HOUSEHOLD DETERMINANTS OF LABOUR MIGRATION IN KYRGYZSTAN

By

Azhar Abdykadyrova

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Supervisor: Professor Robert Lieli

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Abstract

The paper is aimed to investigate household determinants of labor migration in order to address social problems that are arising due to labor migration of household members. Negative consequences such as high dependency on remittances and expansion of child labor in migrants' households are revealed in case of Kyrgyzstan that might have long term costs outweighing short term benefits of labor migration. In order to address such problems labor migrating household should be determined. Therefore, using Linear Probability Model and Fixed Effect regression the correlation between household characteristics and labor migration decision is investigated based on "Life in Kyrgyzstan" research based household survey across 2010-2013. The findings are: income per capita, marital status of household head, number of old dependents are significantly correlated with labor migration. Based on given results the policy recomendations are given to ease social problems in households with labor migrants.

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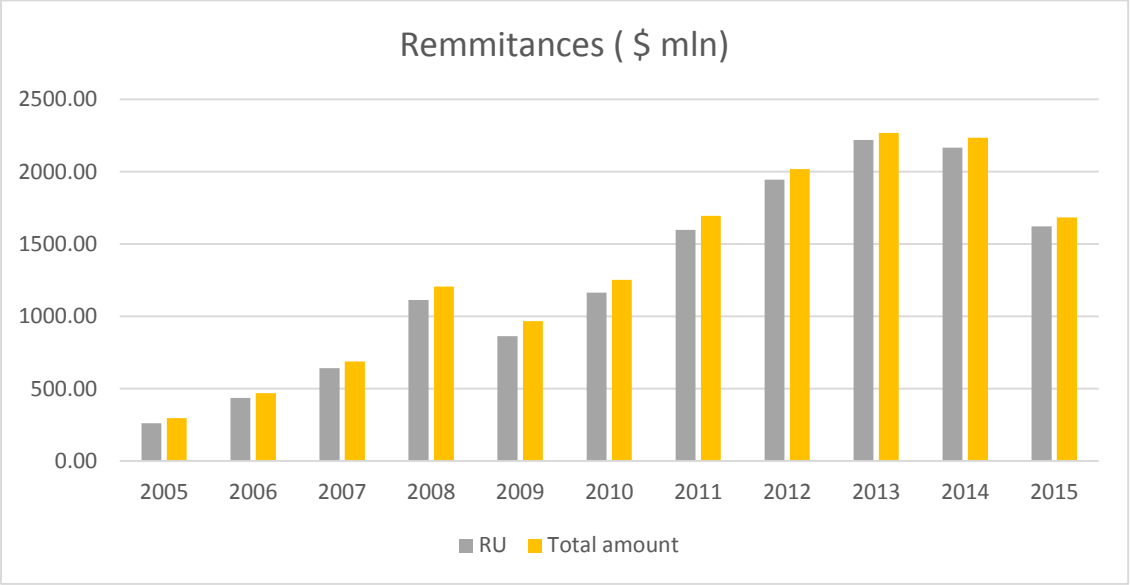
Introduction

After the collapse of the Soviet Union newly established Central Asian countries faced various challenges. Tremendous changes in social and economic lives strongly affected the demographic situation in all countries of the Central Asian region. Gaining independence and at the same time transiting to market economy resulted in political and economic shocks with continuous instability in the region. (Mogilevsky, 2005) As a consequence, the region was in a deep poverty with increased unemployment rate and hyperinflation. (L.Bokros, 2013) And one of the main mechanisms to exit poverty was labor migration to neighboring countries like Russia and Kazakhstan, as the economies of these countries were riding on high oil prices (Anna Di Bartolomeo et al., 2014). Therefore, remittances sent by labor migrant was an instrument to address the poverty.

Central Asian countries, particularly Tajikistan, Kyrgyzstan, and Uzbekistan heavily rely on remittances sent by migrant workers abroad. Based on World Bank statistics Tajikistan (1st place) and Kyrgyzstan (2rd place) are among the most remittance-dependent countries in the world looking at remittances-to-GDP ratio in 2014.[1] The dynamics of official money transfers to Kyrgyzstan are shown in Figure 1. The volume of remittances has been gradually increasing and it reached its peak in 2013 with official money transfers around $2.3 billion. The major part of remittances are coming from Russia, on average 94 percent of total official money transfers. This is a huge support, taking into account the fact that the transfers-to-GDP ratio reached 30 percent. Vinokurov has also pointed out that most part of remittances were used for consumption purposes by receiving household, and only minor part is used as investment resources (Vinokurov, 2013)

[1] Remittances Data, World bank, 2014

Figure 1 Remittances made through the official money transfer systems



Source: National Bank of the Kyrgyz Republic

Thereby, labor migration became one of the main source of income not only for the migrant itself but to his or her families as well.

According to National Statistics Committee, in 2011 there were around 457,000 Kyrgyz migrant workers, out of which 92 percent were working in Russia and the rest 8 percent in Kazakhstan. The growing economy of Russia started to attract migrant workers from the post-Soviet Union, particularly from Central Asian countries: Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. And the flow of immigrants has been gradually increasing over time. So, the percentage of migrants from Central Asia to Russia in 2000-2004 accounted for 24.4 percent, in 2005-2009 it had increased to 33.5 percent and reached its peak in 2010-2013 to 40.4 percent (Anna Di Bartolomeo et al., 2014). Official numbers of labor migrants in Russia from Central Asia differ very much from the real picture. Officially 300,000 Kyrgyz migrants and 250,000 Uzbek migrants traveled abroad during 2004-2008, while unofficial statistics reveals those indicators at 800,000 Kyrgyz migrants and three million Uzbek migrants. Tajikistan is the poorest country among Central Asian countries and heavily relies on remittances; around 1.5 million people are working abroad, mostly in Russia. The main reasons of working in Russia

and Kazakhstan are better job possibilities and salaries. In addition lack of job opportunities in Central Asia and comparative abundance of job places in destination countries are driving factors for migration. (Anichkova, 2014) Therefore, labor migartion is an important factor in the economy of sending countries, as it provides not only migrants with incomes, but also improves well-being of their families.

Even though remittances are regarded as a positive impact on economy of the domestic country through decreased poverty level and increased investments, social negative effects of labor migration usually left out. "Labor migration has much higher negative consequences and its long-term costs highly outweigh its short term benefits" ((G.Khuseynova, 2013) In case of Tajikistan the following social problems were pointed out as a result of labor migration of its members: high dependency of migrants' households on remittances and their vulnerability in case of job loss of labor migrant, child labor and school absenteeism of children, difficulties for women in managing household duties in absence of male members working abroad, and psychological costs and risks taken by labor migrants themselves as well as by their wives and other members of the family (G.Khuseynova, 2013). Such problems are common not only for Tajikistan. I assume that these problems are typical for Kyrgyzstan as well, as both countries heavily rely on remittances to address the poverty.

So, in order to address such problems of labor migration there is a need to determine which households are more likely to have labor migrants. Using linear probability model and time fixed effect regression, the correlation between labor migration decision and household characteristic is to be investigated based on "Life in Kyrgyzstan" household survey across 2010-2013.

My findings are that income per capita, marital status of household head, number of old dependents, and number of active females and males are significantly correlated with labor migration. On the other hand, age, educationa level of household head are insignificant as well

as number of young dependents in migration decision. Based on given results the policy implications are suggested to address social problems in households with labor migrants.

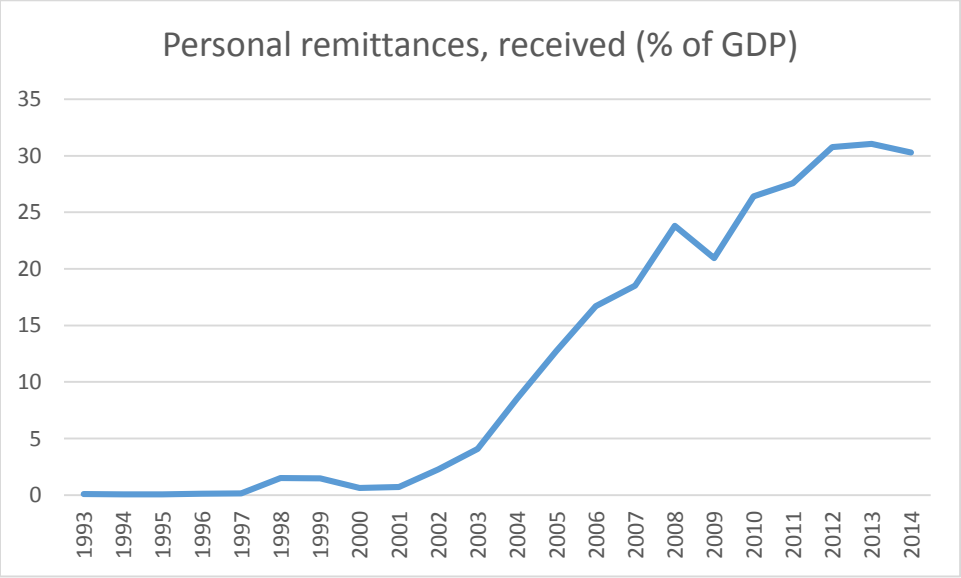
The paper is structured as follows: first section reveals theoretical framework, second is literature review, methodology and data description are given in third section, results along with policy implication are described in fourth section.

Negative effects associated with labor migration. Evidence from Kyrgyzstan

High dependency of migrants' families on remittances and their vulnerability

As it was pointed out before, Kyrgyzstan is among highly remittance-dependent countries in the world, being on the second place after Tajikistan in 2014. Figure 2 presents dynamics of personal remittances as share to GDP in Kyrgyzstan.[2] The share of remittance has started to increase right in post-Soviet period, when the financial subsidies coming from Soviet budget that accounted up to 40 percent of the country's budget were cut off. (G.Khuseynova, 2013) Since that period the share of remittances as percentage to GDP has been increasing and accounted in recent periods at 30 percent to GDP.

Figure 2 Personal remittances, received (% of GDP) in Kyrgyzstan

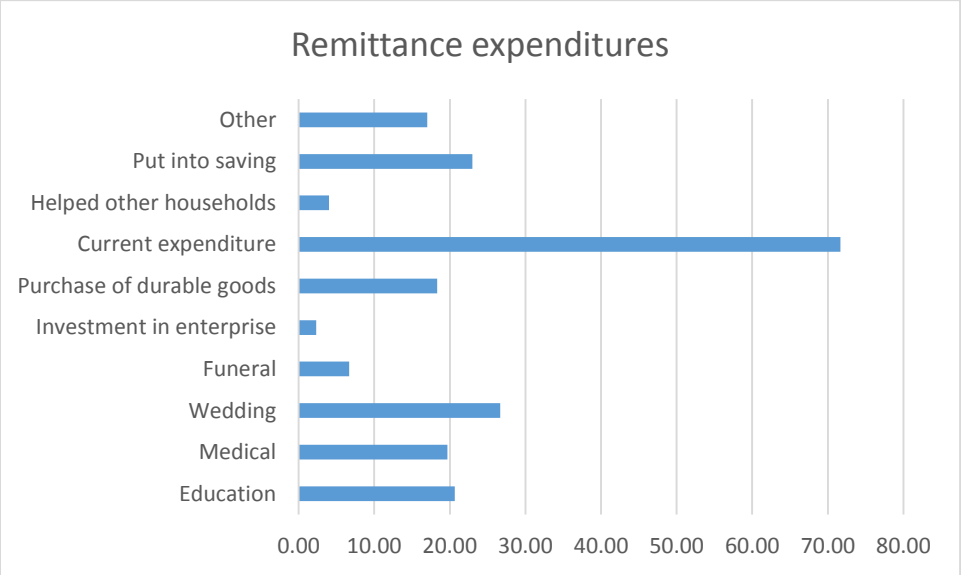


Source: World Bank, Remittances Data, 2014

[2] Remittances Data, World bank, 2014

Remittances are one of the main sources of income for many households in Kyrgyzstan. Figure 3 shows remittance expenditures by receiving households using research-based survey "Life in Kyrgyzstan" for 2013. Based on the survey, 71 percent of labor migrants' households answered that remittances are spent on current expenditures. Current expenditures conceive food, electricity, rent and etc. And only few households answered that remittances were regarded as an investment source. Around 20 percent of households spent remittances on education and medical services.

Figure 3 Distribution of households based on remittance expenditures



Source: "Life in Kyrgyzstan", 2013

Therefore, based on the figures above, it can be concluded that households of labor migrants are highly dependent on remittances sent by workers abroad.

The impact of labor migration on child status in the family

Labor migration has an impact on children as well. It affects the level of their education and expansion of child labor. (G.Khuseynova, 2013) Even though remittances are positively correlated with improved access to education and health system of migrant's household

members; the household where parents, particularly father migrated, children are exposed to do heavy works or to help family, being distracted from free time and even schools. [3]

Table 1 shows average hours spent by children on homework, on working within household and working outside household classified by households with labor migrant and without based on survey "Life in Kyrgyzstan". It can be seen that children living in the household with labor migrant abroad are spending more hours on average helping at home, in family business or farm i.e. working within household. The same conclusion for number of hours spent on working outside for money, children from labor migrant's family spend more time compare to children without labor migrants abroad. Thus, spending more hours on working might distract children from studying. And this can be seen in number of hours spent on homework. Lower hours are spent on homework among children living in households with labor migrants compare to children living within household without migrants.

Table 1 Time spending of children per each day

	Children's (7-18) spent hours per each day			
	Households with migrant		Households without migrants	
	Mean	Standard deviation	Mean	Standard deviation
Number of hours spent on homework	1.79	0.82	1.81	0.84
Number of hours spent on working within household	1.5	1.37	1.4	1.28
Number of hours spent on working outside household	0.03	0.22	0.02	0.22

Source: "Life in Kyrgyzstan", 2013

It might be assumed that children are distracted from studying in households with labor migrant as they are spending more hours on working for family substituting labor migrants abroad. Probably, one of the adverse effects of labor migration is negative impact on children

[3] Economic Consequences of Migration, *Central Asia Security Briefs #21*

development through expansion of child labor in migrant's household that deprives children of opportunity to get education, as well as leads to decline of human capital (G.Khuseynova, 2013). Thus, I assume that these social problems are the consequences of labor migration and there is a need to analyze the labor migration process in Central Asia, particularly in Kyrgyzstan. And in order to identify which households are more likely to migrate linear probability model and fixed effect regression are used to see the correlation between household characteristics and labor migration decision using research-based household survey "Life in Kyrgyzstan" from 2010 to 2013.

Theoretical framework

New economics of labor migration suggests that the decision to migrate is not made on an individual level but on household level. (D. Massey et al., 1993) Mutual decision is made not only to increase the expected gains of the household but to minimize its risks to their economic well-being which are arising from national market failure, apart from the labor market. In developing countries such risks could arise mainly due to weak level or even absence of insurances in different spheres:

Crop market insurance: agricultural sector takes significant part of economic well-being in developing world, thus human or natural risks that could damage or decrease future harvest could "leave families with insufficient income and food for subsistence". New technologies and new types of seeds in developed world allow to decrease those risks and expect higher return, while developing countries are lack of that. Families have incentives to self-insure from income loss, thus sending one or more workers abroad to remit earnings home is the only way.

Unemployment insurance: Wages earned by family workers are the main source of income, and any worsening on macro or micro level could threaten the households by income loss. Worsening could be expressed through deterioration of economic situation that leads to increase of unemployment rate as well as incidents in families such as injured worker who is not able to work. Unemployment compensations or disability programs in developing countries are either insufficient to cover basic needs or just absent. In wealthy countries such insurance programs work properly, protecting worker and its family from those risks. So, in poor countries migration of one the family members abroad does insurance function.

Capital market: Investments are positively correlated with economic growth. However, in poor countries it is very difficult to borrow money from financial institutions due to lack of proper collateral or high costs of it compare to developed world where household can rely on

savings or easy access to loans. Thus, one of the ways to get additional income in developing countries is labor migration. (D. Massey et al., 1993)

"Migration decisions are often made jointly by the migrant and by some group of non-migrants. Costs and returns are shared, with the rule governing the distribution of both spelled out in an implicit contractual arrangement between the two parties" (O.Stark, D. E.Bloom, 1985). Therefore, the theory views migration as a household decision. Particularly in developing countries an individual is motivated to migrate not only to fulfill his/her own goals but to support his/her family for the "survival" of the household. And the main support from labor migrant is remittances. The theory assumes that "remittances are better explained as an intertemporal contractual arrangement between migrant and the family rather than as the result of altruistic considerations". Thereby, this approach shifts the focus of labor migration from individual independence to mutual interdependence of family members considering the migration decision as a result of "calculated strategy" but "not as an act of desperation or boundless optimism" (O.Stark et al, 1985)

Literature review

Central Asian countries are very similar in forms of labor migration, particularly Uzbekistan, Kyrgyzstan, and Tajikistan. There is a number of researchers that investigated labor migration factors and its consequences in the Central Asian region.

E.Vinokurov and V. Pereboyev analyzed labor migration and human capital in Kyrgyzstan and Tajikistan. They define factors of labor migration by countries: "discouraging" factors in sending country and "encouraging" factors in the destination country. So, "discouraging" factors in the home (sending) country are low-income level and high unemployment rate, while "encouraging" factor in destination country is growing labor demand. It was pointed out that pushing factors of labor migration are stronger rather than pulling factors in decision-making. As a result difference in per capita GNP is considered to be a predetermining factor in migration trends. 1 percent decrease in GNP per capita is associated with 0.65-0.77% increase of emigration. Additionally, demographic and quantitative sociological assessment predicted the profile of the statistically –average migrant worker from Kyrgyzstan. So, those who are up to the age of 35 (average age is 29), coming from small families (1-2 people); and living in Chui Region and the three southern regions (Batken, Osh, and Jalal-Abad) are more likely to be labor migrants. The underdevelopment of these regions also plays an important role in the decision to migrate. So, residents of the Osh and Jalal-Abad regions showed a higher level of preparedness to move to another region or country in order to find a job. The Southern part of the country is associated with its limited arable land, scarce opportunities for livestock rearing and low level of industrial development. And one of the main reasons of southern region's residents to migrate is a willingness to improve their personal economic situation. Other determinants of labor migration were estimated to be wage level, unemployment rate, household income, age and level of education. Per capita household income and age have a

negative correlation with the likelihood of migration. Thus, it can be concluded that labor migrants are pushed to work due to lack of possibilities to earn enough in domestic country.

Even though labor migration is considered to be as positive effect on economic well-being of the domestic country labor migrants do not receive proper support from government agencies in destination countries. 90 percent of migrants working in Russia and 78 percent in Kazakhstan claim that the main source of their support on a new place are relatives, friends, acquaintances, and compatriots. While the support from government agencies only 3 percent of labor migrants received in both sides: sending and destination countries. This shows low level on engagement of governmental agencies. (Vinokurov, 2013)

Among other negative consequences social problems were revealed on a household level in case of Tajikistan. Increased number of divorces due to migration of household heads. Among labor migrants from Tajikistan 83 percent are men. Working abroad men are usually exposed to find new families abroad and divorce with their wives in home countries. Statistics shows that every year 14,000 married Tajik migrants divorce in order to establish new family on a new place. As a result, one third of labor migrant wives are abandoned by their husbands working abroad. (G.Khuseynova, 2013)

Data description

In order to examine the correlation between labor migration decision and household characteristics the survey "Life in Kyrgyzstan" is used. The "Life in Kyrgyzstan" is a research based longitudinal survey on household and individual levels. Currently the data is available for 4 years, from 2010 to 2013, covering 3000 households and 8000 individuals across all regions of Kyrgyzstan. Household questionnaire was filled by the most informed household member, individual questionnaire was filled by all adults of age 18 and older within sampled households. A stratified two-stage random sampling design was utilized for the survey on several strata: 1) the strata is formed by Bishkek and Osh (main cities) 2) rural and urban areas of the seven regions (oblasts); summing up in total 16 strata. The range of questions is big, covering different topics: household demographics, assets, expenditure, migration, employment, agricultural markets, shocks, social networks, subjective well-being, and many other topics. Household missing values were excluded from the analysis.

Methodology

Linear probability model is used to see correlation between migration decision and household characteristics. For further robustness check time fixed effect model is used controlling for time-variant characteristics that could impact on outcome variable, such as economic fluctuations, government regulations and others. Panel data across 2010-2013 is used. The model is expressed by the following equation:

$M = \alpha X + \varepsilon$ (1)

Where M represents migration decision within the household; X is a vector of explanatory variables. I assume that the error term ε is independently and normally distributed with zero mean and variance σ^2. The empirical model can be written as:

$M=\alpha_0 + \Sigma a_k X_k + \varepsilon$ (2)

Description of dependent variable

As dependent variable migration dummy variable is used. Dummy variable answers to the following questions: "Does [household member] currently stay in the household dwelling?" and "if No, for what reason?" The reason of "working" was chosen excluding short term business trips that could mislead. Thereby, dummy variable is 1 if the household has at least one of the members outside Kyrgyzstan and for working purposes, and it is 0 otherwise. Households with at least 2 members are chosen. Table 1 provides descriptive statistics on a number of households with labor migrant workers outside Kyrgyzstan for each year. As shown in Table 1, the percentage of households with labor migrant outside Kyrgyzstan in the sample ranges from 10.85 to 14.84 percent across 2010-2013.

Table 2 Distribution of dependent variable

	Distribution of households				
Year	Households with labor migrant	%	Households without labor migrant	%	Total
2010	350	0.13	2447	0.87	2797
2011	306	0.12	2332	0.88	2638
2012	418	0.16	2216	0.84	2634
2013	418	0.16	2216	0.84	2634

Source: Life in Kyrgyzstan survey, 2010-2013

Description of explanatory variables used in the model

There are almost no papers that investigate labor migration on household level. S. Akhter investigates the household level determinants of rural-urban migration in Bangladesh. The observed factors of migration are similar to factors of migration decision in Kyrgyzstan. The major factors were determined as weak agricultural development, poverty, food insecurity, and unemployment in rural areas. (Sh. Akhter et al, 2014) In addition, I assume that household head characteristics play important role in household decision making. Thus education level, age, and marital status of household head are taken.

1. Age of Household Head

Age of household head can be regarded as proxy variable for decision making of migration. The sign of the variable can be positive or negative. Positive sign is predicted when the household is economically active (age of 15-59), meaning that he/she is able to migrate pursuing jobs abroad or send one of the family members while he/she can manage the farming or family responsibilities properly. However, becoming old aged household head is willing to keep their sons and daughter with them, thus negative sign is expected. (J.R.Aworemi et al, 2011) Age squared is included to track quadratic relationship.

2. Number of Economically Active Male Members

Economically active members are considered to be at age from 15 to 59. The expected sign of this variable is positive on migration decision. Based on literature review active and young males are more likely to be involved in migration.

3. Number of Economically Active Female Members

Number of Economically Active Female Members is also positively correlated with labor migration decision within a household. Active female members in the household can manage the household activities without males, thus giving opportunity to other members to migrate.

4. Young Dependents in the Household

Young dependents are at age 14 and below. The sign for this variable can be either positive or negative. Positive sign can reflect high probability of migration in order to cover costs of young dependents. However, negative sign can be expressed through inability to move as potential migrant should stay in the family to look after young dependents.

5. Old Dependents in the Household

Old dependents are at age 59 and above. Number of old dependents in the household can induce labor migration, since they are not economically active and require some expenditure. Another assumption is that the presence of old dependent can ease labor migration, as old dependent can look after young dependent, and this is very common in case of Kyrgyzstan. Thus, sign is expected to be positive. Descriptive statistics for the variables above is given classified by household with migrant and without migrant. Number of young dependents, active females and males are significantly higher in households with labor migrant.

Table 3 Household size components

Mean of characteristics per household		
	Household with migrant	Household without migrant
Number of young dependents	2.14	1.81
Number of old dependents	0.38	0.37
Number of active females	2.18	1.56
Number of active males	2.31	1.46

Source: Life in Kyrgyzstan survey, 2010-2013

6. Education level of Household Head

Education level of Household Head is classified by three levels: low (basic, primary, and illiterate), middle (secondary general, primary technical, secondary special) and high (university degree, PhD level). I use two dummy variables for low and middle levels of education with reference to high level of education. I assume that household head with low or middle level of education occupies low skilled job position or in agricultural sector, thus having either insufficient income or risks of income loss are more likely to migrate. Thus, I expect the sign on both dummy variables to be positive compare to high level of education.

7. Income per capita

As low income is one of the main factors to migrate in Central Asia, I assume the sign of the variable to be negative, as higher the income per capita the lower probability of migration. Monthly income sources and amount of incomes are given. I have excluded income coming from remittances abroad in order to avoid reverse causality. Additionally I divided income by household size in order to get income per capita. Income per capita is taken in logarithm in order to normalize the distribution.

8. Marital Status of Household Head

As I am considering households with at least 2 members, the marital status of household head plays important role in migration decision-making. Marital status of household is given by dummy variable: 1 if he/she married or live together and 0 if separated, divorced or widowed.

Table 3 shows mean of characteristics per household. As we can see there is significant difference in number of young dependents, number of active females and males between households with labor migrant and without.

Table 4 Distribution by marital status of Household head

	Marital status of Household Head			
	Household with labor migrant	%	Household without labor migrant	%
Married/Living together	270	0.77	1,868	0.76
Single	80	0.23	579	0.24
Total	350	100%	2,447	100%

Source: Life in Kyrgyzstan survey, 2010

9. Ethnicity of household head

Ethnicity of household head is classified into 3 dummy categories: 1) Kyrgyz 2) Uzbek 3) Other (Tajik, Uigur, Dungan, Kazakh and others) with reference to Russian. As almost 94 percent labor migrants choose Russia as destination country, it is interesting to see labor migration decision among ethnicity groups with reference to Russian; assuming that for Russians it is easier to integrate. Based on statistics among households with labor migrant Kyrgyz and Uzbek are prevailing.

Table 5 Distribution by ethnicity (2010)

Ethnicity distribution				
	Household with labor migrant	%	Household without labor migrant	%
Kyrgyz	249	71.14	1,657	67.72
Uzbek	75	21.43	243	9.93
Uigur	10	2.86	40	1.63
Tajik	7	2.00	21	0.86
Russian	6	1.71	289	11.81
Other	2	0.57	95	3.88
Dungan	1	0.29	85	3.47
Kazakh	0	0.00	17	0.69
Total	350	100%	2,447	100%

Source: Life in Kyrgyzstan survey, 2010

Empirical Results

Linear probability model estimation shows correlation between migration decision and household characteristics for each year. Results reveal that the signs of correlation between explanatory variables and migration decision do not change over time.

Interesting conclusion can be taken from household head ethnicity variables. As reference group is Russian, positive or negative sign on the dummy variables refer in comparison to Russian. Thus, Kyrgyz and Uzbek are more likely to migrate compare to Russians, even though most of migrant workers are moving to Russia. Despite the fact that for Russians it is easier to integrate into Russian labor market compare to Kyrgyz or Uzbek due to nationality, language and other social aspects; Russians are less likely to migrate. I assume that the explanation for that can be household size, as higher the household size the more probability to migrate. Household size in Kyrgyz and Uzbek families are usually high, due to traditional aspects. Usually grandparents live together with their children in Kyrgyz and Uzbek families as well as fertility rate is higher among Kyrgyz and Uzbek families reflecting in increased number of dependents without of income source. Below the statistics on household size is given based on our sample, showing that average household size among Kyrgyz and Uzbek is 4.78 and 5.41 while in Russian families this number is only 2.7.

Table 6 Average of household size by ethnicities

Ethnicity	Average of household size
Uzbek	5.41
Kyrgyz	4.78
Other	4.83
Russian	2.70

Fixed effect regression is done for controlling time-variant variables that could affect migration decision over time. In addition I have excluded time invariant variables in fixed effect regression such as ethnicity of household head.

Age- age of the household head is insignificant in migration decision.

Marital status of household head –fixed effect regression shows the coefficient on marital status of household head is negative. Thus, single parents or household head families are more likely to have a migrant rather than households with married or living together household heads.

Monthly income per capita- income per capita is negatively correlated with labor migration decision, meaning that lower the income per capita higher probability to have labor migrant in a household.

Household head education - Interestingly, household head education level does not show any significance in household decision.

Number of Old Dependents – the coefficient on number of old dependents is positive, showing positive correlation between migration decision and number of old dependents. Old dependents do not have sufficient income source receiving low pensions which does not cover basic costs of living.

Number of Active Females and Males- the coefficients on number of active females and males are positive, the households with higher number of active females and males are expected to have higher probability of having labor migrant abroad. It can be associated with new economics of labor migration, where the household members are send to differentiate the risk of income loss due to failure of national market. Or this can be referred to high unemployment rate among youth, thus the inability to find jobs are associated with moving abroad pursuing job places.

Table 7 Linear Probability Model Results

Linear Probability Model

VARIABLES	2010	2011	2012	2013
Age	0.00244	0.00288	0.00616**	0.00480
	(0.00220)	(0.00240)	(0.00297)	(0.00298)
Age^2	-2.56e-05	-2.09e-05	-5.34e-05*	-4.32e-05
	(2.18e-05)	(2.41e-05)	(2.84e-05)	(2.86e-05)
Married	-0.0497***	-0.0394***	-0.0262	-0.0233
	(0.0149)	(0.0151)	(0.0171)	(0.0172)
Head education level/low	-0.0376*	0.0133	0.00513	0.00878
	(0.0210)	(0.0220)	(0.0235)	(0.0236)
Head education level/middle	-0.0163	0.0185	0.0377**	0.0389**
	(0.0140)	(0.0138)	(0.0164)	(0.0164)
Ethnicity/Kyrgyz	0.0247*	0.0312**	0.0816***	0.0884***
	(0.0127)	(0.0136)	(0.0156)	(0.0158)
Ethnicity/Uzbek	0.0950***	0.0216	0.0991***	0.106***
	(0.0247)	(0.0235)	(0.0269)	(0.0268)
Ethnicity/Others	-0.0295*	-0.0357*	-0.0393*	-0.0309
	(0.0166)	(0.0196)	(0.0207)	(0.0209)
Log income per capita	-0.0865***	-0.0251***	-0.000742	-0.00944
	(0.00880)	(0.00904)	(0.0100)	(0.0104)
Number of young dependents	-0.0189***	-0.0101**	-0.00326	-0.0176***
	(0.00494)	(0.00504)	(0.00395)	(0.00575)
Number of old dependents	0.0634***	0.0459***	0.0603***	0.0612***
	(0.0147)	(0.0146)	(0.0176)	(0.0174)
Number of active female	0.0342***	0.0484***	0.0568***	0.0572***
	(0.00808)	(0.00831)	(0.00982)	(0.00919)
Number of active males	0.0873***	0.0876***	0.0815***	0.0800***
	(0.00838)	(0.00853)	(0.00913)	(0.00880)
Constant	0.245***	-0.0969	-0.315***	-0.231***
	(0.0704)	(0.0716)	(0.0823)	(0.0854)
Observations	2,749	2,624	2,561	2,561
R-squared	0.170	0.137	0.119	0.122

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8 Fixed Effect Regression Model Results

Time fixed effect regression

VARIABLES	Fixed Effect regression
Age	-0.00191
	(0.00550)
Age^2	-2.71e-06
	(4.59e-05)
Married	-0.0601***
	(0.0225)
Log income per capita/month	-0.0365***
	(0.00511)
Household Head Education level/low	-0.00391
	(0.0409)
Household Head Education level/middle	0.00676
	(0.0309)
Number of Young Dependents	0.00252
	(0.00247)
Number of Old Dependents	0.0300*
	(0.0162)
Number of Active Female	0.0199**
	(0.00835)
Number of Active Males	0.0539***
	(0.00991)
2011.year	0.000303
	(0.00662)
2012.year	0.0377***
	(0.00844)
2013.year	0.0409***
	(0.00717)
Constant	0.280*
	(0.159)
Observations	10,495
Number of hhid	2,821
R-squared	0.020

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Conclusion and Policy Implication

International labor migration is usually regarded as positive impact on the economy of sending country through reduction of poverty, smoothing families purchase power, investment in education and medical care. However, negative effects of labor migration are usually left out and are not considered seriously. The paper is aimed to investigate possible negative effects of labor migration in case of other Central Asian countries and analyse these effects in case of Kyrgyzstan. Among negative effects associated with labor migration high dependency on remittances and expansion of child labor are revealed based on research-based survey "Life in Kyrgyzstan". Other possible negative effects of labor migration that were analysed in case of Tajikistan might be relevant to Kyrgyzstan as well. Negative effects such as difficulties for women in managing household duties in absence of male members working abroad, school absenteeism of children, psychological costs and risks taken by labor migrants themselves as well as by their family members, increased divorces within labor migrants' households could lead to long-term costs that outweigh short term benefits of labor migration. Since these negative effects are the consequences of labor migration, in order to address these problems we need to look on the determinants of labor migration decision. Based on new economics of labor migration, labor migration is regarded as household decision rather than individual in developing countries. Thus, linear probability model was used to see correlation between household characteristics and labor migration decision, to see which households are more likely to have labor migrants. As a result households with lower income per capita, with single household heads and higher number of old dependents are more likely to have a migrant pursuing job places abroad. In this case following policy recommendation should be taken into consideration:

Firstly, the Government of Kyrgyzstan should shift its policies from encouraging labor migration to development of economic opportunities within a country through support of small and medium enterprises that are major sources of job creation. This would decrease the dependency of the households on remittances and encourage labor migrants to return.

Secondly, to ease social problems that are arising due to absence of one the family members, policies should be addressed to targeted groups. Since there is a higher probability to have a labor migrant within a household with number of old dependents. The possible solution could be related to pension increase or provision of some benefits for old-aged people so to be able to cover at least their basic needs. Single parents should be also the target group of increased benefits, as abandoned children due to labor migration of household head can lead to long-term negative consequences.

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