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Remittances and Financial Inclusion: Evidence from El Salvador

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Summary. — This paper investigates the impact of remittances on financial inclusion. Using household-level survey data for El Salvador, we examine whether remittances affect households' use of savings and credit instruments from formal financial institutions. We find that although remittances have a positive impact on financial inclusion by promoting the use of deposit accounts, they do not have a significant and robust effect on the demand for and use of credit from formal institutions. If anything, by relaxing credit constraints, remittances might reduce the need for external financing from financial institutions, while at the same time increasing the demand for savings instruments.

Key words — remittances, financial inclusion

1. INTRODUCTION

Remittances have become a significant source of external financing for developing countries. They reached US$401 billion in 2012, more than three times the amount of official development assistance and over one half of the private capital flows received by developing countries in that year. Remittances are especially significant for small developing countries neighboring large rich economies. For example, remittances account for approximately 16.4% of Gross Domestic Product (GDP) in the case of El Salvador and they represent the second most important source of external flows after exports.

There is an extensive literature on the effects of remittances on growth, investment in microenterprises, poverty, inequality, health, and education.[1] However, the literature has so far ignored the impact of international remittances on financial inclusion—households' access to and use of financial services. This question is important because there is a growing body of research showing that promoting financial inclusion can have significant beneficial effects for households. Based on a randomized evaluation of a microcredit program in India, Banerjee, Duflo, Glennerster, and Kinnan (2010) find that access to microcredit leads to greater investment in business durables, increases the number of businesses started, and improves the profitability of existing ones. Karlan and Zinman (2010) conduct a field experiment in which a finance company randomly liberalized screening criteria on consumer loans in South Africa and find significant positive effects of access to credit on consumption, economic self-sufficiency (measured by employment status and income), and some aspects of mental health and outlook.[2] Studies on the impact of accessing and using savings products also find positive effects. In particular, the literature has found that providing individuals access to savings instruments increases savings (Aportela, 1999, chap. 1; Ashraf, Aycinena, Martinez, & Yang, 2010[3]), female empowerment (Ashraf, Karlan, & Yin, 2010), productive investment (Dupas & Robinson, 2009), and consumption (Dupas & Robinson, 2009 and Ashraf, Karlan *et al.*, 2010).

Using household-level survey data for El Salvador for the period 1995–2001, this study investigates the impact of remittances on financial inclusion. In particular, we focus on whether remittances promote the use of deposit accounts and credit by examining the effect of remittances on the likelihood that households have a deposit account, apply for loans, and receive loans from formal financial institutions (commercial and saving banks, credit unions, credit cooperatives, etc.).

There are several ways in which remittances could potentially affect financial inclusion. First, remittances might increase the demand for savings instruments. The fixed costs of sending remittances make the flows lumpy, providing households with excess cash for some period of time. This might potentially increase their demands for deposit accounts, since financial institutions offer households a safe place to store this temporary excess cash. Second, remittances might increase household's likelihood of obtaining a loan. Processing remittances flows provides financial institutions with information on the income of recipient households. This information might make financial institutions better willing and able to extend loans to otherwise opaque borrowers. On the other hand, since remittances might help relax households' financing constraints (Chami & Fullenkamp, 2012; Giuliano & Ruiz-Arranz, 2009), the demand for credit might fall as remittances increase.

We conduct estimations of the likelihood of using deposit and credit services, allowing for municipality-, or household-level fixed effects to control for factors other than remittances that might affect financial inclusion at the household level.[4] Also, to deal with the potential endogeneity of remittances, we conduct three different sets of instrumental variables regressions, using economic conditions in migration recipient US states, municipality measures of the importance of remittances, and lagged values of remittances, respectively, as instruments.

Our estimations consistently show that households that receive remittances are more likely to have a deposit account at a financial institution. Our most conservative estimates indicate that receiving remittances increases the likelihood of having an account by at least 11 percentage points and an additional colon per household member in remittances raises this probability by 8 percentage points. These effects are sizeable given that on average only 19% of households have an account. However, remittance recipient households are not more prone to request or receive a loan. This suggests that though remittances might have the potential to encourage the use of savings instruments, they do not necessarily foster the demand

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for and use of credit, perhaps because they help to relax credit constraints.

Our paper is related to studies that examine the impact of remittances on the development of the domestic financial system.[5] Aggarwal, Demirgüç-Kunt, and Martínez Pería (2011) use balance of payments data on remittances and analyze how these flows affect bank credit and deposit amounts for 109 developing countries over the period 1975–2007. They find strong evidence indicating that remittances promote financial development as measured by the ratio of bank deposits and of bank credit to GDP. Gupta, Pattillo, and Wagh (2009) use a similar methodology as Aggarwal *et al.* (2011) and find analogous results for a sample of Sub-Saharan African countries. Focusing exclusively on Mexico and using municipality-level data, Demirgüç-Kunt, López Córdova, Martínez Pería, and Woodruff (2011) find that municipalities where a higher proportion of households receive remittances have a higher number of bank branches and accounts per capita, and larger shares of deposits to GDP.

Although these papers find evidence of a positive impact of remittance flows on financial depth, they provide little information regarding the effect of remittances on financial inclusion. Financial inclusion is not the same as financial depth. Financial depth might be high and financial inclusion might be low if large amount of credits are assigned to few households. For example, the fact that larger inflows of remittances increase financial depth at the country or at the municipality-level does not necessarily mean that those households that receive remittances are more likely to be financially included. In particular, the increase in credit at the macro level due to higher remittances flows might only be channeled to nonremittance recipient households, keeping poorer remittance recipient households out of the financial system. Similarly, deposits might increase in the economy even if remittance recipients themselves do not open accounts, as the remittances flowing into the economy are spent and end up in the deposit accounts of nonremittance recipients.

Our paper is also complementary to a literature that addresses the impact of remittances on economic development and their interaction with the financial sector. In particular, Giuliano and Ruiz-Arranz (2009) use balance of payments data and find evidence indicating that remittances constitute an alternative way of financing investment, especially in shallow financial systems. Hence, the authors suggest that instead of boosting credit markets, remittances act as a direct source of funds to financially constrained households. This paper directly tests the mentioned hypothesis by analyzing the effect of remittances on credit demand.

Our paper contributes to the study of the impact of remittances on the financial sector in several ways. First, to our knowledge, this is the first paper to analyze the impact of remittances on financial inclusion directly. Second, unlike the previous literature that focuses only on the banking system, this paper also considers other formal financial institutions in El Salvador such as cooperatives, credit unions, and financiers. Third, by looking at whether households apply for loans, this study is able to examine the impact of remittances on the demand for credit and not purely on credit outcomes. This is useful because it can allow us to begin to assess to what extent remittances might relax credit constraints. Fourth, by using survey as opposed to balance of payments data, this study can circumvent some of the limitations of the previous studies. In particular, the survey data used in this study has the potential to capture remittances flows received through formal and informal channels, minimizing concerns about measurement error in remittances.[6] Also, because we use household-level panel data we are able to control for unobserved household characteristics that can affect both remittances and financial inclusion, reducing concerns about endogeneity. Finally, our study offers evidence on the impact of remittances on financial inclusion for a new country—El Salvador—for which remittances represent a very significant share of GDP.

The rest of the paper is organized as follows. Section II characterizes the Salvadoran financial system during our period of study. Section III describes the data and the empirical methodology we employ. Section IV presents the results of our estimations. Section V concludes.

2. THE SALVADORAN FINANCIAL SYSTEM DURING THE LATE 1990S

El Salvador's financial system witnessed a number of reforms during the 1990s. In the late 1980s, during the final years of the civil war, the system became largely insolvent. Trying to overcome that situation, in 1989, the Salvadoran government adopted a reform plan with the aim of increasing competition and efficiency. In this process, several laws were passed allowing the privatization of banks, removing restrictions on foreign bank entry, and establishing new supervision rules. As a consequence of these reforms and due to good macroeconomic performance, there was a considerable increase in the depth and the size of the financial system (see Fuentes, 2001). As shown in Table 1, from 1991 to 2001, the ratio of bank and nonbank credit to the private sector expressed as a share of GDP increased from 23% to 39%, while the ratio of demand and term deposits to GDP rose from 24% to 36%. The number of banks and nonbank institutions did not change significantly during the period: there were 14 institutions that were allowed to collect deposits in 2001, only one more than in 1991.

The Salvadoran financial sector became one of the deepest in Central America[7] by the end of the 1990s (see Fig. 1). However, despite the financial reforms undertaken during this decade, financial inclusion remained low in El Salvador. Based on a survey of rural households, conducted by FUSADES (Salvadoran Foundation for Economic and Social Development), 8.7% of households had a deposit account as of 1995 and 6.8% had a loan from a formal financial institution.

3. DATA AND EMPIRICAL METHODOLOGY

The household-level data we use in this study come from the *National Rural Household Survey* carried out by FUSADES in 1996, 1998, 2000, and 2002. All the information gathered by each survey refers to the previous calendar year. The survey uses a questionnaire adapted from the World Bank's Living Standards Measurement Survey and covers a stratified, nationally representative, random sample of rural households. The four waves contain information for about 937 households dispersed across the 14 departments that make up El Salvador. Within our sample, 719 households are present in more than one wave and 451 households have data for the four waves, allowing us to construct a panel.

The survey includes data on demographic characteristics, education, employment, economic activities, wealth, and income of households. With respect to migration, the survey has information on the number of members per household that have migrated to other countries, on whether the individuals that migrated sent remittances in a given year, and on the amount sent.