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Financial literacy and its consequences: Evidence from Russia during the financial crisis

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ABSTRACT

The ability of consumers to make informed financial decisions improves their ability to develop sound personal finance. This paper uses a panel data set from Russia, an economy in which household debt has grown at an astounding rate, to examine the importance of financial literacy and its effects on behavior. The paper studies both the financial and real consequences of financial illiteracy. Even though consumer borrowing increased very rapidly in Russia, only 41% of respondents demonstrate an understanding of interest compounding and only 46% can answer a simple question about inflation. Financial literacy is positively related to participation in financial markets and negatively related to the use of informal sources of borrowing. Moreover, individuals with higher financial literacy are significantly less likely to report experiencing a negative income shock during 2009 and have greater availability of unspent income and higher spending capacity. The relationship between financial literacy and availability of unspent income is higher in 2009, suggesting that financial literacy may better equip individuals to deal with macroeconomic shocks.

1. Introduction

The 2008 financial crisis, characterized in part by mounting losses for individuals, has generated interest in better understanding how to promote savvier saving and borrowing behavior. The ability of individuals to make informed financial decisions is critical to developing sound personal finance, which can contribute to more efficient allocation of financial resources and to greater financial stability at both the micro and macro level (see, e.g., Lusardi, 2008; Lusardi and Tufano, 2009a,b). Recent studies have shown financial literacy to be a key determinant of household financial behavior (Lusardi and Mitchell, 2013). Efforts to improve financial literacy can also be an important component of efforts to increase saving rates and lending to the poorest and most vulnerable consumers (Cole et al., 2011).

Our paper extends the existing literature in a new direction, using a panel survey of financial literacy administered to a nationally representative sample of over 1000 Russian individuals during 2008 and 2009. Russia is a particularly important country to study, given the large increase in consumer credit it has recently experienced. Household debt in Russia grew at an astonishing rate: from about RUB 112.5 billion in 2002 to over RUB 4 trillion in 2008—accounting for nearly 10% of GDP in 2008 versus 1% in 2002. Moreover, the volume of credit institutions' lending to households increased at an average annual nominal growth rate of 84% (World Bank, 2009). This is one of the few panel data sets on financial literacy, and with it we are able to address some novel questions, such as: What is the level of financial literacy in a country without a legacy of consumer credit and financial education? Are there not only financial but also real consequences of low financial literacy? Are lower levels of financial literacy related to greater financial vulnerability during a crisis, i.e., are less financially literate individuals less able to deal with financial crises?

Assessing the direction of causality between financial literacy and financial decision making or consumption and saving behavior has been a challenge in previous work, as financial literacy is potentially an endogenous variable. However, this assessment in a country like Russia may suffer less from the endogeneity problem, as financial markets are less developed and there are few financial education programs in place. In our empirical work we are able to address this problem by relying on instrumental variables (IVs) estimation and using a new set of instruments, i.e., the number of newspapers and the number of universities across regions, to measure exposure to financial information or to peers

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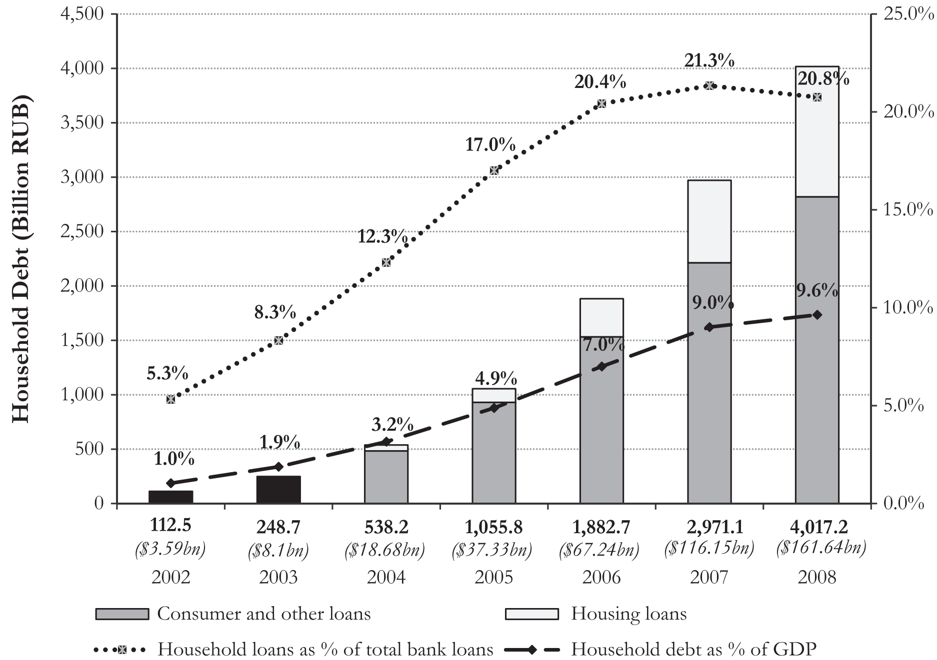

Fig. 1. Russian household debt. Notes: The source of the data is the European Credit Research Institute (World Bank, 2009). $US values are calculated using exchange rate data from the World Development Indicators.

with higher financial knowledge. Importantly, because we have a panel data set, we are also able to account for unobservable variables, such as intelligence, ability, and interest in financial matters, which can also affect the relationship between financial literacy and financial or real outcomes.

We find that even though consumer borrowing increased very rapidly in Russia between 2002 and 2008, in the latter year only 41% of respondents in our sample have an understanding of the workings of interest compounding and only 46% can answer a simple question about inflation. Financial literacy is not only low in the general population but is particularly severe among specific groups, such as women, the old and pensioners, those with low income and low educational attainment, and those living in rural areas. Most importantly, we find that financial literacy in Russia is significantly related to the use of formal banking and borrowing and negatively related to the use of informal borrowing. Financial literacy has real as well as financial consequences: Even after accounting for many characteristics and income, individuals with greater financial literacy are significantly less likely to report experiencing a negative income shock during 2009. Moreover, they are more likely to report having higher availability of unspent income and less likely to report low spending capacity. In addition, the relationship between financial literacy and availability of unspent income is stronger in 2009 versus 2008, showing that financial literacy may be related to particular individual strategies in coping with macroeconomic shocks.

Our findings suggest that the rapid growth of consumer credit combined with low levels of financial literacy might end up being a dangerous mix. As Russia transitions quickly to a market-based banking system, financial education and basic financial literacy are still lagging. Many young Russians have parents who did not have experience with bank loans (i.e., they did not have an opportunity to receive financial education at home)[1] and did not receive formal financial literacy courses in school (i.e., there is no curriculum requirement for financial education in Russia). Furthermore, consumer debt was almost non-existent before 2001, so few individuals are likely to have long personal banking relationships or experience with formal debt contracts and other financial products. In the context of current events, this is likely to be the first financial crisis that most Russians have experienced as borrowers.

The paper is organized as follows: Section 2 reviews the existing literature on financial literacy and its effects on financial decision making; Section 3 reviews the environment for consumer finance in Russia; Section 4 describes our data, variables, and summary statistics; and Section 5 presents our empirical strategy and reports our results. Section 6 concludes.

2. Review of existing literature

Many papers have documented a link between financial literacy and a set of behaviors. Bernheim (1995, 1998) shows that most households lack basic financial knowledge and cannot perform very simple calculations and that the saving behavior of many households is dominated by crude rules of thumb. Hilgert et al. (2003) find a strong correlation between financial literacy and day-to-day financial management. Financial literacy has also been linked to a set of behaviors related to saving, wealth, and portfolio choice. For example, several papers show that individuals with greater numeracy and financial literacy are more likely to participate in financial markets and to invest in stocks (Christelis et al., 2010; Yoong, 2011; Almenberg and Dreber, 2011; Christiansen et al., 2008; Almenberg and Widmark, 2011; Van Rooij et al., 2011). Moreover, more literate individuals are more likely to choose mutual funds with lower fees (Hastings and Tejeda-Ashton, 2008; Hastings and Mitchell, 2011).

Similarly, Lusardi and Mitchell (2007a, 2011b) show that those with high levels of literacy are more likely to plan for retirement and, as a result, accumulate much more wealth, a finding reproduced in many of the countries that are part of an international comparison of financial literacy (Lusardi and Mitchell, 2011c),

[1] Although state banks existed in Soviet times, their main role was to serve state-owned enterprises. There were no credit-reporting bureaus and the availability of credit to private firms and individuals was limited (McMillan and Woodruff, 2002). For the relationship between financial literacy and parental background, see Lusardi et al., 2010).