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Remittances and credit markets: Complementarities and evidence from Senegal

In markets that lack access to formal financial institutions, remittance flows and credit can serve as complementary resource channels to help alleviate the impact of shocks to households. This blog looks at the effect of remittance flows on credit access for households in rural Senegal.

Remittances are crucial to many developing countries and in particular in sub-Saharan Africa. International migrants' transfers are estimated at USD 40 billion, representing 2.6% of Africa's GDP in 2010. In Senegal, remittances represent 9.3% of the GDP and are one of the main resources for the country. Credit markets are also very important for developing countries. However, the proportion of formal loans remains low due to many barriers, such as a lack of collateral provided by borrowers. In my recent [AfDB working paper](#) I offer a new contribution to the literature on the impact of migrants' remittance transfers on rural credit markets. More precisely, I make the assumption that although remittances are substitutes to credit market imperfections, migrants' transfers and loans can also be complementary.

Remittances and credit markets can be complementary

Migrants can increase the likelihood that their relatives can secure a loan. Remittance flows offer an alternative means of repayment, in the event that a household experiences a shock. They play the role of collateral by being the "third element" or the "element of trust" in the credit contract between a borrower and a lender. This role of trust is explained by the level of information asymmetry between the parties.





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In rural areas, information asymmetries can be low because most of the loans are informal and the lender knows whether a borrower has a migrant in his household. It is also very likely that the lender knows the characteristics or ‘ability’ of this migrant. Consequently, migrants can act as a signal of the reliability of their borrowing family members.

Migrants also provide collateral in the form of household risk-sharing, particularly in the event of a community-wide (or covariate) shock. Without access to insurance markets, risk-within the same community is difficult, and households must rely on arrangements outside the community. Subsequently, the level of information asymmetry is higher when borrowers and lenders do not belong to the same network. Even in this case, I argue that because of their remittances, migrants make the borrowers left-behind less likely to default and thus more reliable.

“ remittances can help expand households’ access to credit markets, rather than being used after the fact to help repay loans. ”

Measuring the effects of remittances

To better understand the impact that remittance flows might have on a household’s access to credit, I test the statistical strength and validity of the relationship between remittances and credit markets using an ordinary least square regression (OLS). To identify the causal impact of remittances however, any regression results have to overcome a few basic statistical challenges, including: endogeneity and reverse causality. Simply put, endogeneity could mean there is the possibility of some selection bias, whereby households that opt to have members migrate for work are in some intrinsic way distinct from households that do not migrate. This also suggests that there are, potentially unobservable, household characteristics that affect a household’s credit outcomes, and that remittances cannot fully explain credit market effects. Reverse causality would imply that while remittances can enable households to access to credit, they might also be sent to *repay* loans. Moreover, loans can fund migration for one or several household members and thus explain the following receipt of remittances.

To address these concerns, I use a household fixed effects model. This allows me to control for selection effects and potentially unobservable time invariant characteristics of households in the sample. I also control for the potential reverse causality by applying an instrumental variable approach. As an instrument for remittances, I use distance from a village to the harbour of Dakar which represents the exogenous cost of

migration between 1900 and 1960 when the first Senegalese migrants' networks were formed.

This approach relies on the long migration history of Senegal and the role of the harbour of Dakar, in setting up historical migration networks. The harbour was built in 1866 during the time of French colonialism era and **played an important role** in the development of the city of Dakar, which attracted internal migrants. At the same time, due to its strategic location, it also played a role in international migration from Senegal to other West African countries as well as to France.

A remaining concern is that the instrumental variable should meet the exclusion restriction, which means that the distance between a village and the harbour of Dakar should only be correlated with loans through its effect on remittances. However, since loans are a driver for investment, a lack of access to credit markets can decrease the level of development of a village which in turn will increase migration. Subsequently, I rule out this source of bias by controlling for the village level of development.

Findings

The OLS regression results show that the receipt of remittances increases the likelihood of receiving a loan in a household. This result is robust to the inclusion of household head and general household characteristics, proxies for wealth and the occurrence of shocks. In terms of magnitude, I found that the receipt of remittances increases the likelihood of having a loan by 4.9 percentage points. After controlling for household fixed effects, the findings show that the receipt of remittances increases the probability of having a loan by 11.8 percentage points. Results are also robust while using the instrumental variable approach – this suggests that remittances can help expand households' access to credit markets, rather than being used after the fact to help repay loans.

The overall findings support a complementarity between remittances and credit markets. A detailed analysis shows that the results are mainly driven by loans for consumption reasons and food, in particular, as well as loans provided through informal channels such as family or relatives.

Policy implications

These results highlights the fact that family and close relatives left-behind do not only depend on their migrants' transfers to fulfil their basic needs but also on credit markets. Consequently, policy makers should put more efforts to alleviate extreme poverty which will allow remittances to be invested in more productive investments such as starting a business or professional activities. Moreover, despite the availability of other income such as remittances, credit markets still play an important role and are not fully replaceable.