ECONOMICS & Sociology

Yormirzoev, M. (2017). Determinants of Labor Migration Flows to Russia: Evidence from Tajikistan. *Economics and Sociology*, *10*(3), 72-80. doi:10.14254/2071-789X.2017/10-3/5

DETERMINANTS OF LABOR MIGRATION FLOWS TO RUSSIA: EVIDENCE FROM TAJIKISTAN

Mirzobobo Yormirzoev,
National Research University Higher School of Economics, Perm City, Russian Federation,
E-mail: mmermirzoev@hse.ru

Received: February, 2017
1st Revision: May, 2017
Accepted: August, 2017

DOI: 10.14254/2071-789X.2017/10-3/5

ABSTRACT. Tajikistan is an active participant in international migratory flows since the breakup of the Soviet Union. Initially, a civil war was the primary push factor for geographic mobility of people. Currently, economic deprivation, limited land area and demographic pressures largely determine the dynamics and flows of the Tajiks' migratory processes, in particular labor mobility from this post-Soviet republic. The primary goal of this paper is to identify factors affecting labor migration to Russia as an important place of destination for Tajik migrants. We look at the role of socio-demographic factors as well as migration-related social capital in population movements. Findings indicate that demographic profile of migrants seems to be a more significant factor toward migration as it reflects a relatively higher share of younger people in country's total population. Results also indicate that knowledge of Russian as a second spoken language is influential.

JEL Classification: J6, J60, J61

Keywords: labor migration, Tajikistan, Russia, social capital.

Introduction

Many citizens of Tajikistan are engaged in international migratory flows since the breakup of Soviet Union. Initially, a civil war was the primary push factor for geographic mobility of people that resulted in displacing about 20% of country's population (Justino *et al.*, 2012). Afterwards and at the present time, economic deprivation, limited land area and demographic pressures largely determine the dynamics and flows of the Tajik's migratory processes, in particular labor mobility from this post-Soviet republic.

To some extent, the country's economic deprivation stems from a significant reduction of its production activities. In 2000, the share of industry and agriculture accounted for 35.6% and 25.1%, respectively, of the country's gross domestic product (GDP). By 2010, the share of these sectors in the GDP decreased by 21% and 19.9% respectively[1]. As a result, this situation affected unemployment level in Tajikistan. The economy of Tajikistan used to be an essential source of agricultural produce and semi-industrial goods under the centralized planning which were primarily labor intensive sectors of the economy. Following the collapse of the Soviet Union the structure and dynamics of Tajik economy did not change in post-communist period. Due to continuous shrinking in agriculture and industry sectors many

[1] EBRD Transition Reports 2011. Available at: http://www.ebrd.com/downloads/research/transition/tr11.pdf (accessed 15.02.2017).

economically active people became unemployed. Even though the service sector tends to increase it cannot complete substitute job places from industry and agriculture.

Currently, about half of country's population lives below the national poverty line[2]. This may be attributed to gradual downturn of industry and agriculture over the last decade.

Recently, Tajikistan has experienced changes in its demographic profile. In particular, for the last decade the total population in the country increased by 11%[3]. This tendency also had an impact on raising country's population density from 44 to 49 people per square kilometer. Such demographic trends spur further labor migration.

According to official data, more than 600 thousand people stay in other countries as labor migrants and the vast majority of migrant workers move toward Russia. This number constitutes 15 percent of the country's working age population. Demand for foreign labor force in Russia gives Tajik migrant workers an opportunity to have earnings which are directed not only for consumption but also for savings. Foreign income serves as a primary source for remittances.

One should note that the amount of remittances sent by Tajik migrants increased significantly over the last decade. The officially recorded amount of such transfers to country's GDP increased from 6 percent in 2002 to 41 percent in 2015[4]. Therefore, one could conclude that labor mobility has become an integral part of Tajik society.

The present study explores factors affecting labor migration flows from Tajikistan using household data from the 2009 Tajikistan Living Standard Survey (TLSS). We also examine whether Tajik migrants obtained any type of assistance prior their departure. Although the TLSS is not exclusively designed for research in migration, some information drawn from the survey may be used to analyze and predict labor mobility from the country.

1. Literature review

As a result of the increased importance of labor migration and remittances in Tajikistan, several authors have explored this topic. This became possible owing to the availability and access to household survey and remittance data.

The recent literature has focused on macroeconomics of remittances and the impact of foreign exchange earnings on country's development, the relationship between remittances and children' nutrition, implementation of effective policy based on migration and remittances, employment and labor supply. Some authors analyzed migration patterns in Tajikistan during the global financial crisis.

Azzarri *et al*. (2011) explored the relationship between international migration and undernutrition, and food insecurity. Their findings indicate that in general migration and its associate remittance flow to Tajikistan have a positive impact on children's nutrition and growth patterns. However, economic crisis that hit Russian economy in 2008 that is a key destination for regional migration from Tajikistan may have adverse effect on cognitive development of children and their long-term productivity.

Khakimov (2016) provides detailed description of external labor migration and remittances in Tajikistan. He points out that without considering this phenomenon it will be impossible to design and implement sound economic policy in Tajikistan that may have significant implications for the national economy.

[2] Tajikistan in figures 2013. Available at: http://stat.tj/ru/img/ad0df465351c083293dff8839095681b_1378536558.pdf (accessed 18.02.2017).
[3] Tajikistan in figures 2013. Available at: http://stat.tj/ru/img/ad0df465351c083293dff8839095681b_1378536558.pdf (accessed 18.02.2017).
[4] World Bank Online Indicators 2013. Available at: http://data.worldbank.org (accessed 13.12.2016).

In their paper Gulina *et al*. (2016) point to the recent developments and overall direction of migration policy in Russia and Tajikistan. Authors argue Tajikistan does little effort to implement effective re-integration migration mechanism that in turn facilitates a higher level of dependency on remittances and further out-migration. Although officials state that migration is a key factor towards poverty reduction in Tajikistan, the impact of remittances on household welfare is likely limited.

Shemyakina (2011) analyzed the effect of armed conflict on schooling accumulation during the internal civil war in Tajikistan. Her empirical findings show that girls from conflict affected region were less likely to complete their mandatory schooling, while their counterparts in other non-conflict regions were able to attend schools and get their secondary education degrees. There was no effect of regional and household conflict on boys' secondary school education.

Kireyev (2006) argues that labor mobility generates significant foreign financial inflows and their macroeconomic impact is likely to be ambiguous. Remittances may drive the private sector and spur overall growth. Despite the fact that private transfers help Tajikistan to mitigate the economic and social impact of transition, remittances will not have long-term effect on country's growth rates since the marginal propensity to consumption remains high. Consequently, the design and implementation of further economic policies as a part of continuous reforms need to reflect the role and implications of remittances in Tajikistan. Sultonov (2013) reinforces earlier studies by Kireyev and confirms that primary determinants of remittances to Russia are attributed to country's GDP per capita growth and unemployment rate. Higher level of output per capita and the overall economic environment in host country are also important for migratory processes from Tajikistan.

By using and comparing several micro-level data, Buckley *et al*. (2012) assess critically the differences between remittance-receiving and non-remittance receiving households in terms of economic security and development-related behaviors in Tajikistan. Their empirical findings emphasize that remittance income is not linked with household financial stability and private investment activities. Only basic consumption is positively affected by foreign financial inflows, which cast some doubt on whether remittances serve as an effective mechanism for development. They believe that financial infrastructure becomes an obstacle toward viable household investment decisions, while corruption and weak legal setting may hinder the effective use of foreign private transfers.

Kumo (2012) provides evidence that migration and its associated remittances to the country are not pro-poor. His analysis shows that households with a relatively lower level of income send more migrants abroad. However, they did not receive the bulk of remittances. The supply of migrants' labor force and transfers are not consistent with altruistic models in which low-income households who send more migrants abroad are more likely to get the higher share of remittance income. He concludes that poverty reduction in Tajikistan is not affected by migration and remittances.

Justino *et al*. (2012) estimate the impact of remittance on labor supply of working age men and women in post-conflict Tajikistan. Their findings, which are based on household data, reveal that the effect of remittances on labor supply is stronger for men than for women, since the process of labor migration initially took place in conflict affected areas. As a result of labor mobility, men are likely to migrate leaving more job opportunities to women who enter the workforce in their places of origin.

By using the household level dataset Abdulloev *et al.* (2011) demonstrate empirically that labor migration acts as a substitute for informal activities in Tajikistan. They argue that migrants' income in host country and income made in Tajikistan are an imperfect trade-off. Authors emphasize that individuals with professional skills opt for informal activities in their places of residence, while people with low skills and without secondary education decide to

migrate to another destination, mostly to Russia to look for potential foreign employment opportunities and earnings.

By analyzing migration patterns during the global financial crisis, Danzer *et al*. (2010) point out that despite a notable decrease in remittance transfers, the stock of migrants from Tajikistan increased. The pattern of migration becomes risky during the crisis and households sent younger family members abroad, particularly to Russia using their existing support networks. In addition, women began to experience increasing labor mobility.

However, past studies did not explicitly analyze the role of migration – related social capital in population movements. Among people who consider a trip to Russia, connections with current and former Tajik migrants could be a valuable social asset since such ties can be used to get relevant information and assistance that reduces the potential costs and risks in places of destination in Russia. Alternatively, use of this capital may increase the odds of getting an attractive job in Russia and reduce local bureaucratic costs associated with foreign employment and residence. Therefore, our study will empirically test and analyze this hypothesis as an essential research question.

2. Data and Methods

We examine factors affecting labor migratory flows from Tajikistan, using the second wave of the 2007 TLSS which was conducted during November 2009. The TLSS compromises a panel survey of 1,500 Tajik households and it is representative at national and regional level covering all four regions and the capital – Sughd, Khatlon, Districts of Republican Subordination, Gorno Badakhshan Autonomous Province and Dushanbe City. The first wave of the survey was based upon the Multiple Indicator Cluster Survey (MICS) approach. It implies that the overall population was ordinarily divided into groups or clusters and a simple random sample from these groups or clusters was selected. For example, a rural village includes three streets. Instead of interviewing every household in the village a simple random sampling allows to interview households from one of these randomly selected streets that belong to a designated group or cluster.

During the final wave of the survey the same households that had been randomly selected as a result of cluster sampling were revisited. The relevant data was gathered in face-to-face interviews. The purpose of the second visit was to record any notable changes that may have been occurred in surveyed households.

Questions that were administered at the time of developing and implementing TLSS designed to evaluate the welfare level of Tajik individuals and households and to determine what proportion of people in the country is unable to meet their basic living needs. The information gathered may be used in various studies related to employment, agriculture, health and nutritional status and serve as important policy implications both for the Government of Tajikistan, donor countries and international development agencies[5].

The main respondents of the survey are household heads who provided basic information on their social, economic and demographic characteristics. Their responses on family member living away from the households, access to health care, utilities, water and sanitation, durable goods and transfers have also been reflected in the survey.

The second category of respondents who represent individuals aged 14 and older provided information on internal and international migration, and local labor market participation. Information on schooling highlights the degree of education within the range of elementary and graduate level.

[5] Tajikistan in figures 2013. Available at: http://stat.tj/ru/img/ad0df465351c083293dff8839095681b_1378536558.pdf (accessed 18.02.2017).

The last category of respondents that is classified as "the most knowledgeable household member" answered questions on welfare related questions such as subjective poverty, food security and non-food purchases.

It is important to emphasize that questions on international and internal migration that were designed for people aged 14 and over did not completely provide their responses. Therefore, data from this section of the survey cannot be effectively used for our empirical study. Alternatively, I refer to data from a section on family members living away from the household. According to the TLSS, an actual migrant is classified as a person who has been away from the household twelve or more months working abroad.

Data on family members living away from their families comprises 246 observations. This section comprises information on migrants' education level, knowledge of the Russian language, their employment status prior moving to Russia. In addition, data on migration-related social capital and remittances are also given in this section of survey.

As for the empirical tool of our analysis we use the logistic regression method. The response variable of interest has two possible qualitative outcomes. As the dependent variable has two value limits, it needs to be transformed in the following way:

$$odds_i = \frac{P_i}{1-P_i} \qquad (1)$$

Here, $odds_i$ is defined for example as the ratio of the probability of migrating to a new destination to its alternative, i.e. staying home. The second step of conducting this type of empirical analysis involves taking the natural logarithm of the odds ratio, calculating the logit, L_i, as:

$$L_i = \ln(\frac{P_i}{1-P_i}) \qquad (2)$$

Using this in a linear regression one obtains the logistic model as:

$$L_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \cdots + \beta_k X_{ki} + u_i \qquad (3)$$

Hence, the logistic model maps probabilities from the range of (0,1) and it satisfies key regression assumptions of normality of errors and homoscedasticity of error variances (Kutner *et al*., 2004). The maximum likelihood method is then used to estimate the model (Hosmer *et al*., 2013).

In this study we evaluate two models: in the first case, we examine the role of age, gender, and number of languages spoken on the odds of taking a trip to new places of destination. The regression equation will be as follows:

$$ln(\frac{M_i}{1-M_i}) = \beta_0+\beta_1 Age+\beta_2 Age^2+\beta_3 Gender+ \beta_4 Language+u_i \qquad (4)$$

where *M* is whether a person stayed in the household or migrated to Russia.

In the second case, we refer to data from a section on family members living away from the household. We estimate whether actual migrants used migration-related social capital prior their departure to Russia. Explanatory variables include age, gender, education level and knowledge of Russian. Mathematically, it will be expressed in the following way:

$$ln(\frac{SC_i}{1-SC_i}) = \beta_0+\beta_1 Age+\beta_2 Age^2+ \beta_3 Male+\beta_4 SGD+\beta_5 SSD+\beta_6 UNE+\beta_7 RU +u_i \qquad (5)$$

where *SC* is whether the migrant used migration-related social capital, *SGD* is secondary general education, *SSD* represents that the respondent has completed secondary special education, *UNE* represents that the respondent has completed university education and *RU* – knowledge of Russian by migrants and u_i is error term. In this estimation, we have 218 observations. We apply a list-wise deletion technique to exclude 28 observations which had "do not know" responses for the dependent variable.

We acknowledge that there could be certain potential biases of sampling strategy. The survey was conducted during a period when the weather is not usually favorable to travel to mountainous areas to collect the necessary data. As a result, some households are underrepresented who might have had migrant relatives working abroad.

3. Estimation Results

In this section, we discuss the empirical findings of the study. At first, we consider factor that influence of labor migration among individuals who either stay at home or travel abroad.

Table 1 depicts the corresponding results for the first model. For each additional year of age, the odds of migration to Russia decreases by a factor of 0.64 and is increased by a factor of 1.003 after controlling for all other variables in the model. It is easier to start over in a new country when one is younger. Those individuals who speak Russian as a second language are more likely to migrate. In other words, their odds towards migration are greater than those who know native language and Uzbek by a factor of 3.79, *ceteris paribus*. Language skills increase one's employability and reduce the transaction costs of living in a new community. Although the coefficient for male is consistent with its expected sign, it is not statistically significant. Consequently, the role of gender is less influential for geographic mobility of people. The pseudo-R^2 shows that this model explains about 57% of the variation in people's attitudes toward international labor migration.

Table 1. Coefficients from Logistic Regression Analysis Predicting Labor Migration (odds ratio)

Variable	Coefficient	*Robust Standard Error*
Demographic Background		
Age	0.637***	0.04
Age squared	1.003***	0.006
Female (reference)	-	-
Male	1.104	0.413
Language		
Tajik (reference)	-	-
Uzbek	1.498	0.757
Knowledge of Russian	3.798*	3.385
Log Pseudo Likelihood	-	-148.724
Pseudo R squared	0.56	-
N	*492*	-

****p<0.01, *p<0.1.*

Source: own compilation.

Further, we examine whether the Tajik migrants used assistance prior moving to Russia in *Table 2*. Compared with those who hold basic education, the odds of using assistance for those who have at least a secondary general education are diminished by a factor of 0.408, after controlling for all other variables in the model. A possible explanation is

that people with more education are less successful in their current country is less likely to need assistance.

Table 2. Coefficients on whether Active Migrants used Migration-Related Social Capital (odds ratio)

Variable	Coefficient	*Robust Standard Error*
Demographic Background		
Age	0.809	0.133
Age squared	1.003	0.003
Female (reference)	-	-
Male	1.899	1.232
Human Capital		
Basic Education (reference)	-	-
Secondary General Education	0.408*	0.196
Secondary Special Education	0.561	0.404
Higher Education	0.640	0.439
Language		
Second language – Russian	2.535*	1.251
Log Likelihood	-101.398	-
Pseudo R squared	0.06	-
N	*218*	-

**p<0.1.*
Source: own compilation.

Alternatively, one might predict that education would make it easier for the individual to obtain assistance in migration. In addition, those migrants who speak the language in places of destination benefited from social capital. The odds of obtaining assistance before departure are greater by a factor of 2.534 if the migrant speaks Russian, *ceteris paribus*. One might expect that the ability to speak Russian aids the individual in seeking assistance. All other explanatory variables such as demographic background and higher level of education seem to be less important.

Conclusion

This paper has analyzed the role of socio-demographic factors on labor migration from Tajikistan. It contributes to existing literature by assessing the impact of migration-related social capital on population movements that did not get significant attention in the past.

Findings reveal that a person's demographic background is the most important predictor for labor mobility from this Central Asian republic. This may be attributed to country's positive population growth rates, in particular continuously increasing size and proportion of working age of population. Those individuals who speak Russian were key participants in regional labor mobility.

Results indicate that migrants who speak Russian are more likely use migrant-based social capital. Such capital could be mainly useful in the context of a shortage of attractive employment options at the local Tajik labor market. Thus, migrant-based social capital plays a greater role in facilitating migration, whereas demographic context is more important in motivating migration toward Russia.

Migration has become a global phenomenon that affects both countries of origin and destination. For Tajikistan it helps to export excess of its labor force and thus reduce social and political burden on society. Remittances sent by migrants are important since foreign

private financial inflows facilities domestic consumption that is a key element of GDP growth. However, migration and its associated overseas transfers should not be taken as a primary tool for country's economic policy and stability.

Recent trends in world economy and politics showed that countries such as Tajikistan that has heavily relied on migrants seemed to be extremely vulnerable to international shocks. Therefore, sound economic policy needs to be implemented in terms of stabilizing population growth rates, creating favorable conditions for locally operating small and medium businesses as they act as the main source of employment in Tajikistan. Alternatively, Tajik Government needs to motivate returning migrants how to use their gained international professional skills at home when migration to Russia is less attractive.

Needless to say that without a proper migration policy and regulation of the geographic mobility of people toward a new destination there may be some long term negative consequences to the country. Tajikistan may experience a shortage of key specialists in near future. Currently, the number of medical doctors, engineers and technical experts is not sufficient in society as most of them opt for migration to Russia. If such a policy is not effectively implemented Tajikistan may experience more financial costs by inviting f highly qualified and professional specialists from other states.

References

Abdulloev, I., Gang, I., Landon-Lane, J. (2011). *Migration as a Substitute for Informal Activities: Evidence from Tajikistan* (IZA Discussion Paper No. 6236). Retrieved from the Institute for the Study of Labor website: http://ftp.iza.org/dp6236.pdf.

Azzarri, C., Zezza, A. (2011). International Migration and Nutritional Outcomes in Tajikistan. *Food Policy*, *36*(1), pp. 54-70.

Buckley, C., Hofmann, E. (2012). Are Remittances and Effective Mechanism for Development? Evidence from Tajikistan. *Journal of Development Studies*, *48*(8), pp. 1121-1138.

Danzer, A., Ivaschneko, O. (2010). Migration Patterns in a Remittance Dependent Economy: Evidence from Tajikistan during the Global Financial Crisis. *Migration Letters*, *7*(2), pp. 190-202.

Gulina, O., Utyasheva, L. (2016). Putting People Last: Lessons from the Regulation of Migration in Russia and Tajikistan. *Public Administration Issues*, Special Issue, *5*, pp. 92-118.

Hosmer, D., Lemeshow, S., Sturdivant, R. (2013). *Applied Logistic Regression*. New Jersey: John Willey and Sons.

Justino, P., Shemyakina, O. (2012). Remittances and Labor Supply in Post-Conflict Tajikistan, Institute of Development Studies (Working Paper No 388). Retrieved from the Institute of Development Studies website: https://www.ids.ac.uk/files/dmfile/Wp388.pdf.

Khakimov, P. (2016). Labor Migration and Remittances in Tajikistan: Trends and Consequences. *Himalayan and Central Asian Studies*, *20*(4), pp. 80-95.

Kireyev, A. (2006). The Macroeconomics of Remittances: The Case of Tajikistan (IMF Working Paper WP/06/02. Retrieved from the International Monetary Fund website: htpp://www.wp0602.pdf.

Kumo, K. Kazuhiro (2012). Tajik Labor Migrants and their Remittances: Is Tajik Migration Pro-Poor? *Post-Communist Economies*, *24*(1), pp. 87-109.

Kutner, M., Nachtsheim, C., William, L. (2004). *Applied Linear Statistical Models.* New York: McGraw – Hill.

Shemyakina, O. (2011). The Effect of Armed Conflict on Accumulation of Schooling: Results from Tajikistan. *Journal of Development Economics*, *95*(2), pp. 186-200.
Sultonov, M. (2013). The Macroeconomic Determinants of Remittance Flows from Russia to Tajikistan. *Transition Studies Review*, *19*(4), pp. 417-430.