee. One year contracts with the three winning firms were signed on March 1, 1993 and the firms took over maintenance on March 15, 1993.

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<sup>10</sup> Detailed information on the characteristics of these units compared with the municipal stock in general is presented in the Section 4.

<sup>11</sup> There are about twelve municipal districts in each prefecture or administrative district.

The choice of three, rather than one or two, firms was deliberate. There is some evidence that private firms perform better when they are responsible for maintaining 400 to 600 state-owned units rather than thousands of units (Clapham, 1992). At least as important in this case, however, was the desire to maximize the number of firms obtaining the relevant experience in order to begin forming a group of firms that could manage more properties in the future. Furthermore, program managers thought it wise to diversify their risk by having several firms rather than a single firm.<sup>12</sup>

Meetings were held by city officials with tenants at each site prior to the competition to explain the program and to reassure them that this was not the opening phase of a program to sell their units to investors.

### **Contract Costs**

As part of the competitive process firms stated their proposed price for undertaking the work. The price was for March 1993, with the contract stating that adjustments would be made over the year for inflation. The average price per unit per month was Rb 1,574. This is somewhat more than RAiUs received at the same time, but the comparison is complex. More information on costs is presented in Section 5.

Rents were *not* increased at the pilot buildings to cover the additional costs. Rather, the funds were provided from the city's overall budget for housing maintenance. This policy reflects the strong view of city officials that increasing rents would produce strong resistance to the introduction of the new management system. Rather than special rent increases for the sites, rents will be raised for these units as part of the across-the-board increases scheduled to be initiated in the fall of 1993.

It is worth underscoring at this point that the funding provided was for routine maintenance, not improvement of significant deficiencies existing at the time the private firms took over. Thus, no major improvements in overall physical conditions were anticipated when the private firms began work. On the other hand, improvements in trash removal and the cleanliness of public spaces in the buildings and the grounds around the buildings were expected. Beyond this, over months and years, the firms were expected to make progress in painting and plastering public entryways, replacing broken doors and window panes, repairing crumbling entryway steps, and replacing broken or missing wall and floor tiles.

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<sup>12</sup> In the parallel program in Novosibirsk the opposite decision was made and all 2,200 units in the first phase were placed under contract with a single firm.

### **Monitoring Performance**

Contractor performance will be monitored carefully during the first year of the pilot program (through March 1994). Performance is to be measured against the contractor's approved work plan and budget. In addition to holding regular weekly meetings with the contractor, the owner is to make regular inspections to assess and verify site conditions. Performance indicators include:

- contract compliance
- routine/emergency service response times
- budget compliance, particularly cost savings
- building conditions
- site conditions
- correction or removal of hazardous conditions
- appearance of the common areas and grounds
- operational readiness of building systems
- tenant satisfaction

The USAID-funded resident advisor for the pilot program is participating actively in the monitoring program and is also observing the performance of the owners.

### **3. EVALUATION METHOD**

The general scheme for the evaluation is to identify change by contrasting conditions in the buildings included in the pilot program before and after the introduction of private management. Because conditions in the buildings were so poor at the time of the introduction of private management, we reason that there must be improvement in conditions for the primary goal of the program—the provision of high quality maintenance—to be achieved. Documentation of improvements gives evidence of the management companies moving toward achieving the goal.

The evaluation does not include a control group of similar buildings. Therefore, it is theoretically possible that any improvement observed at the pilot buildings could also be occurring in other buildings because of general factors. This type of general improvement in conditions in Moscow's municipal housing stock during the spring of 1993 seems extremely unlikely because of the sharp reductions in the funding for maintenance: the Department of Engineering and Communal Services estimates that in 1990 funding to the RAiUs was sufficient to fund 60 to 70 percent of the services they were supposed to provide; by the beginning of 1993, this

figure had declined to 25 to 30 percent. No increase in funding has occurred during the period since the private firms took over the pilot buildings.

### **Data Employed**

Data from three household surveys are involved:

1. A December 1992 survey of the occupants of 2,002 randomly selected state rentals in Moscow. The sample included 1,706 units belonging to the city and being maintained by the RAiUs. To insure comparability, data only for the municipal units are employed in this analysis.
2. A February 1993 survey of 300 randomly selected households living in buildings included in the pilot program. The survey instrument was identical to that used in the December 1992 survey.
3. A reinterview of the 300 households in the pilot buildings in May 1993, ten weeks after the private companies took over maintenance responsibilities. No replacement households were permitted in this survey, i.e., only households included in the February survey could participate. Every attempt was made to have the same respondent who was the respondent in February. A total of 291 interviews were successfully completed.

All three survey instruments included extensive sets of questions on the conditions in the common spaces of the building (as observed by the respondent and the interviewer) and in the flat; on breakdowns in services, such as hot water, security systems, and elevators, during the preceding two months; and the respondent's experience with the maintenance company when the respondent requested assistance. Each survey also gathered information on the occupant family's income. In addition, the December and February surveys obtained data on basic unit and building characteristics, housing expenditures, household demographics, and privatization status.

### **Analysis Plan**

The analysis has three parts. In the first, we examine the extent to which the attributes of the units and buildings included in the sample differ from the overall stock of municipal housing. The question to be explored is whether the buildings selected are in better condition or appear to be easier to maintain than the overall stock. Here we employ data from the December and February household surveys.

The third part of the analysis is a simple comparison of the cost of private firms and the RAiUs at the time at which the private firms took over management of the buildings.

The second and main analytic task is the comparison of building conditions and the comparison of tenant experience when help is requested from the maintenance company before and after the introduction of the private management firms. Data used are from the February and May household surveys. Responses of tenants to questions about changes in maintenance are analyzed using data from the May survey. Expert ratings of physical conditions are compared for February and May.

In carrying out these tests our working hypothesis was that we would observe little change in physical conditions over such a short period. While the new maintenance firms are charged with making repairs to common areas and maintaining the grounds, they may simply not have time and resources to make much progress. On the other hand, we expect more change in tenants' dealings with the management company.

In every phase of the analysis we employ standard statistical tests of the significance of differences between the demonstration projects and the general municipal building population or between the "before" and "after" data for the pilot buildings. In the "before" and "after" analysis separate results are presented for each of the three sites (firms) as well as results for the three sites combined. The separate data allows us to determine whether the performance of a single firm is strongly influencing the overall results.

#### **4. CONDITIONS WHEN THE PRIVATE FIRMS TOOK RESPONSIBILITY FOR MAINTENANCE**

This section presents information on two comparisons: the types of units and buildings placed under contract to private firms and the condition of this stock compared with all municipal units in Moscow; and, the cost of maintenance for the private firms and the RAiUs.

##### ***Building Attributes and Conditions***

Table 1 displays data on the type of units and buildings included in the pilot and those for the Moscow municipal stock. In terms of size, as measured by total space, living space, and number of rooms, the two groups of units are very similar. The demonstration buildings have significantly fewer communal apartments than the municipal stock, but the difference is only four percentage points.

More important differences concern the types of buildings. The demonstration buildings are relatively concentrated in Stalin and Khrushchev era buildings and in new panel buildings. The Stalin buildings are considered to be of high quality

construction, although with age and lack of proper maintenance they are no longer the clearly superior buildings they once were. On the other hand, the five-story walk-up Khrushchev buildings are generally viewed as having been cheaply constructed, with low ceilings and small room sizes. Overall, the demonstration buildings contain few structures over 15 stories in height compared with the total municipal stock.

More important for the evaluation are maintenance conditions at the time when private firms took over management responsibility. Data on this point are presented in Table 2. The top panel gives information from tenants' responses, while the lower panel uses ratings supplied by the interviewers. The summary entries in the table are based on more detailed data in Table A.1. When a condition is rated as "better" or "worse," it means that conditions in the demonstration buildings were statistically significantly different from the total municipal stock. An "ambiguous" rating indicates that while the statistical test shows that the two distribution of conditions differ, the direction of the difference is not clear because one group of buildings has a higher overall incidence of the problem but the problem is more intense for the other group. For example, the heat might be interrupted more often in the first group but be off longer when it is interrupted in the second group.

Both tenants and the interviewers agree that, if anything, conditions in the common spaces were worse in February in the demonstration buildings than in the municipal stock. On the other hand, the experience with the RAiUs was essentially the same for the two groups of tenants—bad.<sup>13</sup> The tenants interviewed in the demonstration buildings, however, in general reported significantly fewer inadequate maintenance services than did their counterparts in other municipal buildings.

The information on conditions in the flats paints a more ambiguous picture. Some conditions were better in flats in the demonstration buildings (e.g., fewer leaks in the ceiling, and less trouble with ants and cockroaches) and some were worse, particularly problems with breakdowns in heat supply.

One's general impression from reviewing this information is that the buildings included in the demonstration were certainly not better maintained than the average municipal building. Similarly, the RAiUs serving these buildings provided essentially the same level of services as those serving other buildings.

### ***Costs at the Start of the Demonstration***

How do contracted costs for private maintenance compare with those for the RAiUs? It is impossible to answer this question with precision because of limitations

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<sup>13</sup> For substantiation see the data in Table A.1 and Daniell, Puzanov, and Struyk (1993).

in the data available for the RAIUs and because of differences in the functions carried out by the two types of firm. Nevertheless, some suggestive information is available.

The average per unit per month (PUM) cost for the private firms as of March 1993 was Rb 1,574. This is the amount for which the contracts were written.<sup>14</sup> In February 1993 the RAIUs were receiving approximately Rb 1,000 PUM; this is a city average figure, i.e., not a figure specific to the demonstration sites. However, the Department of Engineering and Communal Services estimates that the RAIUs are receiving about 25 to 30 percent of the funds they need to carry out their assigned duties. On this basis, the full cost for the RAIUs would be Rb 3,000 to 4,000 PUM. The private companies have agreed at the lower price to carry out most but not all of the functions assigned to the RAIUs. These functions are primarily office functions such as registering young men for military service. They also include following up with families who are delinquent in paying their rent. If such activities constitute 20 percent of total cost, then the Rb 1,574 for private firms could be compared with Rb 2,250 to 3,000 for the RAIUs.

These comparisons are imprecise but they do suggest that private firms certainly should not cost more than the RAIUs. It is worth emphasizing, however, that the costs for the private firms are their *projections* for the costs of executing the terms of the contracts they signed, not their actual experience. It could be that the firms either fulfill the contracts but lose money or are unable to provide the services agreed upon within the budgeted amount. Only with time will we be able to address the issue of cost with greater confidence.

## 5. CHANGES IN CONDITIONS UNDER THE PRIVATE FIRMS

This section provides a comparison of the demonstration sites before and after the introduction of the private maintenance firms and information on how well informed the tenants were of the management change. The comparison uses February and May survey data to examine the change in the physical conditions in both public spaces and apartments, as well as the change in the reoccurrence of breakdowns in services and in the speed and quality of execution of repairs. Information on tenant knowledge of the change in management was obtained in the May survey.

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<sup>14</sup> The firms will also receive inflation adjustments identical to those obtained by the RAIUs.

### ***Physical Conditions of Public Spaces/Apartments and Reoccurrence of Breakdowns in Services***

In assessing the change in the conditions in public spaces and in apartments, as well as in the reoccurrence of breakdowns in services, responses on the following topics were included in the statistical analysis: condition of the entryway; lighting in the common areas; presence of rubbish in halls and stairways; cleanliness of the refuse chute area; functioning of the security system, elevator, and toilet; leakage in the ceiling; and presence of rats, mice, cockroaches or ants in the apartment. Responses to questions concerning the heating system and the removal of snow and ice from the entryway were not employed in the analysis due to the change in seasons which occurred during the survey period: in addition to the snow having melted by the time our May survey was conducted, the heat had been turned off permanently for the summer by the authorities. Responses on the smell of garbage in the collection system and of urine in public spaces were omitted because the warmer May temperatures would heighten the odor if there had been no change in the situation over the period. In addition, data on hot water service was excluded from the analysis since this is a service over which the private firms have no control: heat is regulated by the central authorities.

For the included topics, respondents were either asked in both surveys to rate the condition on a scale from "very bad" to "very good" or to indicate the frequency in which a task was NOT performed or in which a service was NOT provided on a scale from "did not occur" (meaning the firm was performing its duties) to "occurred practically a whole month." Regarding the questions on pests in the apartment, respondents were asked to indicate the extent to which the apartment was infested. A summary comparison of the data is presented in Table 3. In the table, data are included only for the extremes of the scale since it is most likely that only at the extremes that the private firms could hope to make a decided improvement in such a short period of time (10 weeks). Therefore, it is also at the extremes where improvement or lack thereof is most evident. Using the data from both the positive and negative extremes, a net improvement rating was determined. A rating of "better," denotes that performance under the new firm was better than under the RAIU. A rating of "worse" indicates just the opposite, namely, that service worsened under the private maintenance firm.

In addition to rating conditions and services on the scales discussed above, respondents were also asked whether they perceived that conditions had improved or worsened under the new private maintenance firm or whether the frequency in which tasks were not performed or services not provided had increased or decreased under the private firm. In Table 3, a numerical net improvement percentage is presented which is derived from respondents' answers. In most cases, this number corresponds generally with the net improvement rating listed above it: this close correspondence reinforces our confidence in the data.

The results presented in Table 3 indicate that there was a decided overall, statistically significant improvement for the three sites combined in the condition of public spaces and apartments and in the reoccurrence of breakdowns in services under the private firms. Both the net improvement ratings and the net improvement percentages support this. For the sites combined, there is no area in which conditions were worse and only one (security systems) where little change was observed.

Among the sites, Site 3 clearly improved the most, followed by Site 2 and Site 1. It is also important to note that no one site seems to have influenced the overall results. Interestingly, the net improvement percentages for eradication of pests in the apartment is exceedingly high, indicating that the private maintenance firms are actively combatting the problems.

The only area in which the firms did not exhibit improvement concerns the functioning of the security system. However, major repair or replacement of these systems is often required and therefore beyond the responsibility and financial means of the firms.

### ***Experience with Repairs***

The data on tenants' experience with repairs are presented in Table 4. Again, the results for the extremes are listed and, from these, the net improvement rating was then derived. Here also, the data indicate a distinct improvement, on the whole, in the speed in which repairs were made and in the quality of the repairs themselves. About ten percent fewer tenants requested repairs of the new firms. The new firms did a better job than the RAiUs in setting a concrete time for making the repair and then did a better job of keeping their promises. The new firms made a large improvement over the RAiUs in eventually making all requested repairs.

None of the sites appear to have strongly influenced the overall results. Sites 1 and 2 clearly showed the most improvement. The experience with repairs for tenants at Site 3 actually worsened slightly. The result for Site 3 is in some ways unexpected since it had a strong record of improvement in site conditions. It nevertheless signals a problem.

### ***Tenant Knowledge of Management Change***

Table 5 presents the findings concerning how well-informed respondents were that their building was being maintained by private firms. While only one percent of the respondents thought that the RAiU was still maintaining their buildings as of March, over half of the tenants did not know who had taken the place of the RAiU. Only 37.5 percent of the respondents at Site 1, 13.7 percent from Site 2 and 5.9 percent from Site 3 could name the private firm which was maintaining their

building. In addition, over 75 percent of the respondents were unaware of the contractor's responsibilities. Only 21.6 percent of the respondents from Site 1, 6.9 percent from Sites 2 and 3 were aware that the new firm was responsible for all maintenance. The results unquestionably indicate that all three private maintenance firms did a poor job of informing tenants of their new presence.

To the extent that tenants are ignorant of the firm's identity, the more difficulty they may have in obtaining service. Moreover, lack of information about the firm's duties can lead to dissatisfaction with the firm for failures for which the firm is not responsible. In short, better knowledge on the part of tenants is in the firms' best interest.

## **6. CONCLUSIONS**

Introduction of any new practice into a situation in which other methods of operation are well-established is always risky. So, too, was the introduction of private companies, competitively selected to undertake the maintenance of municipally-owned residential buildings in Moscow.

Quite contrary to our working hypothesis that little change could be expected over such a short period, results from the "before and after" analysis evidence a decided improvement in overall maintenance of the three sites with the introduction of the private firms. The data clearly indicate that the pilot program has been successful. However, they also reveal a few problem areas for the three individual sites. Site 3 clearly needs to improve its repair record. Sites 1 and 2 should strive to further improve maintenance of public spaces and to improve services. All three sites need to better inform tenants of the firm's identity and the specific functions for which the firm is responsible.

The program of monitoring the experience of the three sites will continue for another six months. At the end of this period another survey of the same 300 respondent households will be conducted to determine whether the kind of improvement documented in this report has been sustained.

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TABLE 1  
COMPARISON OF HOUSING ATTRIBUTES

	Demonstration	Moscow
Total space (sq.m.)*	56.76	54.20
Number of rooms	2.35	2.28
Kitchen size (sq.m.)	7.75	7.84
Ceiling height (cm)**	277.75	271.00
Total space/Living space	1.56	1.56
Type of unit*		
single	93.7	89.6
communal	6.3	10.4
Type of building**		
ramshackle stock	0.0	6.1
Krushchevka	22.0	17.1
brick of Stalin era	44.7	21.4
70's design	0.0	31.1
new panel	31.0	22.0
modern brick. improved	2.3	2.4
Number of floors in bldg.		
2-5	22.0	27.3
6-10	27.6	32.4
11-15	45.3	21.7
16 +	5.0	18.6
* significantly different at .10 level or higher ** significantly different at .05 level or higher		

TABLE 2

## COMPARISON OF DEMONSTRATION PROJECT WITH MOSCOW MUNICIPAL HOUSING STOCK

<b>Respondents' Opinion</b>	<b>Demonstration Project (relative to Moscow)</b>
<b>CONDITION OF PUBLIC SPACES</b>	
Condition of the entryway	worse
Lights in lifts out of order	worse
Security system out of order	slightly better
Trash and debris in hallways	worse
Refuse chute area not clean	worse
Smell of urine and excrement	same
Snow and ice around entryway	worse
Lift out of service	same
<b>CONDITION OF THE FLAT</b>	
Heat was out	worse
Electric heater or ovens used	slightly worse
Too much heat	worse
No hot water	worse
Toilet out of order	better
Leaks in the ceiling	better
Rats or mice in the flat	better
Cockroaches in the flat	better
Ants in the flat	worse
<b>EXPERIENCE WITH MAINTENANCE</b>	
Repairs need in past two months	slightly better
Length of time quoted for repair	better
Timeliness of promised repair	same
Completion of repairs	same
Tenant satisfaction with repair	same
Tenant satisfaction with building maintenance	same
Management/Maintenance problems perceived	better
<b>Interviewers' Opinion</b>	
Safety hazards requiring repair	worse
Trash and debris in hallways	worse
Smell of refuse in common areas	worse
Signs of failure to perform routine cleaning	worse
Overall impression of the flat	ambiguous
Overall impression of building	worse

TABLE 3  
CHANGES IN CONDITIONS:  
INDIVIDUAL SITES AND ALL SITES COMBINED

Site 1=OLSO  
Site 2=Mosremzhilservice  
Site 3=Santexnika-Complex

	<u>Total</u>		<u>Site 1</u>		<u>Site 2</u>		<u>Site 3</u>	
	Feb	May	Feb	May	Feb	May	Feb	May
A. CONDITION OF PUBLIC SPACES								
Condition of entryway			..	..	..	..	..	..
a) rating								
very bad	27.3	19.9	33.3	33.0	34.0	20.6	15.4	7.9
very good	0.3	0.0	0.0	0.0	0.0	0.0	1.0	0.0
net improvement	better		same		better		better	
b) impression of change								
net improvement	7.6		10.2		1.9		10.9	
Lights out of order	..	..	..	..	..	..	..	..
a) rating								
did not occur	14.3	40.2	13.3	62.5	14.2	25.5	15.4	35.6
practically a whole month	49.7	22.3	57.8	21.6	64.2	26.5	27.9	18.8
net improvement	much better		much better		much better		much better	
b) impression of change								
net improvement	11.3		27.3		0.0		8.9	
Security system out of order	..	..	..	..	..	..	..	..
a) rating								
did not occur	13.5	17.6	13.3	10.7	15.8	2.6	12.2	32.4
practically a whole month	58.1	59.9	67.8	74.7	61.4	55.3	45.1	47.3
net improvement	ambiguous		bit worse		bit worse		better	
b) impression of change								
net improvement	-2.4		-5.7		0.0		-3.7	
Trash/Debris in hallways	.	.	..	..	..	..	..	..
a) rating								
did not occur	36.0	39.7	16.7	30.7	42.5	25.5	46.2	62.0
practically a whole month	21.7	13.8	46.7	29.5	16.0	9.8	5.8	4.0
net improvement	better		much better		bit worse		much better	
b) impression of change								
net improvement	4.5		10.2		-6.9		10.8	
Refuse chute area not clean			..	..	..	..	..	..
a) rating								
did not occur	69.3	74.8	58.0	76.8	81.6	52.8	74.6	86.2
practically a whole month	8.5	6.1	17.3	13.0	2.0	2.8	1.7	0.0
net improvement	same		better		much worse		better	
b) impression of change								
net improvement	2.7		0.0		-6.0		14.9	
Lift out of service	..	..	..	..	..	..	..	..
a) rating								
did not occur	26.8	50.2	51.1	54.5	13.1	44.4	9.8	51.8
practically a whole month	11.5	9.8	5.6	15.9	26.2	9.9	0.0	0.0
net improvement	much better		worse		much better		much better	
b) impression of change								
net improvement	6.0		1.1		7.2		11.7	

Site 1=OLSO  
 Site 2=Mosremzhilservice  
 Site 3=Santexnika-Complex

B. CONDITION OF FLATS	Total		Site 1		Site 2		Site 3	
	Feb	May	Feb	May	Feb	May	Feb	May
Toilet out of order	*	*	**		**		**	
a) rating								
did not occur	88.6	88.7	87.8	88.6	92.4	85.3	85.3	92.1
practically a whole month	4.7	4.5	10.0	6.8	1.9	4.9	2.9	2.0
net improvement	same		same		worse		better	
b) impression of change								
net improvement	3.8		0.0		1.0		9.9	
Leaks in the ceiling	*	*	**		**		**	
a) rating								
did not occur	80.3	85.6	93.3	92.0	72.6	83.3	76.9	82.2
yes, a big problem	10.3	5.2	3.3	2.3	15.1	7.8	11.5	5.0
net improvement	better		same		better		better	
b) impression of change								
net improvement	not available		not available		not available		not available	
Rats/Mice in flat	**	**	*		*		*	
a) rating								
none	82.7	89.0	82.2	85.2	85.8	92.2	79.8	89.1
a lot	5.3	1.0	7.8	2.3	0.9	1.0	7.7	0.0
net improvement	better		better		better		better	
b) impression of change								
net improvement	21.6		0.0		30.0		35.7	
Cockroaches in flat	**	**	**	**	**	**	**	**
a) rating								
none	56.0	59.5	15.6	15.9	78.3	87.3	68.3	69.3
a lot	20.7	9.3	48.9	19.3	5.7	2.0	11.5	7.9
net improvement	better		better		better		bit better	
b) impression of change								
net improvement	19.2		16.2		14.3		27.0	
Ants in flat	**	**	**	**	**	**	**	**
a) rating								
none	60.7	68.0	37.8	55.7	60.4	62.7	80.8	84.2
a lot	21.7	9.3	36.7	9.1	24.5	15.7	5.8	3.0
net improvement	better		much better		much better		better	
b) impression of change								
net improvement	25.0		30.2		15.0		33.3	

\*\* significant at the .05 level  
 \* significant at the .10 level

Note: Figures in the table are based on responses to questions concerning the condition of buildings and flats, and the improvement after three months of private management.

TABLE 4  
EXPERIENCE WITH REPAIRS:  
INDIVIDUAL SITES AND ALL SITES COMBINED

Site 1=OLSO  
Site 2=Mosremzhilservice  
Site 3=Santexnika-Complex

	<u>Total</u>		<u>Site 1</u>		<u>Site 2</u>		<u>Site 3</u>	
	Feb	May	Feb	May	Feb	May	Feb	May
Repairs needed in past two months	**	**		**		**		**
none	55.3	63.0	46.7	45.3	66.0	72.5	51.9	68.3
yes	44.7	37.0	53.3	54.7	34.0	27.5	48.1	31.7
			fewer	more	fewer		fewer	
Promise of repair within...	•	•		•		•		•
1 day	60.4	58.5	56.4	62.5	60.9	64.7	64.7	50.0
no concrete promise made	24.0	16.9	25.6	8.3	21.7	11.8	23.5	29.2
time could not be set	7.3	3.1	10.3	4.2	4.3	5.9	5.9	0.0
net improvement	better		much better		better		worse	
Repairs made within promised time	•	•						
yes	42.0	59.0	40.5	68.2	35.7	53.3	48.6	54.2
no	37.0	29.5	37.8	18.2	35.7	26.7	37.1	41.7
net improvement	better		much better		much better		better	
Were repairs eventually made?				•		•		•
yes, during first visit	42.4	62.7	39.0	68.2	26.9	64.3	59.4	56.5
re-requested, but no result	17.2	8.5	22.0	13.6	19.2	7.1	9.4	4.3
net improvement	much better		much better		much better		ambiguous	
Satisfied with quality of repairs?								
no	34.4	30.8	42.9	35.0	25.9	30.8	32.3	26.3
yes	8.6	11.5	8.6	5.0	3.7	23.1	12.9	10.5
net improvement	better		bit better		better		ambiguous	

- significant at the .05 level
- significant at the .10 level

Note: Figures in the table are based on responses to questions concerning the condition of buildings and flats, and the improvement after three months of private management.

TABLE 5  
 KNOWLEDGE OF CURRENT MAINTENANCE RESPONSIBILITY:  
 INDIVIDUAL SITES AND ALL SITES COMBINED

Site 1=OLSO  
 Site 2=Mosremzhilservice  
 Site 3=Santexnika-Complex

	<u>Total</u>	<u>Site 1</u>	<u>Site 2</u>	<u>Site 3</u>
<b>Persons responsible for maintenance**</b>				
RAIU	1.0	1.1	0.0	0.0
do not know name of firm	56.7	45.5	58.8	64.4
OLSO	12.0	37.5	0.0	2.0
Mosremzhilservice	5.8	0.0	13.7	3.0
Santexnika-Complex	2.7	0.0	2.0	5.9
<b>Contractor responsible for...**</b>				
for _____ (fill in the blank)	12.4	10.2	24.5	2.0
for all maintenance	11.3	21.6	6.9	6.9
do not know	76.3	68.2	68.6	91.1
<b>Month contractor began</b>				
January	1.9	2.3	0.0	5.3
February	3.8	2.3	2.3	10.5
March	87.6	90.7	90.7	73.7
April	6.7	4.7	7.0	10.5
<b>Persons responsible for making management decisions</b>				
RAIU	10.0	9.1	10.8	9.9
DES	3.4	4.5	2.9	3.0
committee of a residents association	0.3	1.1	0.0	0.0
meeting of a residents association	0.0	0.0	0.0	0.0
group of residents	0.7	0.0	1.0	1.0
do not know	85.6	85.2	85.3	86.1
<b>Amount tenant would pay with the RAIU**</b>				
less	2.7	5.7	1.0	2.0
same	36.4	48.9	38.2	23.8
more	0.3	1.0	0.0	0.0
do not know	60.5	44.3	60.8	74.3
<b>Other sources of income for contractor*</b>				
subsidy from municipality	79.5	75.0	92.3	50.0
rent from commercial space	7.7	4.2	7.7	50.0
do not know	12.8	20.8	0.0	0.0

- \*\* significant at the .05 level
- \* significant at the .10 level

TABLE A.1  
COMPARISON OF HOUSING ATTRIBUTES AND QUALITY OF MAINTENANCE

RESPONDENT OPINION	<u>Demonstration</u>	<u>Moscow</u>
Condition of Public Spaces		
Condition of entryway**		
very bad	27.3	13.6
bad	38.7	32.9
acceptable	31.0	42.5
good	2.7	9.9
very good	0.3	1.2
Lights in lift out of order**		
did not occur	14.3	21.4
once and less than a day	6.0	11.5
twice	10.7	14.7
three times	19.3	13.3
practically a whole month	49.7	39.1
Entry security system out of order**		
did not occur	13.5	13.6
once and less than a day	5.7	4.2
twice	9.6	3.4
three times	13.1	2.7
practically a whole month	58.1	76.2
Trash/Debris in hallways*		
did not occur	36.0	42.3
once and less than a day	15.0	15.0
twice	18.7	12.9
three times	8.7	7.9
practically a whole month	21.7	21.9
Refuse chute area not clean*		
did not occur	69.3	73.3
once and less than a day	10.1	9.0
twice	9.5	6.0
three times	2.6	5.6
practically a whole month	8.5	6.0
Smell of urine and excrement		
did not occur	55.3	55.7
once and less than a day	14.3	13.1
twice	9.0	11.8
three times	6.0	5.4
practically a whole month	15.3	13.9

	<u>Demonstration</u>	<u>Moscow</u>
Snow/Ice around entryway not cleared**		
did not occur	57.2	77.1
once and less than a day	14.7	6.6
twice	9.7	5.8
three times	4.3	3.7
practically a whole month	14.0	6.8
Lift out of service		
did not occur	26.8	30.9
once and less than a day	22.6	22.7
twice	19.6	19.9
three times	19.6	15.9
practically a whole month	11.5	10.6
Condition of Flat		
Heat was out**		
did not occur	49.0	64.1
once and less than a day	16.8	14.8
twice	16.1	11.2
three times	12.8	6.5
practically a whole month	5.4	3.4
Electric heaters/oven had to be used**		
did not occur	76.3	76.4
once and less than a day	2.0	6.4
twice	7.0	7.2
three times	10.0	4.1
practically a whole month	4.7	6.0
Had been without hot water**		
did not occur	37.0	51.4
once and less than a day	26.3	21.8
twice	15.3	15.0
three times	15.3	8.0
practically a whole month	6.0	3.9
Toilet out of order**		
did not occur	88.6	81.7
once and less than a day	4.0	6.7
twice	2.0	3.6
three times	0.7	2.1
practically a whole month	4.7	5.9
Too much heat**		
never	79.3	84.1
occasionally, some rooms	13.0	9.5
occasionally, all rooms	0.7	2.8
frequently, some rooms	1.7	2.3
frequently, all rooms	5.3	1.3

	<u>Demonstration</u>	<u>Moscow</u>
Leaks in the ceiling**		
did not occur	80.3	73.6
yes, in one area	9.0	13.6
yes, a major problem	10.3	12.0
do not know	0.3	0.9
Rats/Mice in flat**		
no	82.7	70.6
yes, rare occurrence	12.0	20.6
yes, a lot	5.3	8.7
Cockroaches in flat**		
no	56.0	38.1
yes, rare occurrence	23.3	37.7
yes, a lot	20.7	24.1
Ants in flat**		
no	60.7	66.3
yes, rare occurrence	17.7	20.7
yes, a lot	21.7	13.1
Experience with Maintenance		
Repairs needed in past two months		
none	55.3	52.3
yes	44.7	47.7
Phone call resulted in promise of repair within...**		
1 day	60.4	44.0
2 days	3.1	9.7
3-7 days	4.2	7.6
2 weeks	1.0	1.8
no concrete promise made	24.0	30.6
time could not be set	7.3	6.3
Were repairs made within promised time?		
yes	42.0	40.8
with small delay	12.0	10.7
with long delay	9.0	7.5
had not been	37.0	41.0
Were repairs eventually made?		
yes, during first visit	42.4	40.9
yes, but had to re-request	8.1	8.6
yes, but had to make several requests	9.1	6.7
yes, but had to call authorities	1.0	3.2
did not even try to re-request	22.2	18.5
re-requested, complained, no result	17.2	22.1

	<u>Demonstration</u>	<u>Moscow</u>
Satisfied with quality of repairs?		
no	34.4	28.2
more no	25.8	26.6
more yes	31.2	38.9
yes	8.6	6.3
Satisfied with maintenance of building? **		
no	26.3	21.6
more no	46.3	39
more yes	27.0	38.3
yes	0.3	1.1
Bldg's main maintenance/management problems		
cleanliness	25.0	25.8
routine repair of common area **	25.0	31.2
security system **	48.0	34.6
light in halls/walkways	40.3	37.2
refuse disposal *	4.3	7.2
lift **	11.7	16.8
heat **	26.0	14.0
hot water	8.7	8.4
leaks into flat/water damage *	15.0	11.5
response to service calls	11.3	14.4
rats, mice, cockroaches	15.7	16.4
other *	12.3	9.0
Privatization status *		
did	35.7	26.3
will	19.3	27.5
might	34.3	31.7
won't	7.0	8.2
unclear	3.7	6.3
INTERVIEWER OPINION		
Safety hazards requiring significant repair **		
none	29.0	62.3
at least one major safety hazard	42.3	29.5
two or more	28.7	8.2
Trash/Debris visible in hall/entryways, stairs **		
none	36.3	56.8
some trash/debris visible	37.7	35.9
much trash/debris visible	26.0	7.3
Smell of refuse or backed-up plumbing **		
in common areas		
no smells	53.7	64.0
faint smells	20.7	23.3
noticeable smells, in one area	20.0	7.8
noticeable smells in many common areas	5.7	5.0

	<u>Demonstration</u>	<u>Moscow</u>
Signs of failure to perform routine cleaning**		
none	4.0	21.2
1-2 times	33.7	47.6
3-4 times	29.0	22.4
5+ times	33.3	8.8
Overall impression of interior of flat**		
needs major rehabilitation	3.0	6.6
needs some repair and rehabilitation	28.0	24.4
generally good condition	60.0	57.7
excellent condition	9.0	11.3
Overall impression of the building**		
needs major rehabilitation	23.0	13.5
needs some repair and rehabilitation	63.0	34.1
generally good condition	14.0	49.3
excellent condition	0.0	3.1

\*\* significant at the .05 level

\* significant at the .10 level

TABLE A.2  
COMPARISON OF HOUSING ATTRIBUTES AMONG DEMONSTRATION SITES

Site 1=OLSO

Site 2=Mosremzhilservice

Site 3=Santexnika-Complex

	<u>Total</u>	<u>Site 1</u>	<u>Site 2</u>	<u>Site 3</u>
Total space (sq.m.)	56.8	71.7	51.4	49.3
Number of rooms	2.4	2.7	2.2	2.2
Kitchen size (sq.m.)	7.8	8.8	7.8	6.9
Ceiling height (cm.)	277.8	303.1	269.3	264.5
Total space/Living space	1.6	1.5	1.5	1.5
Type of unit				
single	93.7	81.1	100.0	98.1
communal	6.3	18.9	0.0	1.9
Type of building				
ramshackle stock	0.0	0.0	0.0	0.0
Krushchevka	22.0	0.0	20.8	42.3
brick of Stalin era	44.7	100.0	20.8	21.2
70's design	0.0	0.0	0.0	0.0
new panel	31.0	0.0	51.9	36.5
modern brick, improved	2.3	0.0	6.6	0.0
Number of floors in building				
2-5	22.0	0.0	20.8	42.3
6-10	27.6	92.2	0.0	0.0
11-15	45.3	7.8	65.1	57.7
16 +	5.0	0.0	14.2	0.0

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