THE WILLIAM DAVIDSON INSTITUTE
AT THE UNIVERSITY OF MICHIGAN BUSINESS SCHOOL

Social Networks in Transition

by Lorena Barberia, Simon Johnson, and Daniel Kaufmann

Working Paper Number 102
October 1997

Comments Welcome

Presented at the ***Conference on Labor Markets in Transition Economies,*** held October 17-19, 1997, at the Davidson Institute in Ann Arbor, Michigan.

October 10, 1997

Social Networks in Transition

Lorena Barberia, Simon Johnson, and Daniel Kaufmann
Harvard, MIT, and The World Bank

Abstract

Inter-household transfers in Russia, Ukraine, and Latvia to provide an important supplement to individual incomes. These transfers are as high as in many developing countries. Transfers are from richer to poorer, from older to younger, and to female-headed households. We find no evidence that Russia has lower transfers than Ukraine, which has had relatively little reform. The high level of inter-household transfers may help explain why there has been so little social protest in Russia despite the large fall in measured real wages.

I. Introduction

Why has there been no social explosion in Russia? Since 1991 there has been an unprecedented decline in measured output and wages. Even allowing for unofficial incomes, GDP is down by at least 30 percent (Johnson, Kaufmann, and Shleifer 1997). At the same time, state support for many poor people is at very low levels. Open unemployment is at least 6 percent and measured real wages for many people are below the subsistence level. Government and World Bank estimates place between 20 and 40 percent percentage of the population in poverty. Yet there has been little social protest, few strikes, and reforms continue.[1] This combination is hard to understand using existing models of transition which emphasize labor market adjustment by individuals (e.g., Aghion and Blanchard 1994, Blanchard 1997).

In contrast, this paper stresses the importance of informal social networks.[2] Mutual support networks can help people improve their living standards in at least four ways. First, these networks allow people to informally exchange services, and thus effectively raise their welfare. Second, networks allow households to pool resources for income-generating investments. Third, networks may provide people with mutual insurance, which can be used in periods of low income. Fourth, networks may make it easier for people to give resources to each other and therefore facilitate altruism.

Previous attempts to evaluate social networks in Russia have used data on inter-household transfers, and have found these networks are not strong and may even be in

[1] For the latest economic statistics see Russian Economic Trends (1997). Aslund (1996) provides the best single review of Russian reform experience.

[2] Related work on informal activity suggests that this is also an important supplement to official incomes (see Johnson, Kaufmann, and Ustenko 1997.)

decline. Comparing 1993 relative to 1992, Cox, Eser, and Jimenez (1997) conclude that transfers deteriorated in Russia as a result of high inflation, declining real wages, and the large fall in output. According to their study, the proportion of the Russian population interacting in networks declined by 4 percent and transfers as a share of income fell by 2.5 percent in one year, although the proportion interacting through transfers remained roughly constant at around 40 percent.

Our paper presents new evidence on social networks in Russia, Ukraine and Latvia from matching surveys of inter-household transfers involving urban workers in mid-1996. Respondents detailed the resources they received and gave to other households in the form of cash, food and services, enabling us to develop detailed measures for the magnitude of transfers and the proportion of households engaged in this kind of network activity. We use this data to address three questions.

First, to what extent do social networks based on transfers exist in Russia? We show that these networks currently exist in roughly the same size and scope as in developing countries. In Russia, 65 percent of households either give or receive transfers, with aggregate transfers amounting to 5.2 percent of total income in our sample. The poorest 20 percent of Russians received transfers worth around 30 percent of their pre-transfer income. For most people, private transfers are more important than state assistance.

Second, what happens to such networks in times of economic hardship, for example when output fell after the end of communism? The presumption to date has been that networks were disrupted: "... The worsening economic conditions in Russia in 1993 were associated with a one-third falloff in private transfer amounts while the

incidence of private transfers attentuated only slightly" (Cox, Jimenez, and Okrasa 1996, p.19). While our evidence is not conclusive on this point, we find no reason to believe that networks were greatly disrupted. In fact, we find that Russia, Ukraine, and Latvia all had quite normal social networks in mid-1996. The structure of net transfers was from somewhat better off to poorer people although, just as in developing countries, many of the relatively poorest people give to other poor people. Transfers from older to younger people follow a similar pattern to that in developed countries.

Third, what are the effects on social networks of economic reforms such stabilization and privatization? Initially reform means relatively few people have higher incomes and become more wealthy. Do they share this wealth through transfers or do they keep it to themselves? In the case of Poland, Cox, Jimenez and Okrasa (1997) found that private transfers were much lower in 1992 than in 1987, suggesting that more reform weakens social networks. In contrast, by 1996 Russia had experienced considerably more reform than Ukraine, but we find Russia exhibits at least as much social network interaction as Ukraine.

Our analysis of transfers and network entrepreneurs uses ideas from two literatures. It builds on the work of sociologists and anthropologists who advanced the theory that resources are stored in human relationships, and that this constitutes social capital. By studying networks, researchers, such as Nadel (1957), Blau (1964) and Granovetter (1985), showed how social structures have important effects. James S. Coleman has argued that networks are largely about exchanges, centering on informational and instrumental interchanges (Coleman 1988). According to Coleman, networks constitute a form of social capital because of their potential to provide

assistance to its members. A transfer in such a network creates diffuse obligations and the concentration of these obligations accumulates to form capital. By studying inter-household transfers, this study offers one way to quantify a particular aspect of social capital.

Economists have become increasingly concerned with understanding the influence social interactions can have on economic outcomes. Building on Becker's (1974) influential paper, which proposed an economic model for understanding social interactions, empirical and theoretical research in economics has focused on the motives and impact underlying social ties in developed and developing countries.[3] Research on inter-household transfers between kin and non-kin relations have been shown to be important for achieving social objectives, such as reducing income inequality, providing social insurance and liquidity (Kaufmann 1982, Kaufmann and Lindauer 1985, Cox and Jimenez, 1990). Particularly important for our research is the finding that these inter-household networks are essential for those living in poverty (Kaufmann 1982, Kaufmann and Lindauer 1985). Recent work in Eastern Europe has challenged this finding, arguing that the private social safety net "frayed" in the years after transition in Russia and Poland (Cox, Jimenez and Okrasa, 1997 and Cox, Eser and Jimenez 1997).

[3] Various theories have been proposed to explain the motivation behind such inter-household transfer networks. Economists, such as Gary Becker (1974) and Robert Barro (1974), present models in which altruism is the underlying motivation to transfer resources to other households. Kaufmann and Lindauer (1986) argue that private transfers are motivated by self-interest to maintain the implicit social insurance contract of the network, where households join the network to insure against the risk that their income falls below a minimum basic needs level. Lucas and Stark (1985) recognize that both altruism and self-interest may motivate transfers. We do not address the reason for transfers in this paper.

Section II introduces the data and our methodology in detail. Section III compares Russian inter-household transfers with other countries. Section IV examines whether Russia and Ukraine have a different pattern of transfers. Section V concludes.

II. The Data

The data used in this analysis is from a World Bank-sponsored survey of urban workers in Latvia, Russia, and Ukraine conducted between June and August 1996. The survey questionnaire compiled detailed socioeconomic information for 11,359 individuals living in the cities of Stavropol, Volgograd, Rostov, Dnepopetrovsk, Mariupol, Lviv and Riga. Stavropol, Volgograd and Rostov are in the South-Western portion of Russia closest to Ukraine; Dnepotrovsk and Mariupol are in Eastern Ukraine, while Lviv is in Western Ukraine; Riga is the capital of Latvia. These urban centers were chosen because they closely resemble the characteristics of the three Ukrainian cities included in the sample.

We contacted individuals through the personnel departments of large industrial enterprises and research institutes. About two thirds of our sample is current workers while the rest are people who had separated from this place of employment. Those still employed were interviewed in person while people who had separated were interviewed by phone.

We use responses only from individuals who are the primary wage earner in a household, assuming that this person is responsible for giving and receiving transfers. Primary wage earner status was determined according to the respondent's answer to the

following question: "how many members of their family, living in the same residence, have greater income than yours?" The results below use 5,466 observations, of which 2,505 are individuals living in Russia (45.8 percent of the sample), 2,488 are individuals living in Ukraine (45.5 percent of the sample), and 473 are individuals living in Latvia (8.7 percent of the sample). Appendix 1 provides summary data on our respondents.

The data contains comprehensive information on the range of coping strategies that individuals employ in economies in transition. In particular, we attempt to quantify all sources of income. Respondents were asked about all possible sources of income, including income obtained from activities outside the legal/official economy, private cash and in-kind remittances received from within and outside the recipient's household, and state and firm cash and in-kind subsidies.[4]

Households were asked to report the proportion of total income they received and donated from three sources -- cash, food and services --to other households. Respondents were asked to select the proportion of monthly income in current dollars they received and gave to other households from specified ranges of income. The survey asked respondents to report separately the amount of cash, food and services they received and donated to other households, again using categories. Private transfers received and given were then constructed using the mid-point values from these designated ranges of income. Recipients also reported the social relationship and location of the donor

[4] Respondents were asked to report the proportion of their monthly income which was earned from driving passengers in one's car, selling foods cultivated on one's dacha, renting rooms or garage space, and selling goods obtained from trips to foreign countries.

household. Social relationships included relatives outside the household, neighbors and friends.[5]

III. Cross-Country Comparisons

Table 1 summarizes the results of comparable studies of cash and non-cash inter-household transfers in transition economies, while Table 2 reports studies across a broader range of countries which deal only with cash transfers.

The studies reviewed in Table 1 find the incidence of informal network activity is much higher in Eastern Europe than in Russia. For example, in their study of Poland, Cox, Jimenez and Okrasa (1997) report that an average of 65 percent of the Polish population made use of household networks in 1992.[6] Richard Rose (1995) reports high levels of transfers in Bulgaria, Czechoslovakia, and Ukraine, but finds that only 27 percent of Russian households are engaged in similar networks. Studies by David Cox and Emmanuel Jimenez, estimate only about 40 percent of the Russian population were involved in social networks in 1992, with transfers received amounting to 4.4 percent of income (Cox, Eser, and Jimenez 1997, Cox, Jimenez and Jordan 1994).

In contrast, our findings suggest there is a high level of inter-household transfers in Russia, Ukraine, and Latvia (see Table 3). In Russia we find that 65 percent of

[5] Recipients also identified location choices as either: 1) within the same city; 2) another city; 3) the suburb; 4) the countryside; 5) the capital; or, 6) other country.

[6] Cox, Jimenez, and Okrasa (1996) study of Poland uses household budget survey data. According to Milanovic (1996, p.87) "For all FSU countries, the bias against including the poorer is estimated to have been very strong." This problem may also be present in work on Russia using the Russian Longitudinal Monitoring Survey (RLMS), such as by Cox, Eser, and Jimenez (1997). In contrast, our sample should capture those of the poorest who were once or who are now employed in large firms.

respondents engaged in some form of inter-household transfers, either as a donor or a recipient. In Ukraine and Latvia the figures are only a little higher at 57 and 60 percent respectively. While our samples are not representative of the whole population, these numbers suggest that network interaction is at least as high among urban workers in the former Soviet Union as it is in developing countries (see Table 2).[7]

Furthermore, as shown in Table 1, even the average amounts involved are significant. In our sample, total transfers given were 5.2 percent of total household income in Russia, 3.9 percent in Ukraine, and 3.7 percent in Latvia. Transfers received account for 7.1 percent of total average income in Russia, 5.4 percent in Ukraine, and 9.5 percent in Latvia.

As Table 4 shows, the proportions are much higher for people who actually receive transfers: around 23 percent on average in Russia and Ukraine. Not surprisingly, poor people receive more relative to their income. For Russian recipients in the lowest income quintile, transfers are 30.6 percent of wage earnings and 28.2 percent of pre-transfer income.

Private transfers are large compared to government assistance. Pensions, unemployment benefit, disability benefits, and all other types of public aid are about 4

[7] We have to be cautious about comparing this study and other inter-household transfer studies in developing countries for two reasons. First, as the survey design between them differs greatly. For this study, respondents gave detailed information on cash, services, and food. The surveys for developing countries, cited in Table 2, only queried respondents about monetary transfers. The only developing country study that includes all three transfers is for South Africa by Cox and Jimenez (1995). For the non-white population, the estimated proportion of gross recipients is 24 percent and 17 percent for gross donors. The total proportion of households that received, gave, or did both is 39 percent. Second, the income variability and access to social insurance mechanisms, which

percent of average monthly income for Russian families in our sample (and 3 percent in Ukraine).

These private transfers are also large compared to the special assistance workers receive from their employer, in the form of subsidized goods and meals, medical services, and monetary transfers. In our sample, enterprises contribute an average of only 3 percent of total income through these benefit packages. Unlike public assistance, firm-level assistance rises with earnings. As a result, lower income workers obtain proportionately less assistance from firms and depend on public and private transfers to supplement their earnings.

While transfer recipients are concentrated in lower income groups and donors tend to belong to higher income quintiles, people give and receive at all income levels. In Russia, 58.4 percent of households in the lowest wage quintile received transfers, while 41 percent reported giving. For the highest wage quintile, 40.3 percent of Russians received transfers and 52.3 percent gave.

Inter-household transfers in Russia involve approximately the same share of income and the same proportion of households as in developing countries. At least for the urban workers in our sample, most households engage in informal networking of some kind. Relative to household income, state support, and firm-provided subsidies, the share of income derived from transfers is substantial.

IV. The Effects of Reform

---

are important determinants of transfer behavior, differ significantly between transition and developing countries.

Our survey evidence allows detailed comparisons between Russia and Ukraine. By mid-1996 Russia had experienced considerably more reform than Ukraine, particularly in terms of privatization (see Aslund, Boone, and Johnson 1996, Johnson, Kaufmann, Shleifer 1997). Our survey evidence allows us to examine closely whether Russian reform was associated with lower levels of inter-household transfers than in Ukraine.

What can we say about the nature of these transfer networks in Russia? Based on work in other countries, we would expect a "normal" social network in a developed country to transfer resources from richer to poorer people, from older to younger people, and to households with more children. We now examine income, age, and household composition for both receiving and giving in Russia and Ukraine.

Receiving Transfers

The first column of Table 5 presents results from estimating a logit model with the dependent variable equal to one if the family received gross transfers. We then estimated an ordered logit in which the dependent variable is the level of transfers received. These regressions pool data from all three countries.

The probability of receiving transfers at the sample mean is 43 percent. At the sample means, Russians are 5 percent more likely to receive transfers relative to Ukrainians. There is only a percentage point difference between Russians and Latvians in incidence of receiving. A family with of two children their single working mother with high school education is 25 percentage points more likely to be a recipient in Russia. For a Russian family of two pensioners with the primary wage earner in the household

having a university level education, the likelihood of receiving transfers falls by 18.5 percent to 25 percent.

Income is the most important factor determining whether a family receives transfers; in all three countries poorer households receive the greatest overall level of transfers. Higher wages reduce the likelihood of transfer receipt, although the overall effect of income on the probability of receipt is moderate in comparison to other variables. The impact of increasing wages by 50 percent from a mean value of $98.55 per month resulted in only a 1.3 percent increase in the probability of being a recipient. The coefficient on income from secondary jobs was positive, but not statistically significant at the 10 percent level. A Russian household in the lowest earnings quintile, with mean wage income of $102.40 and secondary job income of $5.54, is 8.6 percentage points more likely to receive cash, services and food from other families.

Not surprisingly, private transfers are more likely to be received by those who do not get any form of public assistance. A larger number of pensioners in the household and being a pensioner reduces the family's likelihood of receiving a private transfer.

The ordered logit results presented in Table 5 indicate that a primary wage earner who has a low-wage job, higher education and works in a state enterprise is more likely to receive larger transfers. Income from secondary employment or public and firm assistance does not seem to affect the size of transfers. Unlike the incidence of receiving transfers, workers with only a high school education have a lower probability of getting more transfer dollars.

Young families with fewer adults and greater numbers of children and students are more likely to receive greater amounts of transfer dollars per month. On the other

hand, the probability of receiving greater amounts of transfers is not higher for female-headed households. Although the coefficient on female primary wage earners is positive, it is not statistically significant at the 10 percent level. These findings are also consistent with evidence from developing countries, where female-headed households have been found to be more probable to be recipients, but extract proportionately less in transfer dollars.

In conclusion, transfers flow to younger, less educated, low-income households, particularly where females are the primary wage earner. Russian families have a higher probability of receiving transfers compared to households in the Ukraine and Latvia. The private social safety net functions to redistribute income to those who have lower income and are least able to cope during transition, except in cases where labor market participation is relatively low or nonexistent.

Giving Transfers

The results from the logit model examining the probability of giving transfers indicate that donors are a mirror image of recipient families. As can be seen in the first column of Table 6, donors are generally older workers employed in state enterprises with higher income. The regression model indicates Russians are 6.2 percent more likely to be donors relative to Ukrainians and 16.3 percent higher than Latvians.

Higher income is positively correlated with giving, due to the positive sign on the formal, informal and firm transfer income coefficients. Increases in wage income have a stronger impact on the likelihood of giving relative to the likelihood of receiving transfers. For donors increasing wages by 50 percent of its mean value of $98.55 per

month raises by 3.5 percent increase in the likelihood that a family will give cash, food or services to other households.

The results also show that secondary employment earnings have a greater effect on the probability of giving transfers relative to formal wages, as the coefficient is larger in magnitude. If the informal sector has a greater necessity for relying on social networks, we would expect self-employed workers to also invest more heavily in them. Both the sign and statistical significance of the secondary job earnings coefficients are evidence in favor of our hypothesis. The model also predicts that public aid or being in the lowest income quintile will have a negative effect on donor incidence, although neither of these coefficients are statistically significant at the 10 percent level.

In analyzing the relationship between transfers and age, we find that transfer patterns in economies in transition are distinct from those in developing countries. Transfers appear to flow in the reverse direction of those in developing countries, where they flow from younger to older generations.

The probability of giving transfers was found to decline as the number of adults, pensioners and children in the family increased. For example, each additional child decreases the likelihood of donation by 2.5 percentage points. Although donors tend to be older, having an additional pensioner in the home decreases the likelihood of being a donor by 6 percentage points. This finding coincides with previously reported results that showed that pensioners are more likely to be public assistance recipients and therefore, less probable to receive private transfers. Apparently, the fact that pensioners derive a majority of their support from the state gives them less incentive to participate in informal networks as both donors and recipients.

Controlling for earnings, educational differences were not found to be a statistically important determinant of giving transfers. Interpretation of this finding is difficult, as it is not clear that education adequately captures differences in permanent income or skill level between households during transition.

Relative to Russian families, households in the Ukraine are less likely to give transfers and also tend to give less in absolute terms. As the results presented in Table 6 demonstrate, higher income reduces the probability of giving more transfers to other families. Those most likely to invest in networks are poor urban households.

Those who tend to give the greatest amounts of transfers are older and belong to families with fewer adults, pensioners, children and students. In contrast to previous findings, which predicted that state workers were more likely to donate cash, food and services to other households, ordered logit results indicate that public sector employees are not more likely to give more in absolute terms. Female-headed households are less likely to donate and those who do are less likely to give larger sums of transfers.

Overall, therefore, it appears that the structure of transfers in Russia makes sense and fits the pattern seen in other countries. If anything, Russia has a pattern which is quite close to developed countries, with transfers flowing from old to young as well as from richer to poorer.

Poverty

As Appendix 2 shows, taking these transfers into account does have a significant impact on estimates of how many people are below the poverty line. Unfortunately, the nature of our sample does not allow us to reassess official estimates completely.

However, if we take the official poverty line seriously, we find that the percent of Russian primary wage earners with income below this line in our sample is 12.7% if we consider only official earnings, but only 3.2 percent when we consider all sources of income, including transfers.

Even if we use a higher poverty line (based on our estimate of the cost of a minimum consumption basket; see Johnson, Kaufmann, and Ustenko 1997), the impact of including state aid, firm benefits, informal earnings and transfers is to reduce the percent in poverty from 30 percent to 6.1 percent in Russia. Note that the while the adjustment in Ukraine is of similar magnitude, our "bottom line" is that nearly 20 percent of the sample have income less than the poverty line. Note, however, that we do not have enough information to determine precisely the percent of households in poverty.

V. Conclusion

Russia has a high level of inter-household transfers. Compared with other countries, a relatively high proportion of Russian households receive transfers. The amounts of income involved are large relative to income and state support.

We find no evidence that Russia has a lower level of transfers than Ukraine or Latvia. While this does not prove that transfers have not declined since the beginning of reform, it suggests that Russian social networks have held up better than commonly supposed. In all three countries, transfers redistribute income from older, more affluent households to younger and low-income families. Female-headed households are more likely to receive transfers. Poor urban families are particularly likely to use networks as

a survival strategy. Transfers help a significant number of people receive at least a minimum subsistence level of income.

Bibliography

Aslund, Anders 1996. **How Russia Became A Market Economy.** Brookings Institution.

Aslund, Anders, Peter Boone, and Simon Johnson 1996. "How to Stabilize: Lessons from Post-Communist Countries." **Brookings Papers on Economic Activity**, Spring.

Becker, Gary, 1974. "A Theory of Social Interactions," Journal of Political Economy, vol.82, no.6, 1063-1093.

Barr, Nicholas, 1994. "Income Transfers: Social Insurance," Nicholas Barr, ed., Labor Markets and Social Policy in Central and Eastern Europe: The Transition and Beyond, (New York, Oxford University Press,).

Barro, Robert J., 1974. "Are Government Bonds Net Wealth," Journal of Political Economy, vol. 82, no.6, 1095-1117.

Blau, Peter, 1964. Exchange and Power in Social Life (New York: Wiley)

Braithwaite, Jeanine and Tom Hoopengardner, 1997. "Who are Ukraine's Poor?" In Cornelius, Peter K., et al, ed., Ukraine: Accelerating the Transition to Market, 61-80, (Washington, DC: The International Monetary Fund)

Briggs, Xavier de Souza, 1996. "Brown Kids in White Suburbs: Housing Mobility, Neighborhood Effects and the Social Ties of Poor Youth" (Columbia University, Unpublished Ph.D. Dissertation, New York, NY)

Briggs, Xavier de Souza, 1997. "Social Capital and the Cities: Advice to Change Agents," The National Civic Review (forthcoming).

Coleman, James, S., 1988. "Social Capital in the Creation of Human Capital," American Journal of Sociology, Vol. 94 Supplement S95-S120.

Coleman, James, S., 1990. Foundations of Social Theory (Cambridge: Harvard University Press)

Cox, Donald, 1990. "Intergenerational Transfers and Liquidity Constraints," Quarterly Journal of Economics, Vol.105, 187-215.

_____ and Emmanuel Jimenez, 1990. "Social Objectives Through Private Transfers: A Review," The World Bank Research Observer Vol.5, 205-218.

_____, 1992. "Social Security and Private Transfers in Developing Countries: The Case of Peru," The World Bank Economic Review, Vol. 6, No.1, 155-169.

_____, Zekeriya Eser and Emmanuel Jimenez, "Family Safety Nets During Economic Transition: A Study of inter-household Transfers in Russia," Jeni Klugman, ed., Poverty, Policy and Responses: The Russian Federation in Transition (Washington, DC: The World Bank, forthcoming).

_____, Emmanuel Jimenez and Wlodek Okrasa. "Family Safety Nets and Economic Transition: A Study of Worker Households in Poland," Review of Income and Wealth, forthcoming.

_____and John Jordan, 1994. "Family Safety Nets and Economic Transition: A Study of Private Transfers in Kyrgyzstan," (forthcoming)

Fallon, Peter, Tom Hoopengardner and Ella Libanova, 1997. "Poverty and the Ukrainian Labor Market," Cornelius, Peter K., et al, ed., Ukraine: Accelerating the Transition to Market, 61-80, (Washington, DC: The International Monetary Fund)

Granovetter, Mark, 1985. "Economic Action, Social Structure, and Embeddedness," American Journal of Sociology Vol. 91 S481-S510.

Gupta, Sanjeev, Elliott Harris and Alexandros Mourmouras, "Reforming Ukraine's Social Safety Net," Cornelius, Peter K., et al, ed., Ukraine: Accelerating the Transition to Market, (Washington, DC: The International Monetary Fund, 1997).

Hofferth, Sandra, Johanne Boisjoly and Greg J. Duncan, 1995. "Do Families "Invest" in Social Capital?," Center for Urban Affairs and Policy Research Working Paper No. 3 (Northwestern University)

Johnson, Simon, Daniel Kaufmann and Oleg Ustenko, 1995. "Winners, Losers, and Survival Strategies in Ukraine," (Washington DC, World Bank, unpublished).

Johnson, Simon, Daniel Kaufmann, and Andrei Shleifer 1997. "The Unofficial Economy in Transition." **Brookings Papers on Economic Activity**, Fall, forthcoming.

Kaufmann, Daniel, 1982. Social Interaction As a Strategy of Economic Survival among the Urban Poor: Theory and Evidence, (Harvard University, Unpublished Ph.D. Dissertation, Cambridge, MA).

_____ and David L. Lindauer, 1985. "A Model of Income Transfers for the Urban Poor," Journal of Development Economics, Vol. 22, 337-50.

_____, 1984. Income Transfers within Extended Families to Meet Basic Needs: the Evidence from El Salvador, World Bank Staff Working Paper No. 644 (Washington, DC).

Knowles, James and Richard Anker, 1981. "An Analysis of Income Transfers in a Developing Country: the Case of Kenya", Journal of Development Economics,8,205-226.

Lomnitz, L., 1977. Networks and Marginally: Life in a Mexican Shutdown (Academic Press, New York).

Milanovic, Branko, 1996. Income, Inequality and Poverty during the Transition, World Bank Research Paper Series, No. 11 (Washington, D.C.)

Narayan, Deepa and Lant Pritchett, 1997. "Cents and Sociability: Household Income and Social Capital in Rural Tanzania," (unpublished draft).

O'Brien, David J., Valeri V. Patsiorkovski, Larry Dershem and Oksana Lylova, 1996. "Social Capital and Adaptation to Social Change in Russian Villages," Centre for the Study of Public Policy, No. 263 (Glasgow: University of Strathclyde,).

Olson, Mancur, 1965. The Logic of Collective Action: Public Goods and The Theory of Groups, (Cambridge: Harvard University Press).

Pearce, Diana, 1979. "Women, Work and Welfare: the of Poverty," Karen Feldstein, ed., Working Women and Families (Sage Publications, Beverly Hills, CA).

Putnam, Robert, 1995. "Bowling Alone: America's Declining Social Capital," Journal of Democracy 6:1, 65-78.

Rose, Richard, 1995. "Adaptation, Resilience and Destitution: Alternative Responses to Transition in Ukraine," Problems of Post-Communism, Vol.42, 52-61.

_____, 1995. "Economic Conditions of Nationalities in the Baltics," Post-Soviet Geography, Vol.36., No.8, 476-495.

_____, 1996. "Social Capital: Definition, Measure, Implications," Remarks delivered at World Bank Workshop on Social Capital.

Sipos, Sándros, 1994. "Income Transfers: Family Support and Poverty Relief," Nicholas Barr, ed., Labor Markets and Social Policy in Central and Eastern Europe: The Transition and Beyond, (New York, Oxford University Press).

Yaremenko, Alexander, Olga Balakireva, Nikolaj Golovatyj, Irina Demchenko and Nadezhda Komarova, 1995. "Employment, Unemployment and Disguised

Unemployment in the Large Cities of Ukraine," (Kiev, International Institute of Sociology, unpublished).

Table 1. Private Inter-Household Transfers[1] in Selected Economies in Transition

Country and segment of population	*Year*	*GNP per capita (in 1995 PPP international dollars)[2]*	*Percentage of households*			*Average transfer amount as percentage of average income[3]*		*Source*
			Receiving	*Giving*	*Networking*	*Receiving*	*Giving*	
Bulgaria								
Urban	1991	4,480	n.a.	n.a.	53%	n.a.	n.a.	Rose, Richard State/Market Survey
Czechoslovakia								
Urban	1991	9, 770	n.a.	n.a.	76%	n.a.	n.a.	Rose, Richard State/Market Survey
Russia								
rural and urban	1992	4,480	23.5% (20.0%)[4]	24.3% (19.4%)	40%	6.9%	4. 6%	Cox, Eser, Jimenez RLMS survey, 1st Round
Urban	1992		n.a.	n.a.	27%	4.4%	n.a.	Rose, Richard State/Market Survey
rural and urban	1993		n.a. (15.3%)	n.a. (20.5%)	36%	4.4%	4.9%	Cox, Eser, Jimenez RLMS survey, 3rd Round
urban workers	1996		47.2% (39.8%)	43.6% (27.2%)	65%	7.2% [12.3%][6]	5.2% [6.9%]	*Results reported in this study*[5]
Poland	1987	5,400	49.0% (44.3%)	28.6% (18.7%)	63%	4.6%	0.1%	Cox, Jimenez, Okrasa HBS Survey
state workers	1992		52.5% (47.5%)	27.8% (17.4%)	65%	3.6%	0.09%	Cox, Jimenez, Okrasa HBS Survey
Ukraine		2,400						
Urban	1993		n.a.	n.a.	76%	n.a.	n.a.	Rose, Richard /NDB II Survey
Urban	1994		21.5%	n.a.	n.a.	n.a.	n.a.	Yaremenko, Balakireva, Golovatyj, Demchenko, Komarova.
urban and rural	1995		n.a.	n.a.	n.a.	2.9%	n.a.	Kiev International Institute of Sociology
urban workers	1996		38.5% (32.5%)	34.8% (22.5%)	57%	5.4% [10.5%]	3.9% [6.2%]	*Results reported in this study*
Latvia								
urban workers	1996	3,370	43.3% (35.8%)	39.3% (20.8%)	60%	9.5% [23.0%]	5.0% [7.2%]	*Results reported in this study*
Kyrgyzstan								
urban and rural	1993	1,800	12.5% (11.7%)	11.4% (9.0%)	21%	7.4%	n.a.	Cox, Jimenez and Jordan KMPS Survey

Notes: 1. Inter-household transfers refer to both cash and in-kind transfers received in gross terms. 2. PPP estimates were obtained from World Development Indicators, World Bank, Feb. 1997 3. Average income includes incomes of those who did not receive or give transfers. The average received as a percentage of income is much larger for recipients and donors. 4. Numbers in parenthesis denote the percentage of net recipients and net donors in each sample. 5. Results reported are for primary wage sample only. 6. Figures in brackets are transfers received as a share of official income (not including informal earnings).

Detailed Explanations of Survey questions used for Table 1:

*Cox, Eser and Jimenez use the RLMS which asked the respondents to report separately on cash and assistance in kind that the household received and how much the household spend on "assistance to relative and friends."

*Cox, Jimenez and Okrasa use the 1987 & 1992 HBS surveys which ask the respondent to report "commodities or services obtained free of charge." The category gifts received includes money, goods, services, bequests, dowry payments, the value of goods received for persons living abroad, and private non-familial transfers such as charity payments received. Total transfers given include money and the values of goods given to persons outside the household, including relatives which have been separated from the family for at least three months

*This study uses a 1996 survey of urban workers in which workers were asked to separately report cash, goods, and services given and received from household members not living with the household as a percentage of monthly income. All data refers to recipients for which we have $ estimates of transfers.

*Rose's studies are based on the State/Market and New Democracies Barometer II data which is a representative stratified population of individuals in Bulgaria, Czechoslovakia and Russia. The numbers refer to the percentage of respondents who stated that they were involved in regular help for friends and relatives (not clear if relatives were not household members).

*Yaremenko, Balakireva, Golovatyj, Demchenko, Komarova perform a random sample survey in which respondents are asked to rank various income sources, including money (or money equivalent in foodstuffs and things) they received from relatives.

*The Kiev Institute of Sociology study asked respondents to report all sources of income, including money and goods received as "aid from private persons."

Table 2. Private Inter-Household Cash Transfers[1] in Selected Developing, Developed and Transition Economies

Country and segment of population	*Year*	*GNP per capita (in 1995 PPP international dollars)*[2]	*Percentage of households*		*Average transfer amount as percentage of average income*[3]		*Source*
			Receiving	*Giving*	*Receiving*	*Giving*	
El Salvador							
Urban poor	1976	2,610	33%	n.a.	11%[3]	n.a.	Kaufmann and Lindauer
India							
Rural	1975-83	1,400	93%	n.a.	8%	n.a.	Behrman and Deolalikar
Indonesia							
Rural	1982	3,800	31%	72%	10%	8%	Ravallion and Dearden
Urban							
Kenya							
Urban (sample of recent immigrants)	1968	1,380	n.a.	59%	n.a.	13%	Rempell and Lobdell
Nairobi (urban poor)	1971		n.a.	89%	n.a.	21%	Johnson and Whitelaw
Nationwide	1974		n.a.	27%	3%	4%	Knowles and Anker
Rural				19%	2%	3%	
Urban				62%	4%	6%	
Malaysia							
Nationwide	1977-78	9,410	19-30%	33-47%	11%	n.a.	Butz and Stan
Mexico							
Two villages	1982	6,400	n.a.	n.a.	16-21%	n.a.	Stark, Taylor, and Yitzhaki
Peru							
Nationwide	1985	3,770	22%	23%	2%	1%	Cox and Jimenez
Philippines							
Large informal housing area	1978	2,850	47%	n.a.	9%	n.a.	Kaufmann
United States							
Nationwide	1979	26,980	16%	n.a.	8%	n.a.	Cox, Donald
Russia							
Urban workers	1996	4,480	18%	20%	1.8%	1.3%	*Results reported in this study*
Ukraine							
Urban workers	1996	2,400	17%	18%	1.7%	1.3%	*Results reported in this study*
Latvia							
Urban workers	1996	3,370	21%	11%	2.1%	0.6%	*Results reported in this study*

Table reproduced from Cox and Jimenez, "Achieving Social Objectives through Private Transfers." *The World Bank Observer*, vol. 5, No. 2, July 1990. The column on the percentage of the population, which can be classified as networking and data on the United States and transition economies is from the authors' calculations and was not part of the original table.

Notes: 1. Inter-household transfers refer to cash transfers only. 2. PPP estimates were obtained from World Development Indicators, World Bank, Feb. 1997. 3. Average income includes incomes of those that did not receive or give transfers. The average received as a percentage of income is much larger for recipients and donors.

Table 3
By Country: Percentage of Each Group

	Russia	Ukraine	Latvia
Gross Recipients	47.2%	38.5%	43.3%
Gross Donors	43.6%	34.8%	39.3%
Social Interactors	65.4%	57.0%	59.8%
Others	34.6%	43.0%	40.2%

Note: Social Interactor is defined as an individual who is a gross recipient and/or gross donor.

Table 4
Gross Inter-household Transfers Received as a Share of Wage Earnings and Pre-Transfer Income
For Primary Wage Earners Sample Only

	Russia	Ukraine	Latvia
For All Recipients			
As a share of Wage Earnings[1]	24.8%	31.0%	48%
	(47%)[2]	(38%)	(43%)
As a share of Pre-Transfer Income[3]	22.7%	23.5%	43.3%
Pre-Transfer Income as a Share of HHS Expenditure[4]	.81	.78	.91
For All Recipients in Bottom 5% of Income Distribution			Only 9obs.
As a share of Wage Earnings	36.4%	58.8%	162%
	(61%)	(56%)	(50%)
As a share of Pre-Transfer Income	41.5%	40.3%	159%
Pre-Transfer Income as a Share of HHS Expenditure	.73	.68	1.03
Recipient in Lowest Income Quintile[5]			max. of 20 observations
As a share of Wage Earnings	30.6%	39.2%	81.0%
	(58%)	(54%)	(47%)
As a share of Pre-Transfer Income	28.2%	29.3%	79.2%
Pre-Transfer Income as a Share of HHS Expenditure	.67	.65	.65
Recipient in 2nd Lowest Income Quintile			
As a share of Wage Earnings	27.7%	27.9%	41.8%
	(50%)	(42%)	(53%)
As a share of Pre-Transfer Income	26.3%	22.3%	40.8%
Pre-Transfer Income as a Share of HHS Expenditure	.79	.73	.89

Notes:
1. Wage earnings refers to income earned through formal employment *only*.
2. Figure in parenthesis is the percentage of gross transfer recipients relative to the relevant sub-sample population.
3. Pre-Transfer Income = Wage Earnings + Informal Earnings
4. Household Expenditure = $ of family budget spent on food/meals
5. Income Quintile is with respect to formal earnings *only*.

Table 5: Logit,Ordered Logit and OLS Estimates for Gross Transfers Received
for primary earner sample only

	Mean of Variable	Logit	Ordered Logit for All	OLS for All	Ordered Logit for Recipients Only	OLS for Recipients Only	Mean of Variable	OLS for All in $	OLS for Recipients Only in $
		(1)	(2)	(3)	(4)	(5)		(6)	(7)
RHS Variables									
Demographic variables									
Female is primary hhs wage earner	0.397	0.180**	0.195**	0.140**	0.063	0.040	0.416	2.520**	2.570
Individual is a pensioner	0.121	-0.047	-0.115	-0.071	-0.410*	-0.208	0.117	0.933	-4.887
Individual is 18-28 years old	0.174	0.833**	1.097**	0.825**	1.210**	0.685**	0.154	15.852**	19.618**
Individual is 29-36 years old	0.185	0.479**	0.581**	0.386**	0.609**	0.337**	0.186	4.845**	5.554
Individual is 37-43 years old	0.229	0.057	0.157	0.090	0.371**	0.181*	0.241	-0.870	-1.682
Individual is 44-51 years old	0.204	0.066	0.065	-0.011	0.005	-0.023	0.215	-2.270	-4.666
ndividual has up to a high school education	0.368	0.293**	0.163*	0.055	-0.346**	-0.208**	0.362	-3.891**	-10.590**
ndividual has a special secondary education	0.368	0.216**	0.178**	0.083	-0.090	-0.066	0.372	0.726	-0.668
Number of non-pensioner adults in hhs	1.549	-0.458**	-0.569**	-0.349**	-0.501**	-0.314**	1.551	-3.443**	-4.805**
Number of children in hhs	0.632	0.363**	0.395**	0.274**	0.284**	0.176**	0.653	4.144**	4.383**
Number of students in hhs	0.130	0.258**	0.262**	0.151**	0.142	0.101	0.139	1.245	-0.358
Number of other pensioners in hhs	0.407	-1.086**	-1.277**	-0.775**	-1.026**	-0.608**	0.385	-7.983**	-10.878**
Country variables									
Individual lives in Ukraine	0.455	-0.431**	-0.360**	-0.209**	0.019	0.013	0.475	-1.701	-1.999
Individual lives in Latvia	0.087	0.295*	0.517**	0.382**	0.923**	0.495**	0.078	30.410**	61.852**
Type of Firm									
Private	0.284	0.140	0.147*	0.117**	0.130	0.089	0.309	-0.438	-0.736
State	0.444	0.341**	0.413**	0.268**	0.327**	0.196**	0.415	6.244**	12.272**
Income Variables (US$)									
Formal monthly earnings	98.554	-0.005**	-0.005**	-0.003**	-0.003**	-0.001**	97.690	-0.029**	-0.022
Informal monthly earnings	15.115	-0.002*	-0.002	-0.001	0.002	0.001	13.354	0.016	0.122**
Firm Transfers (cash & in kind)	4.538	0.023**	0.020**	0.014**	0.007	0.004*	4.552	0.633**	0.884**
State Transfers (cash)	3.803	-0.006*	-0.005*	-0.003*	-0.001	0.000	3.817	-0.111**	0.014
Constant		0.515**		2.640**		2.792**		9.561**	16.274**
Mean of Dependent Variable		0.429	2.11	2.11	2.57	2.57		10.94	23.93
Log-Likelihood		-2318.84	-4742.38		-2395.75				
Chi-Square test for zero slopes(22)		512.48	713.38		275.53				
Adjusted R^2		0.0995	0.070	0.170	0.054	0.142		0.140	0.223
Sample Size		3732	3717	3717	1718	1718		3717	1715

ote: **=significant at 5% level
***=significant at 10% level**

Table 6: Logit, Ordered Logit and OLS Estimates for Gross Transfers Given *for primary earner sample only*

	Mean of Variable	Logit	Ordered Logit for All	OLS for All	Ordered Logit for Donors Only	OLS for Donors Only	Mean of Variable	OLS for All in $	OLS for Donors Only in $
		(1)	(2)	(3)	(4)	(5)		(6)	(7)
RHS Variables									
Demographic variables									
Female is primary hhs wage earner	0.397	0.014	-0.081	-0.105**	-0.411**	-0.219**	0.381	-1.169**	-2.271**
Individual is a pensioner	0.121	0.256*	0.217	0.144	-0.061	-0.052	0.146	0.853	-2.265
Individual is 18-28 years old	0.174	-0.464**	-0.530**	-0.339**	-0.407**	-0.253**	0.190	-0.908	0.019
Individual is 29-36 years old	0.185	-0.578**	-0.633**	-0.414**	-0.453**	-0.267**	0.170	-1.741**	-0.147
Individual is 37-43 years old	0.229	-0.447**	-0.491**	-0.319**	-0.302*	-0.185*	0.210	-0.905	0.297
Individual is 44-51 years old	0.204	-0.374**	-0.425**	-0.283**	-0.381**	-0.208*	0.191	-0.788	0.114
ndividual has up to a high school education	0.368	0.022	0.028	0.044	0.097	0.088	0.378	0.076	-0.143
ndividual has a special secondary education	0.368	-0.098	-0.077	-0.015	0.029	0.046	0.358	0.502	1.042
Number of non-pensioner adults in hhs	1.549	-0.148**	-0.214**	-0.160**	-0.315**	-0.174**	1.525	-1.334**	-1.663**
Number of children in hhs	0.632	-0.163**	-0.237**	-0.167**	-0.421**	-0.246**	0.570	-1.636**	-2.874**
Number of students in hhs	0.130	-0.250**	-0.359**	-0.276**	-0.680**	-0.381**	0.122	-2.636**	-5.115**
Number of other pensioners in hhs	0.407	-0.419**	-0.466**	-0.282**	-0.303**	-0.165**	0.402	-2.063**	-1.141
Country variables									
Individual lives in Ukraine	0.455	-0.248**	-0.300**	-0.179**	-0.261**	-0.140**	0.406	-1.197**	-2.122**
Individual lives in Latvia	0.087	-0.747**	-0.592**	-0.307**	0.268	0.133	0.093	2.192**	14.973**
Type of Firm									
Private	0.284	-0.155*	-0.186**	-0.113**	-0.114	-0.060	0.242	-0.363	0.520
State	0.444	0.224**	0.202**	0.116**	0.083	0.038	0.491	0.159	0.104
Income Variables (US$)									
Formal monthly earnings	98.554	0.003**	0.002**	0.001**	-0.001	-0.001	102.702	0.033**	0.040**
Informal monthly earnings	15.114	0.007**	0.005**	0.002**	-0.003*	-0.002*	17.808	0.009	-0.010
Firm Transfers (cash & in kind)	4.537	0.027**	0.020**	0.013**	0.000	0.000	6.071	0.193**	0.215**
State Transfers (cash)	3.802	-0.003	-0.002	-0.001	0.006	0.003	4.691	0.008	0.104**
Constant		0.057		2.548**		3.039**		7.408**	14.904**
Mean of Dependent Variable		0.392	1.875	1.875	2.234	2.234		6.238	15.577
Log-Likelihood		-2372.05	-4302.72		-1867.41				
Chi-Square test for zero slopes(22)		275.34	315.32		166.49				
Adjusted R^2		0.055	0.035	0.0814	0.043	0.092		0.095	0.171
Sample Size		3732	3732	3732	1488	1488		3718	1486

ote: **=significant at 5% level
*=significant at 10% level

Appendix 1
Characteristics of Households
for primary wage earner sample only

	Russia		Ukraine		Latvia	
	All	*Lowest Income Quintile*	*All*	*Lowest Income Quintile*	*All*	*Lowest Income Quintile*
Characteristics of Individual						
Age of Primary Wage Earner	40.78	43.59	42.26	41.87	37.48	42.55
Percentage of hh with PWE's age less than 28	0.21	0.18	0.12	0.14	0.26	0.24
Percentage of hh with PWE's age greater than 51	0.20	0.33	0.22	0.19	0.15	0.34
Percentage of hh with female as PWE	0.43	0.57	0.38	0.51	0.33	0.45
Percentage of hh with pensioner as PWE	0.14	0.22	0.11	0.10	0.08	0.28
Education						
High School	0.36	0.38	0.39	0.52	0.31	0.31
Occupational School	0.41	0.42	0.31	0.27	0.45	0.53
University	0.23	0.20	0.30	0.21	0.24	0.16
Type of firm						
Private	0.26	0.35	0.26	0.41	0.56	0.65
State	0.51	0.46	0.42	0.32	0.25	0.21
Collective or Leased	0.24	0.20	0.32	0.27	0.18	0.14
Employment category						
Percentage of hh with unemployed PWE	0.01	0.05	0.01	0.04	0.01	0.00
Percentage of hh with temporarily employed PWE	0.12	0.05	0.04	0.03	0.12	0.11
Percentage of hh with part-time employed PWE	0.05	0.14	0.05	0.16	0.06	0.06
Characteristics of Household						
Family Size	2.57	2.20	2.85	2.72	2.20	1.76
No. of children under age	0.60	0.53	0.71	0.71	0.37	0.23
No. of pensioners in hh	0.39	0.30	0.45	0.44	0.28	0.40
No. of wage earners in hh	0.72	0.49	0.82	0.68	0.61	0.44
Assets						
Percentage of hh who own a dacha	0.48	0.43	0.47	0.38	0.35	0.25
Percentage of hh who own a car	0.19	0.07	0.23	0.11	0.16	0.08
Percentage of hh who rented out an apartment or garage	0.07	0.01	0.05	0.00	0.06	0.00
Income						
Monthly wages and/or salary in $	102.38	51.81	69.66	27.62	228.32	128.77
Wage income as a share of total income[1]	0.76	0.69	0.77	0.66	0.81	0.74
Informal monthly earnings in $	14.41	5.23	12.21	4.44	34.20	6.67
Informal earnings as a share of total income	0.09	0.07	0.12	0.14	0.06	0.04
State subsidies per month in $	5.54	9.92	2.24	2.94	3.37	11.45
State subsidies as a share of total income	0.04	0.09	0.03	0.06	0.01	0.06
Firm subsidies per month in $	5.92	4.19	2.66	2.03	7.96	6.34
Firm subsidies as a share of total income	0.04	0.05	0.03	0.03	0.03	0.03
Inter-household transfers received per month in $	11.17	9.53	5.87	5.26	40.49	47.22
Transfers as a share of total income	0.07	0.11	0.05	0.10	0.09	0.13
Total income	140.42	80.47	93.62	41.71	300.70	201.60
Other characteristics						
Monthly household expenditures in $	167.03	111.92	113.31	68.93	442.40	361.67
Per capita household expenditures[2] per month in $	104.85	76.95	68.64	42.51	309.15	292.33
Sample size	2,505	509	2,488	509	472	97

Note: 1. Includes income from wages, informal earnings, state and firm allowances, and inter-household transfers. 2. Per capita household consumption figures were computed by dividing monthly household consumption expenditures by a weighted family size variable, where children were weighted at 0.5 consumption units and students and pensioners were weighted at 0.66 consumption units.

Appendix 2

Poverty Line Calculations

	Russia	Ukraine	Latvia
Official average subsistence minimum in 1995, per month, *per capita* in local currency; (1996 given in brackets)	264,134 (n.a.)	2,790, 000 (4,450,000)	n.a.
Exchange rate, period average; (1996 given in brackets)	4559.2 (n.a.)	147, 307.3 (178,600)	n.a.
Official subsistence minimum in 1995 *per capita*, using period average exchange rate; (1996 given in brackets)	$57.93 (n.a.)	$18.93 ($24.91)	n.a.
Our estimated cost of minimum consumption basket *per capita* in current dollars in1996 (household consumption units given in brackets)	71.14 ($116.77)	64.99 ($112.77)	226.96 ($329.26)
Percentage of primary wage earners below poverty line, according to formal (wage earnings) (1) Official poverty line (2) Minimum consumption basket	(1) 12.7% (2) 30.0%	(1) 6.8% (2) 43.7%	(1) n.a. (2) 56.0%
Percentage of percentage of primary wage earners below poverty line, according to *official income* *(wages + state aid + firm aid)* (1) Official poverty line (2) Minimum consumption basket	(1) 6.9% (2) 13.6%	(1) 4.0% (2) 29.5%	(1) n.a. (2) 33.8%
Percentage of percentage of primary wage earners below poverty line, according to *official income+ informal earnings* *(wages + state aid + firm aid+ informal earnings)* (1) Official poverty line (2) Minimum consumption basket	(1) 4.2% (2) 8.9%	(1) 2.2% (2) 22.5%	(1) n.a. (2) 28.3%
Percentage of primary wage earners below poverty line, according to *all income*, including private transfers (1) Official poverty line (2) Minimum consumption basket	(1) 3.2% (2) 6.1%	(1) 1.8% (2) 19.7%	(1) n.a. (2) 19.7%
Percentage of *households* below poverty line, according to *family budget.* (1) Official poverty line (2) Minimum consumption basket	(1) 12.3% (2) 19.9%	(1) 3.2% (2) 39.0%	(1) n.a. (2) 40.0%

Source:
Country Staff and Poverty Group at World Bank. Figures are based on subsistence minimum set by government.