The Household Finance Landscape
in Emerging Economies[*]

Cristian Badarinza   Vimal Balasubramaniam   Tarun Ramadorai[†]

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Abstract

We survey the household finance landscape in emerging economies. We first present statistics on household balance sheets from official micro-surveys in countries comprising 45% of the global population: China, India, Bangladesh, Philippines, Thailand, and South Africa. We contrast these patterns with those in data from advanced economies. We then survey the nascent literature on household finance in emerging economies, and discuss areas of overlap with the more well-established literature on household finance in advanced economies, as well as the large body of literature on development finance. We highlight useful directions for future research.

1 Introduction

Household finance is the study of how households do (and should) use financial instruments to attain their economic objectives. This field has grown rapidly over the past few decades, and has mainly focused on painting a detailed and accurate portrait of household behavior in financial markets (Guiso et al., 2002; Campbell, 2006; Guiso & Sodini, 2013; Campbell, 2016). A recent development that has facilitated this growth is the proliferation of high-quality administrative datasets of household behavior (Calvet et al., 2007, 2009; Andersen et al., 2018; Olafsson & Pagel, 2018). This has also resulted in the literature's focus on environments in which such rich data are available; they are most often found in a subset of high-income or advanced economies.[1]

As Badarinza et al. (2016b) and others suggest, expanding the study of household finance to a broader international context is a task of significant importance. One reason, but not the only one, is that cross-national variation can inform us about the impacts of different institutional arrangements on household finance outcomes, ultimately leading to better designed systems around the world. In this paper, we argue that a critical, relatively neglected, and high-opportunity region for the study of household finance is low and middle-income, or "emerging" economies.

Studying household finance in emerging economies is important for at least three reasons. First, it will significantly bolster claims to external validity. The body of facts that we can rely on is incomplete, and possibly biased, without analyzing the financial arrangements of the vast majority of households on the globe. Indeed, much of what we know thus far is about WEIRD households.[2] A second reason is that emerging market households may also be exceptional in ways that we do not yet understand. For example, the set of risks faced by households in emerging economies is likely larger—or at least different—from those faced by households in advanced economies. Understanding the unique constraints and circumstances that drive household financial behaviour in emerging

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[1]High quality administrative data on the entire household balance sheet and household demographic characteristics is rare even in advanced economies. Often, the main source of such data is Scandinavian countries such as Sweden, Denmark, Finland, and Norway.

[2]"White, educated, from industrialized rich democracies" (WEIRD), who are not likely to be a representative sample from the global population (Henrich et al., 2010).

economies is a first step towards customizing traditional financial products to help them achieve their outcomes more efficiently. Third, from a welfare perspective, emerging economies have vast numbers of young households accessing financial markets for the first time. These first, defining encounters need to be managed carefully, given a growing body of evidence on the long-lasting impacts of experiences on economic behavior. (Malmendier & Nagel, 2011; Anagol et al., 2018b)

We survey the landscape of household finance in emerging economies in two ways. First, we establish a set of facts using microdata on household balance sheets. To do so, we create harmonized definitions of household assets and liabilities across six emerging economies, and compare and contrast patterns in these data. We also compare these patterns to those in advanced economy household balance sheets.[3] We employ data from China, India, Bangladesh, the Philippines, Thailand, and South Africa—comprising 58% of the population of all emerging economies,[4] or about 45% of the global population.

Despite the difficulties of comparability and measurement across these economies, we do observe several broad commonalities. A high level summary is that unlike their counterparts in advanced economies, households even at the very top of the wealth distribution in emerging economies have much of their wealth in tangible assets—such as real estate and gold—and relatively low levels of financial assets. On the liabilities side, emerging economy households hold high levels of unsecured debt—often sourced from non-institutional providers—and exhibit low participation in collateralized debt markets. We discuss these and other patterns in participation and allocation across the lifecycle and the wealth distribution using data for all six emerging economies in the body of the paper.

Second, we summarize the nascent literature in household finance in emerging economies, as well as relevant parts of the broader household finance and development finance literature. Early work identified the role of financial market development and access to finance in boosting economic growth (see, e.g., Rajan & Zingales, 1998; Zingales, 2015; Beck et al., 2010). It is perhaps not surprising, therefore, that much effort thus far has been focused on understanding the extensive margin, i.e., the

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[3]This work uses similar techniques as in (Badarinza et al., 2016a; Ramadorai & Committee, 2017).

[4]We consider all economies classified as "upper" and "lower" middle-income countries by the World Bank as emerging economies.

factors inhibiting or prohibiting access to finance and financial market participation, and the effects of such access on real household outcomes (see, e.g., Dupas et al., 2018; Karlan et al., 2014b; Karlan & Zinman, 2009). However, there has been relatively less attention paid to the *intensive* margin, i.e., how households in these emerging economies choose to allocate wealth across assets, and the ways in which they use different types of debt to achieve desired outcomes. With vast and increasing numbers of households already financially "included" in emerging economies, it is important to increase efforts to understand allocation decisions, in addition to work on understanding participation decisions.

As we document in more detail, work on emerging economies has used a wide variety of research methods, partly as a result of the difficulty of accessing high-quality and comprehensive electronic records. Such methods include the analysis of survey data (Samphantharak & Townsend, 2010; Deaton, 1997; Xu et al., 2003; Ramadorai & Committee, 2017; Badarinza et al., 2016a), and more recently, the combination of such surveys with randomized experiments in the field (Duflo et al., 2006; Ashraf et al., 2006; Banerjee et al., 2015). Such experimental methods have been extensively used in the development finance literature to derive clean causal insights, whether the underlying data are from "natural experiments" (see, for example, Burgess & Pande, 2004), or from field experiments (see, e.g., Cole et al., 2017).

The literature review also reveals that household finance markets in emerging economies are not always different from those in advanced economies. For instance, when emerging country households invest in risky asset markets, just as in advanced economies, they make costly mistakes and are slow (and not necessarily Bayesian) learners (Calvet et al., 2007, 2009; Campbell et al., 2018; Anagol et al., 2018b). And on the supply-side, issues of imperfect regulation and sub-optimal incentive structures can generate product offerings that are less than ideal for emerging and advanced economy households alike.[5] These similarities make it clear that even researchers interested in advanced economy household finance markets should find the study of emerging economies useful and informative.

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[5]See, for example, Inderst & Ottaviani (2012) and Anagol & Kim (2012); Anagol et al. (2017); Mullainathan et al. (2012).

The remainder of this review is organized as follows. Section 2 compares household balance sheets across six emerging economies, as well as with patterns found in advanced economy households. Section 3 focuses on financial savings in riskfree or low-risk assets, Section 4 describes the literature on household investments in risky asset markets, Section 5 retirement savings, and Section 6 insurance. Section 7 switches to the liability side of the balance sheet and surveys relevant literature on mortgages, and Section 8 unsecured credit. Section 9 concludes.

2 Household Balance Sheets in Emerging Economies

We begin with an overview of the patterns in emerging markets' household balance sheets obtained from official household surveys. Data availability in emerging markets is a well-known issue, and where these data are available, clearly viewing the complete balance sheet presents a challenge. We, therefore, focus on a subsample of emerging economies that have the most comprehensive data, and ensure that these data are broadly comparable across the set of countries that we pick. Our sample includes household data from China, India, Bangladesh, Philippines, Thailand, and South Africa.[6] As a useful reference point, we also present the average statistics from the household balance sheets from official micro-surveys in four of the thirteen advanced economies used in Badarinza et al. (2016b).[7]

Figure 1 maps wealth in these emerging economies against the corresponding distribution in advanced economies, adjusting for purchasing-power.[8] The figure shows that households in the top decile of the wealth distribution in emerging economies have wealth levels that are very similar to the top decile in advanced economies. The bottom deciles are also remarkably similar across emerging

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[6]Naturally, the top two countries by population, China and India, comprise the majority of these reported fractions of the global population. The household survey data sources are the All India Investment and Debt Survey (2012 wave), the Chinese Household Finance Survey (2012 wave), the Townsend Thai Survey (2012 wave), the South African National Income Dynamics Study (2014 wave), the Philippines Consumer Finance Survey (2014 wave), and the Bangladesh Integrated Household Survey (2015 wave).

[7]The countries that comprise our developed economy sample are Australia, Germany, United Kingdom, and the United States of America.

[8]We start by transforming local-currency wealth levels in the micro-surveys to equivalent US Dollars, using bilateral exchange rates, and purchasing power parity (PPP) adjustment factors. These rates and factors are sourced from the World Bank. We compute percentiles of the wealth distributions in the full set of emerging economies (Panel A), and in each of them separately (Panel B), and calculate the fraction of households from emerging economies which hold levels of wealth that are lower than the respective percentiles in advanced economies, as shown on the vertical axis. To compute aggregate percentiles for advanced and emerging economies, we equal-weight countries. To compute within-country percentiles, we use representative population weights, as indicated in each survey.

and advanced economies. However, there are substantial differences between advanced and emerging economies for households in the middle of the respective wealth distributions. The median household in emerging economies corresponds to the 20th percentile household in advanced economies. The bottom panel of the figure shows that these differences vary considerably across countries—China and South Africa are more similar to advanced economies than India and Bangladesh, for example, and the Philippines shows significant differences from the advanced economies. While providing broader context for the statistics below, the plot also reveals that much work needs to be done to understand the drivers of wealth inequality in emerging economies, which may be driven by different factors than advanced economies. Some of these differences are likely also driven by differences in the management of wealth between middle class and very wealthy households, given the steep slopes in this region of the wealth distribution (see, for example, Campbell et al., 2018).

Before going further, we note that the usual measurement concerns with household surveys apply to this exercise.[9] As a result of these challenges, which are potentially exacerbated in the emerging market context, similar work in the related field of development finance often focuses on localized survey instruments implemented as a part of field experiments, and/or sparse information on household finances available from nationally representative surveys whose primary focus is not household financial information.[10] There is also a small but growing literature using high-quality administrative data on specific areas of the household balance sheet.[11]

That said, we begin by classifying the asset and liability sides of household balance sheets into each of three categories. We classify assets into real estate, durable goods, and financial assets, and liabilities into mortgage debt, other secured debt, and unsecured debt. We first compute participation rates in each of these categories across household balance sheets to get a sense of the "extensive margin" decision, and then describe the average shares of assets and liabilities allocated by households

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[9]As noted in Badarinza et al. (2016b), there are the usual concerns of non-response rates (Meyer et al., 2015), inaccurate responses due to imperfect recall, and incorrect valuation of assets (Bucks & Pence, 2015).

[10]See, for instance, Heltberg et al. (2015) and Mitchell & Mukherjee (2017).

[11]See, for instance, Liberman (2016); Foley et al. (2018) using data from Chile, and Van Doornik et al. (2018) using loan data from Brazil.

to each of these categories, conditional on participation, in each of these categories, to get a sense of the "intensive margin".

Figure 2, Panel (A.i.), reports household participation rates in real estate, durable goods, and financial assets. The left most column plots the average of four advanced economies used in Badarinza et al. (2016b). Participation rates in financial assets (represented as diamonds)—including all risky and non-risky holdings such as bank deposits—are high and over 90% for developed economies, whereas they are around 60% for *any* financial asset in emerging markets. However, this average participation rate masks substantial variation across different *types* of financial assets. For instance, less than 10% of emerging economy households participate in equity markets; the major fraction simply have bank accounts.[12] The feature that stands out, however, is that participation in both durable goods and real estate are in all cases higher in emerging economies than participation in financial assets. The reverse is true in the advanced economies, which show higher participation rates in financial assets than for any other type of asset.

Furthermore, there is an important distinction between *having access to* and *using* financial vehicles in emerging markets. In the Appendix, Figure A.1, we plot the fraction of households who have access to banking, as well as the fraction that use these accounts for savings.[13] While access is high, at roughly 80% on average, less than half the households in these economies *use* these accounts as a savings vehicle.[14] This is where work on financial inclusion (which has primarily focused on the extensive margin) would benefit from even greater integration with work on household finance (which has primarily focused on understanding the intensive margin).

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[12]The household surveys are conducted between 2010 and 2014 depending on the country, for comparability. There has been progress on financial inclusion since then, so these numbers are likely underestimates, especially when it comes to participation in bank accounts. This is evident in Appendix Figure A.1, using data from the World Bank FINDEX database in 2017.

[13]These data are from the most recent wave of the Global Financial Inclusion Database (FINDEX) of the World Bank. The Global Findex Database 2017.

[14]High access is partly a result of efforts by governments in emerging economies (such as the PMJDY initiative in India, or the Brazil National Financial Inclusion Initiative) to improve financial inclusion. Agarwal et al. (2017) study the Indian financial inclusion initiative, and find that regions that were more exposed to this initiative saw an increase in lending through formal institutions as well as defaults on new loans.

Households across the six emerging economies also exhibit striking *similarities* in participation rates for real estate (circles) and durable goods (squares). Nearly all emerging economy households in the sample have some durable goods,[15] and more than three-quarters of the households also hold some form of real estate on their balance sheets.[16]

On the liabilities side, Figure 2, Panel (A.ii.), reports participation rates in mortgage debt (circles), other secured debt (squares), and unsecured debt (diamonds). Although the fraction of households with real estate holdings is high in emerging markets (Panel A.i.), not many of them participate in the mortgage market. All of the countries in the sample have many fewer households with mortgage debt than with real estate holdings, with differences between the participation rates as large as 60 percentage points (Thailand). Such large differences are not present in advanced economies, where there is substantial mortgage borrowing against real estate. Standard finance theory suggests that households should borrow to smooth consumption across their lifecycles. The virtual absence of reverse mortgages in emerging economies means that the high holding of illiquid housing on the balance sheet without countervailing mortgage debt is difficult to reconcile with standard theory (Ramadorai & Committee, 2017).

Households in emerging markets exhibit low levels of formal debt market participation across the board. However, the fraction of households that hold unsecured debt, or debt secured with assets other than a property is non-negligible.[17] The fraction of households with secured debt other than mortgages is particularly notable in South Africa.[18] The prevalence of unsecured debt is highest in Thailand, India, and China.

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[15]Durable goods comprise vehicles, gold, livestock, and other physical assets that are not real estate.

[16]We also note that such tangible asset holdings reflect an additional problem with household survey measurement in emerging economies. Such a balance sheet exercise cannot disentangle micro-enterprises from the household balance sheets, especially at the lower end of the wealth distribution, as households tend to deploy their durable assets both for their own consumption, and to generate income. However, we note later that the share of real estate and durable assets are relatively higher than the average rates across advanced economies even at the upper end of the wealth distribution.

[17]A substantial proportion of this unsecured debt comes from non-institutional, non-banking sources such as friends and family, money lenders, and loans from employers.

[18]Debt holdings in South Africa are mainly explained by auto loans. The extent of auto (car) ownership in South Africa is very high and most households have at least one motor vehicle loan (see: In South Africa, more people have loans than jobs).

The nature of the end-use of borrowings is hard to determine in national household surveys in any consistent fashion, so in the Appendix (Figure A.1.) we use the World Bank's FINDEX survey to shed light on this. We find that nearly 40% of all emerging economy households state lack of emergency funds as the reason for their borrowing. Furthermore, the plot suggests that at least a third of the households borrow from family and friends, rather than from formal financial institutions. The combination of these two facts presents a worrying picture—one possibility is that the lack of insurance results in borrowing at high rates from non-institutional sources in the aftermath of emergencies. The resulting debt burden can often be as crippling as the initial emergency for poor households.[19]

We next describe patterns of allocation conditional on participation, i.e., the *intensive margin*, across different asset and debt classes. Figure 2 Panel (B.i.) shows a broad division of the asset side of household balance sheets into real estate, durable goods and financial assets, while Figure 2 Panel (B.ii.) does the same for three broad classes of debt, namely, mortgage, other (non-mortgage) secured debt, and unsecured debt.

On the asset side of the balance sheet, real estate and durable goods (physical/tangible assets) comprise over 90% of wealth in the average household balance sheet in emerging economies, an increase of 20 percentage points over the average for their advanced economy counterparts. On the liabilities side, China is similar in its debt composition to advanced economies, whereas Thailand, Philippines, and India hold very high fractions of their total debt in unsecured debt instruments, while mortgage debt accounts for the lowest fraction of total debt in these economies.

These composition patterns are plotted for the average household, and they mask important heterogeneity both over the life-cycle, and across the wealth distribution. In the Appendix (Figure A.2.) we describe how allocation across asset and debt classes varies over the life-cycle (Panel A), and across the wealth distribution (Panel B). We find that for the most part, elderly households in emerging economies do not have a high fraction of liquid assets in their balance sheet when compared

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[19]Ramadorai & Committee (2017) show that the gains from avoiding debt by taking up medical insurance in India can be substantial. Under the assumption that the pricing of medical insurance is actuarially fair, there can be substantial cost savings due to the avoidance of interest payment on unsecured loans that typically finance emergencies. These savings are substantial for both poor and rich households, in both rural and urban areas (Panel C, Figure 2.13, Ramadorai & Committee, 2017).

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to their counterparts in advanced economies. Indeed, for households in India and China, the share of assets in real estate is higher for the elderly than for the young. This is at least in part a manifestation of more traditional family structures, where multiple generations might inhabit the same residence owned by the elderly head of the household. Some fraction of the labor income earnings of the younger members of these households is generally transferred to the elderly as an informal pay-as-you-go retirement income flow.[20]

Moreover, we find that mortgage debt holdings in emerging markets do not follow the pattern seen in advanced economies, where household borrowing peaks in middle age and gradually declines towards retirement age. In emerging economies, the elderly often hold more mortgage debt than the young. The higher indebtedness of elderly households is also worrying in light of the generally low level of retirement savings.

Across the wealth distribution, it is perhaps unsurprising that poor households in emerging economies hold a higher fraction of real estate than their counterparts in advanced economies. It is more surprising that this is also true for the wealthiest group of households in emerging economies, who hold a far higher fraction of wealth in real estate, and a far lower fraction of wealth in financial assets than their counterparts in advanced economies. As noted earlier, the wealthy in emerging economies are similar to those in advanced economies, meaning that this pattern cannot simply be rationalized using a simple story of liquidity constraints or the financing and generation of consumption. This is, in our view, an important and promising area for future investigation.

An important concern is that any differences between emerging economy and advanced economy household balance sheets are simply driven by variation in demographic characteristics. To control for this, we estimate a Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973) and report estimated counterfactuals using the average shares of tangible assets to total assets ratio and unsecured

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[20]In a representative National Household Survey in 2016, Indian households were asked to answer their likely means for financial security in old age. Over 50% of the households reported their children as the source of funds in retirement. (Panel B, Figure 2.10, Ramadorai & Committee, 2017)

debt to total debt ratio from advanced economies in the Appendix (Figure A.3.)[21] We find, for this simple parametrization of the relationship between demographic characteristics and asset and liability shares, that the observed differences between the advanced economies and emerging economies cannot be explained by differences in demographics. If anything, emerging market households should be expected to hold less tangible assets than their advanced economy counterparts, given that their populations are younger.

Taken together, there are a number of areas of difference between emerging market household balance sheets and their counterparts in advanced economies. The simple patterns that we uncover exhibit interesting variation along a number of dimensions—across countries, as well as within countries across age and wealth groups. We believe that deeper analysis of these patterns will prove to be fruitful areas for further investigation. Next, we turn to providing a targeted summary of the fast-growing body of work in both development economics and household finance on many of these issues.

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[21]More specifically, for each asset and debt category, we run a pooled regression with fixed effects for developed economies (USA, UK, Australia, Germany), and identical separate regressions for each developing economy (China, Thailand, Philippines, India, Bangladesh, and South-Africa). In both cases, the independent variables are decile dummies that capture the position of each household in the global age and wealth distribution. To obtain counter-factual predicted values, we multiply the values of the explanatory variables for households in each developing economy with the estimated coefficients from the pooled regression for developed countries. We compute weighted averages across households using representative population weights, as indicated in each survey.

3 Financial savings

Financial savings allow households to smooth consumption over time, and at the macro level, household savings help to finance productive investments that in turn show up in economic growth. Despite much work highlighting emerging market households' latent demand for savings (Karlan et al., 2014b; Duflo et al., 2006), significant barriers to savings exist, especially for poor households in these markets. One important issue is that savings flows are often "small and irregular," especially for poorer households, and can typically be stored as "under the mattress" cash holdings, in informal savings clubs, or in livestock, rather than at financial institutions (Demirgüç-Kunt et al., 2018; Dupas et al., 2017; Flory, 2018; Karlan et al., 2014b).

Often, pecuniary and non-pecuniary transaction costs can act as barriers to savings. Non-pecuniary transactions costs include the lack of trust in formal institutions (Guiso et al., 2009, 2008), as well as other well-documented demand-side constraints such as shame or embarrassment in requesting advice (Chandrasekhar et al., 2018; Breza & Chandrasekhar, 2015), as well as behavioural biases such as present bias that can have significant negative effects on savings (Meier & Sprenger, 2010; Ramadorai & Committee, 2017). Moreover, the limited accessibility of bank branches, especially in rural areas, can also pose a significant problem. Recent attempts to surmount these barriers and the greater use of technology have proven significant in reducing these barriers (Demirguc-Kunt et al., 2018; Beck et al., 2010; Beck & Demirgüç-Kunt, 2008; Honohan, 2008; Claessens, 2006).

The vehicle in which financial savings are done is also very important. For example, there is significant evidence that savings in formal rather than informal institutions are more effective—Burgess & Pande (2004) show that a one percentage point increase in the share of savings held by rural banks leads to a 2.2 percentage point reduction in rural poverty. Several field experiments also support this conclusion (see, for example, Dupas et al., 2018; Dupas & Robinson, 2013; Prina, 2015).

There has also been significant interest in whether households get their savings decision "right" over their life-cycle, but mainly in advanced economics (see, e.g., Gomes & Michaelides, 2005; Gomes et al., 2009; Kaplan et al., 2014; Campbell, 2016). These questions are equally important in emerging economies, and we believe that this is another promising research area.

In advanced economies, there has been considerable emphasis on the implementation of "nudges" to save more (Madrian & Shea, 2001; Madrian et al., 2017; Sunstein et al., 2008). Yet, less is known about the effectiveness of such nudges in the emerging market context. The effectiveness of nudges depends in part on the government providing sensible default choices that when combined with inertia result in good outcomes. In environments in which trust in government is lower, nudges may not be as effective as households may view default options with skepticism. Moreover, less trustworthy governments may or may not provide defaults that are in the best interest of households. Certainly there is evidence that suggests formal financial institutions might generate such concerns. Consumers underestimate and are inattentive to overdraft costs and occasionally financial institutions can push unsecured credit/borrowing at exorbitant rates to such unsophisticated households (Alan et al., 2018; Gurun et al., 2016).

4 Risky asset holdings

The lack of widespread participation in organized risky asset markets is a long-standing puzzle in developed economies (Haliassos & Bertaut, 1995). The puzzle is even stronger in emerging economies, not as much for households at the lower end of the wealth distribution where liquidity and other constraints are likely to bind, but certainly in the upper ends of this distribution, which are comparable in absolute wealth levels to advanced economy households.

To some extent these patterns can be rationalized by the lack of supply infrastructure to promote stocks and other risky assets, which might result in higher transactions costs impeding participation (Alan, 2006; Guiso & Jappelli, 2005). High levels of fees and complicated fee structures arising from the exercise of unchecked monopoly power can also have a detrimental effect (Anagol & Kim, 2012; Bergstresser et al., 2008).

Moreover, issues of asymmetric information and the fear of insider trading combined with imperfect regulatory oversight may also introduce additional risks in less well-developed market systems. Evidence indicates that this this is likely an important issue (Bhattacharya & Daouk, 2002). There are related issues of trust in reported firm cash flows and the general information environment. For example, Giannetti & Wang (2016); Sane et al. (2018) find that stock market participation decreases

after the revelation of corporate fraud.

To some extent, these issues can be surmounted by appropriate technology. For example, Liang & Guo (2015) use data from China to show a strong effect of Internet use in encouraging stock market participation. Interestingly, they show that online information acts as a substitute for positive social information externalities that arise through offline interactions.

When participation does occur, it can be inefficient, especially if, as is often true in emerging markets, households are new to risky asset investment. This can cause declines in the expected returns that can be earned, and more importantly in the efficiency of the risk-reward tradeoff that emerging market households obtain. This can contribute to increases in wealth inequality if inefficient portfolio construction is more prevalent amongst the less wealthy (Campbell et al., 2018). While emerging market households can learn to invest better through repeated experiences of participation in the stock market, there are questions about whether they always learn rationally (see, e.g., Anagol et al., 2018a,b; Bian et al., 2018).

Portfolio construction can also be constrained as a result of the different nature of household organization in emerging markets. For example, Bogan (2015) looks at the way in which family structure affects the portfolio allocation of household assets, finding that having elderly dependents decreases the probability of stockholding by a magnitude that is twice as much as the effect of poor personal health. This phenomenon is very likely to affect emerging markets in particular, where households are more often multi-generational (see, for example, Banerjee & Duflo, 2007).

5   Retirement savings

A major source of difference between developed and emerging market household balance sheets arises from the lack of retirement savings in emerging household balance sheets. In large part, this issue is attributable to the informality of labor markets in emerging economies, where unorganized labour accounts for a substantial fraction of the total labor market.[22] However, a significant issue is that

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[22]The share of unorganized, informal employment is huge irrespective of the measure used. Between 45 and 82% of non-agricultural employment in developing countries are in the informal economy, with the highest numbers in South Asia (Measuring Informal Work).

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in many emerging economies, government-sponsored or mandated schemes are not widely available (Bloom et al., 2014). When government schemes are provided, there are often issues of distribution of these products to households located in far-flung regions of emerging markets, since the absence of infrastructure generates substantial "last mile" costs (Brown et al., 2013).

Another important problem is that the design of financial products in emerging markets has not always kept pace with the demand for customized versions of these products arising from emerging market households' unique needs. Using new data from a field experiment in India, Mitchell & Mukherjee (2017) test designs of micro-pension schemes with low-income households and estimate the demand curve for such pension schemes. Mitchell & Mukherjee (2017) vary the design of these pension products with different withdrawal ages, government match rates, and options for lump sum withdrawal. They find that nearly 80% of the respondents report interest in micropension schemes, and the savings that they are willing to commit amounts to 40% of expected old-age consumption. Micropension products designed to restrict access to assets until a particular age, and with matching rates from the government were more popular with prospective policyholders.

In earlier work on policy design, Asher & Shankar (2007); Kim et al. (2012) argue that an expansion in coverage of micro-pensions can only be achieved with drastic reductions in transaction costs (including fund management costs) thus highlighting the need for economies of scale to make micro-pensions a profitable venture for formal financial institutions.[23]

This is clearly an important area of household finance in emerging markets, and likely only to become more important given demographic trends. Emerging markets will experience large increases in their age dependency ratios.[24] India and China alone are set to have over 500 million elderly individuals over the course of the next decade. Creating sustainable pension systems (public and

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[23]While contributory pension schemes are more sustainable, evidence from Brazil and South Africa on two of the world's largest non-contributory pension programmes suggest that they reduce vulnerability among the elderly. In contexts where appropriate designs are difficult to implement, and challenges with last mile' access and distribution exist, designs of non-contributory pension plans may become more important (van Dullemen, 2007).

[24]By 2050, it is estimated that there will be the same number of old as young in the world, with 2 billion people aged over 60, and 2 billion under the age of 15 (Harper, 2014).

private) is challenging in these economies, as these systems have both a low tax-base and poor formal labour market participation.

There is a nascent literature on the design of such systems for emerging markets starting with Bloom et al. (2014).[25] Getting this right may not only help to achieve better household financial outcomes, but also promote the development of capital markets in emerging economies.[26] One issue is that there may be a divergence between the best solution for current elderly populations and planning for future populations. A contributory pension scheme for the current elderly obviously cannot be implemented, meaning that their retirement flows may have to be financed directly from tax revenues in these economies (Shen & Williamson, 2006; Barrientos & Lloyd-Sherlock, 2002). However, going forward, this represents a significant risk, especially given the mounting evidence on the impossibility of sustainably providing defined benefits (Bodie et al., 2009).[27]

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[25]The literature on advanced economies is vast and is reviewed in (Bodie et al., 2009; Cocco, 2014).

[26]Using data from developed countries, Scharfstein (2018) argues that policies that promote pension savings also promote the development of capital markets.

[27]An example of a recent pensions crisis leading to political issues in emerging economies is offered by Brazil. Pension spending is equivalent of 12% of GDP, half as much as the average of OECD countries. The combined annual shortfall in Brazil's pension scheme is 4.8% of GDP—nearly half of Brazil's budget deficit. See Reducing Brazil's pension burden and An Exploding Pension Crisis Feeds Brazil's Political Turmoil.

6 Insurance

Households in emerging markets face significant risks that can have a substantial impact on their financial wellbeing. Heltberg et al. (2015) document the principal risks that households in 16 developing countries face, as well as the risk management practices that they adopt. They elicit this information from micro surveys conducted by the World Bank. They find that natural disasters, health shocks, economic shocks, and asset loss are the most important sources of risk faced by these households.

These risks can impact households in emerging economies with great severity, since the support infrastructure provided by their governments (emergency services, disaster management, health services, social security nets) can often provide inadequate defense against them (Kahn, 2005). This increases the important of insurance as a risk-mitigation tool. Despite this, there is substantial variation in insurance uptake across economies. Beck & Webb (2003) explore this question using cross-country panel data, and find that inflation, income per-capita, and banking sector development are helpful in explaining insurance uptake.

Behavioral factors can also inhibit insurance uptake. For example, Cole & Xiong (2017) argue that individuals who purchase insurance policies may perceive them as a waste of money in the event that risks do not materialize. Given this possibility, insurance distributors often claim that selling insurance is more onerous than selling other financial products. This can lead to substantial distribution commissions, or poorly designed insurance products that are bundled with investments (Ramadorai & Committee, 2017; Anagol et al., 2017). Households also tend to underweight low probability events, which can lead to lower demand for insurance (Slovic, 2016). However, there has been little innovation in taking biased beliefs into account when designing insurance products.[28]

A broad literature in household finance discusses the possible mitigating effect on biases and mistakes of financial education. Gaurav et al. (2011) conduct a field experiment in which they offer a rainfall insurance product to farmers in India, and find that financial education has a positive effect on rainfall insurance adoption, doubling the takeup rate from 8% to 16%. However, they also find that the

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[28]Spinnewijn (2015) is a noteworthy exception and suggests that optimal unemployment insurance for biased decision-makers includes higher payoffs upon the realization of risk.

strongest intervention to improve demand was a design that incorporated a "money-back guarantee" in these products; further evidence that households consider insurance expenditure as wasteful unless they obtain a guaranteed return. Creation of new insurance products such as index insurance that lower costs of provision have, however, yielded mixed results in take-up rates (Karlan et al., 2014a; Miranda & Farrin, 2012). One reason might be that insurance contracts essentially compete with traditional informal risk-sharing networks that provide cover to households.[29]

There are also impediments to the appropriate supply of insurance in emerging economies. Weak legal rights for policy holders and the lax enforcement of insurance payouts can significantly skew supply-side incentives (Esho et al., 2004). These problems can be severe, for example, Halan et al. (2014) explore the cost of missold market-linked insurance products in India and estimate that investors lost US$ 28 BN (nearly 2% of India's GDP in 2010) by investing in them. Similarly, in China, concerns with misselling in insurance markets are on the rise.[30]

The structure of incentives for distribution and advice can also have important impacts on insurance markets (and indeed on markets for other financial products). Anagol et al. (2017) suggest that insurance agents can help and assist unsophisticated consumers make insurance decisions; alternatively, they might recommend products that provide themselves with high commission. In a series of field experiments, they find greater support for the latter view.

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[29]See, Mobarak & Rosenzweig (2013, on India), Jowett (2003, on Vietnam) and Fafchamps & Lund (2003, on Philippines), and for an overview, Morduch (1999).

[30]"Mis-selling risks grow with China's insurance sales army". Reuters, 27 Nov 2015.

7   Mortgages

In Section 2, we documented that few households in emerging markets have mortgage debt. Standard finance theory suggests that mortgage borrowing helps households to smooth consumption, especially of essential housing services, early in their lives. Contrary to this intuition, we find that mortgage borrowing in emerging markets is found more in elderly households than in the young or middle-aged.

What factors are responsible for this unusual pattern? One view is that supply constraints are particularly important. Mortgage lending occurs over long horizons, and short-term volatility in required short-term deposit rates, and indeed, any shortage in deposits can generate asset-liability mismatches for financial institutions engaging in this form of lending. In this sense, the lack of financialization of long-term household savings poses problems for lending to households in the form of mortgages (Erbaş & Nothaft, 2005; Warnock & Warnock, 2008; Ferguson, 2004).

Mortgage contracts are fairly intricate, meaning that a robust legal and regulatory infrastructure is also needed to support a well-functioning mortgage market. However, this infrastructure is often absent or inadequate in emerging markets (Lea et al., 2004; Djankov et al., 2007; Warnock & Warnock, 2008). Even when institutions are well-functioning, there is substantial interest rate and regulatory risk that can make these markets fragile (Lea et al., 2004; Campbell et al., 2015; Campbell, 2012).

Other issues in emerging economies include difficulties of collateral verification, often arising from the poor organization of land registries and the lack of detailed and verifiable land records (Domeher & Abdulai, 2012; De Janvry et al., 2015; Chen, 2017; Dower & Potamites, 2014; Morris & Pandey, 2009). Contractual rigidity is also a problem—households in emerging markets often lack steady income streams, meaning that standard mortgage repayment contracts with compulsory monthly repayment terms are less appealing. The excessive informality of labor markets is an additional important factor to consider in emerging economies–standard double trigger models of default require income verification in addition to collateral verification (Buckley & Kalarickal, 2005).

While supply-side issues are important, they are not the only issue—this is most evident for wealthy households in emerging markets, who hold high amounts of real estate, but relatively small

amounts of mortgage debt, and may be less subject to supply constraints. This may be attributable to factors such as debt stigma and aversion.[31]

Given the substantial investments in real estate as a fraction of the asset side of household balance sheets in emerging markets, the lack of robust engagement in mortgage markets is unusual. This also has the potential to pose risks going forward. In many of these economies, households rely heavily on intra-household transfers. Real estate holdings are passed down as inheritances, which constitute an important part of the intra-household social contract (Rosenzweig & Wolpin, 1985; Guiso & Jappelli, 2002; Hansen, 2014). As Ramadorai & Committee (2017) notes, elderly households with substantial housing assets tend to rely on their children for their consumption expenditure, completing the intra-household transfer. However, these social structures are fragile. The composition of households is changing, as migration, economic growth, and the desire for mobility generates changes to the pre-existing social structure (Platteau, 2015; Lipset, 2017). A well-functioning mortgage market can facilitate these important changes and help to mitigate disruption.

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[31]As far as we are aware, there is little work on the issues preventing rich households from holding mortgage debt in emerging economies. However, the literature on mortgage markets in advanced economies shed light on some plausible factors that require further investigation in the emerging market context. For example, see Caetano et al. (2011) and Fornero et al. (2016).

8   Unsecured credit

Unsecured credit comprises a high fraction of household liabilities in emerging economies (Figure 2, Panel B). Such credit is often taken to finance emergency expenditure upon the realization of risks (e.g., natural disasters and health shocks) (Ramadorai & Committee, 2017). In emerging economies such credit is often sourced from informal providers such as local money lenders, family, and friends (Hoff & Stiglitz, 1993; Jain, 1999; Tang & Guo, 2017). In many cases such informal credit is offered at interest rates that are substantially higher than comparable products offered by financial institutions, meaning that the cumulative interest burden on borrowers from such credit can be significant.

Of course, the high rates on informal credit might simply reflect the high costs of providing it, given both transactions costs as well as difficulties of screening and monitoring in emerging economies, especially for households with poor or nonexistent credit histories. Evidence suggests that these issues, and the related issue of limited enforceability of contracts, make it difficult for formal institutions to provide unsecured credit to households at both the bottom (Yuan & Xu, 2015) and the top (Cui & Feng, 2017) of the wealth distribution at reasonable rates.

However, this is not always the case. Early work by Aleem (1990), for instance, finds that money lenders in Pakistan charge rates that equal their average cost of lending, but exceed their marginal cost. Moreover, the high interest burden and the lack of a formal bankruptcy procedure for such informal credit can trap households in a long cycle of rollovers over long and uncertain loan repayment terms (Hoff & Stiglitz, 1993). Credit provided through networks, or intra-family, can bear the illusion of carrying low or even zero interest rates, but they can expose households to onerous social obligations and possible stigma, often damaging relationships and harming communities (Ramadorai & Committee, 2017).

A related puzzle in credit markets in developing countries is the *coexistence* of both formal and informal credit markets. For instance, Siamwalla et al. (1990), and Banerjee & Duflo (2007) show that very poor borrowers in Thailand and India access informal markets even when banks are present in their region. In recent theoretical work, Madestam (2014) suggests that the extent to which informal credit markets complement or substitute for bank credit depends on the extent of competition in the

formal banking system. In this sense, the widespread existence of informal credit may also be a symptom of a lack of competition in emerging economies, which manifests itself in an inability for formal institutions to offer widely accessible low-cost products. Worryingly, any lack of competition in the banking system can also impede the speed of change in emerging economies.[32]

Interestingly, innovation *has* occurred within *informal* institutions of credit provision in emerging economies. For example, Kapoor et al. (2011) discuss indigenous "chit funds" in India, which combine features of both credit and savings. In countries like China, the demand for unsecured credit has been increasingly addressed by online peer-to-peer lending platforms (Lin et al., 2017). While such products hold great promise (Morse, 2015), they also carry risks. Recent evidence suggest that online credit can often just substitute for existing bank debt (Tang, 2018), without necessarily increasing credit coverage to previously underserved groups. A bigger concern is that the pace of innovation in new financial technology may outstrip regulatory capacity—meaning that distributional consequences to different groups of borrowers,[33] inefficiencies, or even outright fraud are possible in the interim before regulators get to grips with these issues.[34]

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[32]For instance, Mishra et al. (2018) show that public sector banks in India have access to credit bureaus—a relatively new technology—but often do not use them to ratify existing borrowers in the banking system.

[33]See, for example, Fuster et al. (2017).

[34]See, for example, "After public outcry, Beijing says it will ban new online lending platforms". CNBC, 13 Aug 2018.

9 Conclusion

We have explored the landscape of household finance in emerging economies, and identified common patterns in household balance sheets in these economies, as well as sources of difference between emerging and advanced economies. We have also discussed the fast-growing literature on the determinants and consequences of household financial behavior in these markets.

Research in development finance and household finance in emerging economies has significantly increased our understanding of factors impeding access to finance, as well as the importance of such access in improving the welfare of emerging economy households. The rapid pace of financial inclusion in these economies means that there are many households entering formal financial markets for the first time. To serve these households better, we propose that there should be an increase in (positive and normative) work on understanding the intensive margin of these households' decisions, i.e., observed and optimal allocation to particular assets and liabilities, conditional on participation. We hope that this paper will help to increase work on what is clearly an important and fast-growing field.

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Figure 1: Global distribution of wealth

The figure maps wealth levels in a set of developing economies (China,Thailand, Philippines, India, Bangladesh, South Africa) against the distribution of wealth in developed economies (United States, United Kingdom, Australia, Germany). We start by transforming local-currency wealth levels to equivalent US Dollars by using bilateral exchange rates and purchasing power parity (PPP) adjustment factors. Both of the latter data series are sourced from the World Bank. We then find percentiles of the wealth distributions in the full set of developing countries (Panel A), and in each developing country separately (Panel B), and calculate the fraction of households from developing countries which hold levels of wealth that are lower than the respective percentiles, as shown on the vertical axis. To compute aggregate percentiles for developed and developing economies, we use equal country weights. To compute within-country percentiles, we use representative population weights, as indicated in each survey.
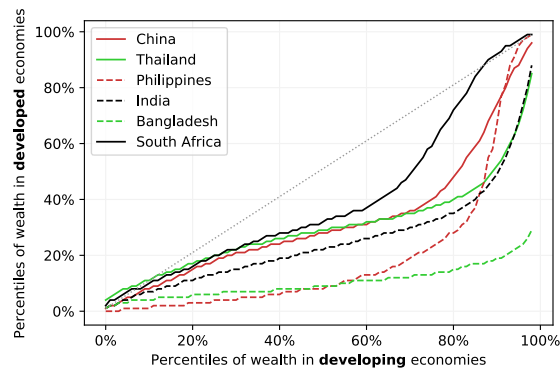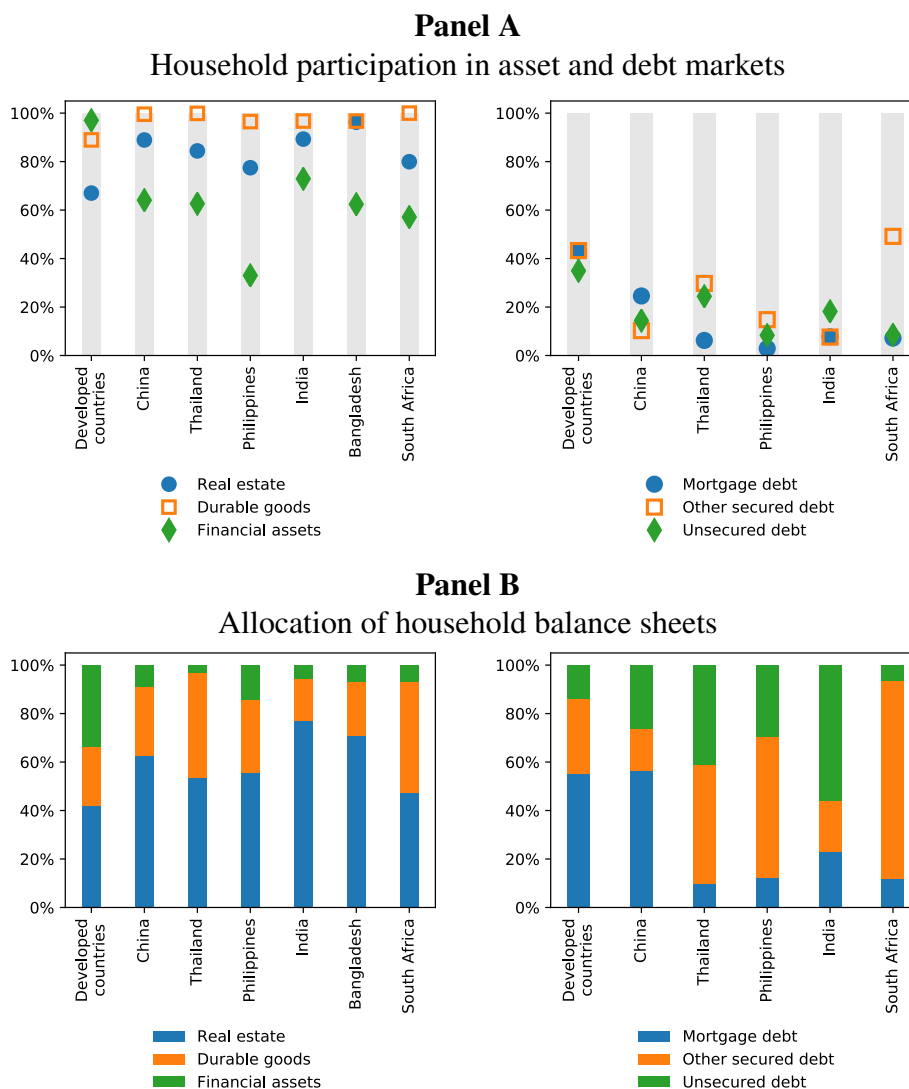
Panel A

Panel B

34
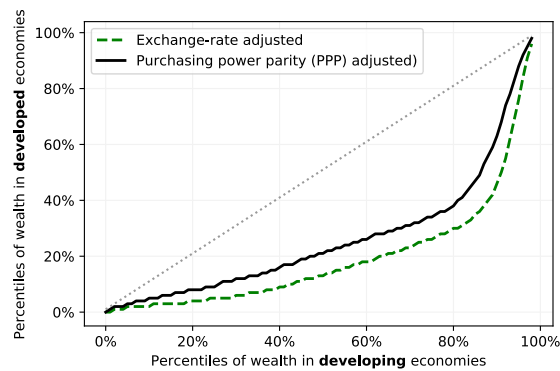
Figure 2: Participation and Allocation across assets and debt markets

Panel A shows fractions of household that hold positive amounts of real estate, durable goods, or financial assets (incl. life insurance and defined-contribution retirement accounts), and fractions of households with positive amounts outstanding of mortgage debt, other secured debt (incl. vehicle loans), and unsecured debt (incl. outstanding amounts on credit cards). Panel B shows respective population-weighted average shares of assets and liabilities categories, relative to total gross wealth and total liabilities. The data sources are the All India Investment and Debt Survey (2012 wave), the Chinese Household Finance Survey (2012 wave), the Townsend Thai Survey (2012), the US Survey of Consumer Finances (2010 wave), the UK Wealth and Assets Survey (2012 wave), the Australian Household, Income and Labour Dynamics Survey (2010 wave), the Eurosystem Household Finance and Consumption Survey (2010 wave), the South African National Income Dynamics Study (2014 wave), the Philippines Consumer Finance Survey (2014 wave), and the Bangladesh Integrated Household Survey (2015 wave). For Bangladesh, no data on liabilities is available.

Panel A

Household participation in asset and debt markets

Panel B

Allocation of household balance sheets

Household Finance in Emerging Economies
ONLINE APPENDIX
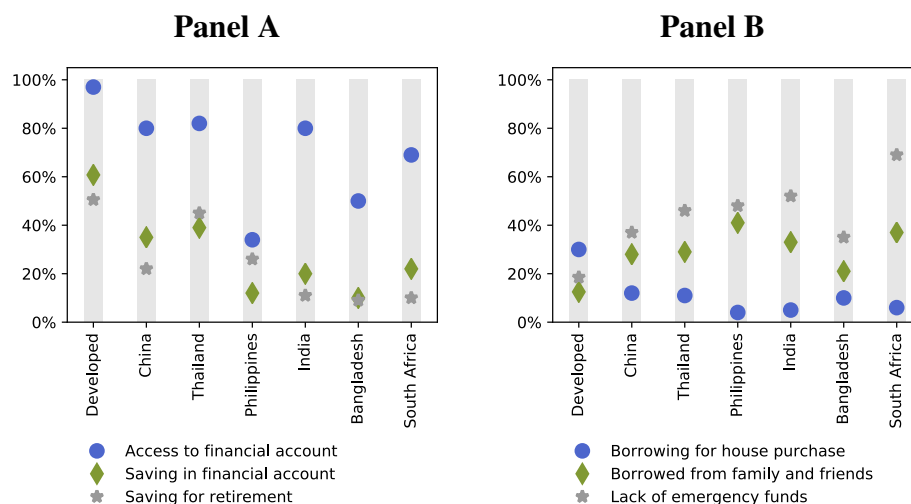
Cristian Badarinza   Vimal Balasubramaniam   Tarun Ramadorai*

November 8, 2018

Figure A.1: Access and Use of Financial Markets

The figure shows selected statistics from the 2017 wave of the World Bank's Global Findex Database. We report fractions of the population that have access to an account with a financial institution (left panel) and borrowing behaviour (right panel). Weighted averages across households are computed by the data provider using representative population weights.

*Badarinza: National University of Singapore. Email: Cristian.Badarinza@nus.edu.sg. Balasubramaniam: University of Warwick. Email: vimal.balasubramaniam@wbs.ac.uk. Ramadorai: Imperial College London, and CEPR. Email: t.ramadorai@imperial.ac.uk

1

Figure A.2: Allocation along the life cycle and across the wealth distribution

The figure shows the allocation of household assets and liabilities along the life cycle and across the wealth distribution. In Panel A, the three vertical bars show average allocations for households where the household head is below 45 years of age, between 45 and 65 years, and above 65 years, respectively. In Panel B, we assign households to a specific wealth tercile, using the distribution of total wealth within each country. The three vertical bars show average allocations for each tercile group. We compute weighted averages across households using representative population weights, as indicated in each survey.

Panel A
Allocation of household balance sheets along the life cycle
(below 45 years, 45-65 years, and above 65 years)

Panel B
Allocation of household balance sheets across the wealth distribution
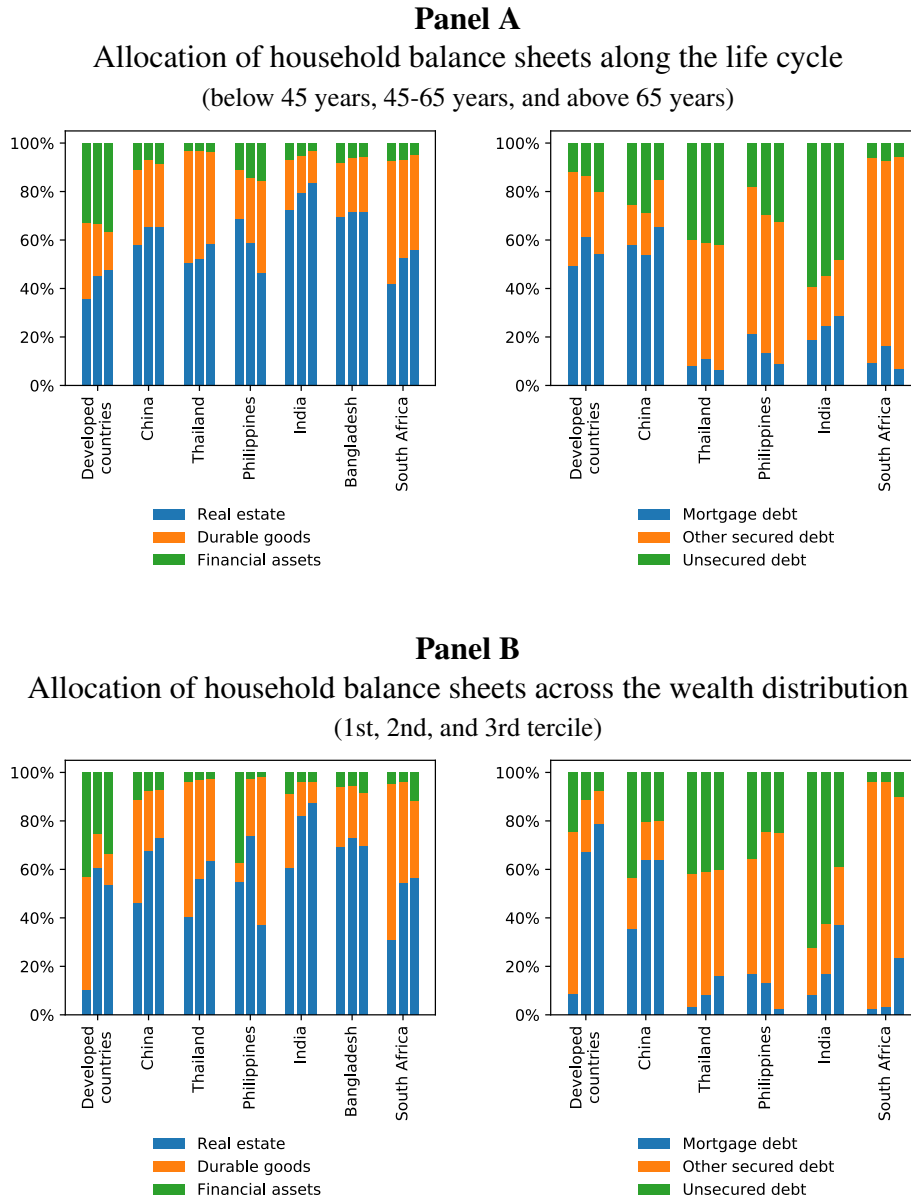(1st, 2nd, and 3rd tercile)

2

Figure A.3: Blinder-Oaxaca Decomposition

The figure reports predicted values for the average shares of assets and liabilities of households in developing countries, under the assumption that they behave like their counterparts in the developed world. We first construct decile dummies, which capture the positions of households in the global distribution of ages and wealth levels. For each asset and debt share, we run a pooled regression with fixed effects for the developed economies (USA, UK, Australia, Germany), and identical separate regressions for each developing economy (China, Thailand, Philippines, India, Bangladesh, and South-Africa). To obtain counter-factual 'predicted' values, we multiply the values of the explanatory variables for households in each developing economy with the estimated coefficients from the developed ones. We compute weighted averages across households using representative population weights, as indicated in each survey.

3