Migration and Social Networks in Kyrgyzstan: Informal Transfers in the Sending Communities

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Abstract:

Previous research investigating the link between social networks and migration primarily seeks to answer how networks affect migration decisions or labour market outcomes at the destination. Little attention has been paid to the possibility that migration might affect the degree of cooperation within social networks of households left behind at the origin. In this paper, we argue that migration and remittances could either strengthen or weaken the degree of informal transfers within social networks. We use data from a detailed household survey in Kyrgyzstan, designed by the authors, to empirically study the effect of migration and remittances on both financial and non-financial informal transfers. We find that migrant households make more financial transfers than non-migrant households, particularly in rural areas. The same is true when we compare households that receive remittances with households that do not receive remittances. The fact that there is no large difference in the effect of migration and the effect of remittances comes from the large analogy between these two aspects. Most households in Kyrgyzstan that have migrants abroad also receive remittances. Furthermore, we find that the receipt of non-financial help in the form of labour appears to be driven by the neediness of households. Only those migrant households with dependants receive more non-financial help than others.

Keywords: Migration, Informal Transfers, Mutual Help, Kyrgyzstan, Central Asia

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1. Introduction

Economists have, for a long time, tried to understand the evolution of non-market institutions in the presence of market imperfections. For example, there is a large body of evidence on how social networks facilitate exchange, cooperation, access to credit, or risk-sharing within village economies in the absence of perfect credit and insurance markets (for example, Ligon et al. 2002, Fafchamps and Lund 2003, Fafchamps and Gubert 2007, Cox and Fafchamps, 2008). In this paper, we study how informal transfers between households within community-level social networks are affected by migration and remittances.

There is a substantial literature devoted to understanding the link between migration and social networks. Beside the evidence on the relevance of networks for the migration decision and labour market outcomes (Winters et al. 2001, Munshi 2003, Pedersen et al. 2008, Damm 2009, Lancee 2010, Beine et al. 2011), there are also some indications that networks matter for remittance behaviour. For instance, the probability of sending remittances is shown to increase significantly with participation in community networks (Aparicio 2011, Piotrowski 2006). Amuedo-Dorantes and Pozo (2006), however, find that migrants with close social networks in the destination country are less likely to remit. The authors argue that this is because they have lower incentives to remit for insurance purposes, since they are now insured by the network at the destination. Much less is known about the extent to which migration affects cooperation in the form of informal transfers between households that are left behind in the source communities. It is also unclear whether the effect of migration is different from the effect of remittances. In this paper, we try to fill this gap in the literature.

Informal transfers are here understood as the provision of help from one household to another, and this help can be of a monetary or non-monetary nature. In this paper, the first refers to money transfers and the latter to labour transfers (for example, helping another household to repair their house). We argue that informal transfers may be provided in response to shocks experienced by another household, but they may also be given independently of shocks.[1] For example, temporary liquidity constraints may trigger monetary transfers and the lack of physically healthy people may explain the receipt of labour transfers, even in the absence of shocks. Given that informal transfers are assumed to be made within social networks, they take place in settings of repeated interactions, which in turn makes reciprocal transfer behaviour possible and even likely (Cox and Fafchamps, 2008).

As we show in the Analytical Framework below, there are a number of reasons why migration as well as remittances may weaken cooperation, but there are also plausible

[1] Therefore, we do not use the terms informal insurance or informal risk-sharing.

arguments why they may strengthen cooperation. For example, households that receive remittances may provide more financial help to their social networks because they can easily insure the network against aggregate shocks since the income process abroad is usually uncorrelated with the income process in the source community (Morten, 2010, Foster and Rosenzweig, 2001). However, they may equally provide less financial help to their social networks because the need for insurance through informal arrangements decreases (Morten, 2010, Albarran and Attanasio, 2003). On balance, therefore, the impact of migration and remittances on informal transfers remains an empirical question.

Morten (2010) and Gallego and Mendola (2011) study a similar question. Morten (2010) examines the effect of remittances on informal monetary transfers within the community. She assumes that remittances have an insurance function and that they can insure against idiosyncratic shocks of the household but also against aggregate shocks of the community. Her argument is that if remittance-receiving households participated in risk-sharing networks, the remittance response should be larger to aggregate than to idiosyncratic shocks. Using data for Indian villages, she shows that this is indeed the case. Her findings imply that remittance-receiving households do not pull out of risk-sharing networks but instead insure the rest of the community by giving up part of their remittances. Gallego and Mendola (2011) explore whether migration and remittances increase participation of the migrant sending households in social networks – both in formalised groups as well as in informal mutual arrangements – in the context of Mozambique. They show that, while having a migrant abroad decreases the likelihood of a household to be engaged in a group, receiving remittances increases this likelihood. They also find that receiving remittances increases the likelihood of providing as well as receiving informal transfers.

In line with both these contributions, we acknowledge that the response in transfer behaviour to migration may be different from the response to remittances. We depart from their approach, however, in the sense that we distinguish between monetary and non-monetary transfers. We also make the distinction between providing transfers to others and receiving transfers from others. This allows us to test our working hypotheses: 1) households that receive remittances make more monetary transfers to others within their networks compared with households that do not receive remittances, and 2) households that have migrants abroad receive more non-monetary transfers compared with households without migrants.

While migration is a common feature of many developing countries, the case of Kyrgyzstan is particularly interesting because of its high incidence of labour migration to

Russia, typically leaving behind the women, children and elderly members of the household. We estimate that about 4 percent of the total population were temporary migrants in 2011. In the South of the country, the share of migrants was substantially higher at around 9 percent. According to the World Bank (2011), Kyrgyzstan is today among the top 15 countries in terms of remittance receipts. The country is reported to have received remittances as high as 15 percent of GDP in 2009. At the same time, providing mutual help within social networks is an essential feature of the Kyrgyzstani society. Informal social networks based on kinship and neighbourhood have played an important role in Kyrgyzstan, in pre-Soviet times, during the Soviet period, and still today (Coudouel et al. 1997, Kuehnast and Dudwick 2002). Anecdotal evidence from Howell (1996) also suggests that borrowing food and money from their relatives and neighbours in times of economic stress is a common practice in southern Kyrgyzstan. For the case of Kazakhs, which are culturally very close to Kyrgyz, Werner (1998) explains that social networks are usually maintained through the exchange of hospitality and gifts as well as through the reciprocal exchange of labour and social services.

For the empirical analysis, we use data from the Life in Kyrgyzstan (LIK) survey[2], which was designed by the authors at the German Institute for Economic Research. This is a multi-topic panel survey, covering approximately 3,000 households in Kyrgyzstan. The LIK contains comprehensive information about international migration, the receipt of remittances as well as the transfer behaviour of households.

Empirically, identifying the effect of migration on transfer behaviour within sending communities could be confounded by simultaneity and unobserved heterogeneity. Simultaneity can be a problem if communities experience more out-migration in response to a greater role of social networks in these communities which enhances information sharing. To address this issue, we look at the effect of past migration on current decisions to make informal transfers. Unobserved heterogeneity might drive migration decisions as well as the decisions to make transfers at the community level. Hence, we look across households within each community (defined at the rayon level), using community fixed effects, to estimate the effect of migration on the decision to cooperate for a migrant sending household.

We find that migrant households make more financial transfers than non-migrant households, particularly in rural areas. The same is true when we compare households that receive remittances with households that do not receive remittances. We also find that the receipt of non-financial help in the form of labour appears to be driven by the neediness of

[2] See http://www.diw.de/kyrgyzstan for details.

households. Only those migrant households with dependants receive more non-financial help than others.

The rest of this paper is organized as follows. In the following section, we outline how migration as well as remittances may be linked with informal transfers and formulate two working hypotheses that we intend to test in this paper. In section 3, we present our empirical strategy, and in section 4, we introduce the LIK data. In sections 5, we outline and discuss our results. We conclude the paper by summarizing our findings, discussing their policy implications, and pointing to scope for further research in the final section.

2. Analytical Framework

In the following, we provide an overview of mechanisms how migration as well as remittances may have an effect on households' transfer behaviour. We distinguish the potential effect of migration from the potential effect of remittances, as having a migrant abroad does not necessarily have the same consequences as receiving remittances. We first focus on migration and then turn to remittances.

On the one hand, migration may strengthen the extent of informal transfers within social networks if there is a co-insurance scheme between the migrant and the household left behind (Stark and Lucas, 1988) and the social network provides part of the insurance that flows to the migrant. In addition, in contexts where the young adults migrate leaving the old and possibly their own children behind, it seems reasonable to expect more help in the form of labour flowing to households that have migrants abroad. For example, if grandparents stay behind with their grandchildren, they are likely to rely more on others' labour - help with repairing the house or accompanying the grandchildren to school - than when their children are at home. On the other hand, migration may weaken the extent of informal transfers because a high rate of migration at the community level increases the level of limited commitment in mutual transfer arrangements. This is because a high probability of people migrating decreases the credibility of future reciprocation, which is necessary in order to sustain non-enforceable transfer arrangements (Ligon et al., 2002).[3] In other words, people might choose not to provide transfers to other people who they think are likely to migrate, as reciprocity may not be possible in the future.

We now turn to the effects of remittances and, again, there may be a positive or a negative relationship with informal transfers. Remittances may increase the extent of informal

[3] Ligon et al. (2002) assume that informal insurance arrangements are sustained by means of direct penalties of breach, such as peer group pressure or being brought before a village council, and the threat of future exclusion from insurance.

transfers because they provide access to uncorrelated income processes: Remittance-receiving households are thus better able to provide transfers to their networks in order to insure those against aggregate shocks (Morten 2010).[4] This argument builds on Foster and Rosenzweig (2001) who study the effect of different degrees of altruism and income variance between individuals on the size of transfers. They show that risk-sharing is achieved at high degrees of altruism and low levels of income correlation. Even at a zero level of altruism, some risk-sharing takes place, if incomes are either independent or negatively correlated. Alternatively, remittances may be positively related to informal transfers because they may provide more stable income to the household, which implies a lower risk to default in mutual transfer arrangements. In other words, remittance-receiving households become more appealing partners within networks, as they exhibit a higher income credibility (Gallego and Mendola 2011). In contrast, receiving remittances may also represent a barrier to informal transfers in the sending community because remittances make the outside option of autarky more attractive. Remittance-receiving households can use remittances to insure against shocks and do not need to engage in mutual transfer arrangements within the community (Morten 2010). This is in line with Albarran and Attanasio (2003: 80) who state that whatever "increases the value of autarky relative to the value of being in the contract decreases risk sharing."

In sum, it is not clear at the outset whether migration has a positive or a negative impact on people's transfer behaviour. The same is true for remittances. As far as monetary transfers are concerned, much of the empirical literature has shown that such transfers "function like means-tested public income redistribution by flowing from better off to worse-off households" (Cox and Fafchamps, 2008: 3733). Hence, our first hypothesis: Remittance-receiving households are in a financially better situation compared with households that do not receive remittances and are thus more likely to provide monetary transfers to others. Whether or not households provide or receive non-monetary transfers, on the other hand, is likely to depend on the resources in terms of labour and time within the household. Households that have migrants abroad are short of domestic labour within the household because they lack one or more (usually physically healthy) household members. They therefore receive more non-monetary transfers compared with households without migrants. This second hypothesis follows Cox and Fafchamps (2008) who note that most of the

[4] Remittances have been shown to respond to income shocks and hence to have an insurance motive (Rosenzweig 1988, Yang and Choi 2007). Giesbert et al. (2011) show that households, that receive remittances, are less likely to have formal insurance which also speaks for an insurance function of remittances. What has not been studied much is whether remittances sent with such a motive are shared with the social network. Yang and Choi (2007) study how remittances from the migrant to his/her origin households change in response to income shocks.

economic literature on informal transfers is concerned with income effects, while demographic aspects have not been studied much even though they appear to figure prominently as well. We agree that the household composition should matter with regard to people's transfer behaviour, especially when non-monetary transfers are considered.

3. Empirical strategy

Our aim is to understand whether migration and remittances help or hinder the degree of cooperation in the form of informal transfers between households in the absence of formal credit markets. In the below empirical analysis, we attempt to investigate whether households with a migrant member (henceforth, migrant households) make/receive more or less transfers to/from other members of the community than households without a migrant member (henceforth, non-migrant households). We also analyse whether households that receive remittances (henceforth, remittance households) make/receive more or less transfers to/from other members of the community compared with households that do not receive remittances (henceforth, non-remittance households).

In order to account for potential differences between migrant and non-migrant households, we estimate a probit model of the form:

$$Y_{ij} = \alpha + \beta_1 M_{ij} + \beta_2 X_{ij} + \beta_3 D_j + \varepsilon_{ij} \quad (1)$$

where Y_{ij} is an indicator for transfers given or provided by household i residing in community j. We estimate separate regressions for monetary and non-monetary transfers as well as for providing and receiving transfers. In other words, equation (1) is estimated for four alternative dependent variables. M_{ij} is a dummy variable indicating whether household i in community j has a migrant member. In a second step, M_{ij} indicates whether a household receives remittances. We control for other household level variables, X_{ij}, that may potentially generate differential transfer behaviour between migrant and non-migrant households, or remittance and non-remittance households. Since our aim is to find out the extent to which migration affects cooperation within social networks, we need to define the network of households. We determine the potential network for a household to be the rayon (district). The mean rayon in Kyrgyzstan consists of 45 villages[5] with a population of 18,384 households. Cities are treated like rayons. We control for community (i.e. rayon) fixed effects, D_j, which allows us to compare the behaviour of migrant and non-migrant households, or remittance and non-

[5] The minimum number of villages in a rayon is 9, the maximum 123.

remittance households, within each community or potential network. β_1 is the coefficient of interest to us.

One problem with equation (1) is the potential endogeneity of migration (McKenzie et al. 2010). Even after controlling for observed differences between migrant and non-migrant households, or remittance and non-remittance households, they might have other unobserved differences that also drive differential transfer behaviour. We intend to use an instrumental variable approach to address this concern. …

4. Data and Descriptive Statistics

The data we use in our empirical analysis comes from the Life in Kyrgyzstan (LIK) survey. This is a panel survey conducted annually between 2010 and 2012 by the German Institute for Economic Research in collaboration with Humboldt University of Berlin, The Centre for Social and Economic Research (CASE-Kyrgyzstan) and the American University of Central Asia. The LIK collects data in all seven Kyrgyz regions (oblasts) and the two cities of Bishkek and Osh. The data is representative at the national, urban/rural, and North/South levels. Households were selected by stratified two-stage random sampling based on the 2009 Census with probabilities proportional to size. The strata are formed by the regions and cities. Data is collected at the community, household, and individual levels of the sampled households. At the time of data analysis, the first two waves (2010-2011) of the LIK had been finalised. We mainly use data from the second wave in this paper because this provides more information on informal transfers compared with the data from the first wave. In the second wave, 2,863 households in 120 urban and rural communities were interviewed and 8,066 adult individuals within these households.

The interviewed households were asked whether any of their regular members were living abroad for more than one month (excluding business trips, vacations, and visits) at the time of the survey.[6] Out of the 2,863 households, 400 reported to have one or more migrants according to this definition, and 569 migrants were reported in total. This translates into 4.15 percent of the total population (13,693 individuals) observed in our sample. Based on the total resident population of 5,362,816 people counted in the 2009 Census, this would mean that there were approximately 223,000 international migrants in autumn of 2011. Given the range of estimates for the number of migrants mentioned above, this number is clearly at the lower

[6] Based on the survey data, we are also able to estimate the number of internal migrants. We identify 264 internal migrants in 189 households. This translates into 1.92 percent of the sample population. This estimate appears to be low given that some people consider internal migration to be at least as important as international migration (Ablezova et al. 2009). It could be that, when people move internally, they often take their families with them. In that case, we would not be able to observe them as migrants in our survey.

bound. It is, however, very close to the estimate of the 2009 Census, which stood at 190,000 migrants. This does not necessarily mean that the larger estimates (of up to one million migrants) mentioned above are invalid. Surveys, such as ours as well as the census, are usually unable to identify those migrants that have moved abroad with their entire families or have moved a long time ago and are hence no longer considered to be regular members of a resident household. In other words, the number of 223,000 migrants should be interpreted as an estimate of the number of temporary labour migrants.

Table 1 provides some information on the characteristics of the observed migrants.[7] The average age of a migrant is 29 years. Two thirds of the migrants are male, and almost half are married. Three quarters of the migrants are of Kyrgyz ethnicity, and the majority of them come from the South (i.e. Osh city, Osh, Jalalabad, and Batken oblasts)[8] of the country. Ninety percent of the migrants have obtained a secondary education degree or higher. They usually go to Russia and work in either construction or trade and repair.

From the total of 2,863 households, we drop those households that have missing information on our key variables. In addition, we also drop households that had migrants in the 12 months preceding the survey but not at the time of the survey. We decided to do so because we cannot be sure whether households with a recent migration experience behave more like migrant households or, rather, like non-migrant households. This leaves us with a sample of 2,611 households, of which 382 are migrant households and 2,228 are non-migrant households. From among the 382 migrant households, 339 (i.e. 88.7 percent) report to receive remittances. This is a very high share and essentially implies that the effects of migration are not easily distinguishable from the effects of remittances. We observe that there are also 82 non-migrant households that receive remittances, presumably from more extended family members or even non-relatives. So, what we do in the estimations below is to compare the transfer behaviour of a) households that have a migrant abroad with households that do not have a migrant abroad (382 vs. 2,228 households), and b) households that receive remittances – regardless of whether or not these come from migrant household members – with households that do not receive remittances (421 vs. 2,190 households). Given that these categories overlap to a large extent, we do not expect the results to deviate from each other by much.

[7] About 10 percent of the migrants are reported to be the head of the household. We then re-defined the head to be the second oldest person in the household (if the head was the oldest, which is most often the case) in order to compute the head's characteristics that we control for in the regressions.
[8] See the Appendix for a map of Kyrgyzstan.

With regard to transfer behaviour, the following questions are asked in the individual questionnaire:[9]

- To how many people did you give any financial help during the last 12 months?

- From how many people did you receive any financial help during the last 12 months?

- To how many people did you give any non-financial help (e.g. repairing house, preparing celebrations, homework help) during the last 12 months?

- From how many people did you receive any non-financial help (e.g. repairing house, preparing celebrations, homework help) during the last 12 months?

Based on these questions, we compute four alternative household-level dummy variables (our dependent variable in the below estimations) indicating whether or not any household member provided transfers to others or received transfers from others.[10] The first two variables (*give_financial* and *receive_financial*) take on the value of 1, if any member of a particular household reported to have made or received a monetary transfer in the last year, and 0 otherwise.[11] Accordingly, the other two variables (*give_nonfinancial* and *receive_nonfinancial*) take on the value of 1, if any member of a particular household reported to have made or received a non-monetary transfer in the last year, and 0 otherwise. Out of the total number of households, half provided monetary transfers to others (Table 2). Again, half provided non-monetary transfers to others. About two fifths of the households received monetary transfers, and again two fifths received non-monetary transfers.[12] Households are not necessarily either pure givers or receivers. Of all those households that give or receive monetary transfers, 48 percent both give and receive. 31 percent only give and 21 percent only receive. Among those that give or receive non-monetary transfers, 67 percent both give and receive, while 24 percent only give and 9 only receive.

[9] The LIK contains some information about the partners in these transfer arrangements. Individuals were asked what group their transfer partners mainly belonged to. Partners are mostly relatives, and this is true for all forms of informal transfers. Conditional on having made or received a transfer, in between 60 percent (for giving non-monetary transfers as well as receiving non-monetary transfers) and 73 percent (for receiving financial transfers) of the cases, individuals report to have made transfers to or received transfers from relatives. Other relevant groups are neighbours and friends, with neighbours being more important in the case of non-monetary transfers. This is in line with previous research, which has found that family and kinship networks are most important to households (Fafchamps and Lund, 2003).

[10] This is necessary as transfers are assumed to be made between households, not between individuals. This means that even if an individual provides the help physically to someone else, it is a household level decision to do so.

[11] It has to be noted that financial transfers may include loans as well as gifts. In the third wave of the LIK, we ask the households to distinguish between loans that contain an interest, interest-free loans, and gifts.

[12] Cox et al. (1998) studied informal transfers in Kyrgyzstan in the early 1990s. They find that only 12 percent of all surveyed households were net recipients and 9 percent net givers. However, their reference period is only the last 30 days.

Figure 1 sheds some light on the difference between migrant and non-migrant households in terms of transfers made and received. Whereas the shares of migrant and non-migrant households that provide monetary transfers and that receive non-monetary transfers are almost identical and not statistically significantly different from each other, the shares differ significantly in the cases of receiving monetary transfers and giving non-monetary transfers. Significantly more non-migrant households receive monetary transfers (44 percent compared with 36 percent for migrant households), and more non-migrant households provide non-monetary transfers (53 percent compared with 42 percent for migrant households). Figure 2 illustrates differences in transfer behaviour between remittance and non-remittance households. As expected, this pattern is very similar to the one for distinguishing the households by their migrant status. Yet, the difference between the two groups is now statistically significantly different only for receiving non-monetary transfers (46 percent for remittance households compared with 52 percent for non-remittance households).

In Table 3, we illustrate the definition of all right-hand side variables that we use in the below estimation of equation (1). Table 4 presents descriptive statistics for the control variables, separately for migrant and non-migrant households. As is evident, migrant households differ from non-migrant families in many respects, such as age, marital status, ethnicity as well as educational attainment of the household head. Migrant households have also more wealth and are larger. This latter aspect is surprising and raises doubts about our second hypothesis. We expected migrant households to be smaller than non-migrant households because they "loose" household members – under the condition, of course, that both were similar in size pre-migration. That migrant households are in fact larger than non-migrant households can be due to the fact that only very large households send migrants abroad or that household members left behind by migrants join other households. The second option seems likely in the Central Asian context where the wife of a migrant would be expected to live with her parents-in-law when her husband is abroad. Comparing the means of the control variables for remittance and non-remittance households shows a very similar pattern and is therefore not reported.

5. Estimation results

The results of estimating equation (1) for migrant vs. non-migrant households are shown in Tables 5 and 6. Including only the migration variable as a potential correlate does not lead to significant results. However, adding control variables makes the migration variable statistically significant in some cases. Keeping all other explanatory variables at their mean,

migrant households are 7.5 percent more likely to make a financial transfer than non-migrant households. They are also 7 percent less likely to provide non-financial help than non-migrant households, but this result is only marginally significant. At the same time, migrant households do not differ from non-migrant households in terms of receiving either type of help. We included results for both the total sample of households as well as for households in rural and urban areas separately. As becomes clear, the difference between migrant and non-migrant households in providing financial help to others is driven by rural areas. Here, migrant households are 10 percent more likely to provide such help, whereas there is no difference between migrant and non-migrant households in urban areas. We argue that this finding makes much sense and is in line with much of the literature on informal insurance that usually focuses on rural areas.[13] This is because credit markets are much less developed in rural areas so that households depend more on transfers from their social networks and because social networks are likely to be more intensive in the less anonymous settings of rural areas.

In Table 7, we repeat the same analysis but, here, our variable of interest is not an indicator for whether or not a household has a migrant abroad but whether or not a household receives remittances (irrespective of the relationship to the sender). The results are similar to the above. Households receiving remittances are 6 percent more likely than their counterparts without remittances to make financial transfers to people in their social networks. Again, this is driven by rural areas (not reported). The other models do not deliver significant results. Given that the receipt of remittances may intuitively seem a stronger predictor of making financial transfers to others – because they relax the financial budget constraint of households – compared with having a migrant abroad, the lower marginal effect here compared to Table 5 seems somewhat surprising. Yet, it could be that there are some measurement issues with regard to the reference periods in the data. In the questionnaire, both questions, i.e. on remittance receipt and on making transfers, refer to the last 12 months. In principle, it would, hence, be possible that households started to receive remittances only in the last month. It is reasonable to assume that they do not start making financial transfers to others immediately after receiving remittances for the first time.

To shed some light onto this possibility, we repeat the analysis with a time lag, using data on migration status and remittance receipt from the first wave of the LIK (Tables 8 and 9). Households that had a migrant abroad one year ago turn out to be 7 percent more likely

[13] For example, Albarran and Attanasio (2003: C77) write: "Models with imperfect enforceability seem to be particularly apt at describing small village economies characterised by repeated interactions and good information flows within the village."

than households that had no migrant abroad at that time. The marginal effect has decreased slightly compared with that in Table 5. Households that received remittances one year ago are now 9 percent more likely than households that did not receive remittances. This marginal effect has increased and essentially supports the expectation that households make transfers to others with some time lag. For the other dependent variables, there are significant results for neither migration status nor remittance receipt.

Overall, we have obtained supportive evidence for our first hypothesis but no evidence for our second hypothesis. It does not seem to be the case that migrant households receive more labour services than non-migrant households. Possibly, this is because migrant households are not labour constrained compared with non-migrant households on average. As shown in Table 4, they have an even larger household size. In order to examine the relevance of household composition, we additionally control for having dependants in the households. We define dependants to be members of the household that are younger than 6 or older than 69 years.[14] If fewer dependants imply less time constraints, then receiving non-financial transfers is less likely to be observed in such households. Re-running the regression for receiving non-financial help with a dummy variable for having dependants included does not lead to any significant results (not reported). As a next step, we interact the dependant dummy with migration status (Table 10). We find the interaction term to have a positive and statistically significant marginal effect, which implies that those migrant households with dependants are more likely than all other households to receive non-financial help. In a nutshell, this is a sign that having a migrant abroad is not sufficient to receive help and having dependants in the household is also not sufficient. Only if both conditions are fulfilled will households be helped by others.

6. Conclusion and Further Research

In this paper, we study how migration and remittances affect informal transfers within social networks in the communities of the migrants' origin. We use data from a detailed household survey that we conducted in Kyrgyzstan to empirically investigate this question. Our preliminary results show that migrant households make more financial transfers than non-migrant households, particularly in rural areas. The same is true when we compare households that receive remittances with households that do not receive remittances. The fact that there is no large difference in the effect of migration and the effect of remittances comes from the

[14] We chose these limits because 1) children officially enter school at the age of seven and 2) 63 is the official qualifying age for obtaining old-age and social pensions for men in Kyrgyzstan (Falkingham and Vlachantoni 2010). The age limit for women is 58 years.

large analogy between these two aspects. Most households with migrants abroad receive remittances in Kyrgyzstan. We also find that the receipt of non-financial help in the form of labour appears to be driven by the neediness of households. Only those migrant households with dependants receive more non-financial help than others. Having said this, our results are no more than preliminary and need to be treated with caution. In the current version of the paper, we have not yet been able to control for self-selection into migration (by running instrumental variables regression), which makes it very likely that the findings shown here are biased. We will address this issue in the coming weeks.

Nevertheless, we already see several lines along which further research seems promising. First, it would be important to know more about the transfer partners as well as the motives to make transfers. Even though we are able to show that households that receive remittances (or, households with migrants) are more inclined to make monetary transfers than other households, we have very little information to whom exactly they make these transfers. In principle, they may choose to provide money to those households that are best able to return it in the future, namely other remittance-receiving households. Alternatively, they may insure financially constrained households (i.e. those that do not receive remittances) in return for non-monetary transfers. In other words, non-remittance households may respond to monetary transfers by providing services. Or the money may simply flow those households that are most needy because the remittance-receiving households care about their well-being. Whereas the first two options imply that mutual insurance and exchange may be the main motives underlying the transfer process, the third option would speak more in favour of altruism as the driving force. We argue that knowing more about these motives is critical in order to understand the otherwise counterintuitive finding that households give up part of their remittances and share it with other households.

Further research:

- what is the labour response of those who receive transfers,
- knowing more about potential transfers (who is ready to help me if it is needed) as these may affect households' savings and investment decisions – and maybe even labour efforts (Cox and Fafchamps, 2008)

Bibliography

Ablezova, M., E. Nasritdinov, R. Rahimov (2009): The impact of migration on elderly people. Grandparent-headed households in Kyrgyzstan, Report by Help Age International Central Asia and Social Research Center, American University of Central Asia, http://src.auca.kg/pdf/The_impact_of_migration_on_elderly_people.pdf (last accessed on December 6, 2011).

Agadjanian, V., L. Nedoluzhko, G. Kumskov (2008): Eager to Leave? Intentions to Migrate Abroad among Young People in Kyrgyzstan, *International Migration Review* 42(3): 620-651.

Albarran, P. and O.P. Attanasio (2003): Limited Commitment and Crowding out of Private Transfers: Evidence from a Randomised Experiment, *Economic Journal* 113: 77-85.

Amuedo-Dorantes, C. and S. Pozo (2006): Remittances and Insurance: Evidence from Mexican Migrants, *Journal of Population Economics* 19(2): 227-254.

Aparicio, A. (2011): Network Effects on Migrants' Remittances, Carlo Alberto Working Paper 202, Collegio Carlo Alberto, Moncalieri.

Asian Development Bank (ADB) (2008): Remittances and Poverty in Central Asia and South Caucasus. Country Report on Remittances of International Migrants and the Financial Sector in the Kyrgyz Republic, Technical Assistance Consultant's Report, http://www.adb.org/Documents/Reports/Consultant/40038-REG/40038-03-REG-TACR.pdf (last accessed on December 6, 2011).

Beine, M., F. Docquier, C. Özden (2011): Diasporas, *Journal of Development Economics* 95(1): 30-41.

Coate, S. and M. Ravallion (1993): Reciprocity without Commitment: Characterization and Performance of Informal Insurance Contracts, *Journal of Development Economics* 40(1): 1-24.

Coudouel, A., A. McAuley and J. Micklewright (1997): Transfers and Exchange between Households in Uzbekistan, in: J. Falkingham, J. Klugman, S. Marnie and J. Micklewright (eds.): Household Welfare in Central Asia, London: Macmillan Press, pp. 202-220.

Cox, D. (1987): Motives for Private Income Transfers, *Journal of Political Economy* 95(3): 508-546.

Cox, D. and M. Fafchamps (2008): Extended Family and Kinship Networks: Economic Insights and Evolutionary Directions, in: T.P. Schultz, J. Strauss and H.B. Chenery (eds.): *Handbook of Development Economics, Vol. 4*, Amsterdam: Elsevier, pp. 3711-3784.

Cox, Donald and Emmanuel Jimenez (1990): Achieving Social Objectives through Private Transfers, *World Bank Research Observer* 5(2): 205-218.

Cox, Donald, Emmanuel Jimenez and John S. Jordan (1998): Family Safety Nets and Economic Transition: A Study of Private Transfers in Kyrgyzstan, mimeo.

Damm, A.P. (2009): Ethnic Enclaves and Immigrant Labor Market Outcomes: Quasi-Experimental Evidence, *Journal of Labor Economics* 27(2): 281-314.

Fafchamps, M. and S. Lund (2003): Risk Sharing Networks in Rural Philippines, *Journal of Development Economics* 71(2): 261-287.

Fafchamps, M. and F. Gubert (2007): The Formation of Risk-Sharing Networks, *Journal of Development Economics* 83(2): 326-350.

Falkingham, J. and A. Vlachantoni (2010): Pensions and Social Protection in Central Asia and South Caucasus: Developments in the Post-Soviet Era, Discussion Paper 1002, University of Southampton, Centre for Research on Ageing.

Foster, A. and M.R. Rosenzweig (2001): Imperfect Commitment, Altruism and the Family: Evidence from Transfer Behaviour in Low-Income Rural Areas, *Review of Economics and Statistics* 83(3): 389-407.

Gallego, J.M. and M. Mendola (2011): Labor Migration and Social Networks Participation: Evidence from Southern Mozambique, INSIDE Paper 28, Institute for Economic Analysis, Bellaterra.

Giesbert, L., S. Steiner and M. Bendig (2011): Participation in Micro Life Insurance and the Use of Other Financial Services in Ghana, *Journal of Risk and Insurance* 78(1): 7-35.

Howell, J. (1996): Coping with Transition: Insights from Kyrgyzstan, *Third World Quarterly* 17(1): 53-68.

International Crisis Group (2010): Central Asia: Migrants and the Economic Crisis, Asia Report No. 183, 5 January 2010, http://www.crisisgroup.org/~/media/Files/asia/central-asia/183%20Central%20Asia%20Migrants%20and%20the%20Economic%20Crisis.pdf (last accessed on December 6, 2011).

International Labour Organisation (ILO) (2009): Labour Migration and Productive Utilisation of Human Resources. Kyrgyz Republic, http://www.ilo.org/public/english/region/eurpro/moscow/info/publ/kri19oc09.pdf (last accessed on December 6, 2011).

Kandiyoti, Deniz (1999): Poverty in Transition: An Ethnographic Critique of Household Surveys in Post-Soviet Central Asia, *Development and Change* 30: 499-524.

Kuehnast, K. and N. Dudwick (2002): Better a Hundred Friends than a Hundred Rubles? Social Networks in Transition. The Kyrgyz Republic, World Bank Economists' Forum Vol. 2, pp. 51-88, Washington DC: World Bank.

Lancee, B. (2010): The Economic Returns of Immigrants' Bonding and Bridging Social Capital: The Case of the Netherlands, *International Migration Review* 44(1): 202-226.

Ligon, E., J. Thomas, and T. Worrall (2002): Informal Insurance Arrangements with Limited Commitment: Theory and Evidence from Village Economies, *Review of Economic Studies* 69(1), 209-244.

Lukashova, I. and I. Makenbaeva (2009): Impact of the Global Financial Crisis on Labour Migration from Kyrgyzstan to Russia. Qualitative Overview and Quantitative Survey, Report

Commissioned by OSCE, ACTED and European Commission, http://www.osce.org/bishkek/40540 (last accessed on December 6, 2011).

Mansoor, A. and B. Quillin (2007): Migration and Remittances. Eastern Europe and the Former Soviet Union, Washington DC: World Bank.

Marat, E. (2009): Labor migration in Central Asia. Implications of the global economic crisis, Silk Road Paper, Central Asia- Caucasus Institute and Silk Road Studies Program, http://www.silkroadstudies.org/new/docs/silkroadpapers/0905migration.pdf (last accessed on December 6, 2011).

McKenzie, D., J. Gibson, and S.E. Stillman (2010): How Important Is Selection? Experimental Versus Non-Experimental Measures of the Income Gains from Migration, *Journal of the European Economic Association* 8(4): 913-945.

Miguel, E., P. Gertler and D. Levine (2006): Does industrialization build or destroy social networks?, *Economic Development and Cultural Change* 54(2):287-318.

Morten, M. (2010): Sending Home the Riches: Informal Risk Sharing Networks and Remittances, Paper presented at the 2010 Conference of the North East Universities Development Consortium.

Munshi, K. (2003): Networks in the Modern Economy: Mexican Migrants in the U.S. Labor Market, *Quarterly Journal of Economics* 118(2): 549-599.

Pedersen, P., M. Pytlikova, N. Smith (2008): Selection and Network Effects: Migration Flows into OECD Countries 1990-2000, *European Economic Review* 52(7): 1160-1186.

Piotrowski, M. (2006): The Effect of Social Networks at Origin Communities on Migrant Remittances: Evidence from Nang Rong District, *European Journal of Population* 22: 67-94.

Rosenzweig, M.R. (1988): Risk, Implicit Contracts and the Family in Rural Areas of Low-Income Countries, *Economic Journal* 98(393): 1148-1170.

Rueegg, M. (2008): The Effects of Labour Migration on Rural Development in Kyrgyzstan. Assessment of the Current Rural Workers Emigration and its Consequences for Helvetas Interventions, Helvetas Kyrgyzstan, http://www.majarueegg.com/Archivos/Speeches/ImpactsLabourMigration_oct08.pdf (last accessed on December 6, 2011).

Stark, O. and R.E.B. Lucas (1988): Migration, Remittances, and the Family, *Economic Development and Cultural Change* 36(3): 465-481.

Tishkov, V. (1997): Ethnicity, Nationalism and Conflict In and After the Soviet Union: The Mind Aflame, London and Thousand Oaks: Sage Publications.

United Nations Development Programme (UNDP) (2009): Human Development Report 2009. Overcoming Barriers: Human Mobility and Development, New York: UNDP.

Werner, C. (1998): Household Networks and the Security of Mutual Indebtedness in Rural Kazakstan, *Central Asian Survey* 17(4): 597-612.

Winters, P., A. de Janvry and E. Sadoulet (2001): Family and Community Networks in Mexico-US migration, *Journal of Human Resources* 36(1): 159-184.

World Bank (2011): Migration and Remittances Factbook 2001, 2nd Edition, Washington DC: World Bank.

Yang, D. and Choi, H. (2007) Are Remittances Insurance? Evidence from Rainfall Shocks in the Philippines, *The World Bank Economic Review* 21(2): 219-248.

Appendix

Map of Kyrgyzstan

Source: http://www.nationsonline.org/oneworld/map/kyrgyzstan-administrative-map.htm

Table 1

Characteristics of current migrants

	Share of all migrants (in %)
Age	29
Male	67.5
Married	41.8
Kyrgyz	75.4
Uzbek	17.6
Russian	1.8
Other ethnicity	5.2
Basic education or below	9.7
Secondary education	76.8
University degree	13.5
In Russia	91.9
In Kazakhstan	6
In another country	2.1
Comes from the South of Kyrgyzstan	84.5
Comes from rural area	69.1
Works in construction sector	40.2
Works in trade and repair	23.1
Works in hotels and restaurants	10.7
Works in another sector	26

Note: Only migrants aged 15 and above are considered.
Source: Authors' illustration based on LIK survey data.

Table 2

Prevalence of informal transfers

	Monetary transfer	Non-monetary transfer
How many households provided help?		
Yes, provided help	1,268 (48.6%)	1,332 (51.0%)
No, did not provide help	1,342 (51.4%)	1,278 (49.0%)
Total	2,610 (100%)	2,610 (100%)
How many households received help?		
Yes, received help	1,115 (42.7%)	1,102 (42.2%)
No, did not receive help	1,495 (57.3%)	1,508 (57.8%)
Total	2,624 (100%)	2,610 (100%)

Source: Authors' illustration based on LIK survey data.

Table 3

Characteristics of current migrants

Variable	Definition	Obs.	Mean	Min.	Max.
migrant_hh	1=currently having a migrant in the household, 0=otherwise	2610	0.15	0	1
remitt_hh	1=receiving remittances, 0=otherwise	2610	0.13	0	1
headage	Age of household head in years	2610	51.2	18	99
headmale	1=household head is male, 0=otherwise	2610	0.72	0	1
headmarried	1=household head is married, 0=otherwise	2610	0.71	0	1
headkyrgyz	1=household head is Kyrgyz, 0=otherwise	2610	0.68	0	1
headuzbek	1=household head is Uzbek, 0=otherwise	2610	0.11	0	1
headrussian	1=household head is Russian, 0=otherwise	2610	0.11	0	1
headother	1=household head is of another ethnicity, 0=otherwise	2610	0.09	0	1
yrs_schooling	Years of schooling of household head in years	2610	10.97	0	20
hhsize	Household size (# of individuals currently in the HH)	2610	4.62	1	15
wealth_index	Household's wealth index based on PCA (household assets)	2610	0.05	-3.04	2.79
anygroupmem	1=household has any group member, 0=otherwise	2610	0.06	0	1
rural	1=household resides in rural area, 0=otherwise	2610	0.6	0	1

Source: Authors' illustration based on LIK survey data.

Table 4
Descriptive statistics for migrant and non-migrant households

	Non-migrant households		Migrant households		Difference
	Mean	***SD***	***Mean***	***SD***	
headage	*50.76*	*14.56*	*53.79*	*11.52*	*-3.03****
					(-3.87)
headmale	*0.72*	*0.45*	*0.71*	*0.46*	*0.01*
					(0.49)
headmarried	*0.70*	*0.46*	*0.77*	*0.42*	*-0.07****
					(-3.01)
headkyrgyz	*0.67*	*0.47*	*0.73*	*0.44*	*-0.06****
					(-2.58)
headuzbek	*0.10*	*0.30*	*0.19*	*0.39*	*-0.09****
					(-5.07)
headrussian	*0.13*	*0.34*	*0.02*	*0.13*	*0.11****
					(6.41)
headother	*0.10*	*0.30*	*0.06*	*0.23*	*0.04****
					(2.72)
yrs_schooling	*11.04*	*2.76*	*10.60*	*2.52*	*0.44****
					(2.89)
hhsize	*4.54*	*2.15*	*5.06*	*2.21*	*-0.52****
					(-4.32)
wealth_index	*-0.03*	*0.99*	*0.51*	*0.62*	*-0.54****
					(10.32)
anygroupmem	*0.06*	*0.23*	*0.06*	*0.24*	*0.00*
					(0.21)
rural	*0.59*	*0.49*	*0.71*	*0.45*	*-0.12****
					(-4.76)
Observations	*2,228*		*382*		

t-statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Source: Authors' illustration based on LIK survey data.

Table 5

Impact of current migration on informal transfers

Probit models, reported are marginal effects (standard errors in parentheses)

	Give Financial Help						Receive Financial Help					
	Full Sample		*Urban Sample*		*Rural Sample*		*Full Sample*		*Urban Sample*		*Rural Sample*	
	(1)	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*
migrant_hh	*0.0411*	*0.0753***	*0.0456*	*-0.0107*	*0.0442*	*0.0990****	*-0.0773*	*-0.0076*	*-0.0061*	*0.0216*	*-0.0948*	*-0.0356*
	(0.1955)	*(0.0305)*	*(0.2877)*	*(0.0611)*	*(0.2060)*	*(0.0322)*	*(0.2081)*	*(0.0357)*	*(0.3099)*	*(0.0679)*	*(0.2113)*	*(0.0395)*
headage		*0.0027****		*0.0011*		*0.0040****		*0.0011*		*0.0016*		*0.0010*
		(0.0009)		*(0.0014)*		*(0.0012)*		*(0.0009)*		*(0.0016)*		*(0.0011)*
headmale		*0.0686***		*0.0908***		*0.0612*		*0.0305*		*0.0203*		*0.0329*
		(0.0336)		*(0.0451)*		*(0.0507)*		*(0.0333)*		*(0.0492)*		*(0.0447)*
headmarried		*0.1295****		*0.1253****		*0.1122***		*0.0086*		*-0.0042*		*0.0043*
		(0.0311)		*(0.0459)*		*(0.0446)*		*(0.0352)*		*(0.0574)*		*(0.0462)*
headkyrgyz		*-0.0327*		*-0.1205*		*0.0475*		*0.0104*		*-0.0185*		*0.0530*
		(0.0543)		*(0.0778)*		*(0.0634)*		*(0.0513)*		*(0.0820)*		*(0.0602)*
headuzbek		*-0.0206*		*-0.2301***		*0.2158***		*0.0510*		*-0.0625*		*0.2297***
		(0.0884)		*(0.1065)*		*(0.1027)*		*(0.0898)*		*(0.1193)*		*(0.0989)*
headrussian		*-0.1104***		*-0.1945****		*0.0093*		*-0.1208***		*-0.1397***		*-0.1579**
		(0.0515)		*(0.0612)*		*(0.0778)*		*(0.0498)*		*(0.0627)*		*(0.0880)*
hhsize		*0.0249****		*0.0463****		*0.0188***		*-0.0054*		*-0.0011*		*-0.0052*
		(0.0073)		*(0.0141)*		*(0.0085)*		*(0.0068)*		*(0.0146)*		*(0.0073)*
yrs_schooling		*0.0145****		*0.0173***		*0.0137***		*-0.0074*		*-0.0116**		*-0.0040*
		(0.0048)		*(0.0080)*		*(0.0057)*		*(0.0048)*		*(0.0066)*		*(0.0067)*
anygroupmem		*0.1735****		*0.3036****		*0.0715*		*0.1460***		*0.1339*		*0.1455**
		(0.0526)		*(0.0510)*		*(0.0665)*		*(0.0676)*		*(0.1139)*		*(0.0828)*
wealth_index		*-0.0433**		*-0.0625**		*0.0055*		*0.0156*		*0.0016*		*0.0431*
		(0.0252)		*(0.0319)*		*(0.0411)*		*(0.0304)*		*(0.0401)*		*(0.0446)*
rural		*-0.0990*						*0.0152*				
		(0.0943)						*(0.1081)*				
Observations	2,610	2,561	1,031	1,006	1,579	1,555	2,610	2,536	1,031	981	1,579	1,555
Pseudo R-squared	0.001	0.139	0.001	0.183	0.001	0.136	0.002	0.148	0.000	0.106	0.004	0.185

Standard errors are clustered at community level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Note: Rayon fixed effects are included in all (2)-column regressions.

Table 6

Impact of current migration on informal transfers

Probit models, reported are marginal effects (standard errors in parentheses)

	Give Non - Financial Help						Receive Non - Financial Help					
	Full Sample		*Urban Sample*		*Rural Sample*		*Full Sample*		*Urban Sample*		*Rural Sample*	
	(1)	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*
migrant_hh	*-0.1041*	*-0.0681**	*-0.0926*	*-0.0623*	*-0.1149*	*-0.0644*	*-0.0254*	*0.0025*	*0.0225*	*0.0233*	*-0.0611*	*-0.0074*
	(0.2093)	*(0.0407)*	*(0.3223)*	*(0.0866)*	*(0.2154)*	*(0.0472)*	*(0.2150)*	*(0.0434)*	*(0.3203)*	*(0.0785)*	*(0.2261)*	*(0.0531)*
headage		*-0.0008*		*-0.0027*		*0.0004*		*0.0034****		*0.0026*		*0.0037****
		(0.0010)		*(0.0016)*		*(0.0012)*		*(0.0011)*		*(0.0017)*		*(0.0013)*
headmale		*-0.0191*		*-0.0220*		*-0.0171*		*-0.0570*		*-0.0032*		*-0.1250***
		(0.0339)		*(0.0466)*		*(0.0491)*		*(0.0356)*		*(0.0477)*		*(0.0499)*
headmarried		*0.0854***		*0.0810*		*0.0874**		*0.1498****		*0.0845**		*0.2215****
		(0.0358)		*(0.0530)*		*(0.0522)*		*(0.0331)*		*(0.0463)*		*(0.0447)*
headkyrgyz		*0.0256*		*-0.0933*		*0.0910*		*-0.0006*		*-0.0743*		*0.0718*
		(0.0742)		*(0.0877)*		*(0.1095)*		*(0.0651)*		*(0.0775)*		*(0.0910)*
headuzbek		*0.0134*		*-0.1811*		*0.0988*		*-0.0186*		*-0.0157*		*0.0272*
		(0.1099)		*(0.1485)*		*(0.1492)*		*(0.1058)*		*(0.1418)*		*(0.1507)*
headrussian		*-0.1438***		*-0.1894****		*-0.1493*		*-0.1446***		*-0.1338***		*-0.2411***
		(0.0674)		*(0.0636)*		*(0.1247)*		*(0.0619)*		*(0.0605)*		*(0.1056)*
hhsize		*0.0349****		*0.0487****		*0.0260****		*0.0076*		*0.0068*		*0.0067*
		(0.0082)		*(0.0147)*		*(0.0092)*		*(0.0074)*		*(0.0120)*		*(0.0092)*
yrs_schooling		*0.0099***		*0.0165***		*0.0076*		*0.0011*		*0.0026*		*0.0020*
		(0.0046)		*(0.0074)*		*(0.0056)*		*(0.0047)*		*(0.0074)*		*(0.0061)*
anygroupmem		*0.0431*		*0.1048*		*-0.0218*		*-0.0279*		*-0.0980*		*0.0296*
		(0.0608)		*(0.0713)*		*(0.0946)*		*(0.0644)*		*(0.0662)*		*(0.0900)*
wealth_index		*0.0214*		*0.0182*		*0.0637*		*0.0322*		*0.0079*		*0.0856**
		(0.0354)		*(0.0452)*		*(0.0495)*		*(0.0366)*		*(0.0422)*		*(0.0486)*
rural		*0.1237*						*0.1697**				
		(0.0977)						*(0.0960)*				
Observations	2,610	2,535	1,031	1,006	1,579	1,529	2,610	2,510	1,031	981	1,579	1,529
Pseudo R-squared	0.004	0.197	0.002	0.212	0.005	0.199	0.000	0.173	0.000	0.124	0.002	0.206

Standard errors are clustered at community level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Note: Rayon fixed effects are included in all (2)-column regressions.

Table 7

Impact of remittances on informal transfers

Probit models, reported are marginal effects (standard errors in parentheses)

	Give Financial Help		Receive Financial Help		Give Non - Financial Help		Receive Non - Financial Help	
	Full Sample		*Full Sample*		*Full Sample*		*Full Sample*	
	(1)	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*	*(1)*	*(2)*
remittance_hh	*0.0226*	*0.0612**	*-0.0398*	*0.0346*	*-0.0812*	*-0.0213*	*-0.0224*	*0.0077*
	(0.1951)	*(0.0328)*	*(0.2055)*	*(0.0340)*	*(0.2052)*	*(0.0379)*	*(0.2108)*	*(0.0381)*
headage		*0.0027****		*0.0010*		*-0.0009*		*0.0033****
		(0.0009)		*(0.0009)*		*(0.0010)*		*(0.0011)*
headmale		*0.0663***		*0.0350*		*-0.0140*		*-0.0564*
		(0.0337)		*(0.0335)*		*(0.0340)*		*(0.0356)*
headmarried		*0.1319****		*0.0052*		*0.0811***		*0.1495****
		(0.0309)		*(0.0354)*		*(0.0358)*		*(0.0328)*
headkyrgyz		*-0.0317*		*0.0108*		*0.0257*		*-0.0005*
		(0.0544)		*(0.0514)*		*(0.0743)*		*(0.0651)*
headuzbek		*-0.0163*		*0.0556*		*0.0144*		*-0.0179*
		(0.0882)		*(0.0897)*		*(0.1110)*		*(0.1058)*
headrussian		*-0.1118***		*-0.1195***		*-0.1411***		*-0.1445***
		(0.0517)		*(0.0498)*		*(0.0676)*		*(0.0619)*
hhsize		*0.0251****		*-0.0052*		*0.0347****		*0.0076*
		(0.0074)		*(0.0068)*		*(0.0082)*		*(0.0074)*
yrs_schooling		*0.0146****		*-0.0076*		*0.0097***		*0.0011*
		(0.0047)		*(0.0048)*		*(0.0046)*		*(0.0047)*
anygroupmem		*0.1727****		*0.1445***		*0.0431*		*-0.0281*
		(0.0529)		*(0.0680)*		*(0.0614)*		*(0.0645)*
wealth_index		*-0.0427**		*0.0150*		*0.0207*		*0.0322*
		(0.0251)		*(0.0304)*		*(0.0355)*		*(0.0366)*
rural		*-0.0993*		*0.0147*		*0.1222*		*0.1696**
		(0.0952)		*(0.1070)*		*(0.0995)*		*(0.0960)*
Observations	2,610	2,561	2,610	2,536	2,610	2,535	2,610	2,510
Pseudo R-squared	0.000	0.139	0.001	0.148	0.003	0.196	0.000	0.173

Standard errors are clustered at community level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Note: Rayon fixed effects are included in all (2)-column regressions.

Table 8

Impact of (lagged) migration on informal transfers

Probit models, reported are marginal effects (standard errors in parentheses)

	Full Sample			
	Give Fin. Help	**Receive Fin. Help**	**Give Non - Fin. Help**	**Receive Non - Fin. Help**
migrant_hh_lag	*0.0823***	*0.0189*	*-0.0058*	*0.0251*
	(0.0386)	*(0.0414)*	*(0.0416)*	*(0.0415)*
HH Controls	*yes*	*yes*	*yes*	*yes*
Observations	2,173	2,158	2,117	2,138
Pseudo R-squared	0.156	0.148	0.200	0.188

Standard errors are clustered at community level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Note: Rayon fixed effects are included in all regressions.

Table 9

Impact of (lagged) remittances on informal transfers

Probit models, reported are marginal effects (standard errors in parentheses)

	Full Sample			
	Give Fin. Help	**Receive Fin. Help**	**Give Non - Fin. Help**	**Receive Non - Fin. Help**
remittance_hh_lag	*0.1014****	*0.0268*	*-0.0160*	*0.0153*
	(0.0320)	*(0.0338)*	*(0.0333)*	*(0.0381)*
HH Controls	*yes*	*yes*	*yes*	*yes*
Observations	2,411	2,391	2,386	2,363
Pseudo R-squared	0.147	0.147	0.203	0.181

Standard errors are clustered at community level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Note: Rayon fixed effects are included in all regressions.

Table 10

Impact of migration and dependency on informal transfers

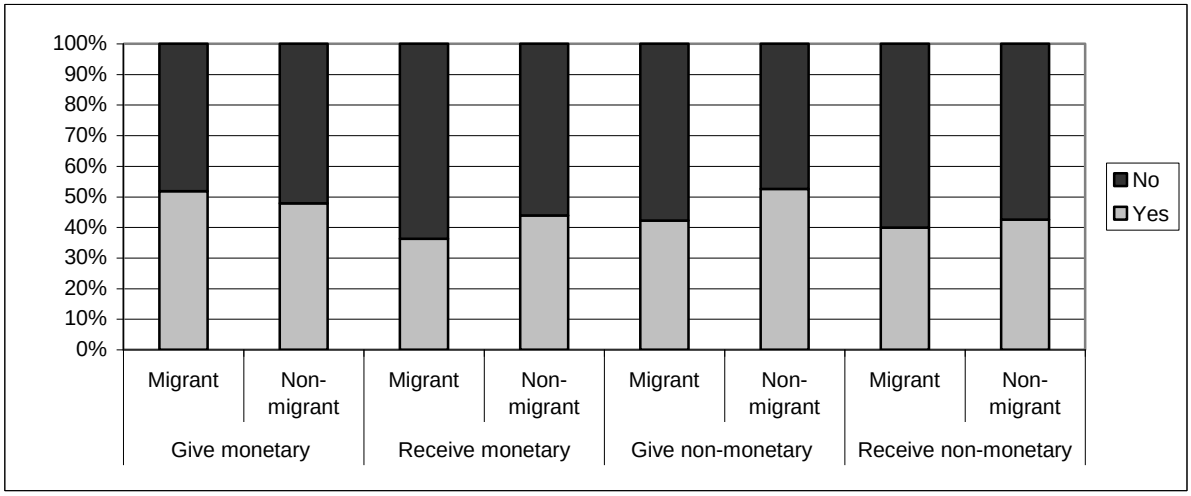
Different models, reported are coefficients (standard errors in parentheses)

	Full Sample		
	Receive Non - Fin. Help		
	(1)	(2)	(3)
	Probit	Probit (marg. effects)	OLS
migrant_hh	*-0.1656*	*-0.0634*	*-0.0489*
	(0.1534)	*(0.0579)*	*(0.0463)*
dependents (<6, >69)	*-0.0632*	*-0.0246*	*-0.0193*
	(0.0588)	*(0.0229)*	*(0.0191)*
migrant * dependent	*0.3012**	*0.1192**	*0.0917**
	(0.1692)	*(0.0673)*	*(0.0532)*
HH Controls	*yes*	*yes*	*yes*
Observations	2,510	2,510	2,610
Pseudo R-squared	0.174	0.174	0.221

Standard errors are clustered at community level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

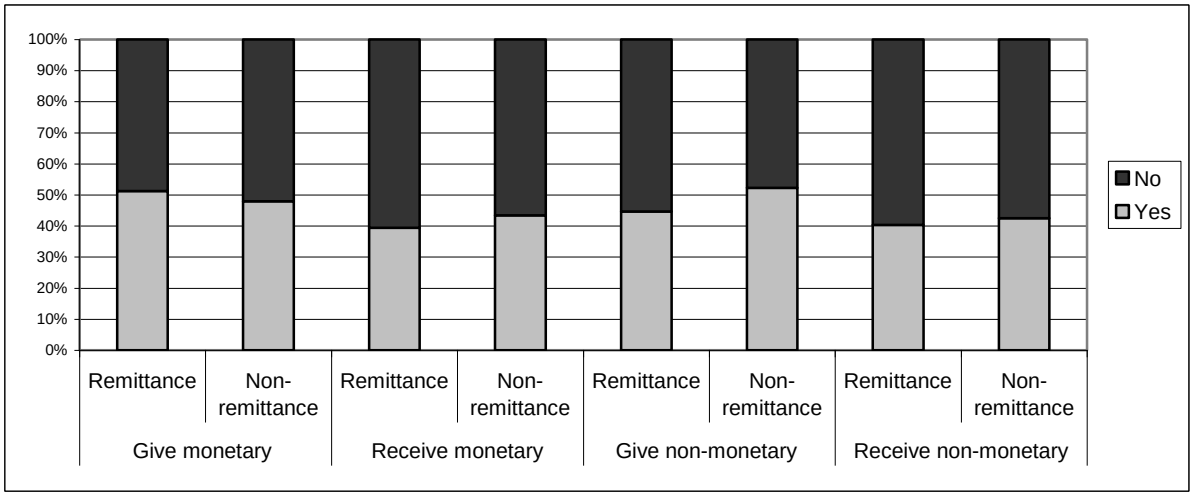
Note: Rayon fixed effects are included in all regressions.

Figure 1: Transfer behaviour in migrant vs. non-migrant households



Source: Authors' illustration based on LIK survey data.

Figure 2: Transfer behaviour in remittance vs. non-remittance households



Source: Authors' illustration based on LIK survey data.