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Household Strategies for Coping with Poverty and Social Exclusion in Post-Crisis Russia

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For Russian households coping with economic hardship in the wake of the recent financial crisis, the choice of survival strategy has strongly depended on their human capital. The higher a household's level of human capital, the more likely it is to choose an active strategy.

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Summary findings

What strategies have Russian households used to cope with economic hardship in the wake of the recent financial crisis? Which coping strategies have been most effective in reducing poverty for different groups of households? And how have people been able to adapt to the dramatic drop in formal cash incomes?

Lokshin and Yemtsov look at these questions using subjective evaluations of coping strategies used by household survey respondents to mitigate the effects of the Russian financial crisis on their welfare. The data come from two rounds (1996 and 1998) of the Russian Longitudinal Monitoring Survey.

The results of their analysis show that a household's choice of survival strategy strongly depends on its human capital: the higher its level of human capital, the more likely it is to choose an active strategy (such as finding a supplementary job or increasing home production).

Households with low levels of human capital, those headed by pensioners, and those whose members have low levels of education are more likely to suffer social exclusion. To prevent poverty from becoming entrenched, the trend toward marginalization and impoverishment of these groups of households needs to be monitored and targeted policy interventions need to be undertaken to reverse the trend.

This paper—a joint product of Poverty and Human Resources, Development Research Group, and Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the Bank to understand household-level vulnerability to shocks and the ability of households to cope with crisis. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1153, email address psader@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at mlokshin@worldbank.org or ryemtsov@worldbank.org. February 2001. (27 pages)

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HOUSEHOLD STRATEGIES FOR COPING WITH POVERTY AND SOCIAL EXCLUSION IN POST-CRISIS RUSSIA

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1. Introduction

The Russian financial crisis of August 1998 affected the living standard of households in a variety of ways. However, for the majority of Russians, the impact of the crises was disastrous. The devaluation of the ruble resulted in a sharp decline in household incomes, rising unemployment, and increasing poverty rates. The collapse of commercial banks effectively deprived most Russians of their hard earned savings and once again undermined the trust of the population in financial institutions.

When the crisis peaked in early 1999, real incomes were at their lowest level since January 1992. However, this crisis was not the first turmoil in the Russian market transition. The entire period witnessed considerable volatility and a series of severe setbacks (the sharpest – but not the only one – being “black Thursday” in October 1994). Moreover, arrears built up to constitute an amount comparable to the total wage bill and transfer payments in the economy; on *average* workers were receiving wages more than a month late (Pinto, 1999). Practically every payment in Russia became a source of uncertainty (and has continued to this date). Throughout this period the deficiency of the public social safety net for protecting households from unemployment and poverty was pervasive (Lokshin and Ravallion, 2000).

Russian households needed to find strategies to deal with the risk of unexpected fluctuations in household income and to maintain a minimal level of consumption for their members. The efficiency of such strategies explains why, despite worse expectations, the incidence of poverty after the August 1998 crisis had increased only minimally (Mroz et al. 1999, World Bank 2000, Roskomstat 1999).

While risk coping strategies in transition economies respond to the same inherent motivations as in the developing world, what they represent in practice differs (Bhalla and Lapeyre 1999). Socialism was an all-embracing system that penetrated every domain of political, economic, and social life. The State provided the basis for inclusion and social cohesion. Except for limited categories of individuals (such as political dissidents or institutionalized populations), everyone officially “belonged;” most people were employed or fell into an ascribed, socially acceptable alternative status (e.g. veteran, a mother of many children, a pensioner, disabled, etc.). The system presented individuals with the idea that they were necessary to others and a feeling of “being in this

together” for better or worse persisted. The rapid socioeconomic stratification that has taken place during market reforms has ruptured many traditional ties that formerly affirmed identity to a collective.

Households in post-socialist economies could not rely on traditional coping strategies validated by generations, as in the developing world. Risk coping strategies developed by Russian households over the transition years have by necessity been driven by market forces and a failure of the State to provide sufficient fall-backs. By trial and error and by learning from each other they developed their own responses to risks and vulnerability. In this process some households have lagged behind others, failing in their adaptation; these households will suffer the most as they are the ones further exposed to risks.

The analysis of household coping strategies is the focus of this paper. Given the dramatic drop in formal cash incomes and lack of support from the government, how are most people able to adapt and maintain a standard of living? Why do some not adapt? What are the relative importance and effectiveness of coping strategies (e.g. land, informal sector, informal social networks, community groups and associations, government allowances, informal sector activities, etc.) in reducing poverty for different groups? Are people learning from each other how to cope with uncertainty and crisis and how can the government facilitate this process?

To answer these questions we look at individual subjective evaluations of a number of coping strategies that respondents in Russia undertook in 1998 to mitigate the effect of the crisis on their welfare. We combine multiple activities into clusters that represent types of strategies dealing with risk: relying on household resources, relying on social networks, and on cuts in household expenditures. We then look at the determinants of why certain households chose particular strategies. Looking at the group that apparently has no meaningful strategy in response to the shock (households who just cut on their spending to cope with the crisis), we identify patterns that make these individuals likely to act in this passive way. We argue that as most of these characteristics are unlikely to change in the short-term, this group faces the risk of being subject to circles of impoverishment and gradually fall outside society’s social fabric. Moreover, we believe that the trend toward marginalization and impoverishment of this group should be expressly monitored, and a specific set of policy interventions should be targeted to avoid the entrenchment of poverty.

The paper is organized as following. The next section discusses the data and main welfare indicators we use. Section 3 provides a description of the various coping strategies employed by the Russian households. In Section 4 we analyze how household characteristics influence the choice of coping strategies. Section 5 discusses the concept of social exclusion and analyzes the factors that influence the probability for households to be marginalized. Section 6 concludes.

2. Data and definitions

Our data comes from the Russian Longitudinal Monitoring Survey (RLMS), a comprehensive survey of all aspects (factors) of living, based on the first nationally-representative sample of several thousand households across the Russian Federation². The data is drawn from the two rounds of RLMS conducted in October 1996 (round VII, with a total sample size of 3,750 households) and in November of 1998 (round VIII, with a total sample size 3,831 households). We use the panel sample of 2,875 households for whom we have complete information on expenditure, household composition and individual characteristics of its members for both rounds of the survey. We tracked 6,869 adults over the 1996 and 1998³ rounds.

The focus of our analysis is on coping strategies. Traditionally, researchers employ “objective” measures, tracing over time how household members actually act in response to adverse external conditions. Though such approach can be appealing, it is subject to substantial measurement biases: some observed responses may be exogenous and not reflect the true household member’s choice.

² The weights and a range of issues related to the sample design and collection of these data are explained in depth in the documents that can be found in the home page of the RLMS. The data sets can be obtained free through the home page: www.cpc.unc.edu/projects/rlms/rlms_home.html. Lokshin and Popkin (1999), and Lokshin, Popkin, Harris (2000) give additional information on the sample and data set.

³ Lokshin and Ravallion (2000) showed that households that were re-interviewed in 1998 tended to have slightly higher expenditure per-equivalent-adult in 1996, have more household members, and were more likely to reside in rural areas. While the characteristics of the two samples are quite similar, we cannot rule out the possibility of non-random attrition such that some of the poorest in 1996 dropped out of the second round, and this may well have been due to the crisis. Thus, the following results based on the panel sample might underestimate the welfare impact of the crisis.

Additionally, many coping mechanisms are simply too difficult to observe with traditional sets of variables from household surveys. Many economic activities are difficultly expressed in monetary value terms. High and unstable rates of inflation, a price system that is often a mixture of market and nonmarket prices varying by region, errors in recall, and measurement errors make it problematic to assign monetary value to certain household behaviors (Hanson, 1993). Household data registers various kinds of transactions within and between households; e.g., monetary gifts and assistance from relatives or friends, and aid from government and non-government organizations. However, informal inter- and intra-household transactions such as grandparents taking care of grandchildren, relatives helping on the family's land plot, in-kind transactions between the members of extended households, and many other household activities are important factors that affect the household's welfare but, at the same time, are difficult to monetarize and register.

Consequently, the strategy that we employ in this paper is to use subjective indicators of the number and characteristics of strategies chosen by household members (more on this in the next section). However, while explaining these choices we use objective household characteristics.

It is believed that aggregate consumption is the most robust measure of household welfare (Grosh, Munoz 1996). Therefore, we use total household expenditure as a proportion of the poverty line (e.g., Popkin et al, 1992) as an objective household welfare indicator in our analysis. This includes cash expenditures and imputed expenditures for the goods and services that have been produced by the household itself. The value of home produced food is calculated as a product of the quantity of each food item produced and its prevailing regional market price.

3. Coping strategies: descriptive analysis

Economic crisis is among the most important roots of sharp increases in the incidence of poverty around the world (Lustig, 1999). A poverty outcome of the crisis for a particular household depends crucially to what extent a household is exposed to hazards of the crisis and its ability to respond or to cope with such hazards (Holzmann and Jorgensen 1999). Since they do not have sufficient savings or their self-insurance coverage is inadequate to see them through bad times (Bardhan and Udry 1999), it is widely believed that poor households are likely to suffer the most. At the same time, the ability to respond or cope with crisis is not a function of household resources alone, as

informal family support networks play an important role during hardships by providing social and economic benefits that the formal social security system fails to deliver (Cox and Jimenez 1990).

It is important to look at the full spectrum of responses that household members use to manage the hazards of the crisis. A special section in the 1998 individual RLMS questionnaire asks questions about coping strategies, introduced with the following statement:

In the last year the country has undergone many changes. People have tried to adjust to the new living conditions in various ways. Tell me, which of all the things I am now naming have you done and how much have they helped you?

Sixteen possible activities followed. Though the reference period for the question goes back to October 1997, the crisis was the most important event that affected the behavior of many Russian households during this period. Consequently, we argue that what we observed are mainly strategies in response to the August 1998 crisis.

In addition to the menu of options, the respondents also rated different strategies in terms of how successful they were in helping to cope with the hardship. Table 1 gives an idea of how often the individual strategies were used and how successful they were according to the respondents' own accounts. A quick inspection shows that the most widely used options were not the most effective: for example, cutting expenditure on clothes was used by 63 percent of respondents, but hardly 10 percent thought it was a successful strategy. On the other hand, "seeking help from the Government" is a clear outlier both in terms of frequency of use and in terms of effectiveness. In fact, less than 5 percent of respondents turned to government agencies for assistance. Russian households are five times more likely to seek help from the informal sector than to ask help from the government. Similar numbers are reported in Zubova and Kovalyova (1997). Their analysis is based on VCIOM (All-Russian Center for Public Opinion Research) data and shows that only 5 percent of the respondents in 1994 and 4 percent in 1996 indicated that they "would primary rely for help in need" on government social security agencies.

Our further analysis excludes three questions from the original list; these are the questions of whether a person changed his job, went to work for a private or government enterprise, and whether the person traveled for training in order to get a new job. We consider that some of these changes may be accounted for by factors external to the household, not as a result of choice (for example, loss of employment that leads to finding a new job). Therefore, it would not be possible

to make meaningful comparisons across households. Those who were subject to greater shocks may appear as more active.

Clear differences exist in the use of the strategies depending on the welfare level of households. Even a simple cross tabulation indicates that those who were previously poor seem to employ a much more limited set of options in response to crisis, and these options are often not effective.

The distribution of the responses to the selected questions by the household expenditure deciles (using a 1996 welfare level) is shown in Table 2. Respondents most frequently report changes in their consumption patterns in response to changes in economic conditions. More than 62 percent answered that they spent less on clothing and shoes. The decline in spending on such items is more significant for the poorest households. About 66 percent of respondents from the first three deciles of the expenditure distribution indicate that their spending on such goods was lower than in pre-crisis period. For the richest three deciles, this proportion is lower than 60 percent and among the households from the richest decile only about 50 percent of the individuals reduced spending on clothing and shoes.

More than half of the respondents decreased their expenditures on food after the crisis. Again, this decrease was not uniform. The highest proportion (about 63 percent) of the respondents who reported that they “cut down on meals” came from the households in the lowest deciles of the expenditure distribution. At the same time, only 36.5 percent of the respondents from the highest expenditure deciles reported a decrease in consumption of food.

Twenty percent indicated that their households cultivated more on their personal plot. Individuals from the higher deciles seem to use their land more. Fifteen percent of the respondents from the lowest deciles reported an increase in home production, while this proportion rose to about 22 percent for the highest expenditure deciles. To some degree this can be explained by the low percentage of land owners among the poorest households.

The share of the respondents who reported use of other strategies in response to the economic crisis is low. Slightly more than 4 percent of households sold their belongings to cope with poverty; only about 1 percent rented out their apartment or moved out from the relatives. The proportion who changed their place of residence is surprisingly high: 5.1 percent (compared to a widespread belief that workers in Russia are extremely immobile, e.g. documented in Helenyak

(1997)). On average, 6.5 percent of respondents indicated that they found supplementary work to adjust to the new economic conditions. The proportion of respondents who found secondary jobs is greater among the highest brackets of expenditure distribution.

Turning to strategies that are based on outside opportunities, a greater percentage (18 %) of poor households sought help from relatives to cope with changing economic conditions. 7 percent of poor households turned to friends for assistance. What emerges is a tendency for cohabitation as an important strategy for coping with economic hardship. 3.3 percent said that they moved in with relatives while less than 1 percent indicated that they moved out. These findings are similar to the results shown by Lokshin et al., (2000) concerning the poverty coping strategies of single parent households in Russia. By moving in with other household members, families can use the advantages of economies of scale with respect to household size, the efficiency of inter-household transfers relative to intra-household transfers, and the sharing of domestic duties and child care duties.

Moreover, responses to coping strategies vary by gender. Figure 1 shows the non-parametric approximation of the distributions⁴ of responses for the selected strategies. When asked about the changes in expenditures on food, 59.3 percent of women reported that they decreased such expenditures, compared to only 48.5 percent of men. Similarly, women more often (66.9 percent) report that they cut their expenses on clothing and shoes than men did (58.1 percent). There are several possible explanations for this phenomenon. First, women may be better informed about the household budget and thus their judgement is more precise. Alternatively, this may represent an indicator of the biases toward men in the intra-household budget allocation.

Women also seem to be more active in using social networks. Graphs at the bottom part of Figure 1 demonstrate that women are more likely to turn to relatives and friends for help than men. Twenty percent of all female respondents indicated that they use relatives to help them to cope with hardship, compared to only 15 percent of men. The proportion of individuals who asked their friends for help are lower: About 7 percent of women and 6.5 percent of men. Among the individuals who sought assistance with the social security departments or some other government organizations, women used state-provided supports twice more often than men.

⁴ We used Cleveland's lowest running-line smoother for these approximations.

However, men more often find supplementary work as a way to cope with economic hardship: approximately 8 percent of male respondents reported that they found an additional job to adjust to the changes in economic conditions compared to only 5.4 percent of women.

4. Poverty coping strategies and household characteristics

So far our analysis has concentrated on individual respondents. However, the very fact that women differ from men in the set of strategies they use suggests that there may exist a complementarity⁵ of strategies within households. In the end, household consumption is the measuring stick for welfare. Therefore, households should be the most appropriate level of aggregation and the measured unit of analysis.

To move to the household level from individual responses we have to tally individual responses of household members. The procedure here is two-step. First, we combine individual responses into three broad clusters. Individuals who chose at least one of the options in a cluster are classified as employing this type of action. Second, if any member of a household has chosen a strategy or response from a cluster, the household is counted as using this type of action. Such a procedure leads to a minimum loss of information, as all the members of a household are given the same weight.

We group different responses based on the intensity of use of household human, physical, financial and social capital (Table 2). The first set of strategies aims at actively changing the place of a household in a society by relying on its own human capital and physical assets. We call these active strategies (C1). Such strategies include an increase in home production, change in place of residence, finding supplementary work, renting out an apartment, and ceasing living with relatives. The second set of strategies aims at using the existing social nets for support (C2). This set includes strategies such as turning to relatives and/or friends for assistance, moving in with relatives, and

⁵ We tried to test formally the hypothesis about the complementarity of individual coping strategies within the household. On a sub-sample of the households with married couples, we estimated the correlations between the strategies used by husbands and wives with the control for individual and household characteristics. Our estimations fail to show any significant correlations between the strategies the spouses employ to cope with hardship. That does not reject the hypothesis about the existence of such complementarities, but can be attributed to the measurement errors (in our case the different interpretation of the strategy questions by respondents).

turning for assistance to the Government. Opposing these active coping strategies, many households responded to changes by cutting on spending or taking fewer holidays. We combine these responses into the third cluster (C3)⁶.

In about 6 percent of households none of the respondents answered the question on coping strategies, and we excluded them from further analysis. Motivating this exclusion includes the fact that some of these respondents represent cases of wealthy households that were not affected by the crisis. Indeed, we found that many of those who did not provide answers were in the top deciles of the distribution in both rounds (1996 and 1998). But the second part of this group clearly consists of non-responses and is fairly homogeneously distributed across deciles. An absence of responses in the data is represented in both cases, making those answers empirically unusable for the estimations.

What determines the choice of a particular coping strategy by a household? To answer this question we analyze how the choices of the strategies depends on household characteristics. The fact that household members may choose different strategies, and that in the end all these types of strategies can be used by a household simultaneously, determines the econometric specification of the problem.

Empirical specification

Assume that a household utility is a continuous, twice continuously differentiable function of a consumption of a composite good, a leisure of its members and household characteristics that play the role of taste shifters. Maximizing its utility, the household chooses to apply one or more strategy. Each strategy is associated with costs and benefits for the household. If costs of a certain strategy are lower than its benefits, the household chooses to enact such behavior. For example, if a family decides to move in with other household members, such co-habitation may be associated with the smaller costs of transfers from the household to its family, increasing returns to household production, economies through bulk discounts, and the help of other household members in child

⁶ As with any aggregation we lose information by combining strategies and responses into clusters. Different groupings can also be suggested. However, we argue that our choice of strategy-clusters is meaningful and it allows econometric analysis of simultaneous decisions of the households to use different strategies.

care. Of course, co-residence may entail some costs, in particular a loss of privacy, a loss of some parts of social networks such as neighbors and friends, and a possible increase in time to commute to work.

Assuming that the unobserved gain G_{ij} associated with the choice of strategy set j by household i can be approximated by a linear combination of the exogenous variables, the observed choice of the particular set of strategies can be presented as:

$$\left. \begin{array}{l} Y_i^j = 1 \text{ if } G_{ij} > 0 \text{ or } X_i\beta_j + \varepsilon_{ji} > 0 \\ Y_i^j = 0 \text{ otherwise} \end{array} \right\} j = 1,2,3, \text{ and } Corr(\tilde{\varepsilon}_i^j, \tilde{\varepsilon}_i^k) \neq 0 \text{ for } \forall k, j \quad (1)$$

where Y_i^j is an indicator variable of the choice of the set of strategies j , β_j is a vector of unknown coefficients, X_i is a vector of household and individual-specific exogenous variables, ε_i is an error term, and 1 indicates the states with a strategy implemented and 0 indicates the state where a strategy is not used. Clearly, error terms of these three equations will be correlated. This correlation is determined by the unobserved variables that affect the probability of implementing the strategies. For example, households that experienced large income shocks would be more likely to use all three types of actions to cope. Under an assumption of a joint normality of the distribution of the error terms, system (1) can be estimated by the method of maximum likelihood. An individual contribution of each observation would be represented by the tri-variate normal cumulative density function⁷. The descriptive statistics for the dependent and explanatory variables in the model are shown in Table 3.

Our dependent variables are three binary indicators corresponding to the three types of coping, i.e., active strategies, strategies based on social networks, and passive household responses. We estimate the system of equation (1) based on three alternative sets of explanatory variables. First, the simplest, specification (I) includes the household specific factors: a logarithm of total household expenditure in 1996, demographic characteristics of the household, such as a logarithm of household size, household type, type of household settlement (urban or rural), age and age squared of the head, level of education of the head, head employment status, subjective assessment of the head in 1996 about the probability of losing a job and changes in household characteristics (to partly control for

⁷ One can think of estimating the household choice of C1, C2, and C3 in a multinomial logit (MNL) setup. However, our specification allows for a more flexible error structure by relaxing the assumption of MNL about the zero cross-diagonal elements in a variance-covariance matrix.

unobservable characteristics that proxy the exposure to risk). We also introduce two variables to control for the effect of land ownership on the choice of strategy.

In the second specification (II) we extend a set of the household-level explanatory variables with the characteristics of the locality. This specification takes into account externalities inherent in the choice of coping strategy.

Local economic conditions may determine the returns of different strategies and affect the stream of benefits from the use of any given strategy. In addition to explicit monetary and non-monetary costs of applying a strategy there are also information costs, associated with learning how to apply a certain strategy. For example, growing more vegetables on a household plot may require knowledge about seeds, pesticides, fertilizers etc. There are clear externalities in gathering such information at the local level: when more households are involved in the same type of activity, the costs for each are lower, as households learn from each other. Therefore, it is important to include in the estimation the information on how widely each strategy is used at the local level⁸.

We use the local unemployment rate and the mean income in the area to proxy the level of development in the locality. The level of inequality can also influence the choice of a strategy by a household, influencing both the costs and benefits.

The last specification (III) includes information about the previous working history of the household head, tracing the link between past stratification and the actual use of coping strategies. When the information on the actual benefits and costs of any strategy is costly, households may choose to rely on their past experiences in choosing their strategy. The survey does not contain any information on the strategies that a household has used prior to the recall period of 12 months, and we have to proxy this history by the social strata that the household head belongs to. We assume therefore that the choice of the strategies in some part is determined by the place in the old stratification.

⁸ We use an aggregate information from the 160 localities (sites) selected in our sample. On average there are 20 households in a locality.

Results of estimations

The results of the estimation of the system of equations (1) are shown in Table 4. According to the likelihood-ratio test criterion, the independent error term specifications are rejected in favor of the specifications with the correlated errors.

Active (C1) and social network (C2) strategies are used by two distinct types of households. There is a strong correlation between the level of human capital in the household and the type of strategy the household is more likely to use.

An estimation of Specification I demonstrates that households with younger heads, households with higher levels of education, and larger households are significantly more likely to implement strategies that are based on the household's own resources. A negative significant coefficient on the variable indicating the fear of losing a job also points to the strong effect of the human capital component in the household decision to apply such strategies. If the head was afraid to lose his job in 1996 that would indicate a lack of skills that are necessary to secure the job position. This variable contains information concerning the self-assessment of marketable skills that are otherwise unobserved.

The level of pre-crisis expenditure indirectly reflects how well the household adjusted to the previous shocks. It looks like across all specifications there exists a positive correlation between the welfare prior to the crisis and a probability that the household will choose active strategies (C1), and a negative correlation between the level of welfare and the use of social networks strategies (C2). These signs suggest that richer households have better prospects to cope more effectively with the hazards of crisis by using active strategies. On the other hand, poorer households tend to rely more on soliciting help.

Among other variables, changes in household size have a positive effect on the probability of using active strategies. Pensioner households (the omitted dummy category in Table 4) are significantly less likely to rely on active strategies than other households. Both variables on land ownership have positive and significant coefficients.

The households that are more likely to use social network strategies (C2) had lower levels of pre-crisis expenditure, and are from urban areas. Relative to households of pensioners, all other types of households have a higher probability to use this type of coping strategy. It is particularly

notorious that single parent households use this strategy most often. Households with an unemployed head are also significantly more likely to rely on social networks. Estimations fail to reveal any statistically significant effects of education, self-assessment of marketable skills or land ownership on the choice of network strategies.

The households that are more likely to use passive action (C3) are households of pensioners and urban households. Land ownership has a significant and negative effect on the probability to use these passive responses.

Introducing the local area effects (Specification II) does not seem to affect the sign and significance of the coefficient for main household characteristics. However, how often other households use a strategy in a locality does significantly affect the choice, controlling for individual characteristics. Specifically, a dichotomy between active (C1) and passive (C3) strategies appears: there is a clear bunching of regions where there is a predominance of using an active strategy, and where households are much more likely to adopt such strategies to cope with the crisis. On the other hand, there are regions where many households adopt a passive strategy and are more likely to rely on cutting their expenditures in the case of a crisis. As expected, introduction of local effects changes considerably the sign and significance of an urban dummy compared to Specification I.

Finally, when we introduce the occupation of the household head in 1991 to reflect the place of a household in the old pre-transition stratification, we do find significant effects from the past experiences. As the omitted category in that case is “managerial workers,” we find that the households headed by any other person are much less likely to use active strategies. Households headed by those who were clerical personnel in 1991 are more likely to use social networks. Those involved in elementary service occupations were most likely to cope with crisis by using passive strategies.

Our results are comparable with the results of the qualitative study of household survival strategies in the Novosibirsk oblast of Russia. Tchrenina (1996) found that the households with higher educated heads (professionals and scientists) were more likely to choose active strategies to cope with poverty. Eighty five percent of professional families used individual plots, and 35 percent receive income from multiple jobs. At the same time, 30 percent of such households reported that they received money from relatives and all the respondents pointed out the wide use of social safety nets to improve their financial situation. Households in rural Siberia relied heavily on individual

plots and help from relatives (73 percent) and friends (49 percent) to cope with economic hardship. The degree of reliance on government agencies was very low.

Effectiveness of the strategies in protecting households against shocks

How effective are the strategies in offsetting shocks to household consumption? To illustrate the effectiveness of the different types of coping strategies in protecting households from shocks we estimate a regression of the change in household consumption between two years (1996 and 1998) with the set of household characteristics and strategy type dummies used as explanatory variables.

The difficulty in interpreting the results of such regression is that the current consumption is endogenous to the actions that households undertake in response to the shocks. In other words, the level of consumption we observe is a result of the exogenous consumption changes the households have experienced and the strategies the households used to cope with these shocks. Although the estimated coefficients of such regression may be biased⁹, we try to evaluate the direction of the bias, and adjust our results accordingly.

The households that experienced large negative consumption shocks would be more likely to employ all coping strategies it can to offset the drop in its intake. At the same time, the households whose consumption did not fall, or declined only moderately would be less inclined to take such actions. Thus, we can assume that the size of the consumption shock is negatively correlated with the probability to use coping strategies. If this is true, the coefficients on the endogenous variables in the regression will be downward biased, or, in other words, if we have a positive (negative) coefficient without control for endogeneity, then with the control the coefficient will be even larger (smaller). Table 5 shows the results of the estimation of the regression of the

⁹ In the regression relating changes in consumption with the indicators for the implemented strategies, the estimated coefficients will be biased, as the dummies are correlated with the error term. One way to correct for that endogeneity bias is to use instrumental variables, or, alternatively, we can estimate the change in consumption regression simultaneously with the three equations in the system (1) under an assumption of the joint correlation of the error terms. In the first case, we would need a set of identifying variables that affect a choice of strategies, but are uncorrelated with the changes in household consumption. We cannot think of any such variables. In the second case we can identify the system of four equations from non-linearities (although such identification is usually weak), but the estimation of such system is rather difficult.

changes in log-consumption on the set of explanatory variables from specification (II)¹⁰ with the addition of three dummies variables for the different types of strategies.

Households that used active strategies offset shocks better. The coefficient on the active strategies dummy is positive and significant. The estimation failed to reveal a significant effect of the social safety net strategy on changes in household consumption. Passive responses are shown to be ineffective in coping with the shocks.

5. Social exclusion

We now turn to the question of social exclusion or marginalization. The stress on formal and informal institutions that survived the socialist era and transitional crisis, along with widespread impoverishment are factors contributing to the marginalization and potential social exclusion of many individuals and social groups in transitional economies. The concept of social exclusion that first arose in Europe, in the wake of prolonged and large scale unemployment (Silver 1994), is related to social isolation (lack of meaningful ties to the family, local or national community, associations, organizations and so forth) and the lack of legal rights and/or inability to defend them. There is a general consensus that the inability of individuals or social groups to participate fully in the economy, in social life, and in political processes reduces social solidarity, augments social tensions, and holds back social development.

Every subsequent crisis is likely to have a particularly heavy toll on the livelihoods of marginalized groups, pushing them even further outside the mainstream. This is a very dangerous tendency since it makes poverty deeply entrenched in societies and unresponsive to economic progress generated by growth. Better understanding of how social exclusion affects different groups may assist in devising specific ways to promote social inclusion.

There exists a substantial group of households in the sample (28 percent) whose only response to the crisis was a reduction in consumption (C3 only). We categorize this type of reaction as marginalization responses. Who are these households? Why are they unable to find resources

¹⁰ We use Specification II for the simulations because of a substantial drop in the sample size (see Table 4) in estimation under Specification III due to missing responses on the previous work history question.

within their households, or rely on social networks, or turn to the government to improve their conditions?

To examine the effects of the household characteristics on the probability that the household did not use any types of coping strategies other than a reduction in consumption, we simulate how households would respond to changes in the specific variables in the model. In a given simulation, a certain value of the variable of interest is assigned to all the households in the sample. The simulated probabilities are generated for each household using the coefficients from joint estimation of the system of equations (1) under the Specification II. Next, the value of the variable of interest is changed, and this changed value is assigned to the entire sample of households. Then the new set of simulated probabilities is generated. The effect of the changes in a particular parameter is calculated as the difference in these simulated probabilities.

Table 6 presents the results of these simulations. Relative to other household types, households headed by pensioners are significantly more likely to use marginalization responses. Simulations reveal that among households at risk of social exclusion are smaller households, households headed by a person with a high school diploma only, households whose head was afraid to lose his job in 1996, and households whose size decreased between the two rounds of the survey. We found a significant negative effect of land ownership on the probability of relying on passive responses. The higher the level of unemployment in the locality, the more likely it is that the only response of the households to the crisis is a decrease in consumption.

Probability differences in using the marginalization response by various demographic groups are illustrated in Table 7, which reports predicted probabilities based on coefficients in Table 6 and corresponding mean values for independent variables. Such predictions offer a useful guide to policy as they use an observed demographic type of household to see how likely it is to be limited in its response options to crisis, and therefore directly addresses the vulnerability of a household to poverty. Clear differences between household types emerge. Single pensioners are at particular risk of choosing marginalization responses and it is predicted that close to 60 percent of them would not use any active response. On the other hand, multi-children households appear to have a relatively low predicted probability of relying solely on cutting spending.

6. Conclusion

A disintegration of the former social network milieu was a significant result of the Russian economic transition. As many social networks withered away, households found themselves vulnerable to economic shocks as their ability to cope with risks became severely limited. The effective reintegration of individuals into social networks and new institutions is therefore an important component of poverty alleviation strategies. However, the success in empowerment will depend crucially on the activity of people in changing their social status and building new relationships with their peers and neighbors. Contrarily, a passive suffering from the economic woes of transition leads to a loss of community ties to and an exclusion from new opportunities opened by market reforms. Thus the trends toward marginalization of certain groups needs to be monitored and minimized, while active efforts to cope are supported by the Government.

The results of our analysis clearly indicates that the choices of survival strategies are strongly determined by the level of human capital in the household. The higher the household human capital, the more likely it chooses active strategies.

Moreover, our work indicates that social exclusion is quite widespread in Russia. The groups that are likely to choose strategies leading to marginalization are not that difficult to reach with traditional government interventions: they are predominantly urban pensioners and poorly educated pre-retirement individuals. Protecting the real value of state transfers is therefore important to decrease the tendency towards stratification of these large social groups.

The small proportion of individuals who turned for help to government agencies and their dissatisfaction with the services reveal an inadequacy and weakness of the existing system of social protection. The track record leaves little hope for dramatic changes in the Russian social safety net in the near future. Thus, low-cost policy measures that help households to implement their own strategies of coping with economic hardship can have an important impact on the welfare of the Russian population. Such policies may include the development of regionally targeted programs of part-time and temporary employment, improvements in information services for individuals wishing to change jobs, and development of retraining programs.

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Table 1: Use of various strategies by individuals and their assessments of strategy effectiveness.

Strategy	Percent of respondents who find the strategy:				
	Percentage report using	very helpful	somewhat helpful	not helpful at all	No answer
New job	12	29	42	27	3
Job in the Government	5	39	41	16	4
Secondary job	7	32	58	9	1
Got retraining	2	34	35	25	7
Moved to the new place of residence	9	21	38	28	13
Grew more on land plot	19	35	60	4	1
Asked relatives for help	21	35	59	5	1
Asked friends for help	8	28	60	11	1
Asked Government for help	5	11	41	46	1
Sold their belongings	5	15	70	14	1
Rented out apartment	1	35	55	9	2
Moved in with relatives	3	39	49	7	5
Ceased living with relatives	2	20	49	28	3
Cut spending on clothing	63	12	53	32	4
Had fewer meals	54	10	53	33	5
Postponed/did not take holiday	27	16	46	39	0

Table 2: Household strategies of coping with crisis. Self-assessment by 1996 expenditure deciles.

		Expenditure deciles										
		1	2	3	4	5	6	7	8	9	10	All
C1	Cultivated more on personal plot	12.91	14.35	17.95	18.55	23.19	20.96	21.90	23.16	19.28	19.30	19.16
	Rented out your apartment	0.48	0.48	1.93	0.96	0.36	0.84	2.05	1.21	0.72	2.17	1.00
	Ceased living with relatives	2.41	1.57	1.45	1.45	2.05	1.69	0.84	1.81	1.33	4.46	1.04
	Change place of residence	9.53	9.65	9.64	10.48	5.31	5.30	9.51	7.48	6.63	10.74	5.07
	Found supplementary work	5.43	5.91	5.18	5.42	6.64	8.19	6.86	9.53	7.11	9.77	7.00
	Sold belongings	4.70	4.70	4.22	4.34	4.83	3.86	4.81	3.50	3.86	6.03	4.18
C2	Turned to relatives for assistance	25.09	25.45	22.77	17.59	20.53	19.52	20.10	18.09	16.02	19.18	20.43
	Turned to friends for assistance	8.69	9.17	7.59	7.59	7.85	7.83	8.06	7.36	5.66	9.65	7.95
	Moved in with relatives	3.14	3.26	5.18	5.06	3.02	2.65	4.45	2.29	2.53	1.93	3.35
	Turned to the government for assistance	4.95	4.95	5.42	7.47	5.43	4.58	3.61	3.38	3.25	4.58	4.76
C3	Cut down on buying clothing and shoes	64.41	68.76	67.23	66.87	65.82	63.37	60.77	59.83	59.52	52.11	62.87
	Cut down on meals	65.26	63.45	63.13	57.11	53.62	53.61	49.10	46.68	48.80	35.46	53.76
	Spend less money on holidays, vacations	35.22	38.96	37.83	38.07	38.04	39.76	36.82	40.17	40.24	38.48	37.19

Table 3: Summary statistics for the dependent and explanatory variables.

		Mean	Standard Error
Dependent variables			
Active strategies	(C1)	0.427	binary
Social net strategies	(C2)	0.451	binary
Passive responses	(C3)	0.942	binary
Independent variables			
Log of expenditure 96		8.480	1.050
Cash benefits 96		965.000	1423.000
Log of household size		0.950	0.529
Nuclear family		0.253	binary
Single parent		0.070	binary
Other households with children		0.213	binary
Households with adults only		0.156	binary
Urban households		0.664	binary
Age of household head		46.400	15.328
Age2 of household head		2385.539	1528.905
High school		0.517	binary
Technical/Vocational		0.310	binary
Unemployed 98		0.127	binary
Afraid to lose a job in 1996		0.367	binary
Change in cash benefits 96-97		-101.610	1265.173
Change in household size		-0.021	0.907
Change in share of small children		-0.013	0.098
Change in share of older children		-0.001	0.130
Change in share of pensioners		0.018	0.170
Household owns dacha		0.252	binary
Household owns land		0.654	binary
Coeff. of variation in expenditure		112.575	98.956
Log of mean expenditure		8.650	0.857
Unemployment level		0.120	0.094
Mean active strategies (C1)		0.385	0.162
Mean social net strategies (C2)		0.409	0.166
Mean passive strategies (C3)		0.854	0.139
Not employed before 1991		0.020	binary
Processionals		0.120	binary
Technicians and associatives		0.084	binary
Clerks		0.032	binary
Services, Shops workers		0.035	binary
Skilled agricultural and fishery		0.004	binary
Crafts and related work		0.221	binary
Industrial workers		0.274	binary
Elementary workers		0.083	binary
Arm forces		0.110	binary

Table 4: Simultaneous estimation of the household choices of strategies.

	Specification I			Specification II			Specification III		
	C1	C2	C3	C1	C2	C3	C1	C2	C3
Log of expenditure 96	0.051*	-0.060**	-0.004	0.093**	-0.046	-0.009	0.092**	-0.025	-0.005
Cash benefits 96	0.175	-0.553*	0.355	0.542*	-0.705**	0.391	0.576*	-0.825**	0.317
Log of household size	0.389***	0.318***	0.394**	0.340***	0.330***	0.548***	0.334**	0.486***	0.068***
Nuclear family	0.091	0.246**	-0.288*	0.136	0.192*	-0.341*	0.152	0.159	0.602
Single parent	0.198*	0.459***	-0.189	0.187	0.459***	-0.137	0.184	0.539***	-0.162
Other households with children	0.209**	0.196*	-0.361*	0.202*	0.187*	-0.254	0.266**	0.149	0.010
Households with adults only	-0.255**	0.254**	-0.157	0.261**	0.194**	-0.144	0.285**	0.279**	-0.221
Urban households	-0.303***	0.258***	0.292**	-0.101	0.040	-0.251*	-0.114	0.014	-0.040**
Age of household head/100	0.016	-0.030	0.014	0.019	-0.029**	0.020	-0.025	-0.056***	-0.488
Age2 of household head/10000	-0.198*	0.247	-0.082	-0.229*	0.233**	-0.128	0.314	0.566**	0.007
High school	-0.326***	0.109	0.095	-0.319***	0.110	0.086	-0.381	0.087	0.050
Technical/Vocational	-0.119*	0.072	0.099	-0.108	0.079	0.074	-0.165***	0.079	0.087
Unemployed 98	0.085	0.145*	0.035	0.074	0.138	0.119	0.049	0.099	0.122*
Afraid to lose a job in 1996	-0.165**	0.002	0.054	-0.161**	-0.034	-0.076	-0.149**	-0.060	0.361
Change in cash benefits 96-97	-0.081	-0.237	0.213	0.093	-0.393	0.230	-0.062	-0.482	-0.124
Change in share of small children	0.243	-0.365	0.024	0.355	-0.298	-0.085	0.300	-0.416	0.286
Change in share of older children	0.080	-0.187	0.044	0.106	-0.272	0.004	0.010	-0.471*	0.127
Change in share of pensioners	-0.019	-0.504**	0.040	-0.050	-0.491**	-0.047	0.109	-0.598	-0.148
Household owns dacha	0.216**	0.009	0.292**	0.225**	-0.022	0.280	0.198**	0.008	0.355**
Household owns land	0.392***	-0.050	-0.250**	0.349***	-0.033	-0.192	0.374***	-0.026	-0.269*
Coeff. of variation in expenditure				0.001*	-0.000	0.000	0.001**	0.000	-0.000
Log of mean expenditure				-0.130*	-0.004	-0.078	-0.158**	-0.013	-0.064
Unemployment level				-0.311	-0.454	-0.037	-0.340	-0.612	-0.514
Mean active strategies (C1)				3.337***	-0.498**	-1.313***	3.113***	-0.374	-1.318***
Mean social net strategies (C2)				-0.093	3.340***	-0.261	0.059	3.395***	0.017
Mean passive strategies (C3)				-0.973***	-0.815***	3.369***	-1.015***	-1.036***	3.559***
Not employed before 1991							-1.165**	0.064	6.010
Professionals							-0.737**	0.202	0.773*
Technicians and associatives							-0.548*	0.491**	0.367
Clerks							-1.072**	0.345	0.536
Services, Shops workers							-0.922**	0.105	0.867*
Skilled agricultural and fishery							-0.418	-0.359	0.052
Crafts and related work							-0.653**	0.342	0.546
Industrial workers							-0.627**	0.268	0.559
Elementary workers							-0.971**	0.247	0.684*
Arm forces							-0.732**	0.391	0.439
Constant	-1.394***	0.725**	0.920*	-1.111	0.242	-0.283	0.579	0.198	-1.029
ρ 's	$\rho_{12}=.156$	$\rho_{13}=-.384$	$\rho_{23}=-.114$	$\rho_{12}=.146$	$\rho_{13}=-.332$	$\rho_{23}=-.121$	$\rho_{12}=.148$	$\rho_{13}=-.249$	$\rho_{23}=-.163$
Log-likelihood		-3427.07			-3017.05			-2270.38	
N		2543			2543			1945	

Note: (*) means the coefficient is significant at 10% level, (**) - 5% level, (***) - 1% level

Table 5: Regression of changes in logs of household expenditure 1998-1996.

	Coefficient	Standard Error
Active strategies	0.076*	0.044
Social safety net strategies	-0.033	0.043
Passive responses	-0.198**	0.089
Log of household size	-0.108*	0.064
Nuclear family	0.220***	0.071
Single parent	0.171**	0.086
Other households with children	0.215**	0.076
Households with adults only	0.038	0.065
Urban households	-0.088*	0.055
Age of household head/100	0.473	0.801
Age2 of household head/10000	-0.391	0.842
High school	0.041	0.056
Technical/Vocational	-0.038	0.059
Unemployed 98	-0.031	0.063
Afraid to lose a job in 1996	0.030	0.048
Change in household size	0.199***	0.025
Change in share of small children	0.069	0.258
Change in share of older children	0.027	0.185
Change in share of pensioners	-0.289**	0.126
Household owns dacha	0.002	0.055
Household owns land	-0.009	0.052
Log of mean expenditure	0.083**	0.041
Coefficient of variation in expenditure	-0.505*	0.364
Unemployment level	-0.247	0.232
Mean strategy 1	0.083	0.145
Mean strategy 3	0.071	0.142
Mean strategy 2	-0.375**	0.159
Constant	-0.546	0.422

Note: (*) means the coefficient is significant at 10% level, (**) - 5% level, (***) - 1% level

Table 6: Effect of covariates on probability to use only passive strategy

	Specification II	
	dP/dx	Standard Error ¹⁾
Log of expenditure 96	0.002	0.011
Cash benefits 96	-0.031	0.113
Log of household size	-0.121***	0.034
Nuclear family	-0.061*	0.037
Single parent	-0.120**	0.036
Other households with children	-0.068*	0.037
Households with adults only	-0.111**	0.030
Urban households	0.002	0.029
Age of household head	0.003	0.004
Age2 of household head	0.001	0.042
High school	0.066**	0.029
Technical/Vocational	0.006	0.031
Unemployed 98	-0.073**	0.031
Afraid to lose a job in 1996	0.061**	0.025
Change in cash benefits 96-97	-0.004	0.115
Change in household size	-0.083***	0.014
Change in share of small children	0.034	0.137
Change in share of older children	0.028	0.096
Change in share of pensioners	0.076	0.064
Household owns dacha	-0.031	0.028
Household owns land	-0.071**	0.027
Coeff. of variation in expenditure	0.000	0.000
Log of mean expenditure	0.014	0.026
Unemployment level	0.002*	0.001
Mean strategy 1	-0.008***	0.001
Mean strategy 3	0.006***	0.001
Mean strategy 2	-0.007***	0.001

¹⁾The standard errors of simulations are calculated using variance-covariance matrix from the joint estimation of system (1) and then applying Cholesky decomposition to obtain the standard errors of transformation.

Note: (*) means the coefficient is significant at 10% level, (**) - 5% level, (***) - 1% level

Table 7: Simulated probabilities to use only passive strategies for the selected types of households.

Household type	Predicted probability
Nuclear family, two children	42.2
Single parent, one child	27.3
Households with more than 3 children	24.8
Single pensioner	56.6
Households without children	28.4

Note: predictions are made at sample means.

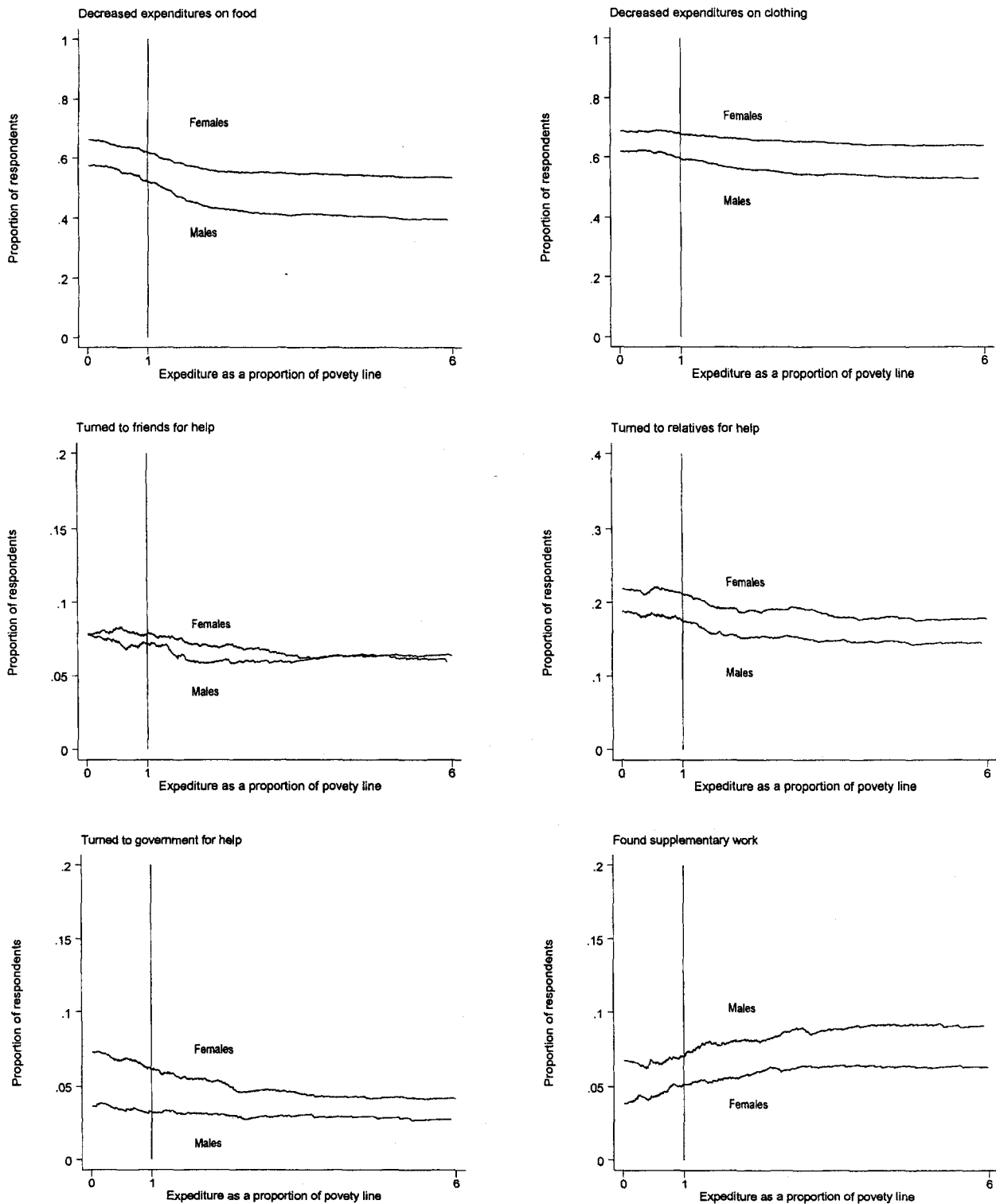


Figure 1: Strategies of coping with economic hardship by gender of the respondent

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