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The impact of remittances on school attendance: The evidence from the Republic of Moldova

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ABSTRACT

This article examines the effect of remittances on high school attendance of youth 16–20 years old in the Republic of Moldova in the districts of Causeni, Floresti, Straseni and in the municipalities of Balti and Chisinau. Using an instrumental variable approach, it was found that remittances have an insignificant effect on high school attendance. While the education level of the mother seems to play an important role in a youth's education, the father's level of education had no significant effect. The higher the number of siblings and residence in a rural area had a negatively affect high school attendance. The results showed that almost 3/4 of the young people surveyed intend to migrate abroad mainly due to economic reasons such as the lack of suitable and well – paid jobs.

1. Introduction

International labour migration of population, characterised by significant financial flows in the form of remittances sent by members working abroad, continues to be one of the most considerable issues nowadays. The remittances can influence the overall household consumption in recipient countries (Giannetti et al., 2009), they can improve economic conditions of families left – behind in rural areas and can reduce their economic vulnerability (Azam and Gubert, 2006). They can significantly reduce poverty level of recipient households and can play a crucial role in eliminating the incidence of child labour caused by increased household budget (Alcaraz et al., 2012; Koska et al., 2013) and in the promotion of education (Calero et al., 2009).

Although the remittances are frequently used to improve children's access to education and health care (Adams and Cuecuecha, 2010; Adams, 2011), the absence of family members can negatively influence children's educational achievements and can result in lower attendance or in a higher rate of adolescent drop – outs from school (Amuedo-Dorantes and Pozo, 2010). Moreover, youth left behind faced increased household duties. Frequently, the disruptive effect of family departure abroad is partly compensated by the remittances (Hu, 2012).

Many factors influence children's achievements in education. For example, family structure and household resources, a number of siblings and the parents' level of education are argued to be particularly important (Arguillas and Williams, 2010).

In the Republic of Moldova approximately 770,000 emigrants are estimated living abroad, which is equivalent to 21.5% of the Moldovan population (Ratha et al., 2011) and almost 177,000 children have a parent working abroad, of whom 22,000 children had both parents abroad with the majority of them living in rural areas (Vladicescu et al., 2008). Görlich and Trebesch (2008), Pinger (2009). Borodak and Piracha (2011) mentioned that seasonal migrants represent a significant share of emigrants. According to Görlich and Trebesch (2008), more than 40% of Moldova's international migrants were abroad temporarily in 2004 (duration of the migration was less than one year). The Republic of Moldova is one of the world's leading countries with a very high dependence on remittances. The importance of remittances is enormous, approximately one quarter of Moldovan households depend on them for their daily and basic consumer needs (Lücke et al., 2007). Recent studies showed that living in a remittance – receiving household increases the probability of achieving higher education by around 33% (Matano and Ramos, 2013), but on the other hand, it was found that migration can also cause a lack of control by and support of parents, which in turn leads to occasional school attendance (Cheianu-Andrei et al., 2011).

In summary, the article examines the effect of remittances on the high school attendance of youth 16–20 years old in the Republic of Moldova in the districts of Causeni, Floresti, and Straseni and in the Balti and Chisinau municipality using an instrumental variable (IV) approach. The article identifies the main factors influencing youth education in the Republic of Moldova and determines whether the district and plans to migrate affect high school attendance in the

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Republic of Moldova.

2. Methodology

A triangulation method was used as a tool for testing data validity. Structured questionnaires, interviews with the target group and direct observations were used as a primary data collection method which led to a better understanding of the issue. Pilot testing was realized in the area during the first week of the field survey, in combination with observations in the area. The present questionnaire was designed according to five main objectives: the first part describes basic information about respondents, the second part presents educational information about the respondents and their parents, the third part is focused on migration patterns, the fourth presents information about remittances and the last, fifth part, shows information about households and household wealth. The questionnaires were elaborated in English and the Romanian language. The survey was conducted personally from July to September 2014 and the sample included 284 youths from 16 up to 20 years old living in the Republic of Moldova in the Causeni district, Straseni district, Floresti district and in the municipality of Chisinau and Balti. Respondents of the survey were chosen based on several criteria. They have Moldovan citizenship and were literate and speak Romanian. Only one respondent per household was included in the survey. Respondents were selected using a random sampling method.

The research area was chosen based on the following criteria: 4 development regions (north, south, central) and the municipality of Chisinau which is often used for statistical purposes were included in the research. Rural and urban areas and areas with seasonal migration mainly to CIS countries and areas with permanent migration mainly to the EU were included. The districts and municipalities were also chosen based on the distances to high school (each district is relatively close to major cities – the distance was not an obstacle to high school attendance).

2.1. Interviews with local experts, questionnaires and formal observation

Besides the questionnaire survey of the youths, a personal interview was carried out with the local expert Diana Andrei – Cheianu. To gain a better understanding of the issue, an on-line questionnaire was prepared. The questionnaire was distributed to local experts (n = 15) in the following fields: representatives of local NGOs or organisations focused on youth, local researchers and experts, high school and lyceum professors, representatives of organisations focused on migration and Diasporas. Formal observation was realized in the Straseni district and Chisinau municipality. Information obtained by an attentive and observant perception of respondent surroundings made it possible to add a more realistic picture of the migration issue.

2.2. Limited information maximum likelihood (LIML)

Following Amuedo-Dorantes and Pozo (2010) the following model was estimated:

$$School\ attendance^*_{if} = y^*_{if} = \alpha + \beta R_f + X_{if}\,\gamma + \varepsilon_{if}, \quad (1)$$

$$y_{if} = \mathrm{I}\,(y_{if}^* > 0),$$

where y^*_{if} is the unobserved or a latent likelihood of attending school by the child i in family f. The function $(y_{if}^* > 0)$, is an indicator function taking on the value one if $y_{if}^* > 0$, and zero otherwise. R_f is a binary variable indicating whether the household currently receives remittances or not. The vector X_{if} includes information on important determinants of children's schooling according to earlier studies which are shown in Table 2.

Due to potential endogeneity of variables, the Durbin (1954) and Wu – Hausman (Wu, 1974; Hausman, 1978) tests for endogeneity were applied. The null hypothesis of the Durbin and Wu – Hausman tests is that the variable can be treated as exogenous (StataCorp, 2015). In the presence of endogenous variables the ordinary least square (OLS) estimation is inconsistent. One common strategy to adequately address endogeneity concerns is to use instrumental variables (IVs) methods (Sargan, 1958). There are several IVs methods such as the two – stage least squares (2SLS), limited – information maximum likelihood (LIML) methods and the generalized method of moments (GMM) (StataCorp, 2015).

In the case of small sample size, limited – information maximum likelihood (LIML) estimation is the most appropriate estimator (Blomquist and Dahlberg, 1999). The LIML estimation proposed by Anderson and Rubin (1949) is an IV method based on a maximum likelihood estimator (Greene, 2003). With many weak instruments, LIML estimation performs better than 2SLS estimation (Bekker, 1994).

2.2.1. Instrumental variable tests

There are several criteria which should be checked to eliminate a biased result. IV estimations with weak instruments may perform even poorer than OLS (Stock et al., 2002). The relevance of the instruments is tested in the first – stage regression.

The F – statistics of the joint significance of selected instruments (Staiger and Stock, 1997) and test of the weakness of instruments (the Cragg – Donald statistic) are used to check relevance of used variables (Cragg and Donald 1993; Stock et al., 2002). Cragg – Donald statistics defines a set of instruments to be weak if a Wald test at the 5% level can have an actual rejection rate of no more than 10%, 15%, 20%, or 25% (StataCorp, 2015).

Variables have to be correlated with the endogenous regressors and at the same time instruments used in the model have to be uncorrelated with the error term. If the number of instruments exceeds the number of endogenous regressors than the model is over – identified and therefore instruments should be tested for exogeneity (StataCorp, 2015). Tests proposed by Basmann (1960) is used for testing the exogeneity of instruments in the article. A statistically significant test statistics at the 5% significance level ($\alpha = 0.05$) indicates that the instruments may not be valid (StataCorp, 2015). Failing a test of over – identifying restrictions suggests that at least one of the excluded IVs correlates with an error term (Paxton et al., 2011).

2.2.2. Regional, household and individual characteristics

An array of control variables was used: child characteristics, household demographics, regional characteristics, parental educational status. Education choices are believed to be taken collectively in the family and household characteristics have a direct impact on schooling and therefore it should be controlled for (Mansour et al., 2011). The characteristics which are mentioned in Appendix B were included in the analysis.

Parental education seems to be the most consistent determinant of a child's education (Ersado, 2005). More educated parents tend to invest more in children's education (Zhao and Glewwe, 2010; Hu, 2012) and they have a better understanding of the future benefits of education and value education more than less educated parents (Amin et al., 2006). For girl's enrolment, the mother's education level is especially important (Shu, 2004). In contrast, Borraz (2005) investigated that remittances positively influence children's schooling only when their mothers achieved lower educational level.

The gender of the household head influences a child's schooling in several ways. The heads of the household generally hold greater decision – making power during the allocation of resources within a household and they sometimes have different priorities and preferences to support children's schooling. Lloyd and Blanc (1996) have shown that female – headed households put a higher priority on their children's education.

While male migration has no influence on the likelihood that a particular child stays at school, female departure abroad evidently