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Remittances and expenditure patterns of the left behinds in rural China☆

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ABSTRACT

This paper investigates how private transfers from internal migration in China affect the expenditure behavior of families left behind in rural areas. Using data from the Rural–Urban Migration in China (RUMiC) survey, we assess the impact of remittances sent to rural households on consumption-type and investment-type expenditures. We apply propensity score matching to account for the selection of households into receiving remittances, and estimate average treatment effects on the treated. We find that remittances supplement income in rural China and lead to increased consumption rather than increased investment. Moreover, we find evidence of a strong negative impact on education expenditures, which could be detrimental to sustaining investment in human capital in poor rural areas in China.

1. Introduction

More than one billion people worldwide are estimated to be living and working outside of their origin communities, be they international or internal migrants. In the developing world, remittances sent by migrants make a direct contribution to increasing income of the families left behind, and as such they contribute to easing budget constraints of the poorest, reducing poverty and improving average living conditions (Acosta, Calderon, Fajnzylber, & Lopez, 2008). How these private transfers are spent or used by the families left behind is yet another issue, with potentially important consequences for the economic development in migrant-sending communities. In theory, remittances may alter household expenditure patterns in various ways, depending on how these financial flows are considered by the left behinds (Adams & Cuecuecha, 2010, 2013). If migrants are treated as full

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family members and their income as part of the pooled household income, then remittances are expected to be used as any other source of income and one should not observe any behavioral change in expenditure (Castaldo & Reilly, 2007; Adams, Cuecuecha, & Page, 2008). Another strand of the literature focuses on the role that remittances play on relaxing the budget constraint of the family left behind. A pessimistic view argues that remittances may leave investment decisions unchanged if they are spent on status-oriented, conspicuous consumption, and as such they may have little impact on local economies. A more optimistic view argues that remittances are a transitory source of income for families left behind, and are therefore invested, at the margin, rather than consumed. In that case, remittances may foster investment in human and physical capital at home (Adams, 1998).

The purpose of this paper is to examine how remittances sent by rural-to-urban migrants are spent by families left behind in rural China, by using a large cross-sectional dataset, the Rural–Urban Migration in China (RUMiC) database for the year 2007. China provides an interesting ground to explore the impact of remittances on sending communities because the country is currently experiencing the greatest internal labor migration in history. On April 29, 2015, the National Bureau of Statistics of China released the *2014 Rural–urban Migration Monitoring Survey* showing that the total number of internal migrant workers amount to 274 million, which is more than the total stock of international migrants worldwide. Although there is no official survey on total remittances sent by internal migrants in China, Cheng and Xu (2005) estimated that in 2005 the total remittances sent by rural migrants to their family left behind was ranging between 191 and 330 billion yuan. Hu and Shi (2013) corroborate these findings and estimate that China's annual remittances from rural migrants amount to more than 300 billion yuan.

Empirical studies on remittances and household expenditure behavior in migrant-sending regions provide mixed evidence. A broad literature has highlighted the positive effect of remittances on the investment activities of the left behinds. For example, using the 2005–06 Ghana Living Standards Survey, Adams and Cuecuecha (2013) find that remittances are spent more at the margin on investment goods including education, housing, and health than on food. Similar conclusions have been reached on Guatemala (Adams & Cuecuecha, 2010), Ecuador (Göbel, 2013), Colombia (Cardona-Sosa & Medina, 2006), Mexico (Taylor & Mora, 2006; Amuedo-Dorantes & Pozo, 2011), the Philippines (Yang, 2008), Nigeria (Osili, 2004) or Eritrea (Kifle, 2007). Yet, a few recent studies show that in some countries, remittances are not put to productive uses and tend to leave investment expenditure behavior unchanged. Using the 2003 Tajikistan Living Standards Measurement Survey, Clément (2011) finds no evidence of any positive impact of remittances on investment expenditures. Instead, remittances are regarded as short-term coping strategies helping left behind households achieving a basic level of consumption. Cattaneo (2012) finds no education enhancing effect of remittances sent to Albania by international migrants and ascribes the low share of investment expenditures to the weakness of local education systems.

As far as China is concerned, empirical findings from the still scarce literature on remittances and expenditure patterns of the left behinds also contrast with the optimistic view of remittances as a mean to increased investment in sending communities. Using data collected from 60 randomly selected villages of 6 provinces in rural China, de Brauw and Rozelle (2008) find a significant relationship between migration and consumptive investment (measured by investment in housing and durable goods) between 1995 and 2000, but no significant relationship between migration and productive investment. The relationship between migration and consumptive investment is shown to be particularly strong in non-poor areas, whereas it is not significant in poor areas. Exploiting data collected in 2006 on 1498 households in Anhui and Jiungsu, Zhu, Wu, Wang, Du, and Cai (2012) obtain similar findings, with remittances being mainly used for consumption and not for investment purposes. Zhu, Wu, Peng, and Sheng (2014) confirm that remittances are considered as a permanent source of income by households left behind using data from the Rural Household Survey undertaken by the National Bureau of Statistics (NBS) of China in the provinces of Jiangsu, Anhui and Sichuan in 2001 and 2004.

The contribution of this paper is threefold. First, we investigate how remittances affect the expenditure patterns of receiving households in rural China by using recent data specifically collected to study rural-to-urban migration in China. Unlike small-scale databases used in previous studies, the Rural–Urban Migration in China (RUMiC) database is unique by its spatial coverage and its large scale (Akgüc, Giulietti, & Zimmermann, 2014). The rural household survey comprises 8000 households in 9 provinces and gathers detailed information on household expenditure and its composition. We focus on the differentiated impact of remittances on various expenditure components, which allows us to refine and extend the debate concerning whether remittances do serve any investment purpose in rural China. This is important from a policy point of view because a non-investment use of remittances flowing from the massive labor movement out of rural areas could impede rather than help rural development in the long run.

Second, identifying whether or not remittances influence budget allocation of families receiving these income transfers raises an endogeneity issue: there might be confounding factors that influence both the likelihood of receiving remittances and the household's expenditure behavior. The existing literature typically uses two main approaches to solve this methodological issue: an instrumental variable (IV) strategy or a propensity score matching (PSM) approach. Unlike previous studies on China that identify the effect of remittances using an IV strategy (de Brauw & Rozelle, 2008; Zhu et al., 2012, 2014), we apply propensity score matching to identify the impact of remittances on the expenditure patterns of the families left behind. In the absence of reliable instruments, the PSM method offers the advantage of controlling for self-selection based on observable characteristics without imposing too strong distributional assumptions (Jimenez-Soto & Brown, 2012), although it relies on a strong identifying assumption of selection on observables.

Third, our findings add to the empirical literature on the impact of migration and remittances on families left behind (Antman, 2013). We find evidence of remittances supplementing income and increasing per capita consumption of rural households, with the effect being stronger for non-poor households. This results are consistent with earlier findings on China on the non-investment use of remittances (de Brauw & Rozelle, 2008). When it comes to budget components, we find that remittance-