

REMITTANCES AND SMALL
BUSINESS INVESTMENTS:
THE CASE OF MOLDOVA

by

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Abstract

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This paper analyzes the links between remittances and small business development in Moldova. The aim is to investigate whether being an experienced user of banking services and having access to banking system in Republic of Moldova, in particular, among Moldovan remittance-receivers have a positive effect on investment in small business. In order to address this issue a Probit model and Propensity Score Matching methods were implemented upon subjective fact of owning a business by the head of the remittance-receiving and non-receiving households. The research is based on a household data set for Moldova for the year 2008. It was found that remittance-receivers are more willing to start own business. Also the nearness of bank location, opened current account in the bank and the trust in banks have a positive effect on the entrepreneurial spirit. However, these factors are no more pronounced among remittance-receivers. These results suggest that activities increasing trust and current account usage among all Moldovans will be more effective than those focusing on remittance-receivers only.

To K. Mocreac

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Chapter 1

INTRODUCTION

Moldova belongs to a group of low-income countries and is one of the poorest states in Europe. A low level of standard of living motivates many people to look for a better life abroad becoming 'guest workers'. According to the Migration and Remittances Factbook 2011, 21.5% of Moldovan citizens work abroad. The Human Development Report 2010/2011 shows that the number of emigrants keeps growing, particularly among the young population. The share of Moldovan emigrants aged 20-34 years in the total number of migrants in the period 2005-2008 has increased from 41.2 up to 44.2 percent. Money transfers sent from abroad by these migrants (called remittances) have become an essential source of income for families left in Moldova. For the past half a decade the inward remittance flow has grown from \$920 mln in 2005 to \$1.316 mln in 2010.

During the recent Global Economic Crisis many Moldovan families have relied on remittances. As the Human Development Report 2010/2011 claims, 19% of the disposable income for the average Moldovan household has been derived from remittances in the year 2008. For the rural population this indicator was over 25%. In 2010 India, China and Mexico were the top recipients of remittances in absolute volumes. But smaller and poorer labour-exporting countries, as for example, Moldova, tend to receive relatively larger remittances if taking into account the size of the economy. By the year 2011 the inflow of remittances is about 30% of Moldova's GDP which is among the highest rates in the World.

Unfortunately, these money transfers to Moldova are not contributing to a sustainable economic development, but are rather spent on private domestic consumption of necessities (Mislitscaia and Vakhitova, 2010). Chami et al. (2008)

reports that a “significant proportion, and often the majority” of remittances are spent on consumption and a relatively smaller share of remittance funds is saved or invested.

Moldova has a relatively good investment climate. The “Doing business 2012 ranking” conducted by World Bank placed Republic of Moldova 81st among 183 economies of the Eastern Europe & Central Asia region. Moldova is a member of the WTO and of the Stability Pact since June 2001. It signed the Partnership and Cooperation Agreement with the European Union in 2004 and has an access to the World markets through the General System of Preferences with the European Union, Switzerland, Japan and others. Moldovan wine and food industries are the most popular and well developed fields for investments in the country. All these facts point toward the investment attractiveness of Moldova, thus Moldova fits under the conclusions made by Ratha and Sanket (2007) who suggest that remittances are often used as an investment fund for small businesses in countries with good investment climates. However, no investment boom is observed in Moldova. The World Bank reports that only 7% of all remittances sent to Moldova are invested, while 21% are saved and 72% are used for current consumption. One potential explanation for this may be an undeveloped financial sector, and a weak banking infrastructure which cannot serve properly the needs of the Moldovan potential investors, especially from rural areas, and fails to provide all the necessary spectrum of services.

To overcome the dependence on remittances and to launch a healthy economic growth foundation Moldovan government had developed a program “PARE 1+1” for the years 2010-2012. This program is trying to encourage remittance-receivers to invest the money transferred from abroad. Every invested remittance-received leu the government would match by one leu. This program is an attempt to redirect remittances from consumption to investment, to activate

the development in rural areas and create new enterprises. By September, 2011, the total amount of investments made by the program “PARE 1+1” is \$2 mln.

Another quite successful pilot project was launched in Moldova by the Frankfurt School of Finance & Management and Rural Development Center. The project aimed at increasing financial literacy in use of banking services among the Moldovan rural population, thereby ensuring a more sustainable use of remittance’s inflows. By the end of the project (March 2011), 72 financial education seminars had been conducted with a total of 1440 participants. The seminars included coaching sessions on the savings and credit association system.¹

Being well-informed and having an access to all the banking services in the region remittance-receivers may present an essential layer in the creation of small businesses. Migrants are facing difficult choices and risks on their way to financial independence when choosing to work abroad. Financial awareness and knowledge of the various financial options and instruments may help migrants and their families to effectively use remittances to reach the goal of better life. Therefore the purpose of the study is to investigate whether people with an access to the banking system or with a higher level of financial literacy, due to use of various banking services, are more likely to invest remittances into small business.

The research is based on the household survey conducted by the Center of Sociological Investigations and Marketing CBS-AXA in 2008 for the International Organization of Migration. The survey is representative of Moldovan households at the national level and includes answers from about 3300 households. A simple probit model with a further extension to the Propensity Score Matching (PSM) method will be used to analyze the effects leading to an

¹ Source: <http://www.migration4development.Org>

increase of becoming a businessman or businesswoman among Moldovan remittance-receivers.

Expected results are that being an experienced user of banking services and having an access to banking system among remittance-receivers can have a positive effect on investment decisions in small business sector. A relatively high probability of becoming a businessman or businesswoman may be present among experienced users of bank services who receive remittances.

The paper is structured as follows. Chapter 2 gives an overview of the literature related to the past and recent studies of remittances; Chapter 3 describes the data and the methodology of research; Chapter 4 describes the estimated results; Chapter 5 contains the conclusion part.

Chapter 2

LITERATURE REVIEW

The literature on financial awareness and remittances investment in small business is separated into three logical parts. The first part presents theoretical views on the impact of remittances. Next part discusses main findings for the Republic of Moldova and other transition countries. Finally, methodological issues relevant for the issue are discussed.

Before the 1980s, remittances research was mostly represented by remittance-use studies and qualitative descriptions of migration's impact on local communities. These studies often lacked a theoretical framework to measure the complex interaction between migration and economic behavior within families and communities. In order to investigate these effects it is necessary to test how remittances influence the propensity to invest, not just to describe how they were spent (Mislitscaia, 2010).

Stark (1978) was the first to put migration in the context of household economic relationships and to study household's behavior in conditions of imperfect credit and risk markets that characterize migrant-sending areas. Further theoretical and empirical studies emerge from this point of view and model the interaction between migration and development of a country.

Later studies revealed quite controversial results regarding the effects of remittances on development. The pessimistic view emphasizes such negative effects as lack of incentive to work (Ratha, 2003), appreciation of national currency (Amuedo-Dorantez and Pozo, 2004), Dutch disease and others. The optimistic view refers to empirical findings which show that an essential part of remittances is spent on savings and investments (Haas, 2005).

Many researchers and economists in their papers reflect the idea that remittances should be directed towards investment, such as small businesses, to improve country's production and level of wealth. It may also help to reduce the unemployment level. Ratha and Sanket (2007) describe the influence of remittances on poverty, growth, real wages and external competitiveness. They emphasize that in countries with a good investment climate remittances are often used as an investment fund for small businesses. This might be the road for Moldova.

Empirical studies report that remittances are invested in productive activities if the latter ones are considered to be profitable. For example, a survey of self-employed workers and small firm owners located in Mexico found remittances to be a significant source of capital for micro-enterprises (Lopez-Cordova and Olmedo, 2006). The Asian Development Bank (2009) found that Philippine families with a high share of remittance-based income are more likely to include family members who are either self-employed or run a small business. According to the survey, about 18% of Philippines who invested remittances in small business managed to shift from the low-income group to a medium-income group. There was also an observed decrease in the poverty rate- by about 5% (ADB, 2009).

With the growth and development of small business sector a great attention was addressed to the issues of bank accessibility for ease of business operations. Brevoort and Wolken, 2008, showed that one of the vital aspects of starting a business is the distance from banking market. Relying on the Survey of Small Business Finance (SSBF), they examined the changes in distance between small firms and their financial suppliers over the 1993-2003 decade and observed a tendency of it to shrink due to growing importance of accessibility to banks.

Based on a research made for 54 economies it was found that an access to banking services is substantial for small private enterprises since it is a common

practice to address professional consultants to provide information on creating adequate business plan and financial statements. Starting businesspeople are mostly interested in ability to access credit/loan procedures quickly and easily with no waste of time (World Bank, 2009).

It is important to understand whether knowledge of financial issues related to bank services will help to direct remittances to small business and influence the propensity to invest. Lebedyev (2011) revealed that financial awareness of individuals is positively related to their trust in banks. Unfortunately, financial literacy may have no direct impact on investment or savings (Kharchenko, 2011). It is important that these effects vary for different groups of respondents by their specific individual characteristics. For instance, a social study conducted by EuroMed (2009) in Moldova found that factors such as gender, level of education, level of income and length of time receiving remittances have an influence on the individual's relationships with the banking services. In addition, even experienced users of banking services may restrain from investments if the needed infrastructure is not there or the level of corruption/ bureaucracy is too severe for starting a specific business (OPORA and INDEM, 2010).

Brown and Carmignani (2011) tested the hypothesis that the fact of receiving remittances stimulates the remittance recipients' demand for financial sector services and the supply of potentially loanable funds they provide to banks. Using Azerbaijan household data set the authors presented evidences of a strong negative relationship between remittances and likelihood of holding a bank account by the household. Contrary, for Kyrgyzstan a positive relationship was found by the authors. These findings are explained by stronger household preferences to use non-banking transfer channels. It's not clear, however, to what extend financial literacy affects the results. There may be different explanations as well, including weak institutional or/and poor legal and regulatory environments. Thus, migrant's families could be so much concerned with the safety of their

money that financial literacy has no effect on willingness to use bank account. The latter explanation may be true for Moldova too. In this case, financial education programs similar to the one offered by the Frankfurt School of Finance & Management and Rural Development Center will not stimulate demand for bank services.

Some studies related to the use of remittances confirm that socio-demographic characteristics have a specific effect on a person's decision of starting an own business. It was found that younger people tend to invest in business more than elder people (Arif 1999). Similarly, men often allocate a bigger proportion of the remittances to business investments or land purchases in their countries of origin than women (IOM 2011). Household members with a certain level of education make different investment decisions in various countries. The common finding references are that remittance-receivers with higher education are more likely to invest money in some business. The higher is the non-remittances level of income of the household the higher is the proportion of remittances directed towards investments (Arif 1999).

There are a number of papers investigating the impact of financial literacy and remittances on using banking services in the Republic of Moldova. Orozco (2008) looks at the impact of one of the above-mentioned pilot projects in Moldova that focused on remittance-receivers and their financial education. From about 7,000 recipients that were attending the education sessions, 80% expressed their willingness to obtain financial services. Moreover, Orozco found “a correlation between those who opened a savings account and those who had acquired some financial knowledge.” A study conducted by Cerstin, S. et al. (2005) revealed that remittances are sent using formal, regulated services by individuals who are aware of the security advantages of the banks, or are experienced bank service users. It was calculated that the amount of remittances sent through banks nearly doubled from US\$232.6 mln in 2001 to US\$401.5 mln

in 2004. At the same time this increase in the use of bank services by Moldavian citizens could have been related to the growth in available express money transfer services and the drop in fees for sending money from abroad.

There are two approaches used to analyze remittance spending patterns at the micro level. The first one is based upon remittance-use household surveys that are formed as interviews or questionnaires regarding the issue of remittances spending. This method does not provide with a full picture on the effect of remittances on the propensity of the household to invest. One explanation for this is that remittances are considered to be non-fungible source of income. The second recently dominating the literature approach relies upon econometric techniques. Along with other factors and individual's characteristics, remittances are added in the model as explanatory variable. This method implies that remittances are fungible source of income.

The purpose of the present paper is to extend the literature on remittances for the case of Republic of Moldova by looking at factors that can potentially help to turn remittances into an investment fund for the small business. The relationship between remittances and small business investments is almost not investigated in the literature for the current country. The main issue of current research is to focus on such factors as access to banks and experience in usage of banking system. While recent programs aiming at helping remittance-receivers to start own business emphasize the role of these factors they have never found to be examined. The research will follow the microeconomic method of study using recent econometric techniques taking into consideration the assumption that remittances are fungible source of income.

METHODOLOGY AND DATA

3.1 Methodology

The main question of the present research paper is whether people with an access to the banking system and/or with a wider experience in using bank services are more likely to invest remittances into small business. Methodologically, a simple probit model will be evaluated with a further extension to the Propensity Score Matching method (PSM). PSM is designed for matching the control and treatment groups (those who do receive remittances and those who do not) with the same characteristics and correct for the bias in the estimation of the treatment effects (Rosenbaum and Rubin, 1983).

One of the general problems in remittance studies is the possible endogeneity of remittances as an outcome of migration endogeneity (Taylor, 2006). The issue of endogeneity is connected with the selectivity of migration. Taylor (2006) emphasizes that migration is a choice of individuals (communities). With respect to expenditure patterns, households that receive remittances are a part of migration movements and are fundamentally different in characteristics from non-receiving households and the ones not participating in migration (Mora and Taylor 2006). Variables that affect migration decision and, as a result, remittance-related behavior may also influence household expenditures, for example, marriage (Lucas and Stark, 1985). Furthermore, a set of unobservable factors, such as individual's preferences or tastes, may influence migration and household expenditures. Inability to track the influence of these factors may possibly produce omitted variable bias while estimating the marginal effect of remittances. Though these factors can never be adequately analyzed and added to the model due to their immeasurability.

When writing a paper based on remittances one may also face a problem of measurement errors (Adams 2005, Ratha and Sanket 2007). In some cases the amount of remittances is measured with errors. A feasible solution can be found by using a dummy variable for receiving remittances (Remit) instead of using the amount of remittances. This approach aims at reducing the measurement errors. But it is not without the drawbacks. Replacing the actual amount of money transferred from abroad by a dummy variable is less informative. Besides, there is a risk of bias results in case of heterogeneity among the remittance-receivers.

It has become standard in the related literature to add socioeconomic factors as control variables (Adams 2005, Brown and Carmignani 2011). The following variables describing socio-demographic characteristics of the head of the households will be included in the model: age, gender, region of living, level of education.

Based on the available data the variable of standing for experienced user of banking services will be constructed using individual's access to bank accounts, savings and the variable indicating an access to the banking system will be set based upon the nearness of bank location and other financial institutions to the individual.

Two Probit models are specified: one for individuals having only a desire to start an own business and the other one for those already being businessmen.

$$\begin{aligned}
 Prob(Business=1) = f(Z), \quad Z = & \alpha_i + \beta_j(Remit_i) + \lambda_{1j}(BnkSerExp_i) + \lambda_{2j}(BnkAcc_i) + \\
 & \gamma_{1j}(Remit_i)(BnkAcc_i) + \gamma_{2j}(Remit_i)(BnkSerExp_i) + \gamma_{3j}(Remit_i)(TrustAbove_i) + \\
 & \mu_{1j}HS_i + \mu_{2j}Child_i + \mu_{3j}Age_i + \mu_{4j}Male_i + \mu_{5j}Educ_i + \mu_{6j}Urban_i + \mu_{7j}Trust_i + \epsilon_{ij},
 \end{aligned} \quad (1)$$

$$\begin{aligned}
 Prob(Bus_exist=1) = f(Z), \quad Z = & \alpha_i + \beta_j(Remit_i) + \lambda_{1j}(BnkSerExp_i) + \lambda_{2j}(BnkAcc_i) + \\
 & \gamma_{1j}(Remit_i)(BnkAcc_i) + \gamma_{2j}(Remit_i)(BnkSerExp_i) + \gamma_{3j}(Remit_i)(TrustAbove_i) + \\
 & \mu_{1j}HS_i + \mu_{2j}Child_i + \mu_{3j}Age_i + \mu_{4j}Male_i + \mu_{5j}Educ_i + \mu_{6j}Urban_i + \mu_{7j}Trust_i + \epsilon_{ij},
 \end{aligned} \quad (2)$$

where:

- *Business* is a (subjective) dependent variable describing the desire of starting a business;
- *Bus_exist* is a (objective) dependent variable describing the fact of owning a business;
- *Rem* is a dummy variable which indicates the head of the household is a remittance-receiver (1), or not (0).
- *BnkSerExp* is a set of variables that include information about the individual's experience of using banking services:
 - *CA_bank* is a dummy variable indicating whether the household has (1) or not (0) a current account in Moldovan bank;
 - *SA_bank* is a dummy variable indicating whether the household has (1) or not (0) savings account in Moldovan bank;
- *BnkAcc* is a set of variables that include information about the access to banking services:
 - *Bank_dist* is a variable describing the nearness of bank to the household location;
 - *FinInst_dist* is a variable describing the nearness of other financial institutions² to the household location;
- *Trust* is a categorical variable describing the level of trust in Moldovan banks from the lowest (1) to the highest (4);
- *TrustAbove* is a categorical variable equal to 1 for respondents with a medium or high level of trust in Moldovan banks, 0 otherwise.
- *HS* is the number of members in the household;

² Not specified

- *Child* is the number of children below 5 years in the household;
- *Age* is the age of the head of the household ;
- *Male* is a dummy variable which indicates the gender of the head of the household either male (1) or female(0);
- *Educ* is a categorical variable indicating the highest educational degree received by the head of the household;
- *Urban* is a dummy variable which indicates urban (1) or rural (0) residence of the household;

3.2 Data

The research is based on the CBSAXA Moldovan Household Survey on labor migration and remittances for the 2008. The total number of households interviewed is about 3300 with approximately 1/3 of these households having reported to receive remittances.

This survey includes questions concerning personal information of each member of the household such as sex, age, location, the level of education and the level of income and expenditures. It has a set of questions about remittances, i.e. the amount of money received as remittances, the contribution of remittances to the household budget, or how remittances are spent. Additionally there are questions that may describe some experience with the banking system, namely whether household members have bank accounts, do they have savings, the level of their trust to the banks, etc. Finally there are questions related to investments in small business. In particular the survey asks if anybody is planning to start their own enterprise soon, and reasons for not starting his own business. Based on this question a subjective measure of investment intentions is created. There is a very low number of individuals who already own a business and refer to the objective

measure of investment³. The preliminary investigation did not reveal any factors explaining their decision to become business owners. 46 observations that correspond to the household which already have some business were dropped from the sample.

The current dataset provides information on the socio-demographic characteristics of households⁴. Table 1 describes variables included in the model by remittance-receiving status and provides descriptive statistics on them.

Table 1. Summary statistics,
by Remittance-Receiving Status of the Head of the Household

Variables	Mean	
	Remittance-receiving households	Non-receiving households
Desire to start a business (Business)	0.119	0.084
Remittances (Rem)	1	0
Existence of current account (CA_bank)	0.132	0.078
Existence of savings account (SA_bank)	0.095	0.058
Nearness of the bank (Bank_dist)	11.868 (12.607)	9.142 (11.328)
Nearness of the financial institutions (FinInst_dist)	11.635 (12.551)	9.226 (11.413)
Household size, number of family members (HS)	3.845 (1.454)	3.105 (1.503)
Number of children under 5 years in a	0.254	0.160

³ The regression results for the objective measure of investment group are presented in Table 2.

⁴ See Appendix for the distribution of remittance-receivers and the total population of Moldova by the socio-demographic characteristics.

household (Child)	(0.522)	(0.431)
Being a male (Male)	0.766	0.766

Table 1. Summary statistics,
by Remittance-Receiving Status of the Head of the Household- Continued

Variables	Mean	
	Remittance-receiving households	Non-receiving households
Age (Age)	49.624 (13.666)	54.851 (15.049)
Living in urban area (Urban)	0.273	0.730
Sample Size	869	2442

Standard deviations in parentheses

Remittance-receiving and non-receiving households present significant differences in demographic characteristics. Mean age of the head of the family in the remittance-receiving household is about 50 years, which is 5 years less than in average non-receiving household. Since starting an own business presumes specific age requirements, the sample is limited to household heads with age from 18 to 85. Remittance-receiving households on average are larger (approx. 4 members) than non-receiving (approx. 3 members). Remittance-receivers are more likely to live in rural areas than non-receivers. The share of individuals with higher education is larger among remittance-receiving households (see Figure 1).

Summary statistics as well as further model estimations are made at the household level with additional control for the characteristics of the household head whose decisions are interpreted as crucial for other members of the household. According to Table 1 and Figure 2 less than 2% of interviewed heads

of the household already run a business. In contrast, 11% of remittance receivers and 8.8% of non-receivers are expressing the desire of launching their own business. While not all of these plans will ultimately transform into actual entrepreneurs, the data suggests that remittances, indeed, may increase the likelihood of becoming a businessmen or businesswomen.

An aggregated average of variable Trust in banks was generated consisting of three levels: low, medium and high. About a half of interviewed households in the year 2008 are expressing their feeling of trust in banks on a medium or higher level (see Figure 3). The majority of households receive remittances through official money transfer channels (see Figure 4). Approximately 65% of migrants prefer bank transfers and money transfer operators as the primary method of remitting money. Second most popular method of delivering remittances is through informal channels (31%). Four percent of respondents use post office services to receive money.

Chapter 4

MODEL ESTIMATION

For estimating the effect of remittances, individual's bank service experience and his/her access to banking services on the marginal propensity to start a business an interpretation of marginal effect shall be done after running a simple Probit model (1). Marginal effect is calculated at the average of the independent variables using the prediction option associated with the Probit estimations. The Probit model (1) was estimated for a subjective desire to own a business by the head of the household. Additionally a Probit model (2) for objective fact of owning a business was also ran but no significant results were found since the number of such households is too small. To have a clearer picture, individuals who already run business were excluded from the sample. The estimated marginal effects for the Probit models are presented in Table 2.

Based on the results we may conclude that a household which does not depend much on received amount of remittances is equally likely to consider starting a business. Moreover, an experienced bank client with an open access to all its services and a high level of bank trust is more likely to become future businessperson since this experience and knowledge are potentially useful for entrepreneurial activities. Living in the urban area gives marginally more opportunities and perspectives for business development possibly due to already existing more active business environment. The presence of banks nearby plays an important role in the desire to launch a business (similar to findings of Brevoort and Wolken, 2008), though other financial institutions have a negative effect. A possible explanation of this fact may be that banks provide various services and products which ease business decision-making. Besides bank pays attention to world business trends and events that widen client's choice opportunities and attract businesspeople. If a certain financial

institution is not in the near access to the potential entrepreneur then the absence of some services may decrease the probability of succeeding, for example, in the process of registration of one's business. The probability of starting a business decreases with each year (Arif 1999). This can be explained by the fact that for elder people deal worse with the fixed routine, stress and problems associated with launching new business. Another possible explanation is that with ages people may be out of touch with the modern trends of business development, have no access to necessary information. A large household size increases the probability of starting an own business.

To avoid the distortion of the measurement process and exclude possible systematic errors a Propensity Score Matching (PSM) method is applied using the one-to-one, nearest neighbor matching approach that is aimed on reducing bias. This procedure is one of the most straightforward ones that choose individuals from the control group as match for the one from the control group in terms of the most similar observable characteristics or the closest propensity score. The matching proceeds with replacement that after picking a control unit as a match the same control case has a right to be used again for matching other units of treatment group. Each unit of the treatment case is used only once, though the same control case can be used multiple times if its propensity score is closest to other treatment units. The estimated Propensity Score Matching is presented in Table 3.

To check the success of the matching for the exogenous variables (such as *Rem*, *Bank_dist*, *FinInst_dist*, *CA_bank*, *SA_bank* and *Trust*) a t-test is performed before and after matching with the hypothesis that for each variable the mean value is the same both in the treatment and the control groups. If the p-value is above 0.1 then the null hypothesis cannot be rejected on the 10% significance level. Moreover, a bias and the change in bias before and after matching are computed for each variable. Table 4 shows the difference of values of the

exogenous variables between the treatment and the control groups before. For example, 12.93% of the treatment group has a current account, in contrast to only 9.3% of the control group. After matching it is observed that for all the variables the differences between the treatment and the control groups are considerably reduced. And the null hypothesis that after matching the mean values for the two groups are different cannot be rejected for any variable.

Figure 5 is presenting a graphical evidence for the assumption of common support, since an overlap of the propensity scores of the treatment and the control groups is clearly observed.

Table 5 was designed for comparison of the estimated marginal effects before and after PSM. The results received after applying the matching method are slightly different. One of the changes is that after PSM the fact of being a remittance-receiver is added to the group of factors positively effecting the desire to start an own business. Indeed, remittances create an additional backup for the business funding and ease the family financial constraints. Furthermore, the stimulating influence of such variables as high level of trust, household size and urban residence of the household has disappeared from the model. The effect of *Bank_dist*, *FinInst_dist*, *CA_bank*, *Age* variables on the dependent variable has not changed.

Chapter 5

CONCLUSIONS

This paper analyzes the links between remittances and small business development in Republic of Moldova using CBSAXA Moldovan Household Survey on labor migration and remittances in 2008. The aim was to investigate whether being an experienced user of banking services and having access to banking system in Republic of Moldova, in particular, among Moldovan remittance-receivers have a positive effect on investment in small business.

In order to address this issue a probit and PSM methods were implemented to evaluate the impact of factors on the subjective desire to start own a business by the heads of the remittance-receiving and non-receiving households.

Based on the results remittances are likely to increase subjective willingness to start a business. Furthermore, trust in banks and experience with current account in the bank also stimulate entrepreneurial desires. Nevertheless, it may not be wise to focus business-promoting policies on remittance-receivers only as they are no more likely to consider starting business if they have current account or trust in banks. Instead of this, actual activities increasing trust and current account usage among all Moldovans will be more effective.

There are several suggestions for further studies to be done. First of all, the main challenge for possible future research is to collect data for a wider time period for constructing a panel data. Secondly, it would be worthwhile to add to the model new explanatory variables describing, for example, an occupation or a sector of economical activity, the level of financial literacy of the household head, the level of corruption or bureaucracy by the region or the city of residence to investigate a wider range of factors influencing the desire to become a businessperson in Moldova.

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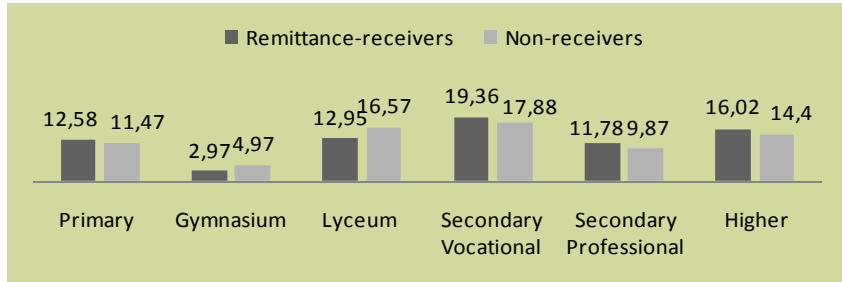


Figure 1. Level of education, by Remittance-Receiving Status

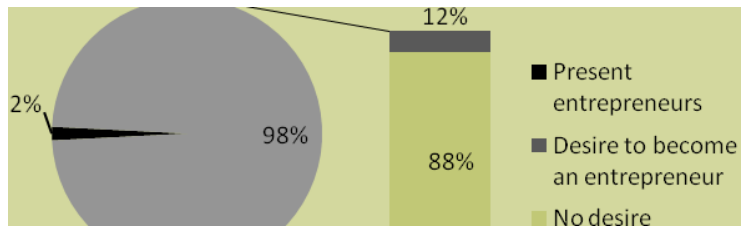


Figure 2. Subjective and objective entrepreneurs

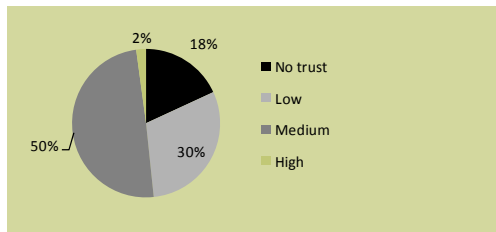


Figure 3. Level of trust among remittance-receivers

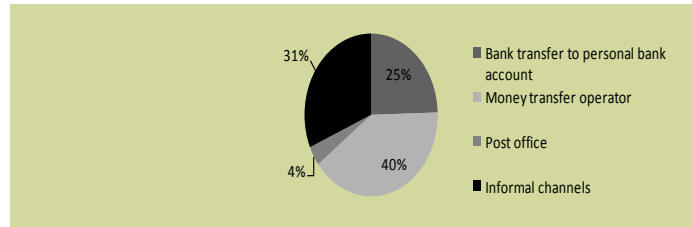


Figure 4. Channels used to send remittances to Moldova

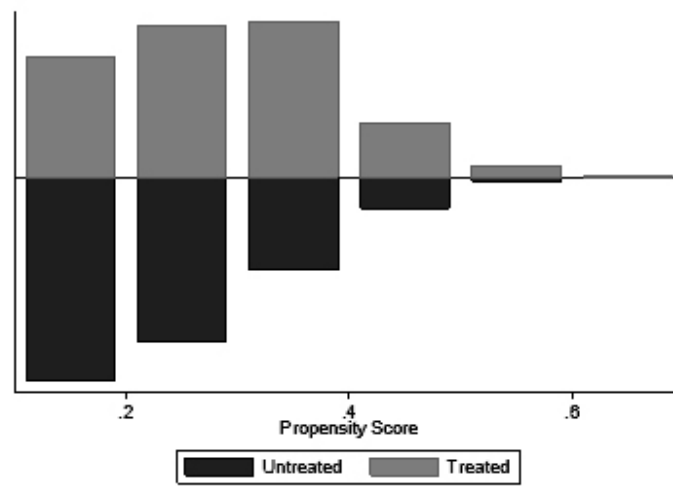


Figure 5. Propensity score overlap for treated and control groups

Table 2. Marginal effects for Probit models

Variables	Subjective business (1)	Objective business (2)
Remittances*Distance to Fin. Institutions	-0.000272 (0.00212)	0.000151 (0.00119)
Remittances*Distance to Banks	-0.000196 (0.00209)	-0.000106 (0.000999)
Remittances*Bank Service Experience	0.0360 (0.0298)	-0.00636 (0.0403)
Remittances*Trust in Banks (above average)	0.0202 (0.0227)	0.0179 (0.0970)
Rem	-0.0109 (0.0172)	-0.00545 (0.0332)
Bank_dist	0.00383*** (0.00116)	-0.000214 (0.00131)
FinInst_dist	-0.00342*** (0.00115)	7.71e-05 (0.000561)
CA_bank	0.0604*** (0.0230)	0.00902 (0.0509)
SA_bank	0.00355 (0.0170)	0.0127 (0.0701)
Low.Trust	0.0225 (0.0152)	-0.00258 (0.0157)
Medium.Trust	0.0612*** (0.0155)	-0.00885 (0.0524)
High.Trust	0.118** (0.0505)	0.00216 (0.0149)
Age	-0.00199*** (0.000343)	-0.000124 (0.000744)
Male	0.00943 (0.0104)	0.00219 (0.0135)

Table 2. Marginal effects for Probit models- Continued

Variables	Subjective business (1)	Objective business (2)
Primary.Educ	-0.0185 (0.0460)	0.661 (41.36)
Gymnasium.Educ	0.0423 (0.0600)	0.514 (40.34)
College.Educ	0.0243 (0.0519)	0.479 (37.06)
SecondaryVocational.Educ	0.0547 (0.0575)	0.417 (34.15)
SecondaryProfessional.Educ	0.0759 (0.0727)	0.738 (34.52)
University.Educ	0.107 (0.0792)	0.653 (37.90)
Urban	0.0221* (0.0123)	0.00202 (0.0125)
Household size	0.0120*** (0.00333)	0.00191 (0.0113)
Child	-0.00579 (0.00935)	0.000589 (0.00453)
Observations	3,311	3,357

Robust standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Table 3. Propensity Score Matching

Variable	Sample	Treated group	Control group	Difference	Standard Errors	T-stat	Treated w/ common support
Starting a business	Unmatched	0.119	0.083	0.04	0.011	3.2	2565
	Matched	0.119	0.11	0.01	0.047	0.18	905

Table 4. Success of the matching for the exogenous variables

Variable		Mean		%bias	% reduct bias	t-test	
		Treated	Control			t	p>t
Rem	Unmatched	1	0	-	-	-	-
	Matched	1	0	-	-	-	-
Bank_dist	Unmatched	11.935	9.239	22.4	86.6	5.95	0
	Matched	11.935	12.295	-3		-0.59	0.556
FinInst_dist	Unmatched	11.714	9.3259	19.9	85.2	5.25	0
	Matched	11.714	12.066	-2.9		-0.58	0.563
CA_bank	Unmatched	0.12928	0.07719	17.2	59.7	4.7	0
	Matched	0.12928	0.10829	6.9		1.38	0.168
SA_bank	Unmatched	0.09282	0.05848	13	64.6	3.55	0
	Matched	0.09282	0.08066	4.6		0.92	0.359
Low.Trust	Unmatched	0.26188	0.34386	-17.9	90.6	-4.55	0
	Matched	0.26188	0.25414	1.7		0.38	0.707
Medium.Trust	Unmatched	0.55249	0.37232	36.7	93.9	9.56	0
	Matched	0.55249	0.56354	-2.3		-0.47	0.636
High.Trust	Unmatched	0.03536	0.02066	8.9	69.9	2.46	0.014
	Matched	0.03536	0.03094	2.7		0.52	0.6

Table 5. Marginal effects for Probit models before/after PSM

Variables	Before PSM (1)	After PSM (2)
Remittances*Distance to Fin. Institutions	-0.000272 (0.00212)	0.00193 (0.00302)
Remittances*Distance to Banks	-0.000196 (0.00209)	-0.00451 (0.00301)
Remittances*Bank Service Experience	0.0360 (0.0298)	-0.0233 (0.0236)
Remittances*Trust in Banks (above average)	0.0202 (0.0227)	-0.0148 (0.0282)
Rem	-0.0109 (0.0172)	0.0877*** (0.0309)
Bank_dist	0.00383*** (0.00116)	0.00854*** (0.00226)
FinInst_dist	-0.00342*** (0.00115)	-0.00608*** (0.00221)
CA_bank	0.0604*** (0.0230)	0.177*** (0.0439)
SA_bank	0.00355 (0.0170)	0.0293 (0.0283)
Low.Trust	0.0225 (0.0152)	-0.00432 (0.0255)
Medium.Trust	0.0612*** (0.0155)	0.0805*** (0.0263)
High.Trust	0.118** (0.0505)	0.0741 (0.0680)
Age	-0.00199*** (0.000343)	-0.00134** (0.000582)
Male	0.00943 (0.0104)	0.0110 (0.0163)

Table 5. Marginal effects for Probit models before/after PSM - Continued

Variables	Before PSM (1)	After PSM (2)
Primary.Educ	-0.0185 (0.0460)	-
Gymnasium.Educ	0.0423 (0.0600)	0.160 (0.133)
College.Educ	0.0243 (0.0519)	-0.00359 (0.0698)
SecondaryVocational.Educ	0.0547 (0.0575)	0.0227 (0.0762)
SecondaryProfessional.Educ	0.0759 (0.0727)	0.0603 (0.0997)
University.Educ	0.107 (0.0792)	0.0913 (0.111)
Urban	0.0221* (0.0123)	0.0260 (0.0212)
Household size	0.0120*** (0.00333)	-0.00353 (0.00559)
Child	-0.00579 (0.00935)	-0.0123 (0.0152)
Observations	3,311	1,687

Robust standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

APPENDIX A

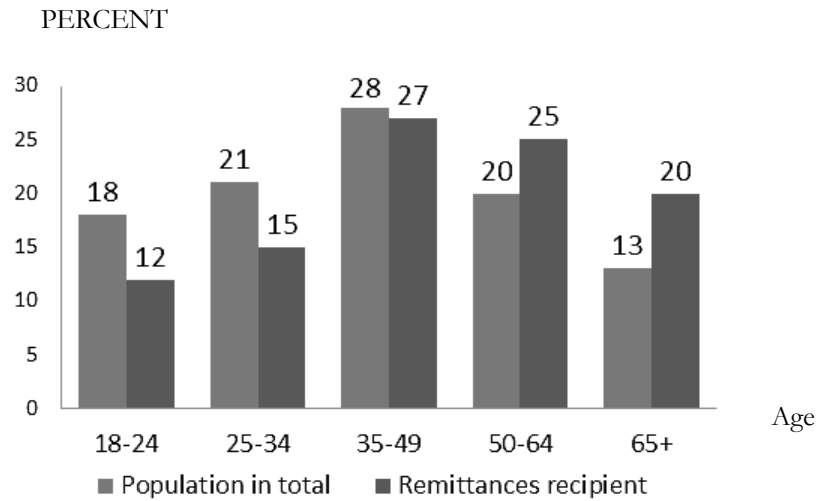


Figure A1. Distribution of remittance-receivers and the total population of Moldova by age.

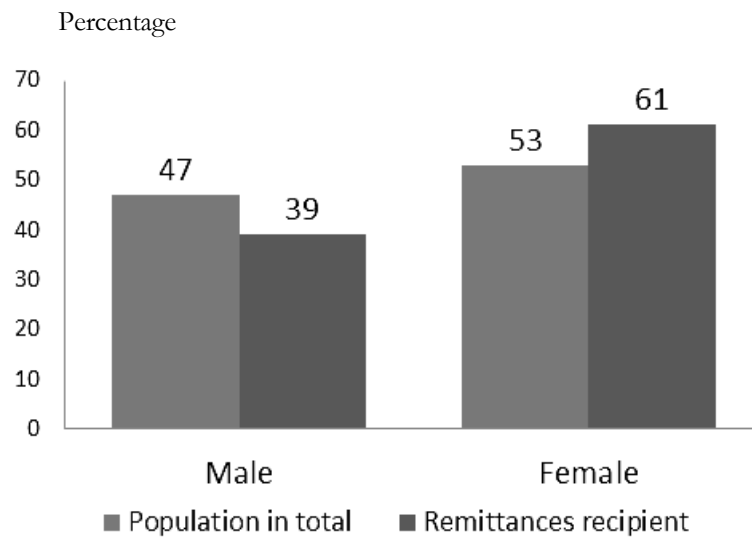


Figure A2. Distribution of remittance-receivers and the total population of Moldova by gender.

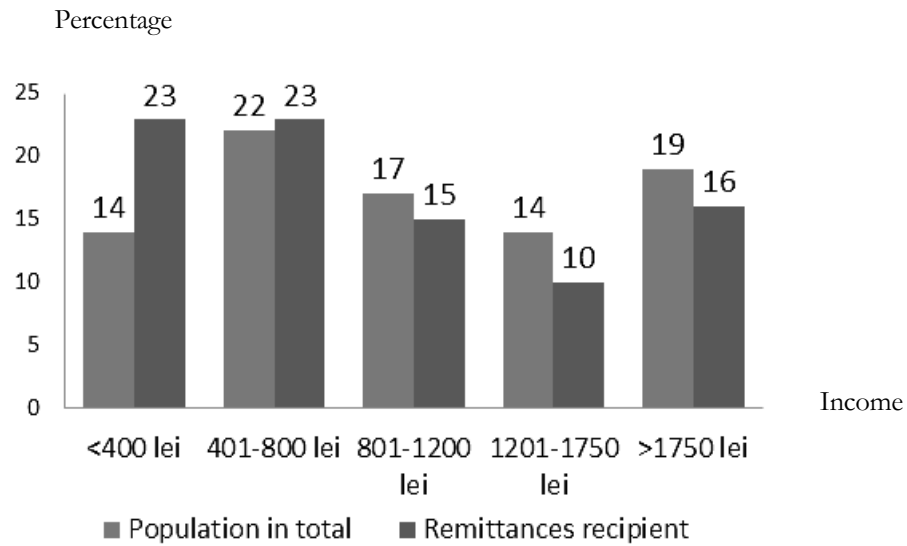


Figure A3. Distribution of monthly household income among remittance-receivers and the total population of Moldova.

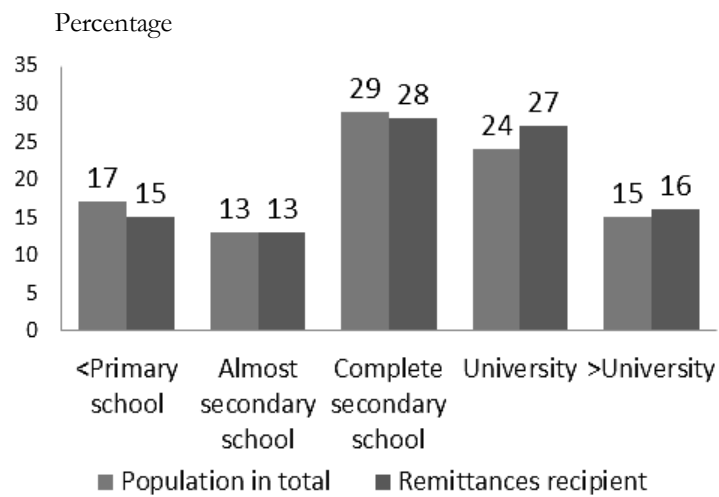


Figure A4. Distribution of remittance-receivers and the total population of Moldova by education.

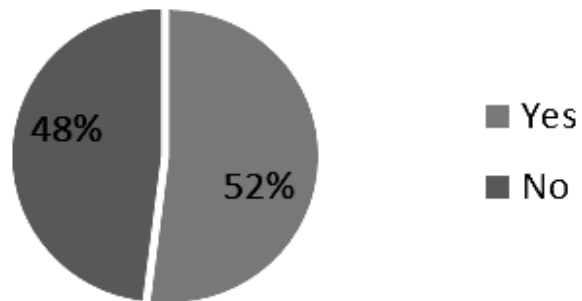


Figure A5. Distribution of households with members living abroad.

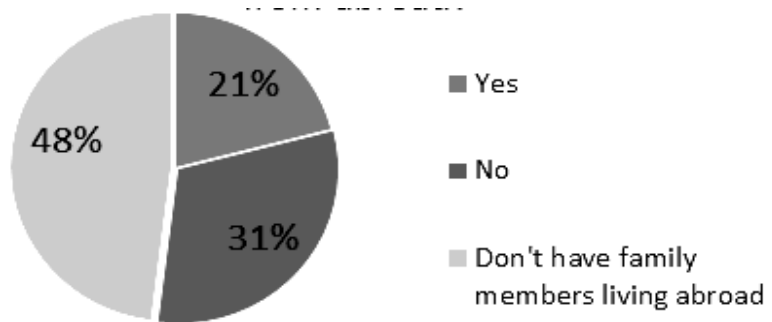


Figure A6. Distribution of households with family members sending remittances from abroad.

