## **Exploring Housing Subsidies to Households in Russia**

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February 11, 2005

### A. Context and Purpose

The Russian government early on recognized the importance of reforming housing and communal services (HCS)<sup>1</sup> from a system where rents and utilities were nearly free to one where residents paid the costs of their housing. Since the early 1990s, a series of reforms have been undertaken to improve cost recovery while protecting vulnerable families. Originally, the government thought full cost recovery could be achieved in five years; however, the target date has been moved back several times and is currently left to the discretion of the regions.<sup>2</sup> Since beginning reforms, cost recovery from households had increased substantially to about 60% (including subsidies). If subsidies are excluded, however, household payments were estimated to cover only about 40% of costs in 2001.<sup>3</sup> The low level of cost recovery means that HCS subsidies are substantial costing an estimated 4% of GDP.<sup>4</sup> Only public spending for pensions exceeds that for housing and communal service subsidies.<sup>5</sup>

The HCS sector benefits from three main types of subsidies: (a) tariffs that are too low; (b) l'goti (or discounts or exemptions for certain population sub-groups; and (c) housing allowances. Two groups of households are systematically excluded from access to housing subsidies: those without access to any communal services and those renting privately. About 12% of households lack all communal services. They are primarily rural households living in individual houses. About 2-3% of households rent privately. Private renters do not have access to either l'goti or housing allowances (see Box 1 for a description of the two programs).

Although the overall level of subsidies and the problem of tariffs are reasonably well understood, a lack of data has meant that little has been known about the recipients of the two formal HCS subsidy programs: I'goti and housing allowances. The recent availability of a new nationally representative survey, the NOBUS, for the first time allows formal housing subsidy recipients to be identified.

**Purpose.** The objective of this paper is to use the newly available NOBUS data, which is described in detail below, to analyze housing subsidy (l'goti and housing allowances) recipients. Because of the way the two formal subsidy programs are structured (l'goti are available to many households without consideration for need, while housing allowances are targeted), we would expect to find that<sup>6</sup>:

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<sup>&</sup>lt;sup>1</sup> Communal services include district heating, water and sewerage, hot water, gas, apartment-building maintenance and repair and garbage collection.

<sup>&</sup>lt;sup>2</sup> For a summary of legislative reforms, see Decoster and Puzanov (2004), part 2.

<sup>&</sup>lt;sup>3</sup> Government of the Russian Federation. 2001. Reform and Upgrading of the Housing and Utilities Sector in the Russian Federation. Subprogram. Resolution No. 797 (November 17, 2001).

<sup>&</sup>lt;sup>4</sup> For a summary of the results of different studies, see ECSIE. 2003. Housing and Communal Services in Russia: Completing the Transition to a Market Economy, p. 7. See also, World Bank (2005-forthcoming). <sup>5</sup> World Bank. 2004. *Russian Federation Poverty Assessment.*, Table 8.1.

<sup>&</sup>lt;sup>6</sup> Although we lack a comparator survey to test this, one would also expect that as tariffs/rents increase, housing allowance coverage should also increase.

- as housing allowances are targeted towards poorer households, allowances would reach many fewer households, those households should be poorer and should live in smaller housing units;
- as l'goti are categorical privileges, l'goti recipients would more closely resemble the population as a whole in terms of both income and non-income dimensions of poverty;
- as both l'goti recipients and housing allowance recipients benefit only if they have access to utilities, both kinds of subsidy recipients are more likely to live in urban areas than rural, and to live in apartments than houses;
- as l'goti are a federal program and as housing allowances are provided in accordance with federal standards, regions would differ relatively little in terms of the incidence of these subsidies.

## Box 1: Overview of the two formal housing subsidy programs (l'goti and housing allowances).

The first subsidy program (l'goti or categorical privileges/entitlements) provides discounts or exemptions on bills for housing and communal services to households who belong to various groups. The largest group of l'goti recipients are pensioners (see Appendix 3). Service-providers generally are not fully compensated for l'goti, which result in arrears. Some groups receive l'goti because they are deemed especially meritorious or entitled, while other groups receive l'goti based on their work history or current occupation. L'goti proliferated in the early transition years and now about 40% of households benefit from this subsidy. Most l'goti are federally mandated, but in many regions they have been augmented by additional local l'goti (i.e., for police). L'goti for housing and communal services are not targeted in any way by income.

The second subsidy program, <u>housing allowances</u>, was introduced in 1994 as a program targeted to the poor in order to mitigate the effects of increasing housing and communal services costs. Housing allowances reached only about 6.7% of households in 2003 (NOBUS, 2003). Households whose housing and communal services costs exceed the maximum admissible share of total family income are eligible for housing allowances. Alternatively, if a family's average per capita income is below the regional minimum subsistence level, the admissible share is adjusted with the ratio of the family income to the minimum subsistence level, which means low-income families are eligible for housing allowances with a lower admissible share. Housing allowances are calculated using one of the two-methods described below, although the second method was discontinued at the beginning of 2005.

Both l'goti and housing allowances are jointly financed by the central and sub-national levels of government. In the case of l'goti, the central government has assumed responsibility for some categories (invalids, war veterans), while other categories (labor veterans, etc.) should be paid for by the regions. The central government also provides some financing to regions for housing allowances provided the regions follow federal eligibility guidelines.

#### **Determination of the Housing Allowance**

Eligibility: The federal norms for floor space (households with more floor space should only be

compensated for the space within the federal norms) are shown below (set until 2008).

• 18 m2 per person in households with three or more persons;

• 42 m2 for two-person households;

• 33 m2 for single-person households.

Utility service consumption norms: three climatic zones with different norms.

Income test: Formal and informal (e.g., family plot) family income and assets divided by number

of family members.

Entitlements: If average family per capita income > MSL:

 $HA = \max\{0, \exp_{HUS} - (0.22 * inc_{FAM})\}$ 

If average family per capita income < MSL:

Option 1: HA =  $\exp_{HUS} - [(0.22 * inc_{FAM} / MSL)* inc_{FAM}]$ Option 2: HA =  $\exp_{HUS} - 0.5 * wage_{MIN} * size_{FAM}$ 

Application: Local housing office or other local authority in charge of housing allowances.

Payment: Direct transfer to housing or utility provider.

Definitions: HA=housing allowance; MSL=regional minimum subsistence level; exp<sub>HUS</sub>=HUS costs based on social standards; inc<sub>FAM</sub>=total family income; wage<sub>MIN</sub>=official minimum wage;s size<sub>FAM</sub> =

number of household members.

**Available data sources.** The Government's collaboration with the Bank in preparation for the recently completed Poverty Assessment (2004) meant that for the first time data from the 1997-2000 Household Budget Surveys were made available to Russian researchers as well as to the Bank's poverty team. This provided a unique opportunity to carry out a more robust analysis of housing and other subsidies than had been possible before when the only data source was the much smaller RLMS.<sup>7</sup>

But the use of the HBS has proven to be problematic for several reasons. First, the questionnaire used does not enable researchers to distinguish between the two different types of housing subsidies. This means it is not possible to compare those who receive l'goti with those who receive housing allowances. Secondly, the incidence of households

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<sup>&</sup>lt;sup>7</sup> See, for example Gassman et al (2003). "Review of Targeted Social Assistance in Russia." Mimeo. and Decoster and Puzanov (2004). "The Distributional Effect of the Transition to Full Cost Coverage and the Introduction of a Housing Allowance Program in Russia."

who receive subsidies calculated from HBS data was only 17% in 2000. This is far below other estimates of the share of households receiving housing subsidies, which usually average around 40%. It is also below the incidence reported in the NOBUS (discussed below). The low incidence of housing subsidies in the HBS calls into question the robustness of the data in terms of housing subsidy analysis. Additionally, the age of the HBS data may make it less relevant as housing and communal service payments have increased from year to year.

Shortly after the 1997-2000 HBS data were made available, the 2003 NOBUS data were released. This survey interviewed 44,493 households and is representative for 46 regions in Russia. Unlike the HBS, households interviewed for the NOBUS were asked directly if they received federal categorical privileges ("l'goti" -- discounts or exemptions on the housing payment and utilities) during the past 3 months. They were also asked if they received housing allowances. As a result, for the first time it is possible to separate out allowance recipients from l'goti recipients. The NOBUS also includes informal and formal sources of income and detailed information on expenditures (including on housing and communal services), which allows calculation of a relatively robust welfare indicator similar to that used in the HBS.

This study, then, uses the newly available NOBUS data to profile who receives the different kinds of subsidies, how subsidy status relates to payments, and what the determinants are of receiving the different subsidies.

**Structure of the report.** The report begins with an analysis of how housing and communal service payments by different types of households have changed since the mid-1990s, using data from the RLMS. The next section compares l'goti and housing allowance recipients with the general population in terms of incidence, poverty, household characteristics, housing type, settlement size, region, and access to communal services. This is followed by an analysis of bills and payments by households for housing and communal services. Next, the determinants of housing subsidy status are investigated using a multinomial logit model. Finally, the results are reviewed and implications for future research are summarized.

## B. The increasing cost of housing and communal services

**Housing and communal service reforms have meant households pay more.** Figure 1 provides a snapshot of the share of household expenditures used for housing and communal services payments by quintiles from 1995 to 2002. This share increased steadily from 1995 to its 1998-99 peak, dropped in 2000, but has increased in each year since then. If in 1989 housing and communal services expenditures accounted for only about 1 percent of all household expenditures, by 2002 the share was much higher. This

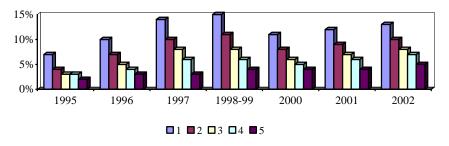
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<sup>&</sup>lt;sup>8</sup> Decoster and Puzanov (2004), Table 5.

increase in expenditures is consistent with government policies to move the costs for housing and communal services to the consumers.<sup>9</sup>

Although poor households in Russia devote a larger share of expenditures to HCS than in the past, poor households in the US are expected to pay much more. In 1995, poor households (q1) used about 7% of household expenditures for HCS while better off households (q5) used only 2%. By 2002, HCS accounted for about 13% of poor household expenditures, but only 5% of the expenditures of better off households. In comparison, low-income US households who receive rental housing assistance are expected to pay 30% of income for rent and utilities. The increasing share of HCS expenditures in Russia results largely from tariff increases. Most housing and communal services are billed based on normative consumption (i.e., per capita or per square meter) so households cannot reduce costs by reducing consumption when faced with increased tariffs. As a result, increased tariffs automatically increase household expenditures.

Figure 1: Housing and communal services as share of total household expenditure, by quintile



Source: RLMS

**Poor households in Moscow and St. Petersburg have been hardest hit by tariff increases.** As shown in Table 1, poor (q1) households in Moscow/St. Petersburg have approximately tripled (from 6% in 1995 to 20% in 2002) the share of expenditures for housing and communal services. During this same period, poor households in urban areas outside Moscow and St. Petersburg more than doubled the share of HCS expenditures, increasing from 7% to 15%. A similar pattern is found in rural areas where poor households nearly doubled their HCS expenditures from 4% in 1995 to 7% in 2002. Regardless of location, the best off households pay relatively little for HCS, which

require less than 5 percent of household expenditures.

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<sup>&</sup>lt;sup>9</sup> The increase largely results from increased expenses for *utilities*, not maintenance or rent and there is a risk that future utility increases will continue this process of crowding out maintenance/rent and thus continuing the deterioration of the housing stock.

Table 1: Share of housing and communal services in total expenditure, by location

	1995	1996	1997	1998- 1999	2000	2001	2002
Moscow/St. Pet	ersburg						
Q1	6%	15%	14%	17%	23%	19%	20%
Q2	5%	12%	13%	13%	11%	13%	13%
Q3	3%	8%	9%	10%	7%	11%	10%
Q4	2%	5%	7%	7%	7%	7%	8%
Q5	1%	3%	3%	4%	4%	4%	5%
Other Urban							
Q1	7%	11%	15%	17%	13%	14%	15%
Q2	5%	8%	11%	12%	9%	9%	11%
Q3	4%	5%	8%	9%	6%	8%	9%
Q4	3%	4%	7%	7%	6%	6%	7%
Q5	2%	3%	3%	5%	4%	5%	5%
Rural							
Q1	4%	5%	10%	10%	6%	7%	7%
Q2	2%	3%	6%	6%	5%	5%	6%
Q3	2%	3%	4%	4%	6%	4%	5%
Q4	2%	2%	5%	4%	3%	3%	4%
Q5	1%	2%	2%	3%	3%	2%	3%

Source: RLMS

**Urban households pay more for HCS than rural households.** Although Table 1 allows us to conclude that the share of HCS expenditures is higher for urban households than rural ones, the result does not necessarily mean that housing costs are higher in urban areas. When HCS costs are calculated, however, the pattern remains the same (see Table 2). In general, HCS payments are highest in the biggest cities and lowest in rural areas. The results are what would be expected since urban households are more likely to have access to communal services than rural households.

The RLMS data enabled us to look at what people actually paid for housing over time. However, the data do not permit identification of l'goti or housing allowance recipients. Since more than 40% of households receive either l'goti or housing allowances, and since recipients of either subsidy simply owe less, the first step in understanding the impact of changing either l'goti or housing allowances would be to analyze who currently receives these subsidies.

Table 2: Average annual payments for housing and communal services (in June 1992 rubles)

	1995	1996	1997	1998-	2000	2001	2002
				1999			
Moscow/St. Per	tersburg						
Q1	208	409	348	312	422	385	569
Q2	273	518	478	398	335	488	582
Q3	220	508	570	429	377	580	647
Q4	227	534	540	413	487	583	745
Q5	452	574	586	479	526	821	1043
Total	290	531	548	427	459	631	<i>791</i>
Other Urban							
Q1	208	283	327	259	272	318	337
Q2	268	343	420	337	318	374	480
Q3	282	348	476	361	323	434	529
Q4	369	368	542	448	376	479	607
Q5	417	536	657	783	657	874	910
Total	312	379	499	457	399	509	590
Rural							
Q1	132	157	220	169	132	172	182
Q2	143	159	232	182	219	234	282
Q3	178	237	265	182	342	252	307
Q4	244	198	460	265	237	251	336
Q5	188	260	314	326	413	360	407
Total	176	203	302	225	257	244	292

Source: RLMS

# C. How housing subsidy recipients compare with the general population

This section profiles I'goti and housing allowance recipients using the NOBUS data to provide a snapshot of the incidence of the different subsidies and how they correspond to differences in consumption levels, household and housing characteristics, location, and households who cannot benefit either because they lack all utilities or because they live in privately rented housing.

### How many households benefit from housing subsidies?

Nearly half (44%) of households receive housing subsidies (l'goti or allowances). As Table 3 below shows, the incidence of housing subsidies, especially l'goti, is quite high. In a situation where so many households benefit from housing subsidies, changing or eliminating subsidies is politically problematic. As a result, it is understandable why housing subsidies, especially l'goti, have not yet been substantially changed.

Table 3. Share of households and population living in households who receive l'goti, housing allowances, both or neither

	% House-	% Population
	holds	
L'goti	37.7	33.2
Allowance	3.3	3.6
Both	3.3	3.0
None	55.7	60.2
Total HHs	100.0	100.0

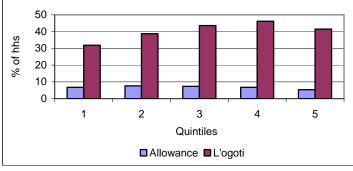
N=44,483 households Source: NOBUS 2003.

**L'goti are much more prevalent than housing allowances.** Although 41% of households reported receiving categorical discounts or exemptions during the prior three months, only 7% reported being eligible for housing allowances during the preceding month. Of households receiving l'goti, fewer than 5% reported that they were exempt from paying for housing and communal services. The overwhelming majority of households receiving l'goti received a 50% discount on the bill.

### Are the poor more likely to receive housing subsidies?

L'goti, which are not intended to be targeted, do not protect the poor. The figure below shows the incidence of l'goti and allowances by expenditure quintile. The share of population receiving l'goti *increases* with income. Regardless of quintile, households are much more likely to receive l'goti than housing allowances. But l'goti are not well targeted. The share of l'goti recipient households increases with income through quintile four, although it decreases slightly from quintile four to quintile five. Nonetheless, households in quintile five (i.e., the best off households) are more likely to receive l'goti than those in either quintiles one or two (the worst off households).

Figure 2: Share of HHs receiving allowances and privileges by quintile



Source: NOBUS 2003

Housing allowances, which should be targeted, do not perform well. As the above figure shows, quintile two households are most likely to receive a housing allowance; however, the differences among incidence in the first four quintiles are very small.

About 6.8% of households in the bottom quintile receive housing allowances, followed by 7.6% in quintile 2, 7.3% in quintile 3, 6.8% in quintile 4 and 5.4% in quintile 5. Housing allowances reach few households and the overwhelming majority of the poorest families do not receive them. As can be seen in the below figure, housing allowances compare poorly on targeting performance.

Mexico PROGRESA Colombia Social Assistance Colombia Scholarship Chile Pension Assistance Chile Cash Assistance Armenian Familiy Poverty Benefit Kyrgyzstan Unified Monthly Benefit Kazakhstan Targeted SA Serbian Family Assistance (MOP) Romanian Minimum Income Guarantee Temporary Assistance for Needy Families, US Food Stamp, US Decentralized Social Assistance, RF HUS Allowances, RF Child Allowances, RF 20 40 100 Share of Funds Captured by the Poorest Quintile

Figure 3: Comparative Targeting Performance (Share of Funds Captured by the Poorest Quintile in Selected Countries)

Source: World Bank (2004).

## Do housing subsidy recipients differ with respect to household characteristics?

The table below summarizes the differences among households receiving l'goti and allowances with all households on a number of important dimensions, including age, level of education, gender and labor market status of the households head, as well as the average household size.

Table 4. Comparison of l'goti and allowance recipients with all households for key household characteristics

	All households l	L'goti recipients A	llowance recipients N	Non-recipients
Ave. age of HH head	53	64	53	46
Education of HH head				
Secondary	44.81%	37.37%	50.02%	49.57%
Higher	20.82%	17.70%	15.42%	23.42%
Female HH head	64.04%	68.23%	74.82%	60.32%
Unemployed HH head	2.72%	1.19%	3.37%	3.74%
Inactive HH head	44.43%	72.62%	48.54%	24.75%
HH size	2.6	2.3	2.5	2.8

### Do housing subsidy recipients differ by settlement size or housing type?

The table below enables us to compare l'goti recipients and housing allowance recipient households with all households in the sample in terms of location (urban, settlements of urban type (PGT) or rural) and by type of housing.

Table 5. Comparison of share of all households, l'goti recipients and housing allowance recipients living in different settlement sizes and housing types

	apartment	Communal apartments & hostels	house/ part of house	Total
All households				
Urban	52.8	4.3	5.7	62.7
<20t,PGT*	6.6	0.3	4.2	11.2
Rural	6.8	0.4	18.9	26.1
Total	66.3	5.0	28.7	100.0
L'goti Recipients				
Urban	56.2	2.1	6.1	64.4
<20t,PGT*	6.2	0.2	4.7	11.1
Rural	5.9	0.3	18.4	24.5
Total	68.2	2.6	29.2	100.0
<b>Allowance Recipients</b>				
Urban	66.7	5.1	1.1	72.9
<20t,PGT*	10.7	0.6	1.1	12.4
Rural	9.4	0.4	5.0	14.8
Total	86.8	6.0	7.2	100.0
Non-recipients				
Urban	49.8	5.7	5.6	61.0
<20t,PGT*	6.6	0.4	4.0	11.0
Rural	7.3	0.6	20.0	27.9
Total	63.7	6.7	29.6	100.0

<sup>\*&</sup>quot;Poselki gorodskogo tipa" (settlements of urban type, population under 20,000)

### Households receiving housing subsidies are more likely to live in urban areas.

Although 26% of all households live in rural areas, fewer than 15% of housing allowance recipients live in rural areas. Housing allowances are strongly biased towards urban areas. L'goti are somewhat biased towards urban areas as only 24.5% of recipients live in rural areas.

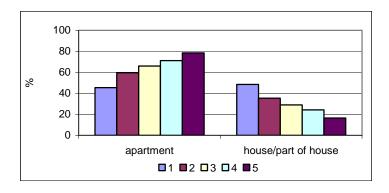
### Households receiving housing subsidies are more likely to live in apartments.

Housing allowance recipients are especially likely to live in apartments and nearly 87% did so. This contrasts sharply with the 66% of all households who live in apartments. L'goti recipients were somewhat more likely than average to live in apartments—68% lived in apartments. The pattern can be seen most clearly in the share of households living in houses or part of houses. Only 7.2% of housing allowance recipients and 18.4% of l'goti recipients live in houses while for the population as a whole the share of households is 28.7%.

**Higher income households are more likely to live in apartments and lower income households more likely to live in houses.** Not surprisingly, the percentage of population living in apartments progressively rises along the income scale while the opposite is true for house/part of a house (see Figure 4, below). Nearly four-fifths of those in the highest quintile live in apartments while only one-fifth of them live in houses. The higher incomes among apartment dwellers may partially explain why the share of l'goti

recipients increases with income quintile since l'goti recipients are more likely to live in apartments than in houses.

Figure 4: Housing type, by quintile



Source: NOBUS survey, 2003

Households receiving l'goti have more living space per capita. As the table below shows, although apartment sizes for l'goti recipient households and households not receiving subsidies are about the same, the smaller size of l'goti households means householders have more living space per capita on average (18.6 sq. meters vs. 16.4 sq. meters for all households). Housing allowance recipients live in smaller units overall and have less space per capita (15.1 sq. meters vs. 16.4 sq. meters for all households).

Table 6. Total living space and living space per capita by subsidy status.

	All households	L'goti recipients	Allowance recipients	Non-recipients
Living Space	34.5	34.2	30.9	35.0
Living space per capita	16.4	18.6	15.1	15.0

Source: NOBUS survey, 2003

L'goti recipients benefit not only from more living space per capita, but also from larger subsidies. Tariffs for district heating and building maintenance are set based on the size of the unit. Since l'goti are not capped but discount the total utility bills, residents in larger apartments with more space per capita receive a *greater* amount in subsidies than those in smaller apartments. Housing allowances compensate families for all utility costs above a certain share of family income. However, at the same time, housing allowances do not compensate for costs for that portion of an apartment above the federal norms for housing space. Since utilities bill households for district heating (the most costly utility) and maintenance based on housing space, this effectively limits housing allowance compensations for these services. Payments will be discussed in greater detail

# Does the incidence of l'goti and housing allowance recipients vary by region?

The concentration of l'goti recipients varies by region. When location quotients (LQs) are calculated for the 46 regions in the NOBUS survey for which the sample is representative, the disparity among regions is clear (Annex 1). LQs allow comparison of the share of l'goti recipients in a given region with the share of l'goti recipients in the population as a whole, LQs <1 are regions that have fewer l'goti recipients than is true for the population as a whole and LQs > 1 are those that have more than expected. Chita, Dagestan, Kamchatka and Tyumen have a smaller share of l'goti recipients than expected with LQs of about 0.7. At the other end of the spectrum, Ryazan oblast has a LQ of 1.29, which represents a somewhat greater concentration of l'goti recipients than expected.

Regions with higher incidences (or LQs) of l'goti recipients are located in the western part of the country. In the figure below, lightly shaded regions are those with below average shares of l'goti recipients, while darkly shaded regions are above average. The geographic distribution is quite clear as regions that are below average in terms of shares of l'goti recipients are overwhelmingly found in the east.

Location Quotients

0.7 - 0.9

0.9 - 1.1

1.1 - 1.3

No data

Figure 5. Relative concentration of l'goti recipients by region (location quotients)

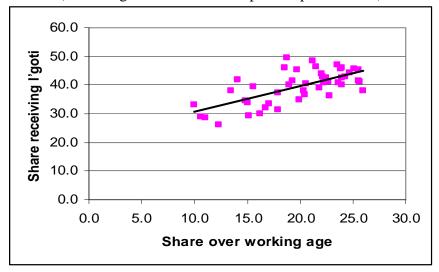
Source: NOBUS 2003.

**Regions with more pensioners have more l'goti recipients.** As the upward slope of the trend line in the figure below shows, the share of pensioners is strongly and positively

correlated with the incidence of l'goti households. The relationship is strong (the adjusted  $R^2$  =0.45) and significant (at 1% level). As shown in Appendix 3, the largest group entitled to l'goti are pensioners.

Figure 6. Share of l'goti recipient households and share of population over working age in Russian regions

(for 46 regions for which sample is representative)



Sources: Share of l'goti recipients calculated from NOBUS, 2003. Share of population greater than working age from census results (<a href="http://www.perepis2002.ru/ct/html/ALL\_00\_02.htm">http://www.perepis2002.ru/ct/html/ALL\_00\_02.htm</a>; accessed on Feb. 9, 2005).

The incidence of housing allowances varies more than that of l'goti. Annex 1 provides the LQs for housing allowance recipients for the 46 representative regions in the NOBUS survey. Regions such as Tatarstan, Orel, Krasnodar, Kabardino-Balkaria, and Bryansk have fewer than one-fifth of the expected share of housing allowance recipients, while Murmansk, Sakhalin and Kamchatka oblasts have more than three times the expected share. The greater variability in LQs for housing allowances likely reflects the greater latitude extended to oblasts in determining the extent of their participation in this program. It also reflects the great disparities among the regions in terms of providing financing for subsidy programs.

## Housing subsidies benefit only households who have communal services.

Households without access to communal services cannot benefit from either l'goti or housing allowances. In the case of l'goti, bills to households for HCS are reduced by 50%. In the case of housing allowances, eligible households are those who have HCS bills exceeding a certain portion of their incomes. In both cases, households that are not connected to communal services will not be billed and hence cannot benefit. Table 7 provides an overview of households without access to any of the communal services. About 12% of all households in the NOBUS survey lacked all communal services, hence could not benefit from either l'goti or housing allowances.

**Table 7: Households without access to any of the communal services** (N=5196)

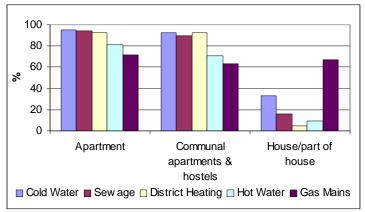
	%
<b>Housing Type</b>	
apartment	14.1
Collective living	1.3
House/part of house	83.9
Other	0.7
Settlement	
Urban	13.2
PGT	15.4
Rural	71.4
Quintiles	
1	35.5
2	20.8
3	16.9
4	16.0
5	10.8

Source: NOBUS, 2003.

Households without access to communal services are generally poor and live in individual houses in rural areas. These results are consistent with what would be expected. In the Soviet Union, the state prioritized construction of new fully served apartment buildings over other kinds of housing. As cities grew, individual houses were replaced by multi-story apartment buildings. People who moved to cities to work in new factories benefited not only from access to higher quality housing (at heavily subsidized rents), but also from better paying jobs.

Households living in apartments benefit from much higher access rates to communal services than those in individual houses. As shown in the figure below, apartment dwellers have much higher connection rates to water (95%), sewerage (94%), district heating (93%) and hot water (81%) than do households in single family houses where the rates are 33%, 16%, 5% and 9% respectively. Only gas access is about the same – 67% of houses are supplied with gas and 72% of apartments. However, households living in houses use gas mainly for heating, while those in apartment buildings use it for cooking. Households living in houses without gas or district heating use wood or coal for heating.

Figure 7: Share of households with access to different communal services by housing type



Source: NOBUS survey, 2003

Access to communal services increases with settlement size. As the figure below shows, connection rates for water, sewerage, district heating and hot water decrease with settlement size. Although more than 90% of urban households have access to cold water, sewerage and district heating, and 83% have access to gas; the rates are substantially lower in rural areas (39%, 25%, 18% and 12% respectively). As expected, rural families without access to district heating or gas are most likely to heat with wood or coal.

Figure 8: Share of households using different utilities by settlement type

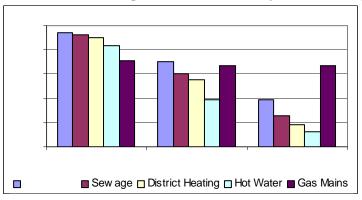


Table 8. Correlation among cold water, sewerage, district heating, hot water and gas mains

			District		
	Cold wa	ter Sewerage	heating	Hot water	Gas mains
Cold water	1.00				
Sewerage	0.81	1.00			
District heatin	g 0.71	0.83	1.00		
Hot water	0.64	0.73	0.71	1.00	
Gas mains	0.14	0.10	0.04	0.08	1.00

Source: NOBUS 2003

Regardless of housing type, lower-income households are less likely to have access to communal services than higher-income households. Table 9 provides access rates to different communal services by income quintile and housing type. With the sole exception of the rate for connection to gas in apartment buildings, connection rates are lowest for quintile 1 households and highest for quintile 5 households. Since gas in apartment buildings is used for cooking, not heating, households without gas use electricity (which was considered a more modern and desirable option) for cooking. For apartment dwellers, 96.8-97.5% of the highest income households are connected to cold water, sewage and district heating, while for low income households (q1), the rates are 86.5%, 81.5% and 79.6% respectively.

Table 9: Use of utilities in each housing type, by quintile

	1	2	3	4	5	Total
Apartment						
Cold Water	86.5	93.7	95.6	96.8	97.5	95.3
Sewage	81.5	91.7	94.9	95.8	97.1	93.9
District Heating	79.6	89.6	93.9	94.9	96.8	92.9
Hot Water	62.6	77.0	82.0	84.1	87.0	81.3
Gas Mains	72.3	75.0	74.0	72.3	67.6	71.6
Communal apartm	ents & l	Hostels				
Cold Water	80.6	88.1	95.5	95.2	97.8	92.1
Sewage	75.2	85.9	93.1	93.7	97.9	90.0
District Heating	80.1	89.2	95.1	94.7	98.3	92.1
Hot Water	53.0	69.5	74.0	73.5	77.8	70.3
Gas Mains	56.7	57.6	64.5	63.8	69.1	62.9
House/part of house						
Cold Water	27.1	33.3	35.6	32.9	38.8	32.9
Sewage	11.7	14.4	16.6	16.9	21.0	15.6
District Heating	2.6	4.5	4.7	5.3	8.4	4.8
Hot Water	6.7	8.6	10.3	9.6	11.9	9.1
Gas Mains	56.7	66.4	70.4	70.6	74.3	66.7
Total						
Cold Water	57.2	72.1	78.2	81.2	87.8	77.2
Sewage	47.1	64.1	72.1	76.6	84.5	71.2
District Heating	42.3	59.5	68.1	73.2	82.2	67.6
Hot Water	34.8	52.4	60.8	65.5	74.1	60.0
Gas Mains	63.7	71.1	72.4	71.5	68.8	69.7

Source: NOBUS survey, 2003

## Housing subsidies benefit only those who rent units from the state or own their units.

### Households renting privately are not eligible for either housing allowances or l'goti.

The table below provides a breakdown of housing tenure by housing type. Only 2.2% of households report living in privately leased apartments. This is an exceptionally small number of private rentals. About 80% of private renters live in apartment buildings. Private renters are found almost exclusively in urban areas. Three-quarters of private renters live in urban areas while the remaining one-quarter are found in settlements of urban type (PGT). Because of the way l'goti and housing allowances are designed and administered, private renters are not eligible (neither l'goti nor housing allowances can be applied to private rents). As a result, these 2.2% of households are not eligible for either housing allowances or l'goti.

Table 10: Tenure status by housing type

		Communal apartments &		
Ownership	Apartment	-	House/part of house	Total
Government	26.1	3.8	1.5	31.4
Self-own (hh)	37.7	0.9	25.3	63.9
Legal entity	0.3	0.1	0.9	1.3
Other form of ownership	0.5	0.1	0.5	1.1
Leased (private)	1.7	0.1	0.4	2.2
Total	66.4	5.0	28.6	100.0

Source: NOBUS survey, 2003

## D. Housing payments and housing subsidies

The NOBUS included questions about how much households were billed for housing and communal services and how much they actually paid. Unlike the HBS, the NOBUS can be used to investigate actual payments by households who receive l'goti or allowances or who do not receive subsidies at all. This section analyzes the survey results for different types of households.<sup>10</sup>

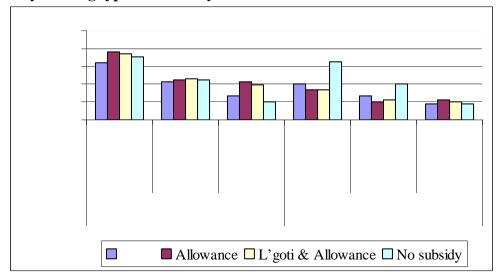
### Bills and payments for housing and communal services

Apartment dwellers are billed and pay more for housing and communal services than those in houses. The figure below shows the average amount billed and paid for housing and communal services for households of different subsidy status and housing

<sup>&</sup>lt;sup>10</sup> The analysis is based on the 41,598 households who reported both billing and payment information (households without any of the communal services were retained and assumed to have received a bill of 0 and made payments of 0).

types.<sup>11</sup> As expected, apartment-dwellers (who are much more likely to be connected to communal services than others and who also need to pay for the upkeep of common areas) report substantially higher bills and payments than households living in individual houses.

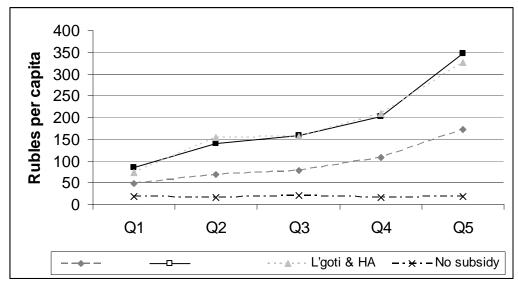
Figure 9. Mean amount billed and paid by households for housing and communal services by housing type and subsidy status



Since subsidies are deducted from (or applied to) the bill, l'goti and housing allowance recipients pay much smaller shares of amounts billed, only 64% and 44% respectively.

Housing subsidies provide greater benefits to higher income groups than to lower income groups. Figure 10 shows the difference between amounts billed and paid by housing subsidy status on a per capita basis. Although a small part of the difference may be due to unpaid bills, the major reason for the difference is the size of the subsidy received by those households. The top three lines show different types of housing subsidy recipients. All three lines are upward sloping, indicating that the difference between amounts billed and paid is greater for richer households. The difference is largest for housing allowance recipients (top two lines). This reflects how housing allowances are structured (i.e., capping the amount a family pays). For housing allowance recipients, the benefit accruing to high-income (q5) households is about three times that accruing to low-income (q1) households. For households who do not receive subsidies, the line is flat showing little difference among the quintiles.

Figure 10. Difference in rubles between amounts billed and paid by housing subsidy status (per capita)



Source: NOBUS 2003

Determinants of total housing and communal services payments

One would expect housing payments to be determined by a number of factors in addition to housing subsidy status. In order to investigate this, a semi-log OLS regression was carried out. <sup>13</sup> The dependent variable was the natural log of housing payments (the sum

 <sup>12</sup> It may also reflect differences in billings as in some areas households eligible for l'goti receive lower bills.
 13 Households who reported no payments were dropped, as were households who were missing housing

<sup>&</sup>lt;sup>13</sup> Households who reported no payments were dropped, as were households who were missing housing payment information. The dropped households included all households without access to any of the communal services (about 5,000), as well as an additional 5,000 households who either reported no

of rent/maintenance, district heating, hot water, cold water and network gas). The explanatory variables included housing subsidy status, consumption per capita, settlement type (urban, PGT, rural), dummy for housing type (apartment vs. house or collective living), housing characteristics (living space, connection to utilities such as district heating, water and gas), characteristics of household head (age, gender, educational status, employment status) and household size. Of the independent variables, only consumption per capita is in log form. In this semi-log model, the coefficient measures the constant proportional or relative change in Y for a given absolute change in X (Gujarati, 1988).

All of the independent variables are highly significant, except for education level and unemployment status of the household head. Gender is somewhat significant, at the 10% level. The results are presented in the table below.

**Table 11. Determinants of Housing Payments (OLS Regression):** Dependent variable: (log) housing and communal services payment

Independent variables	Coefficient	Standard Error
L'goti recipients	-0.36	(0.01)***
Allowance recipients	-0.63	(0.02)***
Per capita consumption	0.36	(0.01)***
Urban	0.27	(0.01)***
PGT	0.15	(0.02)***
Apartment	0.15	(0.02)***
Age (rounded years)	0.00	(0.00)***
HH size	0.20	(0.01)***
Secondary education	0.01	-0.01
Higher education	-0.01	-0.01
Living space m2	0.01	(0.00)***
Female head	-0.02	(0.01)*
Unemployed head	-0.03	-0.03
Inactive head	-0.08	(0.01)***
Gas mains	-0.07	(0.01)***
District heating	0.81	(0.02)***
Water	0.08	(0.02)***
Constant	1.42	(0.08)***

Observations	34,734
R-squared	0.44

Note: Robust standard errors in parentheses: \* significant at 10%; \*\* significant at 5%;

\*\*\* significant at 1%. Dependent variable is in (log) form

Source: NOBUS, 2003.

payments or failed to provide the requested information. Households that received both allowances (which are need based) and l'goti (N=1,563) were included with the allowance recipients, whom they more closely resembled.

Except for gas connections, the observed relationships are consistent with what would be expected. Households connected to gas *pay less* than equivalent households who are not connected to gas, which likely reflects government priorities to extend gas to rural areas where tariffs and collection rates may be lower and where households do not have access to district heating.

The main results include the following.

- As expected, **housing subsidy recipients** (allowances or l'goti) pay less than other households; Allowance recipients and l'goti recipients pay 47% and 30% respectively less than non-recipients (baseline) for HCS payments.
- Better off households pay more for HCS than poorer households. For each one percent increase in consumption per capita, HCS payments increase by 0.37%.<sup>14</sup>
- **Urban households pay more than rural/PGT households**; Compared to rural households, urban and PGT households spend 31% and 16% more on housing payments
- **Apartment dwellers pay 16% more** than those living in houses or in collective living:
- Larger households pay more than smaller households (as expected since some utilities are billed based on number of residents).
- Households in larger units pay more than those in smaller units, though the effect is negligible (also as expected since utilities such as district heating are billed based on unit size).
- Older household heads pay slightly more.
- Households with district heating and water pay more (as expected, since district heating is the most costly of the communal services).
- Households with network gas pay less than those without. This is because
  many households without network gas are using the more expensive district
  heating.
- Although the relationship is weaker **female-headed households pay less** than male-headed households.

### Who receives housing subsidies?

In earlier sections of this paper, we analyzed how housing allowance recipients and l'goti recipients differ from the non-recipients or general population with respect to a number of different household and housing characteristics. In this section, we use multinomial logit model to analyze the characteristics that explain the probability of a households being an allowance or a l'goti recipient.

Given that households which receive both housing allowances and l'goti closely resemble those who receive only allowances, we have considered households who receive both

26

 $<sup>^{14}</sup>$  However, because better off households have higher incomes, they pay a smaller *share* of income for housing costs.

subsidies to be allowance recipients only. Therefore, three categories (allowance recipients, l'goti recipients and non-recipients) are used in the analysis. Non-recipients are the reference or base category.

The multinomial logit model makes a crucial assumption called the independence of irrelevant alternatives, which means the odds of a certain choice does not depend on other available choices (Long and Freese, 2001). The results from the mlogtest option (Small-Hsiao and Hausman tests) in STATA suggested that assumption of independence of irrelevant alternatives is justified and it has not been violated. As with the earlier OLS regression, the explanatory variables were selected to reflect different household and housing characteristics: consumption per capita as a proxy for income, settlement type (urban, PGT, rural), housing type (apartment vs. house or collective living), housing characteristics (size of unit, connection to district heating and gas), characteristics of household head (age, gender, educational status, employment status) and household size.

The results of the mlogit are presented in Appendix 2. The results show that, when other variables are controlled for, housing subsidy recipients (either allowances or l'goti) are more likely to be headed by someone who is inactive, female and/or older. An inactive head increases the likelihood of receiving either l'goti or allowances by 150% and 124% respectively. Gender is also important and a female-headed household increases the odds of receiving either l'goti or allowances by 16% and 50% respectively. Similarly, the likelihood of receiving either l'goti or allowances increases with age.

Housing subsidy recipients are more likely to be connected to water and district heating, and to live in apartments than are non-recipients. The odds that a household connected to water receive either l'goti or allowances increase by 26% and 63% respectively as compared to households without water. For district heating, the effect is even greater. Although district heating only increases the odds of receiving l'goti by 17%, it increases the odds for receiving housing allowances by an astounding 468%. Apartment residency increases the odds of receiving l'goti by 37% and of receiving allowances by 78%.

Housing allowances are also related in the expected way to known correlates of poverty. Households where the heads are unemployed increase the odds of receiving housing allowances (by 58%) while highly educated heads decrease the odds (by 42%) as compared with non-recipients. Controlling for all other variables, housing allowance recipients are less likely to be urban and to be connected to gas than non-recipient households. The gas results are not surprising given the overwhelming importance of district heating in determining likelihood of receiving housing allowances. Housing allowance recipients are poorer than non-recipients.

In contrast, l'goti recipient households are more likely to be headed by someone with secondary or higher education and are likely to be larger than non-recipient households. L'goti recipients are likely to have somewhat larger units, to have more members and to be connected to gas. When compared with HHs who did not receive subsidies, l'goti recipients are slightly poorer.

### E. Conclusion and Implications for Future Research

This study has used newly available data from the NOBUS to provide the first nationally representative in-depth profile of housing allowance and l'goti recipients. L'goti are relatively static since they accrue to broad categories of the population (i.e., pensioners). Since they are a life entitlement, changes in the number of l'goti recipients in the future will be largely driven by changes in the number of people in the categories (the number of veterans will decrease but the number of pensioners will increase as the population ages). Unlike l'goti, housing allowances are more dynamic. Households must regularly reestablish eligibility.

Despite the differences between the two types of subsidies, neither l'goti (which are not targeted) nor allowances (which are supposed to be targeted) have provided much protection for poorer households from tariff increases. The share of expenditures devoted to housing and utilities more than double since 1995. In urban areas, housing and communal services expenditures now account from 15-20% of all expenditures for lowincome (q1) households, while high-income (q5) households spend only 5% of all expenditures for housing and utilities. Although higher than in the past, these levels are well below the 30% poor families in the US are expected to pay.

At the outset, the study proposed four hypotheses to be tested. The first postulated that although housing allowances reach many fewer households, those households should be poorer and should live in smaller units. The second proposed that l'goti recipients would resemble the population as a whole in terms of both income and non-income dimensions of poverty. The third stated that because both l'goti recipients and housing allowance recipients benefit only if they have access to utilities, both kinds of subsidy recipients are more likely to live in urban areas than rural, and to live in apartments than houses. The fourth surmised that because both l'goti and housing allowances are federal programs, regions would differ relatively little in terms of the incidence of these subsidies.

The analysis found **housing allowances are poorly targeted.** The small share of households (even q1 (low-income) households) who receive housing allowances means errors of exclusion are very high as fewer than 7% of q1 households receive housing allowances. Furthermore, errors of inclusion are high as can be seen by the fact that 5.4% of q5 (high-income) households receive housing allowances (a share not much different from the share of low income households who receive housing allowances). As expected, housing allowance recipients live in smaller units and have less living space per capita.

L'goti (which are not targeted) reach many more households but are regressive. Although 32% of q1 (low-income) households received l'goti, 45% of q4 and 41% of q5 (high-income) households received l'goti. Many low-income households do not receive l'goti and many high-income households do receive them. L'goti have high errors of exclusion and exclusion. L'goti-recipient households differ from the general population in other ways as well. The household head is generally much older, somewhat more

likely to be female, less likely to be unemployed and more likely to be inactive (reflecting the age of l'goti recipient households).

Urban residents and apartment dwellers are more likely to receive housing subsidies than rural residents and families in individual houses. This is especially true for housing allowance recipients. Although 26% of all households live in rural areas, fewer than 15% of housing allowance recipients live in rural areas, while 24.5% of l'goti recipients are rural. Housing allowance recipients are especially likely to live in apartments: 87% of recipients live in apartments while an additional 6 percent live in hostels or communal apartments. In comparison, two-thirds of all households live in apartments and 5% in communal apartments or hostels. The concentration of housing allowance recipients in apartments likely results from how this subsidy is administered. Although other subsidies are administered by the social protection bodies at the local level, housing allowances are handled by the housing departments. Some categories of households are not eligible for either l'goti or allowances—notably those without utilities (often very poor to begin with) and anyone renting apartments privately regardless of poverty status.

The availability of both types of housing subsidies varies among regions. Regions with more pensioners have more l'goti recipient households. Housing allowances vary tremendously by region. In some regions the share of households receiving housing allowances is well under 5%, while in others it reaches 20-25% -- about three times the national rate.

### Questions for Future Research<sup>16</sup>

The results of this study point to the importance of further research in two broad areas: 1) the underlying reasons for poor targeting; and 2) changes to improve targeting.

Why are housing allowances so poorly targeted? Having established that housing allowances are poorly targeted, it would be very useful to understand why they perform so badly. Is this a result of design or administration or both?

One explanation for the many non-poor housing allowance recipients likely rests with the use of income in the eligibility criteria. Although the Bank's poverty work continues to point to the importance of informal income sources for Russian households, as a practical matter, local officials have no way to verify informal income, but instead rely on official income. Additionally, the exclusion of private renters and people living in houses without access to network utilities likely contributes to the poor targeting performance as the latter in particular tend to be poor.

<sup>&</sup>lt;sup>15</sup> See Gassman (2004) and Lykova (2004) for discussions of how housing allowances are administered. <sup>16</sup> The recently initiated study on "Strengthening the Targeting Performance of Social Assistance Programs" will investigate not only why housing allowances are so poorly targeted, but how targeting could be improved by looking in detail at selected regions. This will much expand knowledge of housing allowances and will directly address both questions raised in this paper as areas where future research is needed.

A second source of poor targeting may be due to the fact that richer regions typically can afford higher levels of support than poorer regions. It would be interesting to try to correct for this effect by looking more closely at the distribution of housing allowances on a region-by-region basis. Regional differences in prices may also play a role.

A third explanation for poor targeting may lie with how the program is administered by the regions. For example, this study found that housing allowances overwhelmingly went to households living in apartment buildings. Anecdotal evidence suggests that this results from restricting access to the program to households in the municipal stock, which consists almost entirely apartment buildings.

**How can targeting be improved?** A second area for investigation would broaden our understanding of how to improve targeting, including the expected costs and benefits of the different measures.

If official income is a weak measure of poverty then what would be a better measure? Would the use of a means test or proxy means test improve targeting results? How could program eligibility be extended to include private renters and households without access to network utilities?

Similarly, if differences in regional ability to pay underlie the poor targeting performance then how might the current system for allocating funds for this program to the regions be changed?

Finally, a better understanding of how housing allowances are administered at the subnational level administrative problems should provide a starting point for developing a series of recommended improvements.

Addressing the above areas is especially relevant given that continued implementation of the Government's reform program will result in additional tariff increases. At the same time, HCS l'goti are to be eliminated (or monetized) by 2006. Given the short time-frame, the housing allowance is the only currently available tool which could be used to mitigate the impact of these changes. But as this paper has shown, the housing allowance program will need to be strengthened if it is to be effective in protecting the poor. Better targeting would help mitigate the impact of both tariff increases and changes in HCS l'goti on the poor, which would be an important element in responding to the current opposition to any changes in l'goti and advancing the Government's reform agenda for the housing sector generally.

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APPENDIX 1
Location Quotients for Housing Allowance and L'goti Recipients
(for 46 regions in Russia)

Regions	% HHs receiving allowances	LQ for allowance HHs	% HHs receiving l'goti	LQ for l'goti HHs	% poor*
Adigea Rp.	2.2	0.3	42.5	1.1	25.6
Amur	12.5	1.6	30.2	0.8	25.2
Arkhangelsk	8.6	1.1	45.9	1.2	24.0
Astrakhan	4.8	0.6	49.6	1.3	46.7
Bashkortostan Rp.	7.1	0.9	41.4	1.0	12.3
Bryansk	1.7	0.2	45.7	1.2	41.7
Buryat Rp.	6.2	0.8	33.7	0.9	14.1
Chelyabinsk	4.1	0.5	36.5	0.9	12.7
Chita	7.5	1.0	29.5	0.7	24.4
Dagestan Rp.	4.2	0.5	28.6	0.7	22.0
Ivanovo	11.2	1.5	45.6	1.2	20.6
Kabardino-balkarsk	1.3	0.2	39.4	1.0	23.9
Kamchatka	24.2	3.1	26.1	0.7	41.6
Kemerovo	5.4	0.7	45.2	1.1	20.0
Khabarovsk	13.5	1.8	32.1	0.8	6.8
Kirov	11.1	1.4	44.0	1.1	8.8
Comí Rp.	7.2	0.9	41.9	1.1	55.6
Kostroma	2.5	0.3	40.7	1.0	15.0
Krasnodar	0.8	0.1	41.3	1.0	11.9
Krasnoyarsk	19.1	2.5	33.5	0.8	10.3
Kurgan	7.0	0.9	38.9	1.0	23.7
Lipetsk	3.3	0.4	46.1	1.2	23.1
Mordovia Rp.	5.6	0.7	42.9	1.1	30.9
Moscow city	5.7	0.7	46.5	1.2	20.7
Murmansk	23.6	3.1	38.2	1.0	38.7
Nizhnii Novgorod	22.5	2.9	42.4	1.1	31.9
Novgorod	8.4	1.1	44.4	1.1	16.0
Novosibirsk	9.1	1.2	38.1	1.0	28.8
Omsk	5.8	0.8	40.1	1.0	20.1
Orlov	1.5	0.2	40.2	1.0	14.8
Primorie	20.4	2.6	37.2	0.9	36.4
Pskov	2.4	0.3	45.2	1.1	20.3
Rostov	8.4	1.1	36.4	0.9	24.0
Sakha Rp.	4.7	0.6	33.3	0.8	11.3
Sakhalin	23.6	3.1	34.5	0.9	25.2
Samara	8.1	1.1	48.4	1.2	17.5

32

	% HHs receiving	LQ for allowance	% HHs		
Regions	allowances	HHs	receiving l'goti	LQ for l'goti HHs	% poor*
St. Petersburg city	2.9	0.4	47.1	1.2	18.9
Sverdlovsk	2.2	0.3	40.4	1.0	19.9
Tambovsk	4.0	0.5	41.6	1.1	20.0
Tatarstan Rp.	1.2	0.1	34.8	0.9	20.8
Tver	7.5	1.0	38.0	1.0	16.8
Tyumen	6.2	0.8	29.0	0.7	12.3
Udmurdskaya Rp	9.8	1.3	31.5	0.8	16.6
Volgograd	5.2	0.7	40.8	1.0	11.4
Voronezh	4.6	0.6	41.0	1.0	13.8
Yaroslavl	4.3	0.6	42.7	1.1	11.9
Total	7.7	1.0	39.5	1.0	19.6

 $<sup>\</sup>mbox{*}$  This column is from World Bank (2004), *Poverty Assessment*. Table A3.2 (for 2002). Source: NOBUS 2003.

Appendix 2. Results of multinomial regression (logit) of determinants of housing

allowances and l'goti

	Allowance			L'goti
	RRR <sup>#</sup>	Std. Err.	RRR <sup>#</sup>	Std. Err.
Per capita consumption (log)	0.629	(0.02527)***	0.946	(0.027156)**
Apartment resident (dummy)	1.780	(0.13305)***	1.365	(0.067151)***
Urban resident (dummy)	0.568	(0.037689)***	0.933	(0.040931)*
PGT resident (dummy)	1.014	0.077721	1.078	0.055549
Age of HH head—rounded years	1.030	(0.001917)***	1.090	(0.00161)***
HH size	0.988	0.020599	1.096	(0.014794)***
HH head has scndry ed. (dummy)	0.919	(0.045757)**	1.104	(0.039177)***
HH head has higher ed. (dummy)	0.582	(0.0391)***	1.220	(0.053084)***
Living space (unit size)	0.992	(0.001866)***	1.002	(0.000905)**
Female HH (dummy)	1.499	(0.069363)***	1.162	(0.034826)***
Unemployed (dummy)	1.582	(0.176254)***	0.980	0.099375
Inactive (dummy)	2.241	(0.117633)***	2.502	(0.092384)***
Water connection (dummy)	1.633	(0.171105)***	1.263	(0.061923)***
Gas connections (dummy)	0.547	(0.023909)***	1.135	(0.039155)***
District heating (dummy)	5.677	(0.59519)***	1.172	(0.066509)***
Number of obs	=	34,734		
LR chi2(30)	=	14826.73		
Prob > chi2	=	0		
Pseudo R2	=	0.2331		

<sup>\*\*</sup> Relative Risk Ratio (Odds Ratio): estimated coefficients reported as exp(b)

Note: Robust standard errors in parentheses

Outcome subsidy status == no subsidy is the comparison group

Source: NOBUS, 2003

<sup>\*</sup> significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Appendix 3. Main categories of federal l'gotniki, benefits they receive, and amount of cash compensations for non-HCS l'goti.

Category of "l'gota" recipient	Number of people*	Main existing privileges**	Amount of compensation to be paid on monthly basis***, rubles
1. Disabled in military action	966,790	Free trips in city transport, 50% reduction of telephone subscribers (users) fee and rates of private security arrangements, free trips in interurban transport, free provision of transport, free installation of telephone set, reduced rates of payments for HCS, provision of ticket to health and sanatoria resorts, medical products	2,000.00
2. Great Patriotic War veterans	99,998	50% reduction of telephone subscribers (users) fee and private security services rates, free tooth prosthesis, installation of telephone set in the apartments out of order, free trip in city (urban) and interurban transport, reduced rates of payments for HCS, medical products	1,500.00
3. Persons awarded by order "Resident of Blockade Leningrad"	252,000	Free trips in city and interurban transport, installation of telephone set in the apartments out of order, medical products, reduced rates of payments for HCS, free tooth prosthesis	1,100.00
4. Veterans of military actions	147,289	Free tips in transport (including interurban transport once during two years period), free tooth prosthesis, toppriority installation of telephone set in the apartments, medical products, reduced rates of payments for HCS	1,1000.00
5. Military personnel who was on military service during Great Patriotic War (not in regular army); military personnel awarded by USSR orders during this period	90,783	Free trips in city and interurban transport, free tooth prosthesis, receipt of once-only privileged loan from credit organizations for acquisition of apartments or country-house, medical products	600.00
6. People who worked at military objectives during Great Patriotic War	19,234	Free trips in city and interurban transport, preference in installation of telephone set in the apartments, free tooth prosthesis	600.00

7. Family member of disabled, veterans of Great Patriotic War and participants of military actions who dead 8. Disabled	181,332	Free trips in city and interurban transport, 50% reduction of telephone subscribers (users) fee and private security services rates, reduced rates of payments for HCS	600.00
Group III	1,099,044	free trips in city transport, 50% reduction of telephone subscribers (users) fee, 50% reduction of payment for interurban trips, provision of transport carrier and cash compensation of its operation costs, free tooth prosthesis, reduced rates of payments for HCS, provision of ticket to health and sanatoria resorts	1,400.00
Group II	6,810,047	free trips in city transport, free tooth prosthesis, reduced rates of payments for HCS	1,000.0
Group I	2,000,556	free trips in city transport, free tooth prosthesis, reduced rates of payments for HCS	800.00
Disabled children	No data	No specific data	1,000.00
9. Citizens exposed by radiation exposure owing to Chernobyl disaster, and people equated to them	1,379,855	Privileges in nourishment, trips in city transport, free trips in interurban transport to the place of medical treatment and back, top-priority provision of transportation carrier to disabled, free tooth prosthesis, additional payment for work and residence in contaminated area, interest-free loan for acquisition of dwelling, reduced rates of payments for HCS, provision of ticket to health and sanatoria resorts	up to 2,000.00 (depending of status of "l'gotnik")
10. Donors	No data	Medical products, tooth prosthesis, rates of payments for HCS, trips in city and local transport	500.00
11. Work (Labor) veterans	9,361,426	Free trips in city transport, 50% reduction of telephone subscribers (users) fee and private security services rates, free tooth prosthesis, reduced rates of payments for HCS	Measure of social protection are to be set by subjects of the Russian Federation

12. Workers of home front	9,529,246	Free trips in city transport, free tooth prosthesis, receipt of once-only privileged loan from credit organizations for acquisition of dwelling	Measure of social protection are to be set by subjects of the Russian Federation
13. Victims of political repression	1,032,225	Reimbursement of property damage, trips in city and local transport, reduced rates for trips in interurban transport - once a year, provision of private transportation carrier, free tooth prosthesis making and repair, free installation of telephone set, delivery of cash compensations	Measure of social protection are to be set by subjects of the Russian Federation

<sup>\*</sup> will be defined more exactly after adjustments of cross-categories

Source: compiled by Bank staff based on a review of Russian newspapers.

<sup>\*\*</sup> federal categories of "l'gotniks" will receive a social package (from the sum of compensation) in the amount of 450.00 rubles. This package will include free trips in local trains, free trips in interurban transport to the place of medical treatment and back, free provision of drugs in the presence of prescription and, according to medical indications, a ticket to a resort. In addition, the following benefits will be kept: after retirement a person will have a right to use polyclinic to which he was attached during the working period, increased pensions, making and repair of prosthesis (excluding tooth prosthesis), privileged rates of payments for HCS

<sup>\*\*\*</sup>In 2005 cash benefit sum will be 450.00 less than indicated ones, as the social package will be given without fail during the first year of the law effectiveness