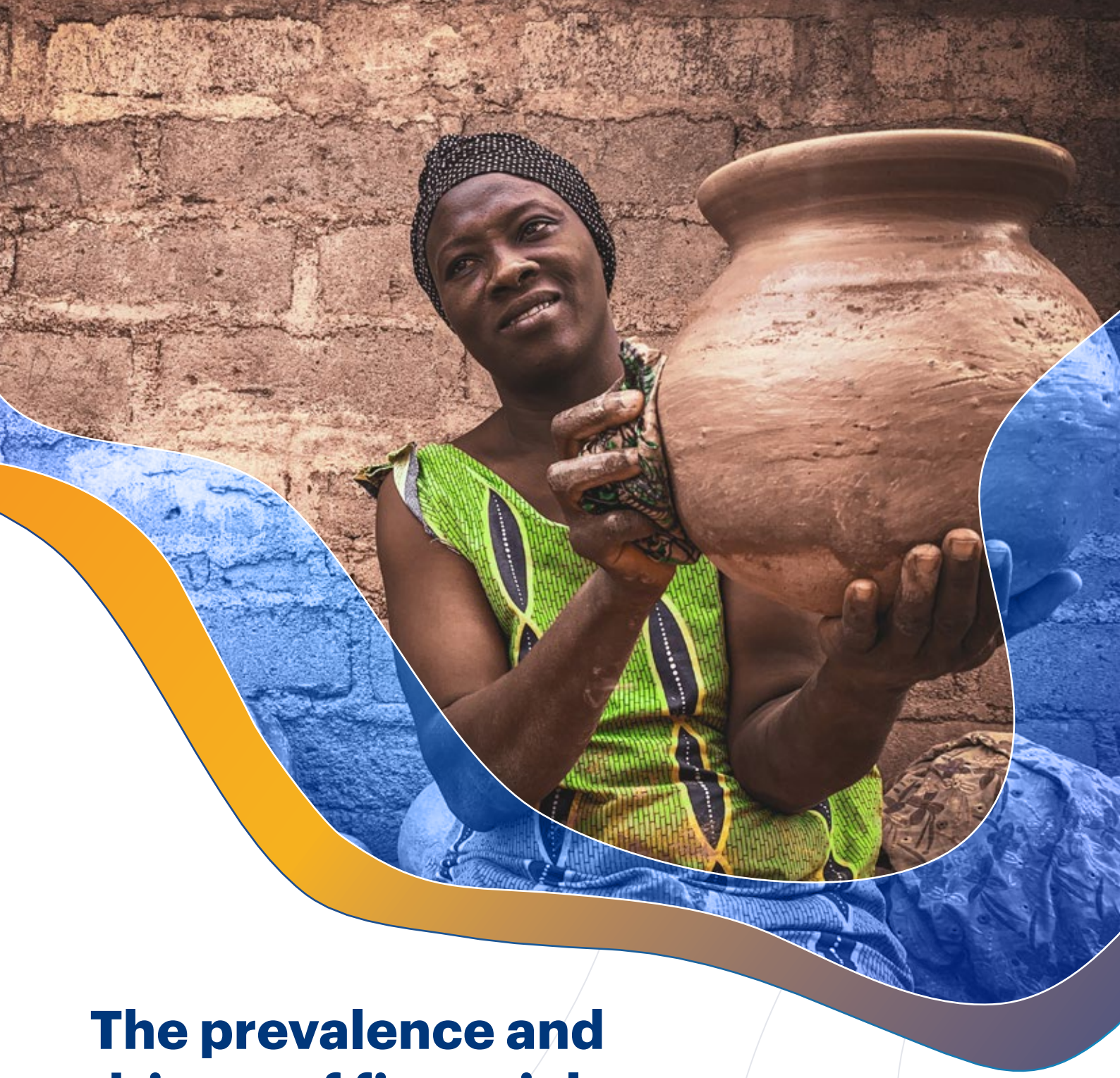

The prevalence and drivers of financial resilience among adults: Evidence from the Global Findex

November 2020

fsd Kenya

Creating value through **inclusive finance**

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Authored by
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The prevalence and drivers of financial resilience among adults: Evidence from the Global Findex

By Paul Gubbins[1]

November 2020

Abstract

This paper provides a detailed multivariate analysis of the prevalence and potential drivers of financial resilience among adults globally, using data from the 2014 and 2017 Global Findex. In 2017, an estimated 2.9 billion adults above the age of 18 (57.3 percent of the global adult population) reported being able to raise emergency funds to cope with an unexpected but moderate financial disruption costing 1/20th of national income per capita. The analysis finds that financial resilience defined in this way is primarily associated with inequalities between adults within countries, rather than with average conditions across countries. Among adults, higher levels of income and educational attainment, as well as saving, are strongly associated with financial resilience. Women are less likely to be financially resilient than men, holding age, education and income constant. Borrowing for consumption and for health care in particular, are negatively associated with financial resilience. Financial inclusion defined as whether an adult among the poorest 40% of their national population has an account at a bank, non-bank financial institution or with a mobile money provider, is associated with greater financial resilience. At the country-level, higher income inequality and unemployment substantially lower the likelihood of financial resilience while higher government spending raises it.

1. Paul Gubbins is an independent research advisor to FSD Kenya. The author thanks Genevieve Melford (Aspen Institute), Dave Kim (Bill and Melinda Gates Foundation), Leora Klapper (World Bank), Julie Zollman (BFA), Tamara Cook (FSD Kenya), and Amrik Heyer (FSD Kenya) for their useful comments and encouragement.

Introduction

The COVID-19 pandemic has laid bare the financial vulnerability of vast segments of the global population. At the onset of this crisis, dominant majorities in many countries were ill-prepared financially to weather a prolonged income shock. In 2018, for example, over two-thirds of adults in Kenya, Vietnam, Greece, Chile, Colombia and Bangladesh reported they would not be able to cover basic needs for 3 months in the event they lost their incomes using just their savings or sales of assets (Figure 1).

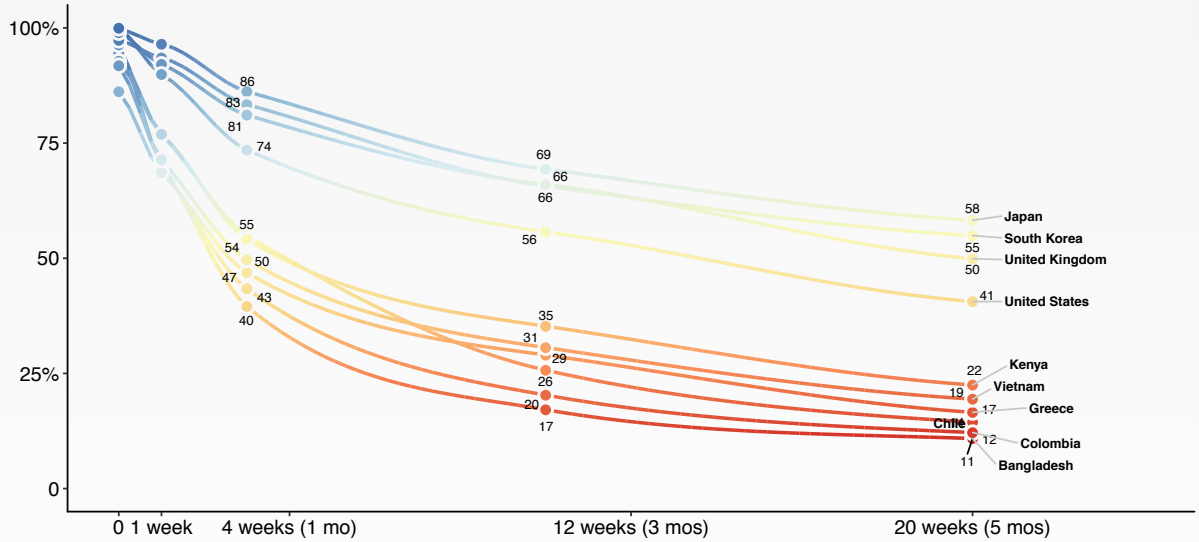
In addition to very limited liquid financial assets, many of the world's 2 billion informal workers in the "missing middle" of social protection faced the oncoming crisis without access to either employment-linked social insurance or social assistance programs like cash transfers (Alfers and Moussié, 2020). And as economies have slowed down, many sources of emergency liquidity available to people around the world – such as social network remittances, supplementing income through casual or gig work, small-business revenue or shop-keeper credit – are drying up. Reckoning with widespread job and income loss and the limitations of existing social protection programs, governments in 200 countries have announced over 1,000 measures to provide relief and economic support to their citizens (ILO, 2020) at an estimated cost nearing USD 600 billion globally (or 0.6 percent of global GDP) (Gentilini *et al.*, 2020).

This paper uses nationally representative 2014 and 2017 data from 144 economies worldwide to examine the ability of adult populations to withstand a moderate and unexpected financial disruption. Specifically, the paper examines the association of individual and country level factors with financial resilience, defined as people's self-reported ability to access funds for an emergency within one month. Three inter-connected questions are addressed: (1) Which economies do particularly well or poorly in supporting financial resilience? (2) is access to formal financial services for low income adults associated with financial resilience? and (3) which financial behaviors are associated with financial resilience? This paper begins with an overview of the concept of financial health and its measurement, and then discusses the data used for the analysis. It next reviews patterns in the prevalence of financial resilience globally, presents results from the analysis and concludes with a discussion of the results.

Figure 1.

For how long would adults be able to cover all basic needs using savings or asset sales in the event they lost their income?

The percent of the adult (18+) population financially 'surviving' at time t (in weeks).



Source: Author's calculations based on Gallup Financial Health survey. Notes: Survey responses referencing a time range have been positioned in continuous survival time as follows: No savings or things to sell = 0 weeks, 1 week or less = 1 week, 1 to 4 weeks = 3 weeks, 1 to 3 months = 10 weeks, 4 to 6 months = 20 weeks. The value on the y–axis represent the cumulative share of adults saying they could cover expenses at time t (in weeks) after an income shock.

An overview of financial health and its measurement

Financial health is an emerging topic of research, advocacy and practice that aims to understand, measure and ultimately improve the part of well-being that is associated with financial life[1]. Financial health is an intuitive concept. Metaphors that describe our experience with money management are common. For example, people "hang by a thread", are only "one paycheck away from disaster", "spend money like water" or are "drowning in debt" (**Box 1**). Tangible manifestations or markers of 'good' or 'bad' states of financial health are familiar. Positive markers might include paying bills on time or safeguarding funds for a dedicated purpose[2]. Negative markers might include an occasional late rent or credit card payment, but more severe manifestations such as skipping or lowering the quality of meals, defaulting on a loan, eviction, foregoing medical care, underinvesting in farm inputs or skills, or having a child sent home from school due to unpaid school fees[3], have much more consequential individual and societal repercussions and potentially signal wrongdoing by the financial sector.

Manifestations of financial health are also psychological. The ease or difficulty of meeting current or future financial obligations, needs or goals through finance can express as depression, stress or anxiety at one end of the spectrum, and a sense of optimism, security and control at the other end. Research has established links between consumer debt on psychological health and newer studies are finding evidence that debt is a socioeconomic risk factor for disease, such as high blood pressure and obesity (Richardson et al., 2013). The literature on subjective well-being has also found direct and mediating links between satisfaction in the domain of finances and overall life satisfaction (Plagnol, 2011; Brzozowski & Visano, 2019).

Box 1. Financial health in culture and language

"From the produce, Wang Lung in this good year had a handful of silver dollars over and above what they needed and these he was fearful of keeping in his belt or of telling any except the woman what he had. They plotted where to keep the silver and at last the woman cleverly dug a small hole in the inner wall of their room behind the bed and into this Wang Lung thrust the silver and with a clod of earth she covered the hole, and it was as though there was nothing there. But to both Wang and O-lan it gave a sense of secret richness and reserve. Wang Lung was conscious that he had money more than he need spend, and when he walked among his fellows, he walked at ease with himself and with all."
– Excerpt from "The Good Earth" by Pearl S. Buck

"When you have money, your wife respects you, your children respect you. When you don't have money, in my language, you smell. People don't want to see you. When you have money, everything is moving one way. You are nice, you smell good. The family is smiling and when friends call you can give them help."
– Nyongesa, Kenyan farmer featured in "The Human account" project

"Personally, I just want to not be scared to look at my bank account. I don't think I've looked at my bank account in years to be honest. It just terrifies me, I'm not sure why..."
– Katie interviewed by Michael Lewis in "Against the Rules" Podcast, The Invisible coach episode.

1. Development of the concept, measurement and applications of "financial health" were an outgrowth of efforts in consumer finance, financial inclusion and financial education in the United States. The Financial Health Network (formerly Center for Financial Services Innovation) and the Consumer Financial Protection Bureau (CFPB) were two of the early organizations that refined the concept of financial health and well-being. Global measurement and applications of financial health measurement are becoming more common. The Bill & Melinda Gates Foundation (BMGF), for example, has funded three exploratory studies focused on financial health, the first - conducted by the Center for Financial Inclusion, the Financial Health Network (CFSI) and Dalberg in 2016-17- was a qualitative study that explored how low income individuals in developing countries understand the concept and advanced a conceptual framework (https://www.centerforfinancialinclusion.org/beyond-financial-inclusion-financial-health-as-a-global-framework). The second – conducted by Dalberg and Rockefeller Philanthropy Advisors - developed a customer segmentation framework to understand people's financial lives in 6 countries (https://www.thehumanaccount.com), and the third, being implemented by Innovations for Poverty Action (IPA) is identifying how financial health can best be measured through household surveys in developing countries (https://www.poverty-action.org/study/measuring-global-financial-health). Annex 8 summarizes some of the financial health measurement initiatives that have been conducted to date.
2. For example, one of the Kenya financial diaries respondents had a nailed-shut wooden box at home where he deposits his coins at the end of the day. He had written on the box "Brian's Bank", money he's saving for clothes and treats for his son. https://fsdkenya.org/focus-note/finance-fortune-4/
3. For example, in the 2012-13 Kenya Financial Diaries study, 57 percent of families over the course of the year had their children sent home from school due to arrears in school fee payments at least once (Zollman, 2014).

Financial health is related to- but broader in scope than- the poverty reduction goal that motivates much donor financing for financial inclusion interventions globally. For example, improving people's ability to make livelihood investments through easier or more affordable access to loans in the presence of credit-market constraints can support the income growth or diversification that enables people to exit poverty. But improving people's ability to cope with adverse shocks so that they don't have to reduce spending on basic needs or resort to coping strategies that undermine long-term well-being, for example, connects to a wider set of policies (e.g. social insurance), sectors (e.g. health care, agriculture) and population segments (the vulnerable non-poor).

Wealth – the economic capital over which people can exercise ownership rights – is another economic concept that closely overlaps with financial health. A comprehensive valuation of a household's real and financial assets at a given point in time can enable the construction of measures – such as the ratio of debt to assets or net disposable income - that relate to financial resilience. National-level wealth indicators for the household sector as an aggregate can be obtained through the system of national accounts and is readily available for OECD countries[4]. In 2013, the OECD released a set of guidelines for the production of wealth measures based on microdata (household surveys or tax and administrative records) and in 2015 released the OECD Wealth Distribution database based on these guidelines (Murtin and Mira d'Ercole, 2015). While wealth and its components might be viewed as an ideal base on which to establish measures of financial health, in practice, data of this nature is difficult to collect. And in settings where social capital, collective ownership of assets or informal sources of income and finance play an important role in financial life, monetary wealth measures may only incompletely capture a person or family's financial health status[5].

Although financial health is gaining attention from policymakers, established financial service providers and startups within an emerging "fin-health" tech ecosystem[6], there aren't yet well-established terminologies, conceptual frameworks and measurement methodologies. For example, a range of terms are used in the literature and among practitioners that refer to different facets of people's experience with money and finance, such as financial *security, strain, stress, control, satisfaction, well-being, resilience* or *perceived income adequacy*. Existing methodologies used to measure financial health vary in their emphasis on people's objective behaviors, financial outcomes or subjective feelings and perceptions. Nonetheless, approaches among practitioners lean less towards perceptions and more towards actual behaviors, experiences or outcomes and definitions converge on a few common elements, primarily that financial health is evident when people have a demonstrated ability to manage money for the following ends: (1) meeting ongoing financial obligations and consumption needs, (2) absorbing and recovering from shocks and (3) fulfilling longer-term goals (Rhyne, 2020).

To the degree that financial health is conceived as a 'state-of-being' at a given point in time with people falling somewhere on a spectrum between being *unable* to smooth consumption (across time and risk states) and to fulfill goals to being *fully* able to do so, the challenge of measuring financial health across a wide range of contexts is in reliably assigning where a person or household falls on that spectrum at a given point in time[7]. Existing financial health measurement instruments vary from single questions which assign a binary state (presence or absence of financial health) to a battery of questions that are combined to create an index that scores people on a continuum (Rhyne, 2020a). In some cases, one or more thresholds are then applied to assign individuals into categories of financial health such as "vulnerable", "coping" and "healthy"[8].

4. This data can be accessed through the OECD statistics dissemination platform: https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE720R.
5. In several countries, in-depth "Financial diaries" studies pioneered by Stuart Rutherford and David Hulme have been conducted that have, as a part of their data collection protocols, captured high frequency data on balances and flows for a comprehensive set of real and financial assets owned by low-income households. These studies have been instrumental in shedding light on how low-income families manage their money: https://bfaglobal.com/our-work/financial-diaries/.
6. See for example "Financial Health: There's an app for that": https://medium.com/datadriveninvestor/financial-health-theres-an-app-for-that-9b62343a9057
7. Based on first principles, desirable properties of financial health measures might include the following: (1) A person who experiences negative (positive) financial outcomes more frequently in a given time period should have a lower (higher) level of financial health, all else equal. (2) A person who experiences more severe negative (positive) financial outcomes in a given time period should have a lower (higher) level of financial health, all else equal.
8. This categorization was used in the Financial Health Network's (formerly CFSI) landmark 2015 report "Understanding and Improving Consumer Financial Health in America" (CFSI, 2015).

One common 'single-question' approach focuses on measuring a person's ability to finance the costs of an unexpected shock and is usually captured by asking people whether they would be able to access a lump sum in the event of an emergency. For example, in its survey of household economics and decision-making (SHED) the US Federal Reserve asks adults whether they could cover a USD 400 emergency expense using cash, savings or a credit card paid off at the next statement (Federal Reserve, 2019). However, as most definitions of financial health encompass more than just the ability to cope with risk, these measures offer only a partial perspective on financial health status[9].

Existing financial health measurement approaches vary in how they conceptualize the causal drivers or sources of financial health. One of the earliest, by the US Consumer Financial Protection Bureau (CFPB), identified financial well-being as resulting from two factors, opportunities and behaviors (CFPB, 2015). While the Center for Financial Services Innovation (CFSI, now the Financial Health Network) did not explicitly define a causal model in its first report on financial health in the US, they identify income and behaviors as key correlates of financial health (CFSI, 2015). In synthesizing existing evidence on the determinants of financial well-being in the United States, Melford (2020) highlights three factors: stable and sufficient income relative to cost of living (positive cash flow); effective money management and personal resources, including liquid savings and social safety nets (both public and private). In a study by CFSI and the Center for Financial Inclusion (CFI) that examined the concept of financial health in lower income countries, four key factors were identified: Income level, income and expense volatility, social network and financial role (status within the household)[10] (CFSI & CFI, 2017). Innovations for Poverty Action (IPA) highlights two inputs in its global financial health measurement framework: access to finance and behaviors (Brune et al, 2020). Drawing on prior research as well as their own qualitative research, Kempson and Finney (2017) identify the socio-economic environment and behaviors as the two most influential drivers of financial well-being. Rhyne (2020) builds on and refines this model, adding chance (shocks and opportunities) as a third element to the most immediate determinants of financial health.

These conceptual models have three common elements: (1) income, (2) factors of the broader environment (social, political and economic) that influence people's financial health outcomes through their effect on the resources available to them, including employment, social safety nets and social networks; and (3) financial behaviors that shape how available resources are used. These behaviors are often viewed as an outcome of knowledge and skills, personal traits and psychological factors (Kempson et al. 2017; CFPB, 2015; Rhyne 2020). Financial health efforts emerging from within the financial services industry are primarily focused on the gains in financial health that can be achieved through improvements in financial behaviors or tools and the corresponding measurement strategies reflect this[11]. The question of whether the most significant binding constraints to higher levels of financial health relate to aspects of the broader social or economic environment or the specific knowledge gaps and sets of behaviors or tools employed by individuals is a matter of debate and in need of greater evidence. The answer is likely to vary across countries and sub-national population groups defined by geographic, demographic and socio-economic characteristics.

Financial health can be viewed as a way of uniting existing concepts of economic welfare in a way that clarifies their role in determining the outcomes that people experience in the domains of meeting basic needs, resilience and growth (**Figure 2**). In this framing, financial health outcomes are most immediately influenced by five interdependent pillars:

- **Income:** Income includes what people can earn using their labor and capital plus transfer income and most directly affects how people finance current obligations.
- **Wealth:** The net financial and non-financial capital people own that enables them to finance large unexpected shocks, purchases and investments.
- **Social capital:** The networks of relationships people have based on trust and mutual support. These relationships are often tapped to cope with emergencies especially in lower income contexts where private wealth holdings are limited.

9. The team leading Innovation for Poverty Action's (IPA) measuring global financial health project argue that the ability to access funds for an unexpected need as a quantitative measure of financial health, is a direct proxy for these other dimensions of financial health (Brune et al., 2020).
10. In the CFSI and CFI globaly study, specific financial behaviors were part of the definition of financial health.
11. For example, research undertaken by the Consumer Financial Protection Bureau (CFPB) focuses on understanding the behaviors that support financial well-being, conditional on a certain level of opportunity (CFPB, 2015).

- **Policies and laws:** The universal or conditional safety nets and social insurance programs available to people, but also includes worker protections and benefits (such as paid sick leave, minimum wage laws and unionization), the design and coverage of the pension and tax system and other laws that influence how labor markets work and how much disposable income people have.

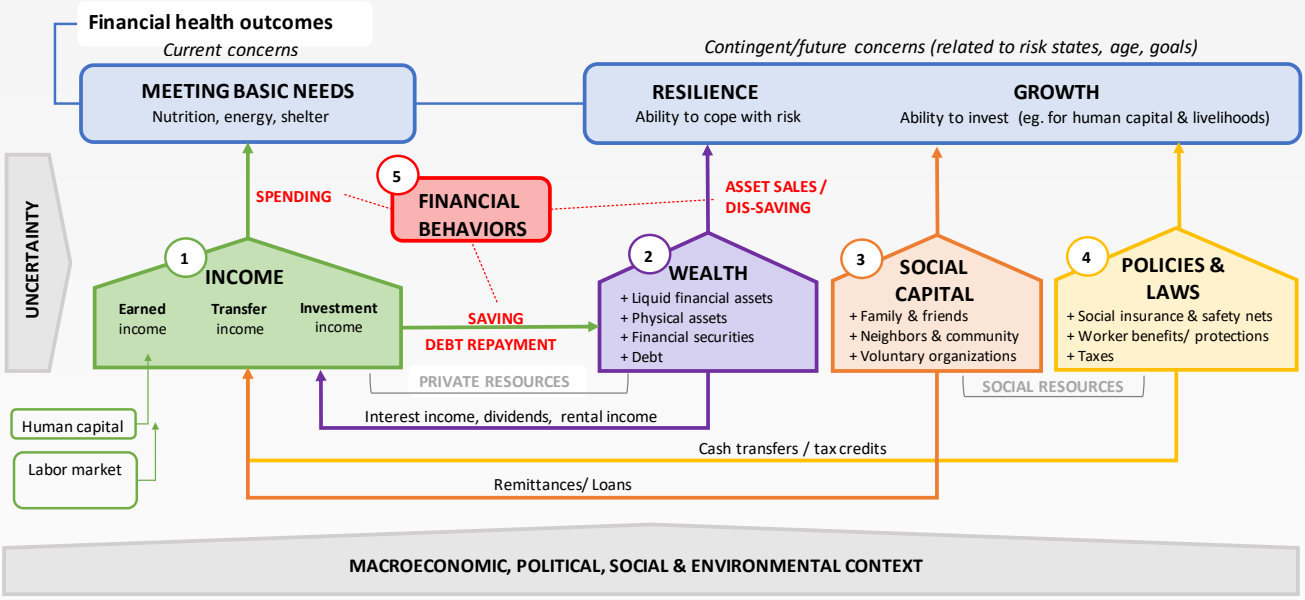
- **Financial behaviors:** Encompasses the planning, spending, borrowing, saving and investing behaviors that determine how current or future income is allocated to (and protected from) different uses and ultimately shaped into net wealth.

At the farthest end of the causal chain are elements of the macro-economic, political and social context, including uncertainty related to prices, climate and political outcomes, which creates volatility in the business and investment environment, people's incomes and cost of living.

Rather than being a core determinant of financial health, financial tools and services are viewed here as (1) moderating the relationship between financial (money management) behaviors and the personal or social resources available to individuals, and (2) defining the specific form that flows (transactions) and stocks of value take (e.g. an exchange of bank notes vs. a debit card swipe or storing cash under a mattress vs. storing cash digitally in a bank account).

Measures of financial health face at least two key hurdles that relate to their relevance as inputs for evidence-based policymaking generally and for financial sector development, specifically: Firstly, to what degree do financial health metrics convey information useful to policymakers beyond what can be gleaned from existing measures of economic welfare such as poverty status, income or consumption? Secondly, to what degree are measures of financial health sensitive to developments in the financial sector or to financial inclusion interventions? And if financial health measures are not particularly responsive to the differences in financial systems or changes within them over time, what are the policy areas that most closely intersect with financial health? What levers are available to policymakers or financial sector stakeholders interested in designing and implementing regulations or interventions to influence positive financial outcomes for people?

Figure 2. A conceptual framework to understand the determinants of financial health



Data

The analysis in this paper uses data from the nationally representative, multi-country, Global Findex survey program (Findex) conducted by the World Bank in partnership with Gallup since 2011. While the Findex collects a wide range of data on people's access to and usage of financial products and services, this paper focuses on a question from the latest two survey rounds that asks about people's ability to raise money for an emergency (**Box 2**). This question was asked to 138,651 adults (18+) in 142 economies in 2014 and to 146,801 adults in 144 economies in 2017[12]. The country sample sizes averaged 1,019 respondents (18 years of age and older) in 2017 and 976 in 2014. The largest sample is Morocco's (N =4,822, 2017) and the smallest is Haiti's (N=471, 2014). Given that Findex is focused on making cross-country comparisons, the dataset provides an opportunity to systematically examine the global variation and drivers of financial resilience[13].

Box 2. The Global Findex resilience question[14]

Now, imagine that you have an emergency and you need to pay [insert 1/20 of GNI per capita in local currency]. How possible is it that you could come up with [insert 1/20 of GNI per capita in local currency] within the NEXT MONTH?

What would be the main source of money that you would use to come up with [1/20th of GNI per capita in local currency] within the NEXT MONTH?

Converted to dollars, the emergency money (1/20th of GNI per capita) referenced in the Findex resilience question ranges from a low of 17 USD in Malawi to a high of 4,056 USD in Switzerland[15] in 2017. Compared to mean monthly household income or consumption per capita in purchasing power parity (PPP) terms from nationally representative household surveys, the emergency money ranges from a low of 0.27 months of income per capita in West Bank and Gaza to a high of 4.2 months of income per capita in Romania[16]. In 2017, the median emergency money was 1.6 months of typical monthly household spending per person, with 60 percent of countries falling in the range of 1.1 and 2.1 months.

Global patterns of financial resilience

In 2017, among the 144 economies where the Findex survey was implemented, the prevalence of financial resilience ranges from a low of 16 percent of adults (18 years of age and older) in Zambia to a high of 94 percent of adults in Norway (**Figure 3**). The median financial resilience prevalence in 2017 was 56.2 percent. Half of the economies surveyed had financial resilience prevalence between 45 and 75 percent. An estimated 2.9 billion adults worldwide were financially resilient in 2017[17].

While there is some variation in financial resilience across broad country income groups, the variation within income groups is substantial (**Figure 3**). In 2017, median financial resilience prevalence among low income countries (those with GNI per capita of between USD 260 and 742) was 44 percent compared to 73 percent among high income countries (those with GNI

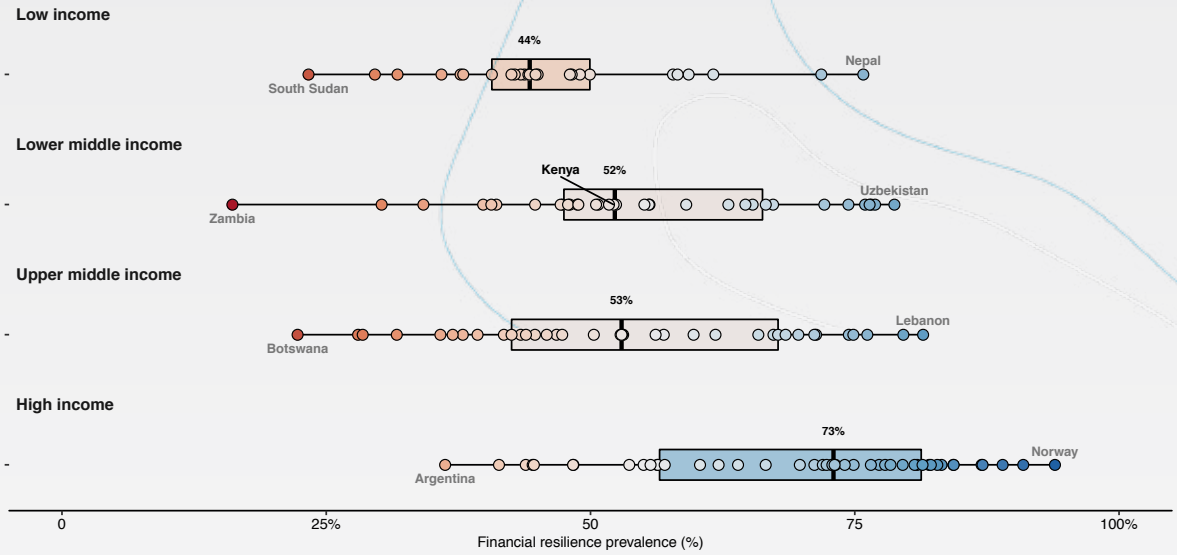
12. Eleven economies were surveyed in 2017 but not in 2014: Central African Republic, Islamic Republic of Iran, Lao PDR, Lesotho, Liberia, Libya, Morocco, Mozambique, Paraguay, South Sudan, Trinidad and Tobago. Nine economies were surveyed in 2014 but not in 2017: Angola, Belize, Bhutan, Burundi, Jamaica, Puerto Rico, Somalia, Sudan and the Republic of Yemen.
13. Throughout this paper, the term "financial resilience" is used as a shorthand for whether a survey respondent reports that it would be possible for them to raise 1/20 of their economy's GNI per capita in a month. The term "financial resilience prevalence" is used to denote the share of the adult population that meets this condition.
14. The Global Findex questions on financial resilience have been revised and expanded for the 2020 survey wave.
15. The GNI metric used here is the GNI per capita converted to USD dollars using the World Bank's Atlas Method.
16. Estimates of mean monthly household income (PPP) are obtained from the World Bank's Povcalnet database, accessed using the Povcalnet API, using the 2015 reference year. These estimates are obtained from nationally representative surveys that capture either income - or more commonly for low- and middle-income countries - consumption.
17. The absolute number of financially resilient adults (18+) was estimated as follows: $\Sigma_i^N FRP_i \times POP18UP_i$ where N = *total number of economies with data in 2017*, $FRPi$ = Financial Resilience Prevalence for economy i and $POP18UP_i$ = Population 18 and up for economy i. $POP18UP$ is estimated as $POP1564_i$- ($POP1519/5$) × 3 + $POP65UP$

per capita of between USD 11,040 and 104,560). There is essentially no difference in the median financial resilience of lower and upper middle-income countries (which was 52-53 percent in 2017) despite mean GNI per capita being three times higher in upper versus lower middle-income countries.

Figure 3. Financial resilience worldwide

The financial resilience of populations varies widely, even within aggregate income groups. For example, among high income countries, over 90 percent of adults in Norway report being able to secure emergency funds in 1 month, compared to 36 percent of adults in Argentina.

Percent of adults (18+) able to raise 1/20 of GNI per capita in 30 days by income group, 2017

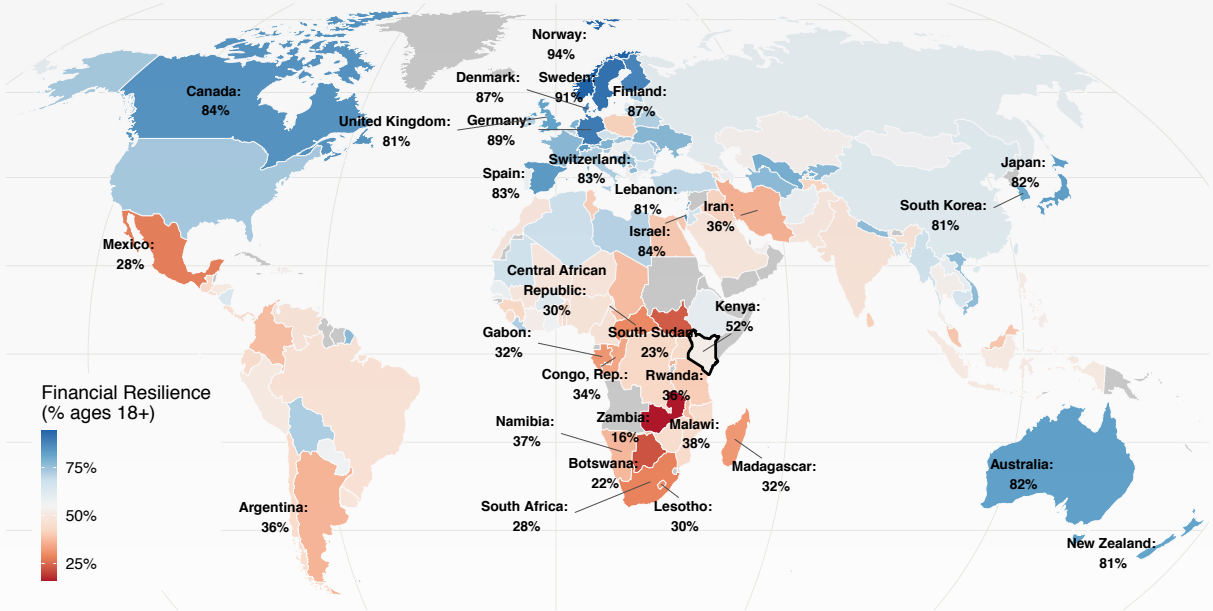


Source: Author's calculations based on World Bank Findex and aggregate income groupings. Notes: Each dot represents a single country. The edges of the horizontal bars represent the 25th and 75th percentile for each country income grouping. The median financial resilience prevalence is shown as a vertical line and is labeled.

Figure 4. Financial resilience by country

Financial resilience worldwide

Percent of adults (18+) able to raise 1/20 of GNI per capita in 30 days by country, 2017



Source: Author's calculations based on World Bank Findex. Countries below the 5th – and above the 95th percentile of financial resilience

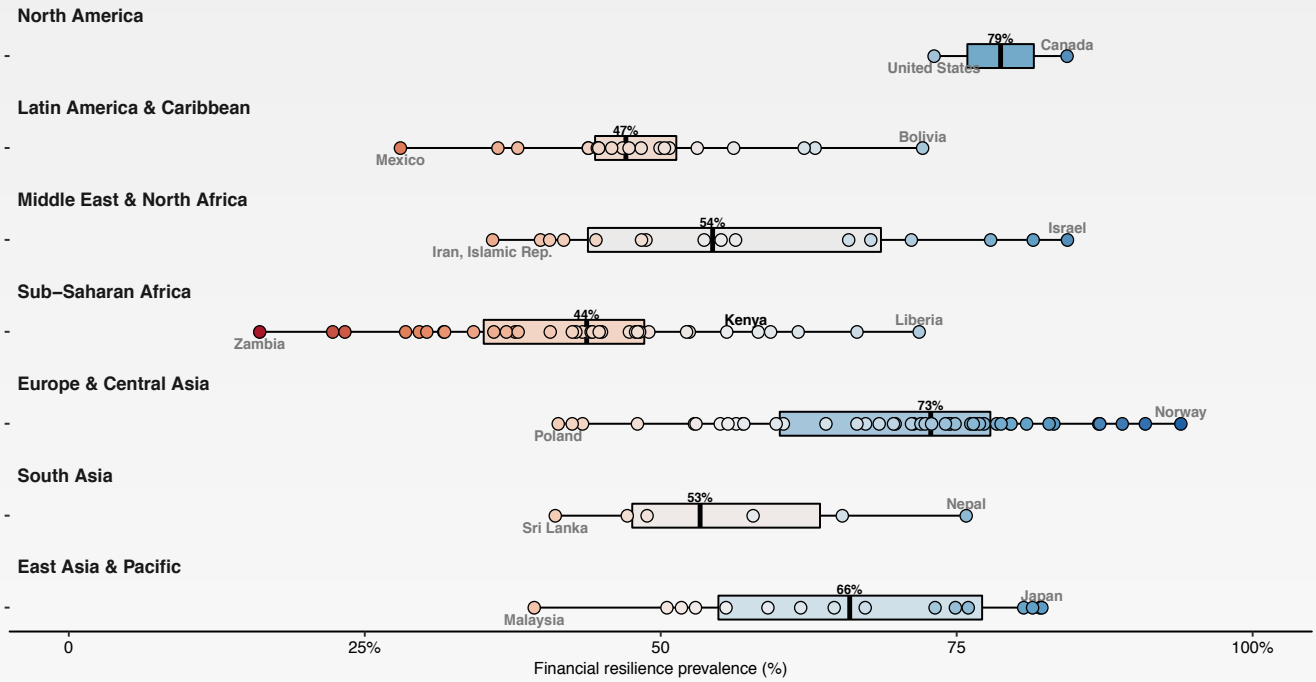
While the geographic distribution of financial resilience closely resembles the distribution of income per capita, there are some notable exceptions that are readily identifiable on the map in Figure 4, such as Bolivia in South America, Ethiopia in East Africa and Poland in Europe.

Among regions, Sub-Saharan Africa (SSA) and Latin America and the Caribbean (LAC) have the lowest median levels of financial resilience (44 and 47 percent in 2017, respectively) while North America (79 percent) and Europe & Central Asia (70 percent) have the highest median levels of financial resilience (**Figure 5**). The fact that LAC and SSA have similar levels of financial resilience despite LAC having nearly four times the mean GNI per capita in 2017 and financial sectors that are almost twice as developed on average, suggests the presence of regional factors (such as institutions, cultural norms, practices or market conditions) that either enhance financial heath in SSA, reduce financial health in LAC, or both[18].

Figure 5. Financial resilience by region

Countries in Sub–Saharan Africa and Latin America have the lowest financial resilience on average.

Percent of adults (18+) able to raise 1/20 of GNI per capita in 30 days by region, 2017



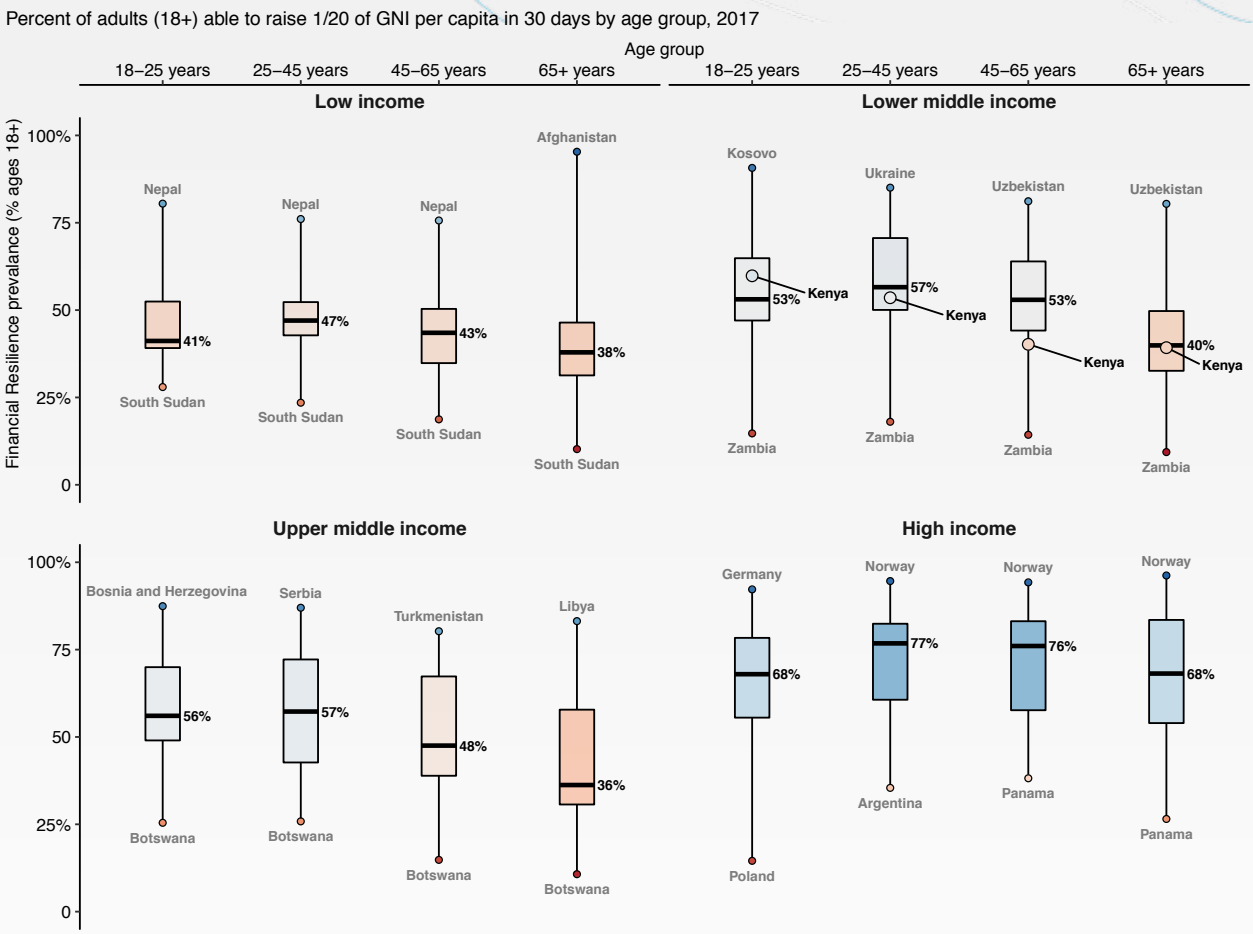
Source: Author's calculations based on World Bank Findex and aggregate regional groupings. Notes: Each dot represents a single country. The edges of the horizontal bars represent the 25th and 75th percentile for each region group. The median financial resilience prevalence is shown as a vertical line and is labeled.

18. The measure of financial sector development referenced here is the IMF's financial development index: https://www.imf.org/external/pubs/ft/wp/2016/wp1605.pdf

Given that populations across countries can have significantly different age structures (for example, the mean age of adult respondents in the Findex data ranges from a low of 33 years in Uganda to a high of 54 years in Japan), it is important to consider differences in financial health by age-groups. With the exception of high-income countries, financial resilience declines among older age-groups, in particular those over the age of 65 (retirement age) and most significantly in upper-middle income countries (**Figure 6**). The global median financial resilience prevalence for retirement age adults in 2017 was 45 percent, about 9 percentage points lower than the median for all adults (18+). In 4 out of 5 countries, retirement age adults were less financially resilient than prime working age adults in 2017. In some cases, the differences are substantial. For example, in Vietnam, Moldova, Bulgaria, Bolivia, Thailand, Indonesia, Hong Kong and China, retirement age adults are over 30 percentage points less resilient than the typical adult. In Kenya, retirement age adults are 14 percentage points less resilient than the prime-age prevalence.

Within countries, there are large differences in financial resilience associated with household income, and the size of those gaps varies substantially across countries (**Figure 7**). For example, the difference in financial resilience between the richest and poorest fifth of the population in China is 62 percentage points, while the difference in Luxembourg is 8 percentage points.

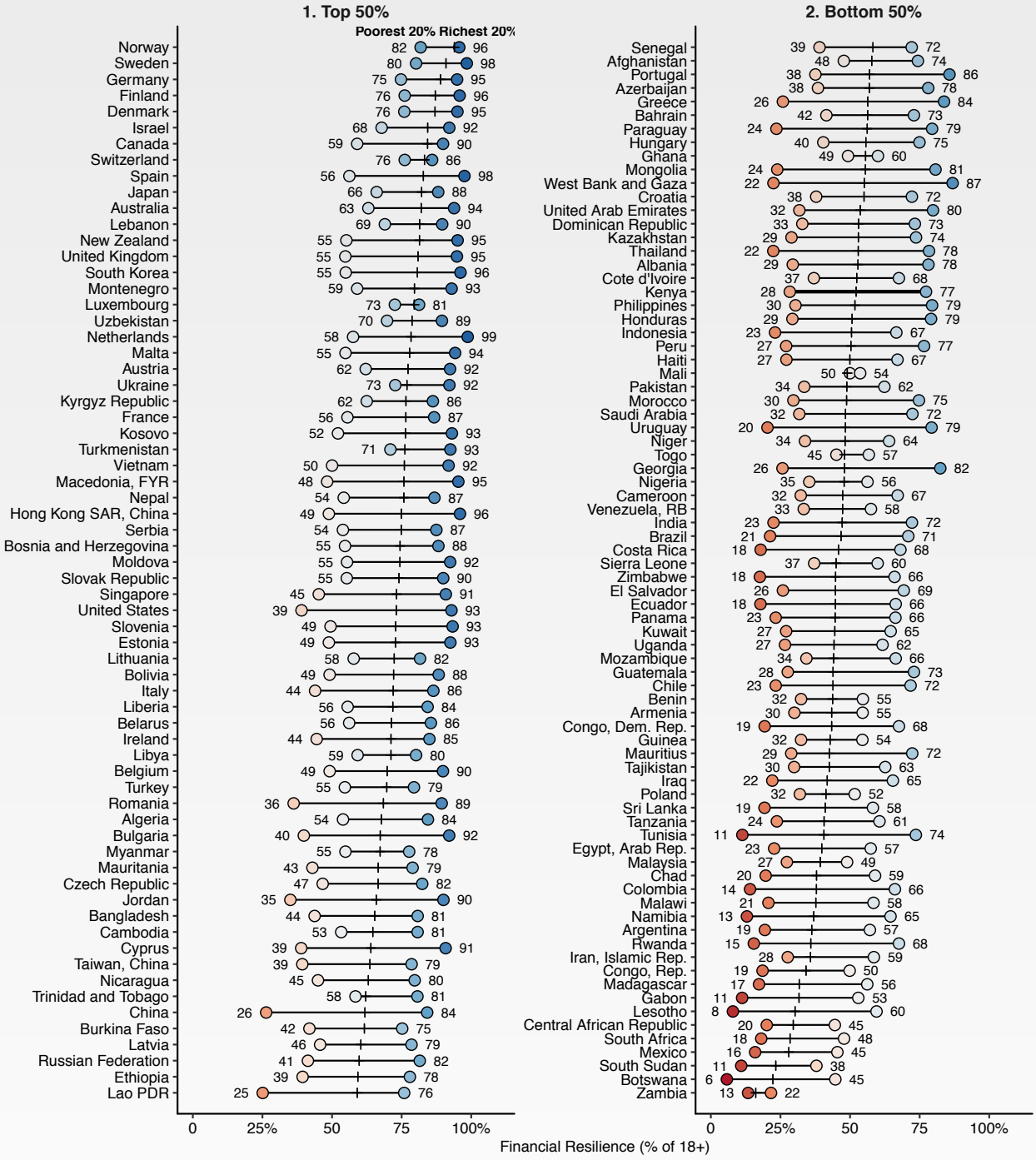
Figure 6. Financial resilience by age group & country income groups



Source: Author's calculations based on World Bank Findex. The edges of the horizontal bars represent the 25th and 75th percentile for each age and income grouping. The median financial resilience prevalence for each age and income group is shown as a horizontal line and is labeled.

Figure 7. Financial resilience by income group

Differences in financial resilience associated with within–country income

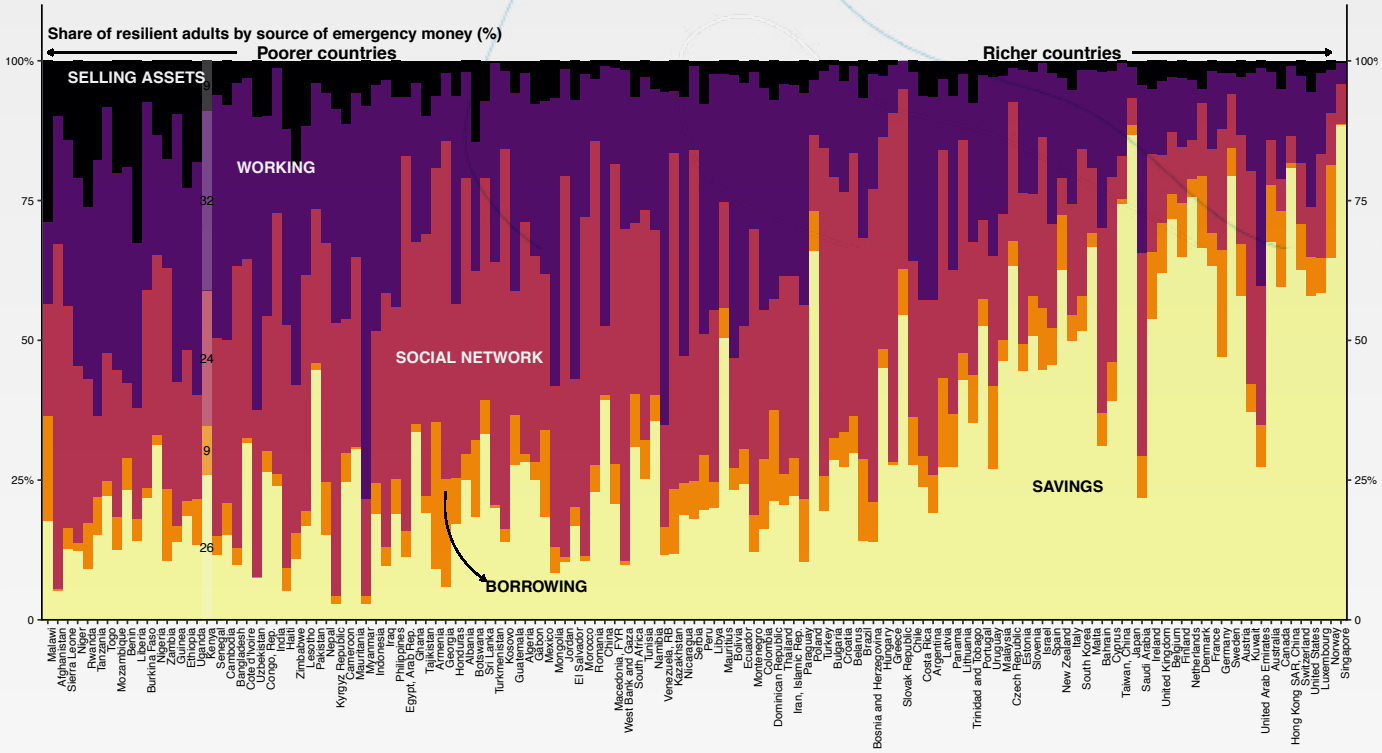


Source: Author's calculations based on World Bank Findex.

In a majority of countries worldwide working or tapping social networks are the two most common ways of raising funds for an unexpected emergency among adults who are financially resilient. Resilient adults in the lowest income countries rely in roughly equal shares on working, selling assets and raising funds from their social network for emergency money. At middle income levels, the importance of social networks rises, while at high income levels, personal savings is the predominant source of emergency money (**Figure 8**). With the exception of personal savings, the fragility of these coping mechanisms has become apparent in the aftermath of a large covariate shock like COVID-19[19].

Figure 8.

How do financially resilient individuals access emergency funds around the world?



Source: Author's calculations based on World Bank Findex

19. See for example Kenya COVID-19 diaries, in-depth case studies of how low-income Kenyans are coping during the COVID-19 crisis: https://fsdkenya.org/kenya-covid-19-diaries/.

Methods

A multi-level linear modeling approach is used to systematically assess the within- and between-country correlates or *drivers* of financial resilience. Using pooled observational Findex survey data from 2014 and 2017 from 144 economies, a logistic regression model for the probability that an adult reports that it would be possible to raise emergency money equivalent to 1/20th of GNI ($y_i = 1$) is fit given the adult's demographics and socio-economic characteristics X_i as well as country j[20]. The responses y_i are modeled as independent with $\Pr(y_i=1) = logit^{-1}(\alpha + X_i\beta)$. In different analyses, the intercept or a coefficient is allowed to vary as a random effect by country as α_j or β_j. All analyses include a year effect which is allowed to vary at the country level. In the figures, regression results are presented on the logit (log-odds) scale. To ease interpretation, model parameters are translated as predicted probabilities in the narrative, and the intercept in the regression model is deliberately constructed to represent the estimated probability of financial resilience for women, between the ages of 25 and 45, with at most a primary school education, who do not earn a salary or wage and who do not receive government assistance[21]. In the 2017 Findex, this reference population represents about 13 percent of adult women (ages 18+) in the 144 countries surveyed (18 percent in low income or middle-income countries but less than 1 percent in high income countries).

Table 1 provides an overview of the analyses explored in this paper. These analyses should be considered descriptive and exploratory. As this study uses observational cross-sectional survey data, findings that relate to causal questions of interest (such as the effect of financial inclusion on financial resilience) are meant to help provide starting points for deeper study and analysis, rather than establish clear cause and effect relationships.

Table 1.

Analysis	Policy question	Statistical question
1.	Which countries perform better or worse than expected in supporting financial resilience given the socio-economic composition of their populations?	In a multi-level regression model, by how much do country-effects modify the probability of financial resilience controlling for individual-level demographic and socio-economic factors?
2.	Which demographic and socio-economic characteristics are associated with financial resilience? How much do differences in financial resilience between men and women vary across countries?	What is the direction and size of the coefficients on individual-level predictors?
	What country-level factors help explain why some countries do well and others do poorly on financial resilience given demographics and socio-economic characteristics?	By how much do country-level predictors reduce the degree of error in country-level random effects?
3.	Is financial inclusion (narrowly defined as account ownership) associated with financial resilience?	Is account ownership among the poorest 40 percent of the population statistically associated with the probability of financial resilience, controlling for other factors?
	Are there countries where the association of financial inclusion with financial resilience is exceptionally high (or low)?	Is there statistical evidence that the association of account ownership with financial resilience varies across countries, controlling for other factors?
4.	Are financial behaviors (for example savings and borrowing) associated with financial resilience?	What is the direction and size of the coefficients on individual-level predictors related to financial behaviors?

20. Between 2014 and 2017, the response options in the Findex to the question "How possible is it that you could come up with [insert 1/20 of GNI per capita in local currency] within the NEXT MONTH?" changed from a set of five possible answers: [1. Very Possible, 2. Somewhat Possible, 3. Not very possible, 4. Not at all possible] to a set of two possible answers [1. Possible and 2. Not possible]. For consistency across years, the response options were harmonized so that the 2014 answers [Very possible] and [Somewhat possible] were recoded to possible.

21. Specifically, the intercept is interpreted as the estimated probability when it is converted to the probability scale using the inverse logit function.

Results

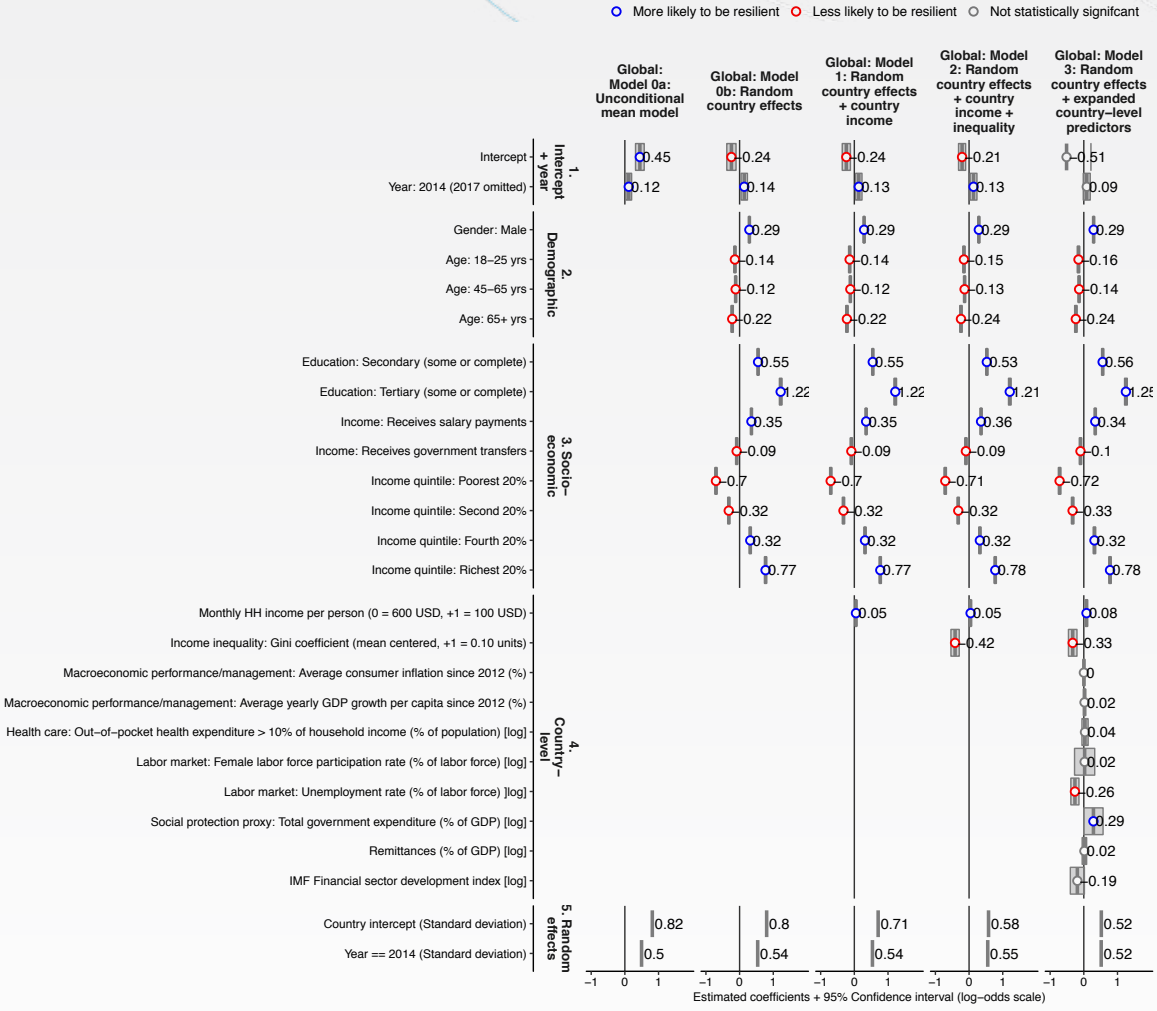
Demographics, socio-economic factors and financial resilience

The vast majority of observed differences in financial resilience globally are due to differences between adults *within* countries. Approximately 17 percent of the global variation in financial resilience is explained by differences *between* countries (adjusting for year effects)[22]. In 2017, the unconditional probability that an adult chosen at random from the global population was financially resilient was 61 percent. The typical country-to-country variation in the probability of financial resilience for an adult was around +/- 21 percentage points (**Model 0a, Figure 9**).

Men, adults between the ages of 25-45 years, adults with post-primary schooling or adults who receive salary or wages from an employer are more likely to be financially resilient, holding other measured factors constant (**Model 0b, Figure 9**). The association between income and education with financial

Figure 9.

Changes in the log–odds of financial resilience associated with individual and country–level factors, global



Source: Author's calculations based on 2014 and 2017 World Bank Findex.

22. This is the intra-class correlation coefficient (ICC) calculated using the following approximation for logistic regression: $ICC = (var(\alpha_{0j}))/(var(\alpha_{0j}) + var(\pi^{2/3}))$. By comparison, the ICC estimated using a linear probability model is 12.1 percent.

resilience is particularly strong. For example, the predicted probability of financial resilience for a woman with primary education in a young working age (25-45 years) and belonging to a household in the middle 20 percent of the national income distribution is 44 percent (the probability for men with the same profile is 51 percent)[23]. If her household's earnings placed her in the bottom income quintile, her chances of financial resilience fall to 28 percent and if her household's earnings were in the top income quintile, her chances rise to 62 percent. If rather than having a primary school education, she had some or complete tertiary education – all else equal - her chances of being financial resilience rise to 73 percent.

A country's average household income per capita helps explain some of the differences in financial resilience across countries after controlling for demographics and socio-economic factors, but not much (**Model 1, Figure 9**) [24]. For example, if a member of the reference population lived in a country where households earned USD 100 more per month per person, her predicted probability of financial resilience would rise to 45 percent (from 44 percent). Controlling for differences in individual factors and average household income, the typical variation in the probability of financial resilience across countries is around +/- 17.6 percentage points.

Using parameter estimates from **Model 1** (**Figure 9**), Figure 10 shows for each country the estimated probability that a survey respondent is financially resilient in 2017, as a function of their demographics and socio-economic profile (age, education and income quintile), adjusting for average country-level household monthly income. The typical range in the estimated probability of financial resilience for adults within a country is 50 percentage points. In Portugal, for example, there are adults with estimated probabilities of being financially resilient of as low as 37 percent and as high as 87 percent. **Figure 11** shows the estimated country-coefficients (α_j) from Model 1 and their 95 percent confidence intervals against country-level average monthly household income and **Figure 12** shows the country-coefficients on a map. The differences among country-coefficients in this figure represent variation that is not accounted for by differences in the demographic or socio-economic characteristics of populations within countries.

Countries ranking at the top and bottom 10 percent of the distribution of the estimated country effects (α_j) for 2017 are highlighted in Figures 10 and 11. These are countries where levels of financial resilience are much higher or lower than expected given their average income levels and the demographic and socio-economic characteristics of their adult populations. Setting aside for now possible explanations, the countries that perform far better than expected include high income countries like Norway, Finland, Denmark, Sweden, Germany, New Zealand and Spain, but also low- and middle- income countries from a range of regions like Kosovo, Lebanon, Nepal, Liberia, Vietnam, Myanmar or Uzbekistan. The countries that perform much worse than expected include South Africa, Malaysia, Poland, and a number of countries in South America (Mexico, Colombia and Argentina) and the middle east (Saudi Arabia, United Arab Emirates and Kuwait). To illustrate these differences, take for example two countries with monthly household income per capita near the global median, Mexico (USD 301) and Vietnam (USD 271)[25]. The chance that a member of the reference population (women with primary education, between 25 and 45 years of age and whose households earn in the middle of the national income distribution) is financially resilient is 13.6 percent in Mexico and 66 percent in Vietnam.

Among high-income countries, one clear distinguishing factor for countries that produce exceptionally high rates of financial resilience is the use of savings as a coping strategy (**Figure 13**). Of the countries that rank in the top 15 percent of the global distribution of the estimated country effects (α_j), 8 are HICs. Financially resilient adults in these economies are significantly more likely to use savings as a source of emergency money than what is typical for financially resilient adults in other HICs. Thirteen LMIC economies rank in the top 15 percent of the estimated country effects. There is a less clear distinguishing factor among this group, but financially resilient adults in these economies are either more likely to use their social networks or draw on labor income in an emergency than what is typical among other LMICs. With over 70 percent of its adults reporting they would address an emergency using labor income, Vietnam stands out among this group.

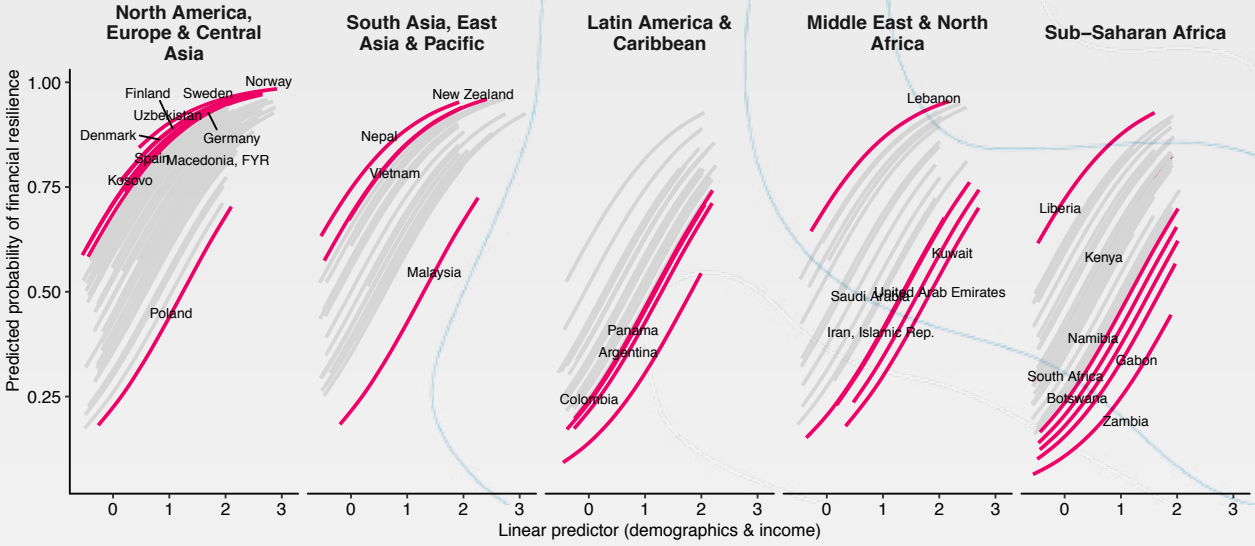
23. The estimated probability of 44 percent corresponds to the inverse logit of the intercept in Model 0b: $logit^{-1}(-0.25)=0.437$

24. Adding average monthly household income per person as a country-level predictor reduces the standard deviation of the country-errors from 0.8 to 0.71.

25. Based on latest available household survey data from the World Bank's povcalnet data repository, the global median monthly household income per capita is USD 307.

Figure 10.

Predicted probabilities of financial resilience as a function of individual–level factors, by country

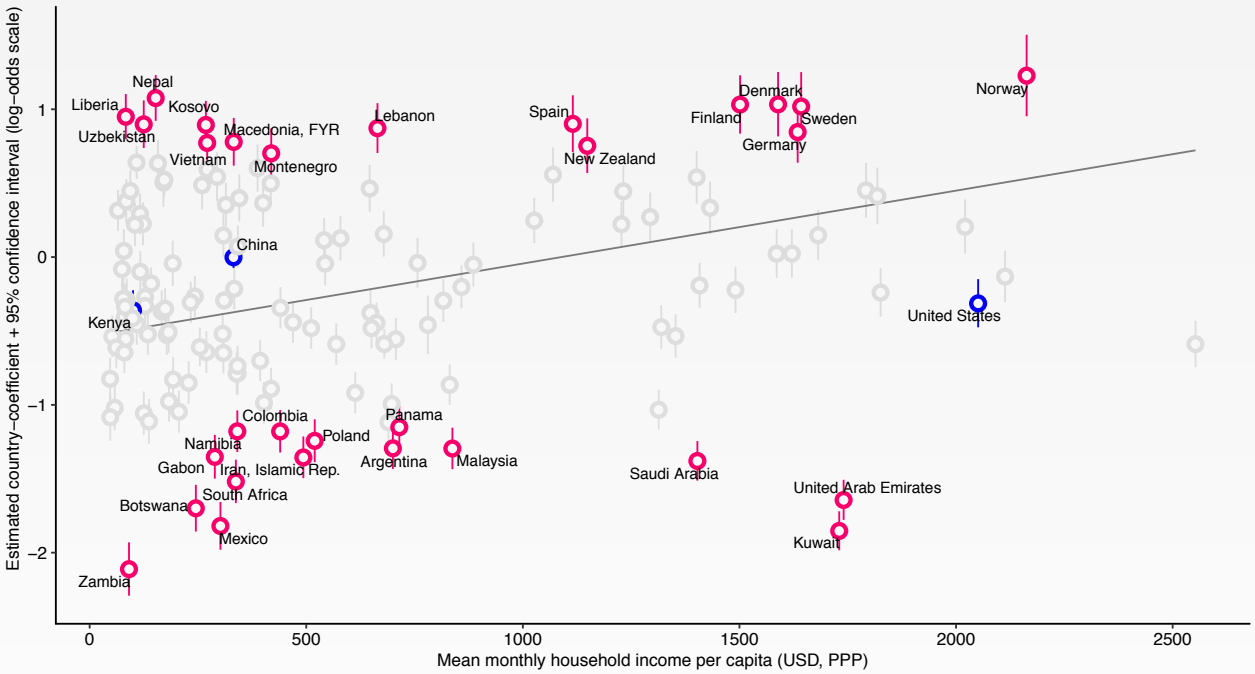


Source: Author's calculations based on 2014 and 2017 World Bank Findex. Notes: Countries whose random effect ranks in the top and bottom 10% of the global distribution are highlighted.

Figure 11.

Average household income does a poor job of predicting whether countries do better or worse than expected on financial resilience controlling for demographic and socio–economic factors.

Country random effects versus mean monthly household income per capita.

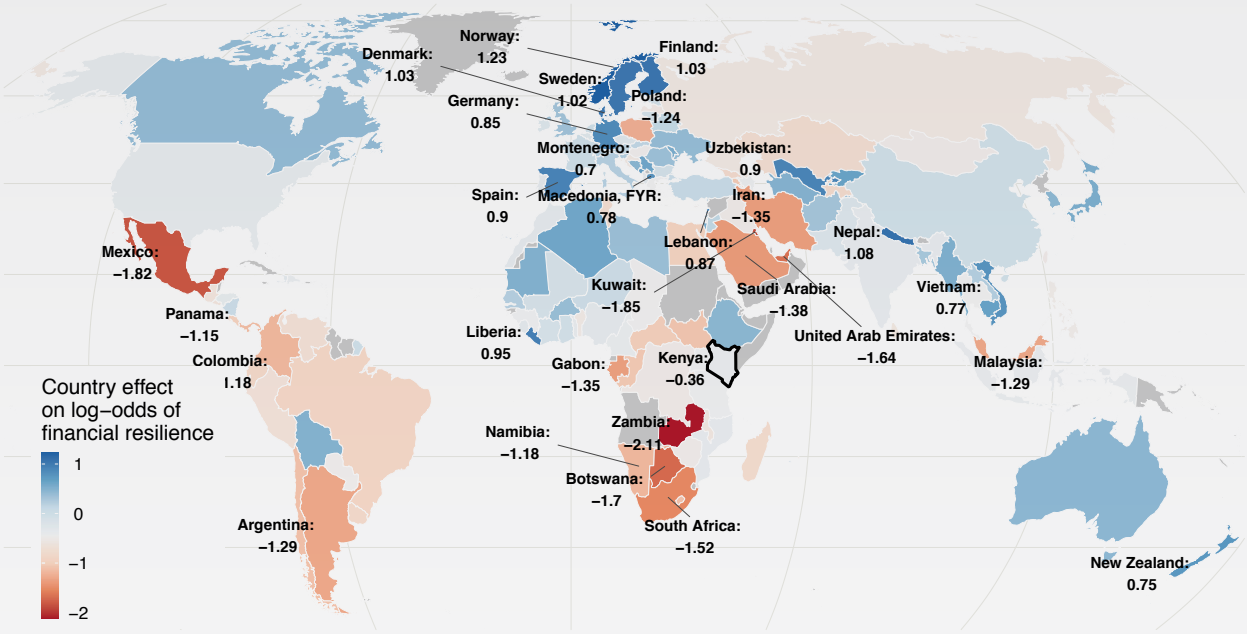


Source: Author's calculations based on 2014 and 2017 World Bank Findex. Notes: These estimates correspond to a multi–level logistic regression (Model 1, Figure 7). Countries whose random effect ranks in the top and bottom 10% of the global distribution are highlighted in pink. Kenya, the United States and China are labeled for reference. The country–level regression line is shown.

Figure 12.

Country performance in supporting financial resilience given the socio–economic and demographic composition of their population.

Estimated country random effects from multi–level regression model that controls for gender, age, educational attainment and household income quintiles.

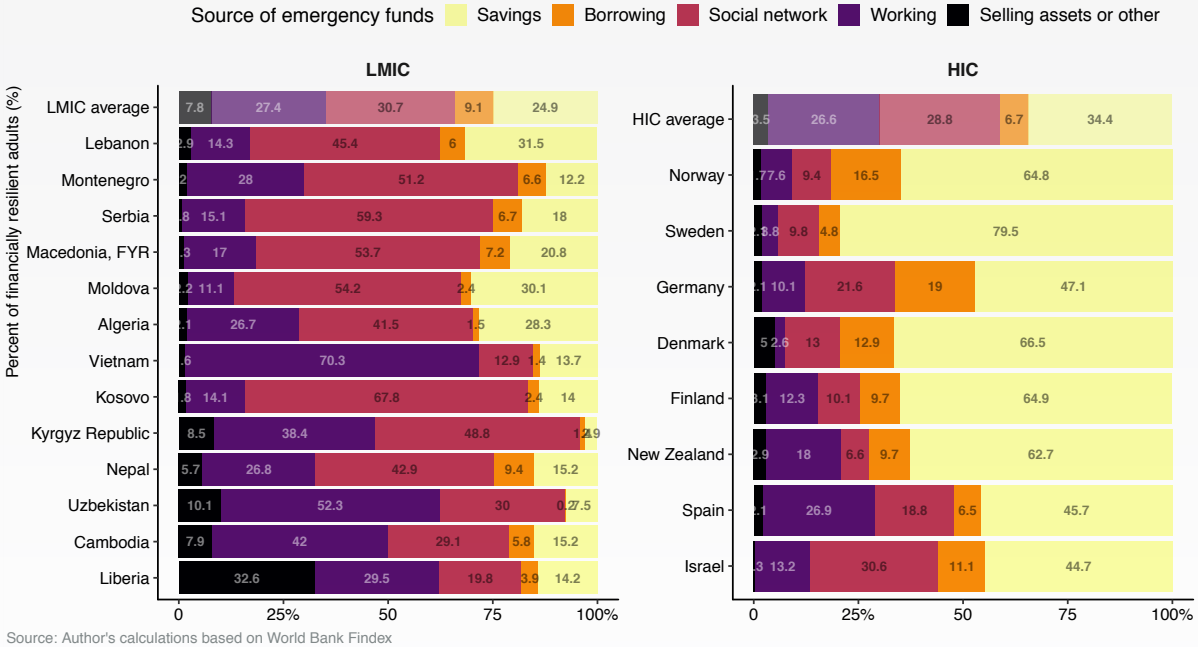


Source: Author's calculations based on World Bank Findex. Countries ranking in the 10th – and above the 90th percentile of country effects are labeled.

Figure 13.

How do financially resilient individuals in high performing countries access emergency funds?

The share of financially resilient adults by how they would raise emergency money, 2017.



Source: Author's calculations based on World Bank Findex

Controlling for individual level socio-economic factors and country income, region-to-region differences in the probability of financial resilience are around +/- 6 percentage points. Adults with the same socio-economic profile have the greatest chance of financial health in South Asia, East Asia or the Pacific and the lowest chance of financial health in Latin America and the Caribbean (LAC). For example, a woman in the reference population has a 37 percent chance of being financially resilient in LAC and a nearly 50 percent chance of being financially resilient in South Asia, East Asia or the Pacific.

While average household income in a country has relatively little impact on the probability of being financially resilient, the influence of a country's Gini coefficient (a measure of income inequality) is much larger (**Model 2, Figure 9)**. For example, a member of the reference population living in a country with an average monthly household income of around USD 600 (PPP) per person and a Gini coefficient of 0.38 (China's level of inequality) has an approximately 45 percent chance of being financially resilient. If she lived in a country with the same average income, but where inequality was 0.48 (Guatemala's level of inequality), her chances fall to 35 percent. That income inequality is strongly correlated with financial resilience is partly a reflection of how the financial resilience measure is constructed (see discussion in **Annex 4**).

Together, income inequality and average household income, reduce the country-effect (α_j) standard deviations from 0.8 to 0.58 (**Model 2, Figure 9**). Other country-level factors that help explain the variation in financial resilience between countries globally after controlling for differences in the demographic and socio-economic profiles of their populations, include the unemployment rate, government spending and the level of financial sector development (**Model 3, Figure 9**)[26]. A 1 percent increase in the unemployment rate is associated with a decline in the log-odds of financial resilience of -0.26 (approximately 6 percentage points on the probability scale), a 1 percent increase in total government spending is associated with an increase in the log-odds of financial resilience of 0.28 (approximately 7 percentage points on the probability scale) and a 1 percent increase in the IMF's financial sector development index is associated with a decrease in the log-odds of financial resilience of 0.21 (approximately 5 percentage points on the probability scale)[27].

These models were run separately for high- (HIC) and low and middle (LMIC) – income countries (**Figure 1, Annex 6**) and for major LMIC regions: LAC, SSA, South and East Asia, and MENA (**Figure 2, Annex 6**). The results are mostly consistent, but there are a few differences. For example, in HICs, retirement age adults are more likely to be financially resilient than prime-working age adults. Among LMICs, income from the sale of agricultural products and social network transfers are associated with increased financial resilience at nearly the same order of magnitude as having wage or salary income from employment. The influence of social network transfers and income from salary or wages on financial resilience is particularly large in SSA. For example, a woman in the reference population in SSA has about a 22 percent chance of being financially resilient, but if she receives income support from her social network, her chances rise to 31 percent, holding other factors constant and if she receives salary income on top of that, her chances rise another 10 percentage points to 42 percent.

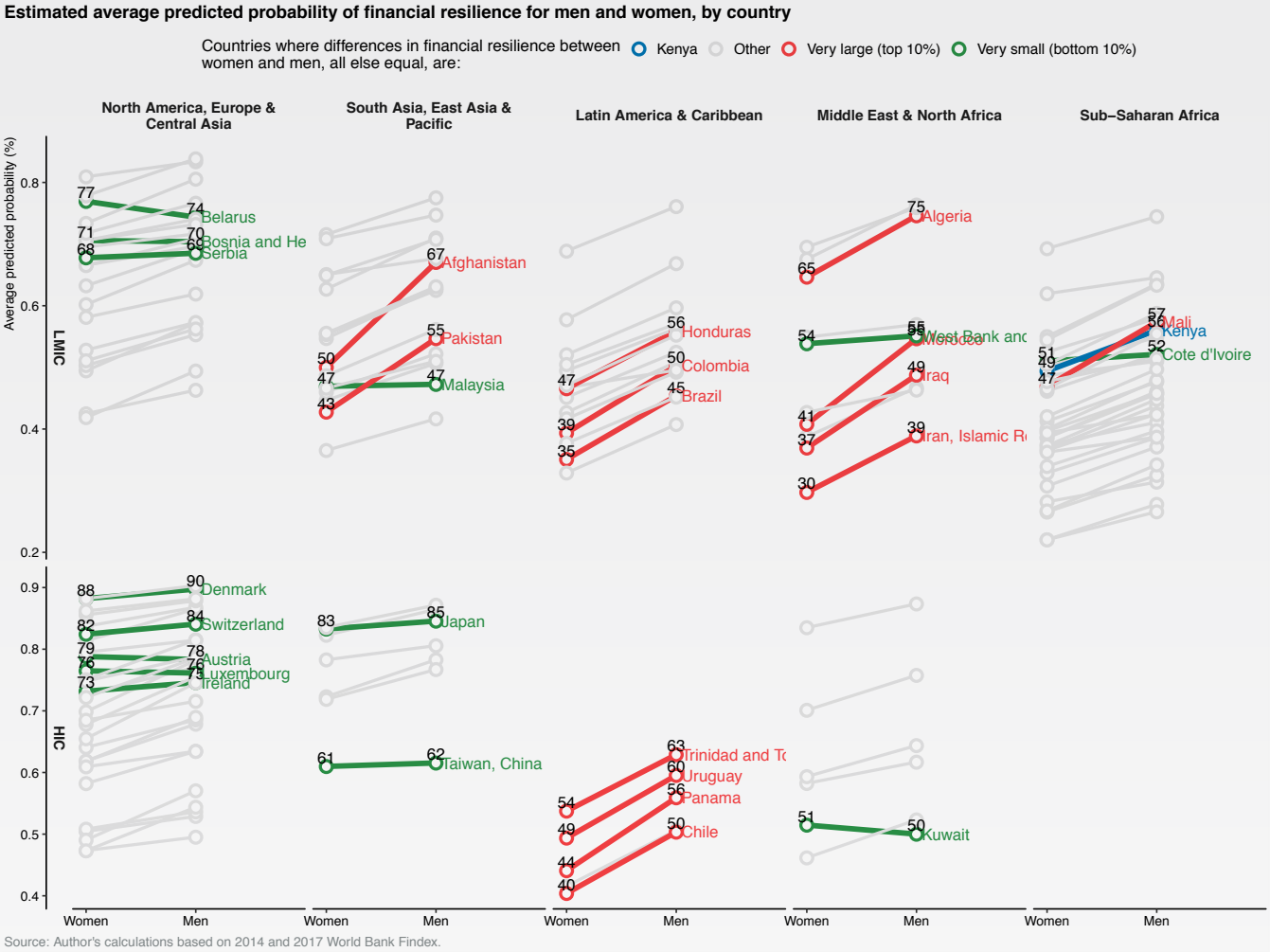
Among HICs, government spending is more strongly associated with financial resilience than among LMICs. Among HICs, a 1 percent increase in total government spending as a share of GDP is associated with an increase in the probability of financial resilience of approximately 25 percentage points. Although not statistically significant at the 95 percent level, the effect of the female labor force participation rate on the likelihood of financial resilience among HICs is nearly as large as the effect of additional government spending, on average.

On average, women are around 7 percentage points less likely to be financially resilient than men, holding age, education and income constant. However, this global average masks considerable differences across regions and countries. The average difference in the log-odds of financial resilience between men and women, holding age, education and household income quintile constant, is nearly twice as large in LAC and

26. Adding the full-set of country-level predictors reduces the standard deviation of the country random effects from 0.58 (in the model with only measures of country-level income and inequality) to 0.52. Annex 3 lists the full-set of country-level factors considered for this analysis. There is a trade-off between including more predictors at the country level and smaller sample size given the low coverage of certain indicators.

27. While not significant at the 95% level, total government spending as a share of GDP and the IMF's financial sector development index are significant at the 94% level (in other words the chance of a false positive result is less than 6%).

Figure 14.



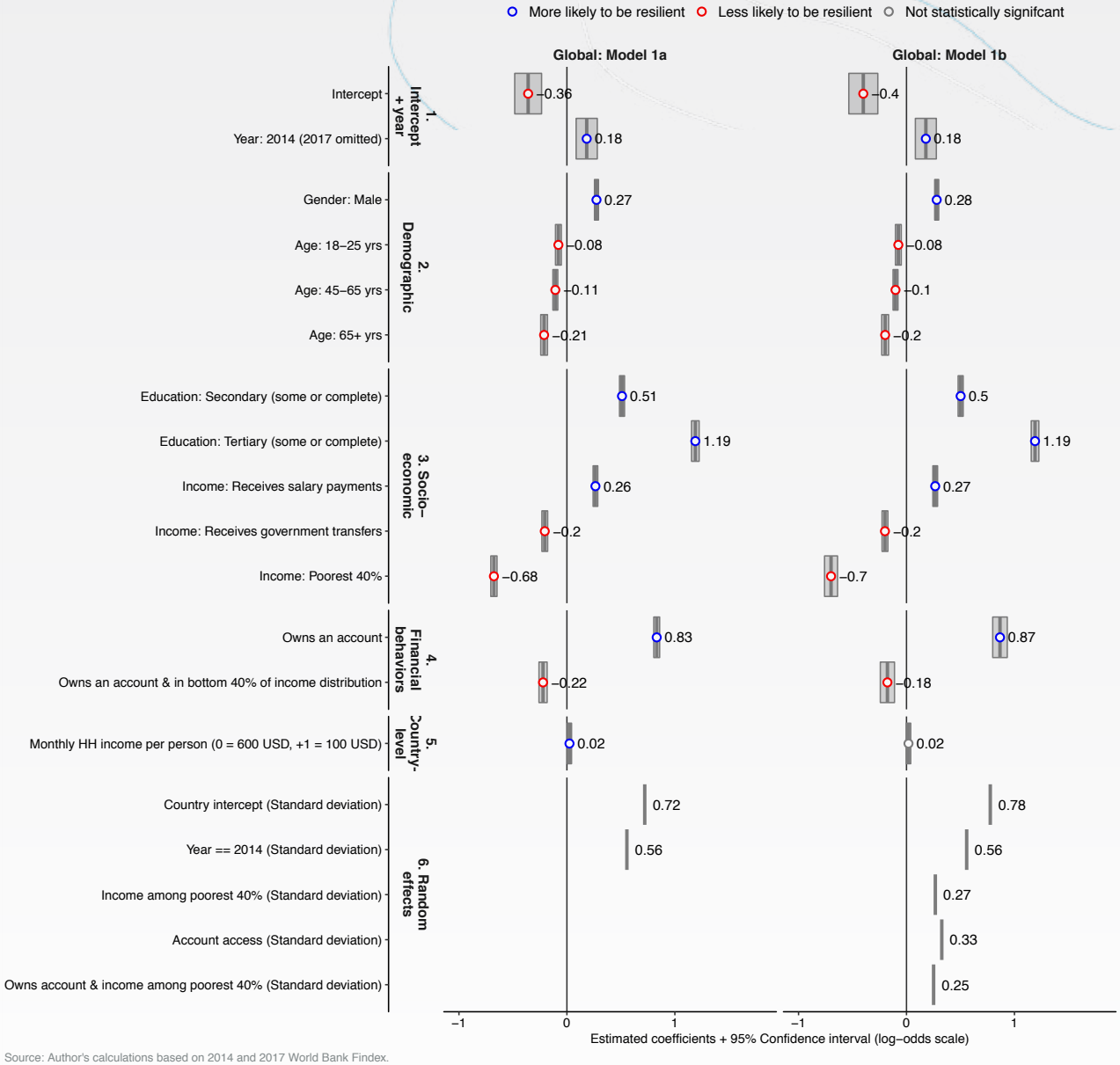
MENA than the global average (**Figure 2, Annex 6**). Among countries, the difference in the mean estimated probability of financial resilience between men and women is less than 1 percentage point in Taiwan, Serbia, Malaysia, Belarus, Kuwait, Austria, Luxembourg and Bosnia and Herzegovina and 10 percentage points or greater in Chile, Algeria, Uruguay, Brazil, Mali, Colombia, Iraq, Pakistan, Panama, Morocco and Afghanistan (**Figure 14**). Half of the countries in the top decile of the magnitude of the gender gap in financial resilience are in Latin America.

Financial inclusion, financial behaviors and resilience

Financial inclusion defined narrowly as whether a low-income adult has an account at a bank, non-bank financial institution or with a mobile money provider, is associated with an increase in the likelihood of financial resilience (**Models 1a - 2b, Figure 15**). Estimates of the magnitude of this association depend on whether one views savings (or borrowing) behavior as a cause or effect of account ownership. In a regression model (**Model 1a/1b**) that does *not* control for financial behaviors, the estimate of the overall effect of account access absorbs the effect of financial behaviors, that may or may not result from account access. In this

Figure 15.

Changes in the log–odds of financial resilience associated with access to financial services, financial behaviors, demographic and socio–economic factors



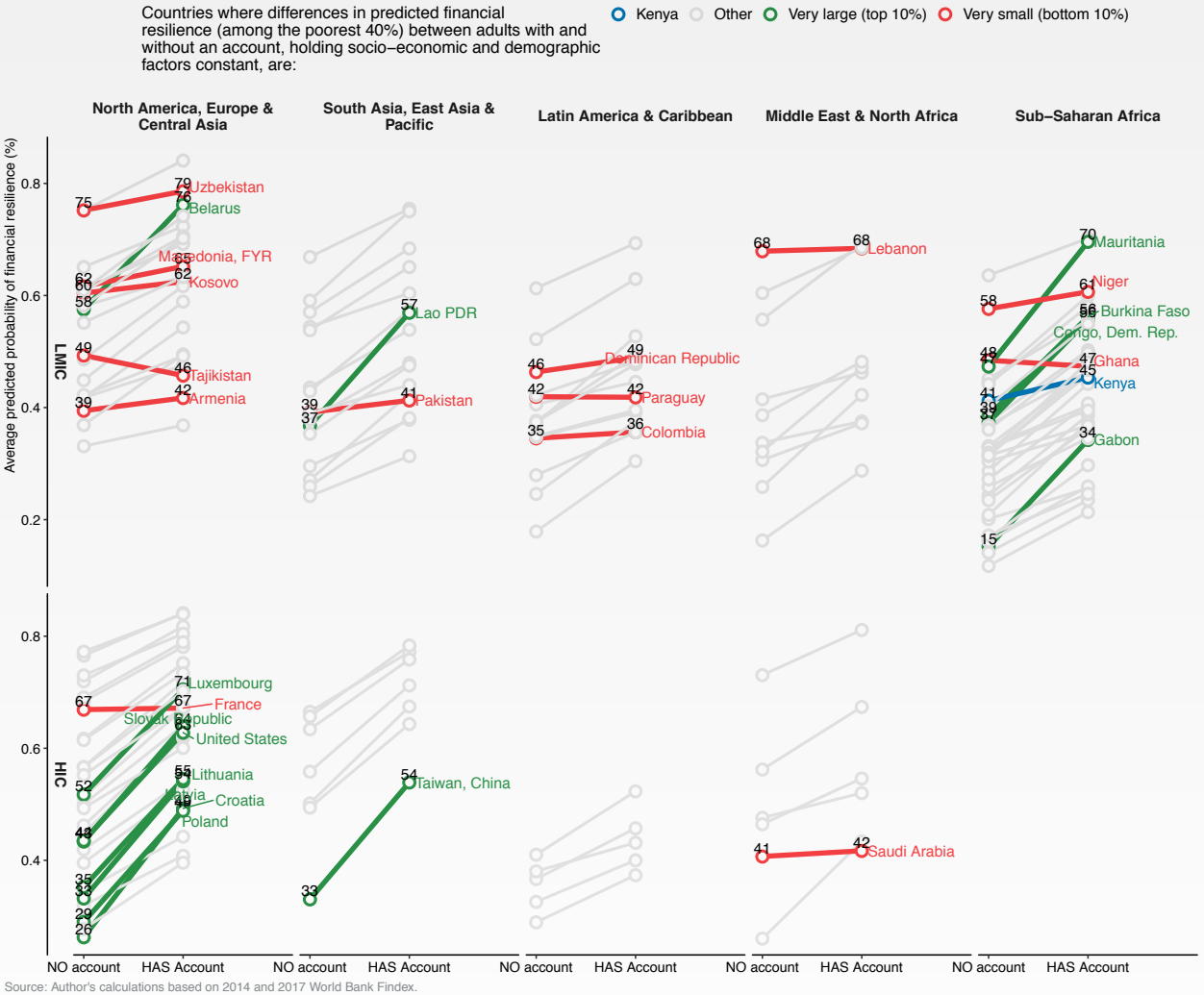
Source: Author's calculations based on 2014 and 2017 World Bank Findex.

model, the marginal increase in the probability of financial resilience associated with account access for the poorest 40 percent of the population is around 15 percentage points. In a regression model that does control for financial behaviors (**Model 2a/2b)** the estimated marginal benefit of accounts on resilience is smaller, around 10 percentage points on average. The marginal benefit of account ownership on resilience is smaller for the poorest 40 percent of the population than for the richest 60 percent of the population.

The average association of financial health with financial inclusion for the poorest 40 percent is consistent across most regions: the difference in the probability of financial resilience with and without an account for a woman in the reference population is between 9 and 10 percentage points in all regions with the exception of LAC where it is approximately 5 percentage points. Across countries, there is more variation, but the estimates are also less precise (**Figure 16**). For example, in Croatia, Mauritania, Taiwan, Lao and Gabon, the difference in the average estimated probability of financial resilience for adults in poor households with and without an account is greater than 19 percentage points. In other countries, the average difference is negligible such as Tajikistan, Ghana, France, Colombia, Pakistan, Saudi Arabia and Niger.

Figure 16.

Estimated average predicted probability of financial resilience for adults ranking in the bottom 40% of the national income distribution with and without an account, by country

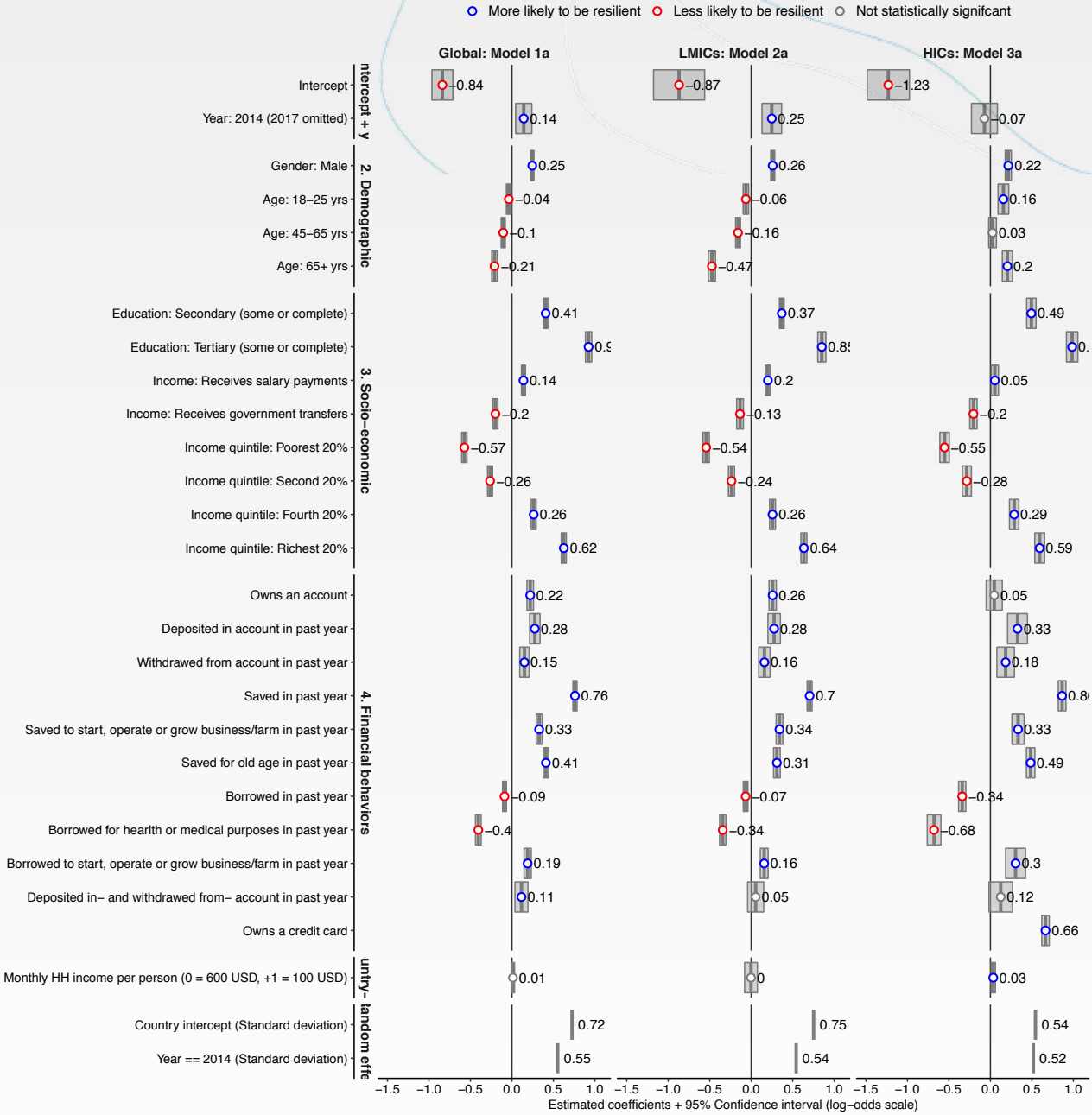


Source: Author's calculations based on 2014 and 2017 World Bank Findex.

Among financial behaviors, saving in the past year for any reason has the strongest estimated association with financial resilience. Adults who save deliberately for productive purposes or for old age are even more likely to be resilient, holding other financial behaviors, demographic and socio-economic factors constant (**Models 1a – 3a, Figure 17**). Borrowing in the past year for any reason is negatively associated with financial resilience and in particular if that borrowing is for a health or medical reason. For example, a woman in the reference population who deposits and withdraws on her account, saves *and* borrows for health care is about 10 percentage points *less* likely to be financially resilient than if she borrowed for other reasons, on average globally.

Figure 17.

Changes in the log–odds of financial resilience associated with access to financial services, financial behaviors, demographic and socio–economic factors, by income group



Source: Author's calculations based on 2014 and 2017 World Bank Findex.

The negative effect of borrowing is nearly four times as large in HICs than in LMICs and the financial resilience penalty of borrowing for health or medical reasons is also nearly twice as large in HICs than in LMICs (**Models 2a and 3a, Figure 17**). The negative association of borrowing for health found here is likely to include the broader adverse effect of the underlying health shock (for example through its impact on reduction of earnings or income), not just the borrowing behavior alone. Borrowing for productive purposes (business or farm investments) completely offsets the negative effect on financial resilience of borrowing generally, implying that borrowing for consumption is a major risk factor for financial resilience. The effect of borrowing for production on resilience is almost twice as large in HICs than in LMICs. In HICs owning a credit card increases the chances of financial resilience by a substantial margin.

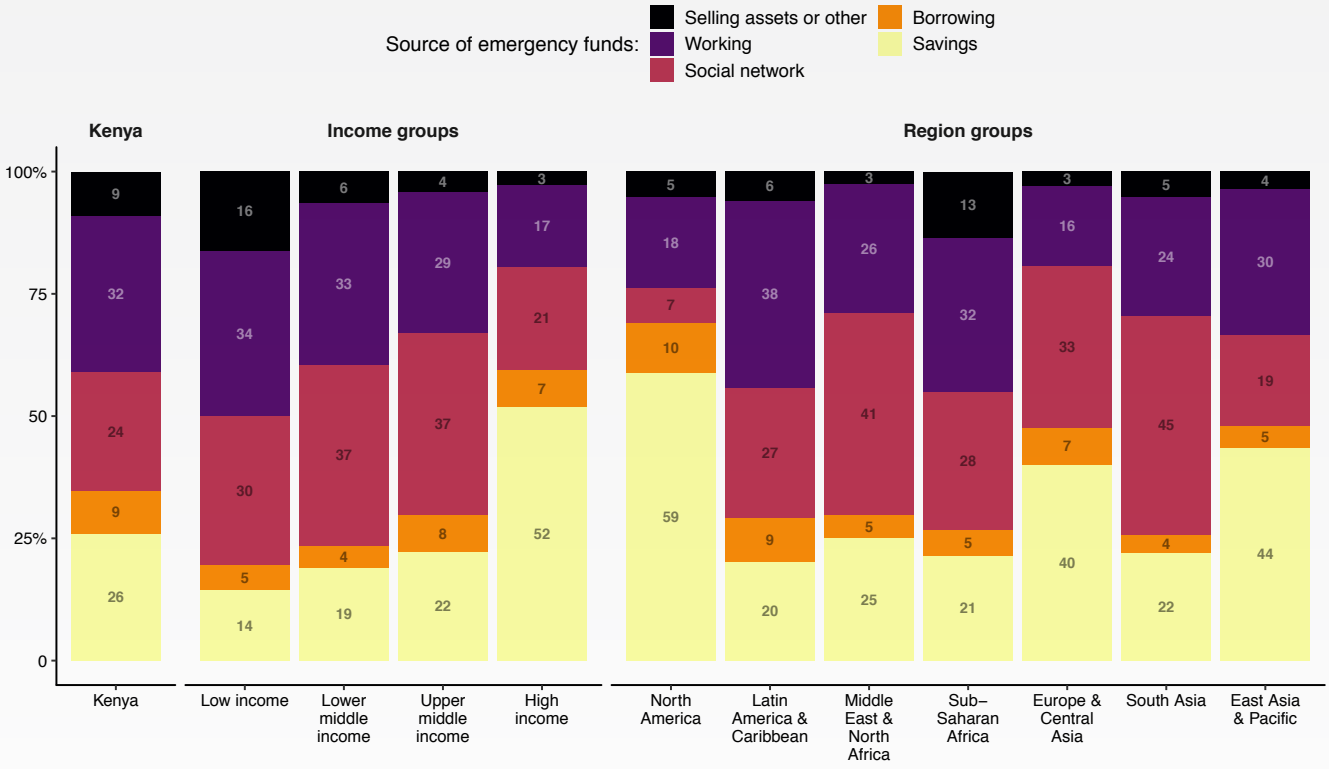
Financial resilience in Kenya

In Kenya, the amount of emergency money referenced in the Findex resilience question was 62 USD (current) or KSh 5,702 in 2014 and USD 72 (current) or KSh 8,039 in 2017. In 2015, the Kenya Integrated Household Budget survey found that average household monthly consumption per person was Ksh 4,984[28]. Using this reference, the emergency money in 2017 in Kenya was equivalent to about 1.6 months of typical household spending per person. With 52.2 percent of its adults able to access emergency funds equivalent to 1/20th of GNI in 2017, Kenya compares closely to both the global median of 56.2 percent and the median for lower middle-income countries in both 2014 and 2017. Kenya performs better than the median country in SSA (44 percent, **Figure 6**) but the differences in financial resilience associated with household income are large: 77 percent of the richest fifth are financially resilient compared to 28 percent of the poorest fifth (**Figure 8**). Among adults who are financially resilient, the three most common strategies for raising emergency funds within a month are personal savings (26 percent), transfers from friends, family or acquaintances (24 percent) and working (32 percent) (**Figure 9**). Resilient Kenyans are more likely to finance emergencies with savings and borrowing than what is typical in lower and upper middle-income countries. The percent of the financially resilient population in Kenya who borrow to cope with an emergency is even higher than the average among high income countries (**Figure 18**).

Figure 18.

How do financially resilient individuals access emergency funds in Kenya and around the world?

The share of financially resilient adults by how they would raise emergency money, 2017.



Source: Author's calculations based on World Bank Findex

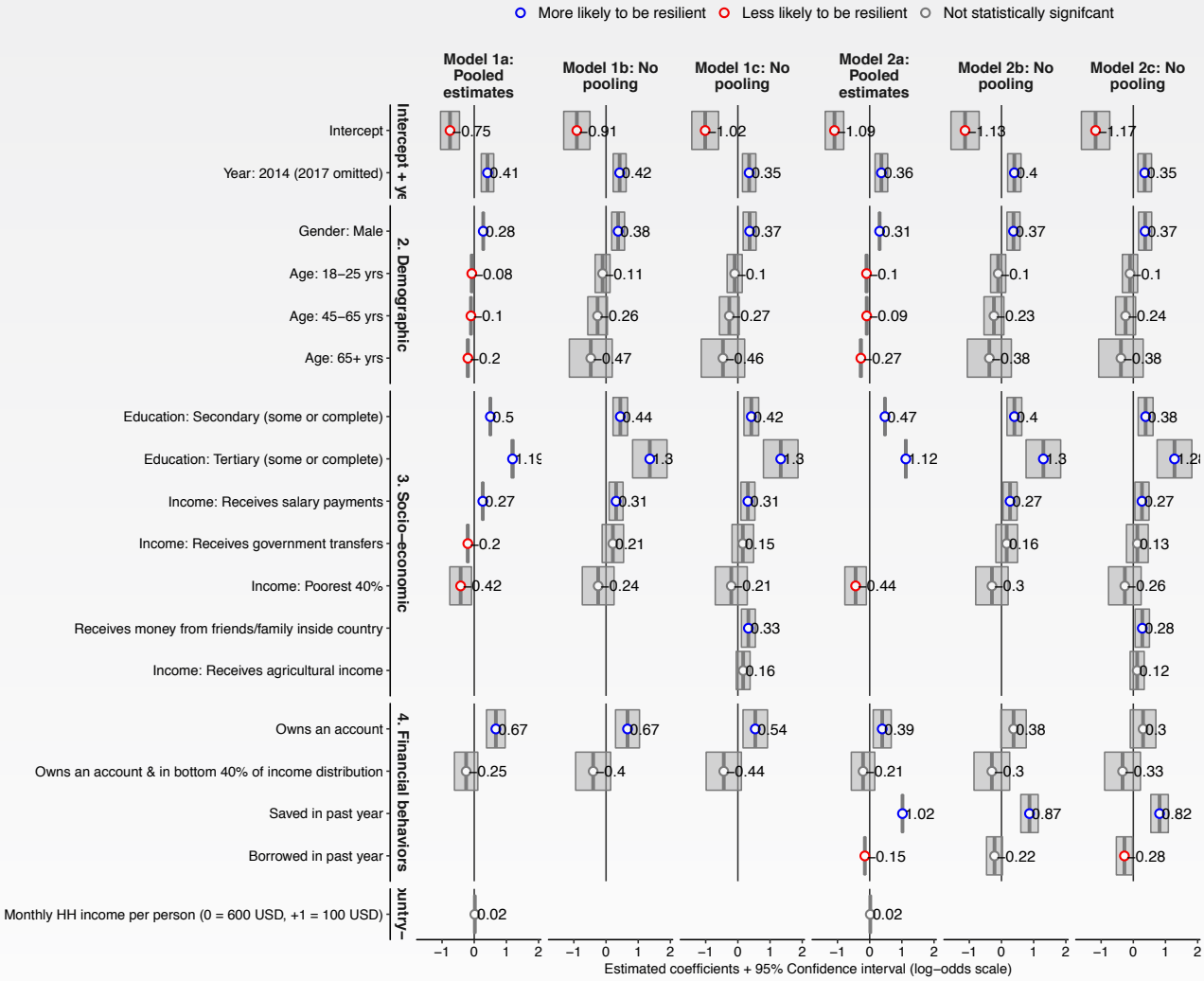
28. Based on the author's calculations using the publicly available KIHBS data available here: http://statistics.knbs.or.ke/nada/index.php/catalog/KIHBS

Kenya experienced a significant decline in financial resilience between 2014 and 2017. Adjusting for demographic, socio-economic and financial access factors, adults were around 10 percentage points more likely to be financially resilient in 2014 compared to 2017[29] (**Model 1a, Figure 19**).

Estimates for the difference in the average predicted probability of being financially resilient with and without an account in Kenya for a women in the reference population whose household ranks in the poorest 40 percent of the population, are between 14 and 15 percentage points on the upper-end (based on models 1a/1b that do not control for financial behaviors) and 6 to 7 percentage points on the lower end (based on models 2a/2b that do control for financial behaviors). The reason for the large difference is that controlling for whether adults save reduces the effect of account ownership by nearly half. Existing experimental research in Kenya suggests that the direction of causality can be from accounts to savings. For example, Dizon et al. (2019) find that providing a second M-PESA account earmarked for emergency expenses to vulnerable women increased savings and

Figure 19.

Changes in the log–odds of financial resilience associated with access to financial services, financial behaviors, demographic and socio–economic factors, Kenya



Source: Author's calculations based on 2014 and 2017 World Bank Findex.

29. This result reinforces findings from the FinAccess survey program which found, using FSD Kenya's multidimensional measure of Financial Health, a decline in the share of the financially healthy adult population between 2015 and late 2018, from 39 to 22 percent (FSD Kenya, 2018).

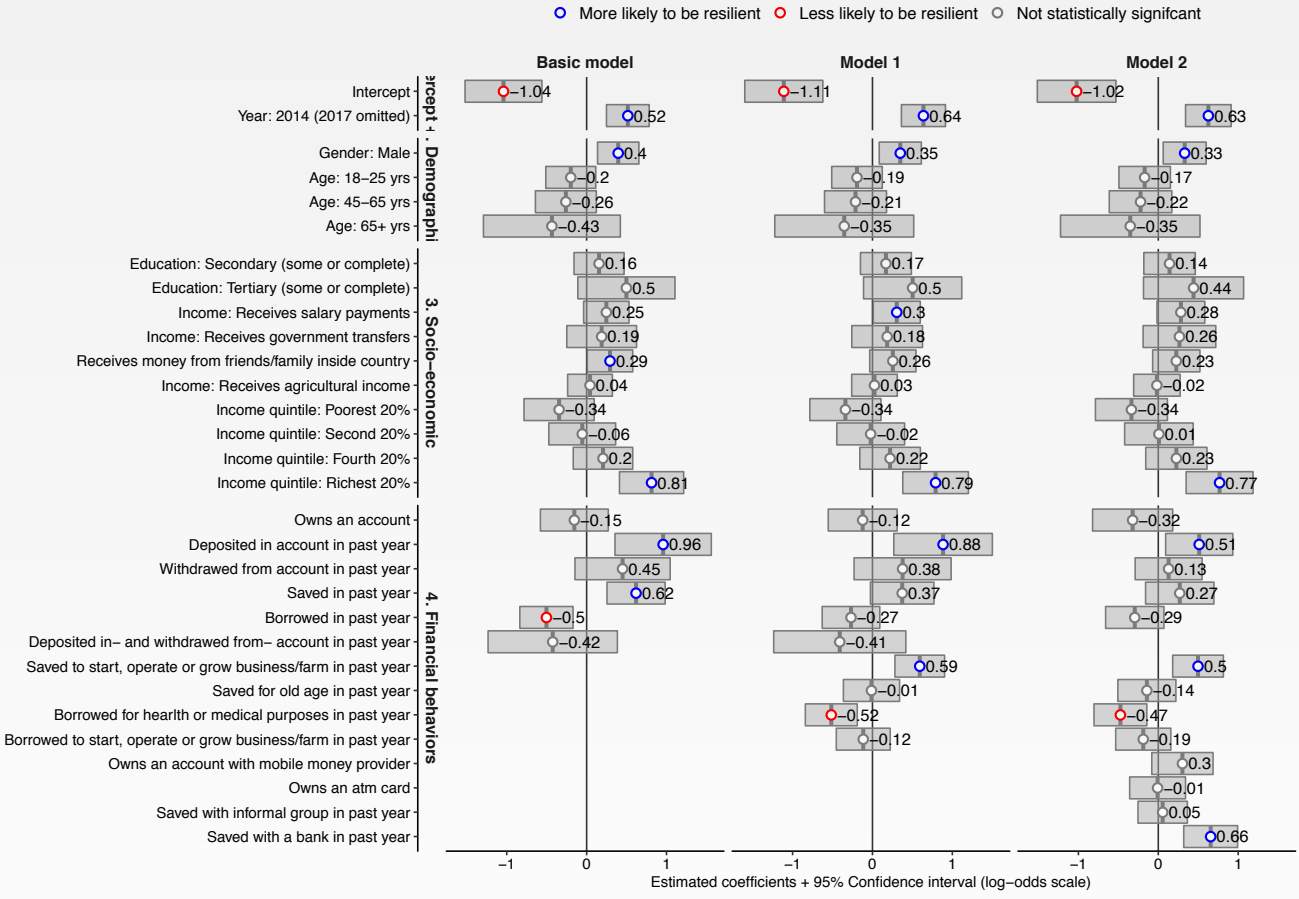
reduced transactional sex as a risk-coping response. Jack and Habyarimana (2018) find that providing a mobile commitment savings account to parents of primary school leavers, increased financial savings and high school enrollment.

Income from friends and family is associated with a statistically significant increase in the chances of being financially resilient (**Models 1c and 2c, Figure 19**)[30] and controlling for these social network transfers reduces the estimated effect of account ownership on resilience by around 20 percent. This attenuation could reflect that the effect of financial inclusion in the Kenyan context operates partially through its relationship with social network transfers which if true, would echo findings from quasi-experimental studies evaluating the impact of M-Pesa (Jack and Suri, 2014).

Among financial behaviors, those most strongly associated with financial resilience in Kenya include saving in the past year for any reason and depositing in an account (**Basic model, Figure 20**). Borrowing for any reason in the past year is associated with a reduction in the probability of financial resilience of about 12.5 percentage points, holding other factors constant. The positive effect of savings on resilience is all accounted for by production-oriented savings and the negative effect of borrowing on resilience is all accounted for by borrowing for health or medical purposes. Controlling for financial behaviors, savings with an informal group or having a mobile money account specifically, are not associated with financial resilience (**Model 2, Figure 20**).

Figure 20.

Changes in the log–odds of financial resilience associated with access to financial services, financial behaviors, demographic and socio–economic factors, Kenya



Source: Author's calculations based on 2014 and 2017 World Bank Findex.

30. Social network income or income from agriculture were not included as predictors in the global models because those questions were not asked in a select number of higher income countries.

Discussion

The analysis in this paper finds that a dominant share of the global variation in financial resilience is accounted for by inequalities *within* countries, rather than average conditions *across* countries. In addition, the evidence lends support to a financial health causal framework that has two *broad* channels of influence: (1) structural factors: the market conditions, policies and norms that shape the *distribution* of income, opportunities and social support for adults with different socio-economic backgrounds and (2) the financial behaviors and tools that adults use when managing their financial lives. Another way of framing these two channels is that the first encompasses factors that individuals have no or limited control over (such as gender, age, ethnicity) and the second encompasses factors that individuals have the most control over (such as spending and saving decisions or usage of specific financial services).

The influence of structural factors on financial resilience is evident in the higher chances of financial resilience for: (1) men (vs women) (2) adults who derive income from wages or salaries (vs own account workers), (3) adults who receive social network remittances, (4) adults who have greater educational attainment and (5) working age (vs retirement age) adults. These unsurprising correlations connect with a range of issues including income predictability, wage inequality, informality, social cohesion or isolation, returns to education, migration and the social norms or attitudes associated with gender that affect women's participation in work, decision-making and wider society[31]. In addition, the strong negative effect of borrowing for health care on financial resilience found here also suggests that illness is closely linked with financial health in places where health care is not affordable (or social health insurance is weak) and people become indebted in order to access care, making coping with a subsequent shock more difficult. Recent research in the US, for example, found that health care policy reforms that expanded the coverage of social health insurance (Medicaid) lead to improved financial health outcomes for low-income households, reducing unpaid medical bills and improving credit scores (Brevoort et al., 2017).

That financial health across countries is influenced less by average levels of income or development and more by other factors, is perhaps most clearly illustrated by the finding that adults with the same demographic and socio-economic profile in LAC are about 2 percentage points *less* likely to be financially resilient than adults in SSA (and the least likely among all regions) despite average income levels in LAC that are over 4 times higher than those in SSA, and poverty rates (at USD 3.20 per day) that are nearly 7 times lower, suggesting a pattern of development of growth without security[32]. Though no single cause can explain either the wave of social protests across LAC in 2019 or its struggle to contain the spread of SARS-COV-2 in 2020, the co-existence of widespread financial vulnerability, gaps in the coverage of formal social protection programs and limited social cohesion, are likely to play a role. Contrasts like those between LAC and SSA are also evident among HICs. For example, while average monthly household income per person (PPP) is only 5 percent (or 100 USD) higher in Norway than the United States, financial resilience prevalence is 24 percent higher in Norway. One key difference is that income inequality is 45 percent lower in Norway.

Consistent with findings elsewhere (Financial Health Network, 2015; Kempson et al, 2017), saving - and in particular saving with a future orientation (to start or grow a business or farm or for old age) - is strongly associated with financial resilience. Conversely, consumption-oriented borrowing is negatively associated with financial resilience. One implication of these findings is that countries whose commercial and financial sectors develop in ways that encourage loan-taking for consumption at the expense of savings create headwinds that may make fostering and sustaining positive financial health outcomes more difficult. In many countries, the opportunity to consume goods and services on formal credit is omnipresent, and financial corporations invest significantly in marketing to get people comfortable

31. While ethnicity was not a predictor used in the analyses in this paper, these same issues affect other groups and minorities. In the United States, for example, historical and current discriminatory practices have shaped the current socio-economic opportunities of black Americans, such that the typical black household in 2016 holds 10 cents to every dollar of wealth held by the typical white household (Darty et al., 2019).

32. In 2018, the GNI per capita (PPP) in LAC and SSA was USD 15,994 and USD 3,667, respectively. In 2015, USD 3.20 poverty headcount ratio in LAC and SSA was 10.7 percent and 68.1 percent, respectively (World Bank, WDI).

using consumption-oriented loan products such as credit cards, second mortgages and more recently digital unsecured loans in many LMICs[33].

But not all forms of debt may undermine financial resilience. For moderate and occasional shocks, access to revolving credit can be helpful. Among the correlations found in this paper, adults in HICs with a credit card are significantly more likely to report being able to raise emergency funds, holding other factors constant. And empirical research in Kenya has found causal evidence between access to digital credit and greater resilience to adverse shocks (Bharadwaj et al., 2019). Among OECD and a select number of other countries, the relationship between the prevalence of indebtedness with financial resilience and the aggregate household-sector debt burden with financial resilience is positive (**Figures 1** and **2**, **Annex 7**). Norway, for example, has both the highest financial resilience prevalence (93 percent) and aggregate household debt (that is nearly 2.5 times annual disposable income). However, the story is not so simple. In Chile, just like in Norway, over 70 percent of households are indebted and about one third of those households have debts equivalent to 3 years of income, yet less than half of adults in Chile are financially resilient (**Figure 2, Annex 6**).

The question is not whether debt can co-exist with financial health, it is under which conditions. Environments characterized by some combination of pervasive consumer credit, high income inequality, high cost of living and significant social pressures may favor people taking on more debt than they want or can afford. This creates systemic risks. When economic conditions take a turn for the worse, households with high debt levels face the impossible task of simultaneously servicing debt payments and meeting basic expenditures. Rapid increases in household debt have tended to precede major economic crises and make recovery more difficult. In the 1920s for example, the growing burden of installment debt coupled with high costs of default underpinned deep reductions in consumer spending in the great depression that began in 1930 (Olney, 1999). More recently, the rise in household debt from high risk sub-prime mortgage loans was one critical ingredient leading to the 2008 financial crisis. The rapid expansion of household debt has also caused trouble in LMICs such as during India's microcredit crisis in 2011 and there is growing concern about high levels of microloan debt among households in Cambodia as garment factories and businesses close as a result of the global economic slowdown[34].

Even after controlling for income and financial behaviors, having a formal account is positively associated with financial resilience. Again, it is worth stressing that since these results are based on observational data they cannot be given a causal interpretation. Mechanisms explaining this relationship might include that for the purpose of building a financial reserve that can be tapped in an emergency, the added friction of accessing funds in an account or the mental partitioning enabled by depositing funds in one, are key benefits of accounts relative to cash. The benefits of accounts may also partly or fully operate through social networks, or government or wage payments. In Kenya, for example, the resilience benefits of mobile money accounts have been linked to their ability to lower the transaction costs of risk-sharing across social networks (Jack and Suri, 2014). More generally, in lower- or middle-income countries where mutual financial support through social networks is a key strategy to cope with shocks, efforts to broaden the reach and lower the costs of peer to peer and cross-border payments infrastructure may pay larger resilience dividends than other financial sector initiatives. In the current COVID-19 emergency, widespread access to digital accounts and payments infrastructure has facilitated the delivery of much needed economic relief. Where access to such financial accounts is more limited, governments have had to distribute cash or food in person, which in Peru, for example, lead to congestion and long lines outside of banks that created potential for infection[35].

While not examined empirically in this paper, there are direct and indirect links between the wider economic and policy context and financial behaviors. In more formalized economies, what households have available to save or spend - their disposable income - depends on fiscal policy: taxes on income,

33. In the 1980s, second mortgages were rebranded as home equity loans to make them more appealing. See interview with Amri Sufi: https://www.npr.org/2020/06/15/877401074/buy-borrow-steal-how-debt-became-the-sugar-rush-solution-to-our-economic-woes.

34. See for example, Los Angeles Times article "They escaped the worst of COVID-19. Now Cambodians face a debt crisis": https://www.latimes.com/world-nation/story/2020-08-07/covid-19-shutdown-creates-debt-crisis-in-cambodia

35. See for example: https://gestion.pe/peru/coronavirus-en-peru-bono-380-soles-reportan-largas-colas-en-exteriores-de-centro-bancario-de-santa-anita-para-cobrar-subsidio-economico-cuarentena-estado-de-emergencia-covid-19-nndc-noticia/

wealth and social contributions as well as any social benefits received. In addition, monetary policy (through its effect on interest rates) alters the incentive to save and borrow. At a cognitive level, interactions between the environment and our psychology can shape decision-making. For example, Mullainathan and Shafir (2013) show how a scarcity mindset, characterized by feeling like you have less than what you need (e.g. time or money), emerges as an outcome of context and adversely affects decision-making. Design factors (or *nudges*) can also influence our choices. For example, Shlomo and Thaler (2007) show how default options can increase people's participation in employer-sponsored retirement plans. At a structural level, income inequality may play a role in fueling household debt. A recent study provides evidence that a 'savings glut of the rich' fueled by rising top income shares in the United States has been channeled almost completely into borrowing among the bottom 90% of households, resulting in dissaving and increased household debt among households at the lower end of the income distribution (Mian et al., 2020). The incentive and ability to save or borrow is also likely influenced by the jobs landscape. In economies with large shares of the workforce in 'own account' activities (such as family farming, non-farm self-employment or casual work) income risk and precarity may boost incentives to save compared to settings where formal employment and safety nets are more common. Lending by financial institutions to households is also facilitated when made against verified employment and salaries, which creates opportunities for households to trade-off some financial wealth for greater material welfare (e.g. using debt to acquire consumer durables). Culture also may shape savings behaviors. For example, in a study of immigrants to the United Kingdom, Costa-Font, Giuliano and Ozcan (2018) find a robust association between savings and country of origin that persists up to the third generation.

To the extent that financial health outcomes are influenced by social and economic inequality (and not just individual responsibility, knowledge and behavior), there is a dimension to financial health that is deeply political. If and how societies choose to respond to and shape the forces that influence the trajectory of inequality within countries, including but not limited to technological change, trade globalization, financial globalization, changes in labor market institutions, redistributive policies, corruption and education, is often decided in the political arena.

One motivation for financial health measurement initiatives has been a recognition that existing economic or financial inclusion indicators do not do a good job of reflecting the true state of people's financial lives or provide little direction for stakeholders trying to enhance the impact of financial services. For example, the Financial Health Network's 2018 "U.S. Financial Health Pulse" report opens with the observation that behind positive economic headlines and indicators:

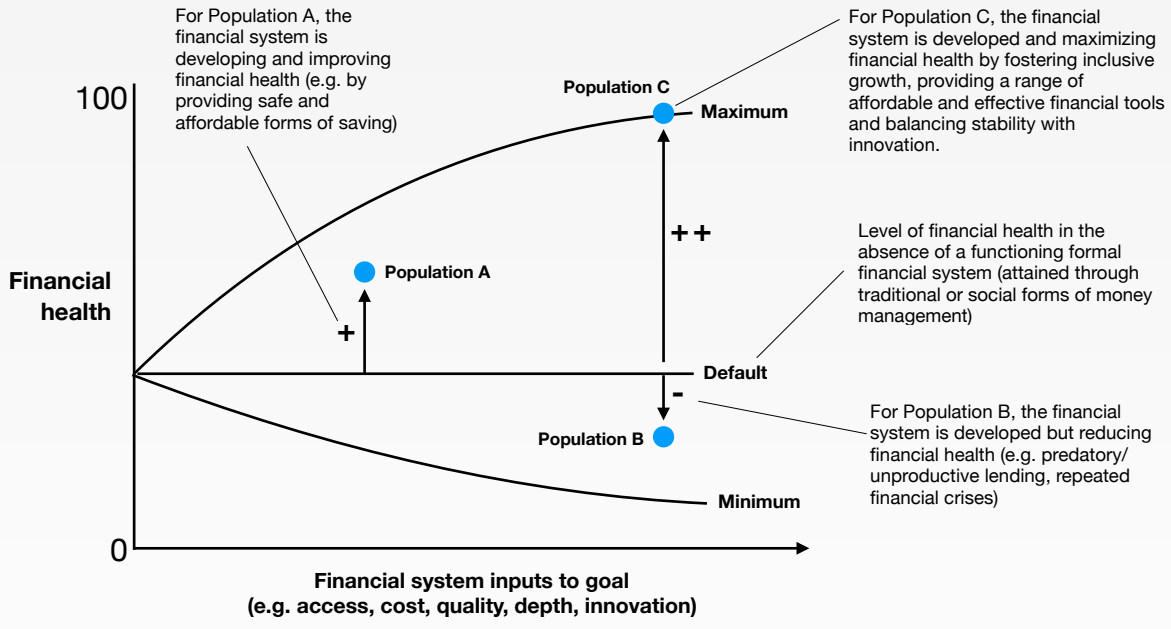
> "...millions of Americans are struggling. The median wealth of U.S. households has yet to return to pre-recession levels. Loan defaults are inching upward, and credit card debt is nearing an all-time high. Total household debt is higher than it was before the financial crisis, baby boomers are nearing retirement with insufficient savings, and Americans of all ages are buried under mounting student loan debt."

While financial resilience is correlated with income-based measures of welfare across countries, there is variation in resilience at any given level of household income or poverty (Annex 7, Figures 1 and 3). In addition, financial resilience is associated strongly with people's financial behaviors and interactions with the financial system. In this sense, there is additional information that financial health measures – such as the resilience metric explored in this paper - bring to the table. But financial health should not be viewed as a completely separate construct from income-based measures of welfare. Income is one part of a larger system that determines financial health, along with behaviors, financial and physical wealth, social capital and government policies (Figure 2). Income- or consumption- based metrics of poverty are part of this system too but draw attention to extreme outcomes in only one domain of financial health: the ability to meet basic needs. For this reason, financial health metrics that also gauge people's ability to cope with risk or fulfill long-term goals are valuable complements, providing a fuller picture of people's financial well-being and can enable a host of analyses such as (1) comparing the financial health of one population group to another and over time, (2) drawing attention to the role of non-income factors that influence financial health, (3) informing debates on priorities for the financial system, (4) identifying the populations most at risk to income or employment shocks (to help planners prepare for such eventualities) and (5) providing a basis to benchmark the performance of financial or economic systems in their ability to generate financial well-being.

On this last point, while it is unreasonable to expect that the financial system fully determines the level of financial health of a population, how can we assess its contribution? To conceptualize this, **Figure 21** shows financial health as a function of the formal financial system's inputs (such as the depth of the system or affordability and access of services). The flat line represents the level of population financial health that would be observed in the absence of a functioning formal financial system, holding other factors constant (such as average incomes or employment). In this scenario, financial health would not deteriorate completely. Across the developing world, for example, many common modes of money management do not rely on institutional intermediaries and are often social and inter-personal in nature, such as savings groups, welfare societies, social network borrowing and shopkeeper credit. The upper curved line represents the maximum level of financial health that could be attained – the *frontier* - while the lower curved line represents the minimum level of financial health that could be attained. This line is lower than the "default" line to capture the negative effects financial systems can have on financial health either by causing harm indirectly through the economywide ripple effects of financial crises or directly through practices such as predatory lending that take advantage of customer's limited knowledge or attention and can lead to indebtedness, bankruptcy or psychological distress. A measure of the performance of a financial system would be how much financial health the system achieves compared to its potential (at its given level of development).

With global and comparable measure of financial health it is possible to identify countries that are near the frontier of financial health. This paper used a multi-level model to estimate country-specific effects on the likelihood adults are financially resilient, adjusting for demographic and socio-economic factors, but other approaches are possible. One way to build on this work, is to produce in-depth case studies of exemplar countries to showcase how they support widespread positive financial outcomes, in the hope that common lessons can emerge for policymakers, development finance institutions and other stakeholders looking to explore ways to build and sustain population financial health and resilience, especially in the aftermath of the COVID-19 pandemic.

Figure 21.



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Annex 1: Sample sizes

Figure	Model	Countries	Adults (18+) (N)
9	0a - Global	144	270,030
	0b - Global	144	265,899
	1 - Global	144	265,899
	2 - Global	133	245,778
	3 - Global	112	209,976
13	1a - Global	144	265,915
	1b - Global	144	265,915
	2a - Global	144	265,915
	2b - Global	144	265,915
16	1a - Global	144	247,465
	2a - LMICs	97	162,794
	3a - HICs	47	84,405
Annex 6, Figure 1	1 - HIC	47	86,676
	2 - HIC	40	73,567
	3 - HIC	36	67,451
	1 - LMIC	95	173,839
	2 - LMIC	92	167,810
	3 - LMIC	75	139,336
Annex 6, Figure 2	Asia	14	34,404
	LAC	20	33,038
	MENA	9	17,609
	SSA	35	55,526
Annex 6, Figure 3	Asia	23	49,503
	LAC	20	30,450
	MENA	16	29,226
	SSA	35	49,284

Annex 2: Sample characteristics by country

% of adult population 18+

Country	Year	Women	Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
			18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
North America, Europe & Central Asia																											
LMICs																											
Albania	2014	50.5	15.7	33	35.5	15.9	13	34.4	52.6	58.1	37	7.7	2.9	7.9	9.5	39.9	39.9	0	23.5	5.9	25.8	56.5	23.8	27	20.9	7.3	14.5
Albania	2017	52.4	14.4	34.4	34.9	16.2	13.4	33.1	53.5	52.8	25.7	9.5	1.6	6.9	9.5	43.4	42.8	2.5	29.7	8.9	31.1	43.7	21.5	21	26.8	7.2	11.1
Armenia	2014	54.7	17	41.6	28	13.3	19.1	65.6	15.3	53.2	20.3	1.8	3.7	3.3	2.1	18.7	18.3	0.7	8.7	6	15	50.2	14.7	8.9	25.8	13.1	19
Armenia	2017	54.7	16.1	37.1	31.7	15.1	24	65.8	10.2	43.4	30.2	10	4.6	9.2	6	49	47	9.7	27.1	8.7	31	56.6	17	23.8	25.6	14.6	18.2
Azerbaijan	2014	52.7	20.3	43.8	30.2	5.7	8.8	80.8	10.4	80.4	41.9	5.9	1.5	9.4	12.2	31.9	31.9	0	17.2	9	29.6	49.8	10.9	21.3	35.6	12.8	32.1
Azerbaijan	2017	51.8	18.9	46	30.7	4.3	8.7	78.8	12.5	56.9	28.4	5.1	3.8	6.2	7.3	31.6	31.6	0	27.3	5.9	26.3	54	12.7	19.1	32.8	6.2	24.4
Belarus	2014	55.3	10.4	37.5	35.6	16.5	21.1	67.3	11.6	83.1	51.7	16	1.2	5.4	23.7	75.2	75.2	0	42.6	14.2	62.1	39.8	4.3	16	62.3	24.4	15.3
Belarus	2017	55.8	6.9	38.3	36.5	18.3	21.5	68.6	9.9	71.3	52.9	24.2	1.9	6.8	26.4	84.7	84.7	0	74	20.2	82	50	6.2	23	63.5	26.1	12.3
Bosnia and Herzegovina	2014	52.4	11.7	32.5	34.5	21.2	9.4	50.9	39.8	73.7	25.9	9	2.6	2.7	10.7	54	54	0	35.9	9.8	47.5	26.1	4.2	8.2	24.9	4.1	14.5
Bosnia and Herzegovina	2017	51.9	11.6	34.9	35.7	17.8	10.3	56.2	33.6	74.4	21.8	10.3	2	7.2	9.3	61.5	61.5	0	42.4	10.3	52.4	24.9	4.4	14	28.8	6.6	12
Bulgaria	2014	53.1	6.6	32.6	35.6	25.2	22.6	50.6	26.8	62.9	28.8	15.6	0.8	6	12.5	66.7	66.7	0	59.5	13.1	59.8	34	5.4	19	46.5	15.6	8.8
Bulgaria	2017	53.1	6.8	33.7	33.1	26.4	22.5	50.3	27.3	67.3	42.2	28.7	1.2	8.4	20.6	73.9	73.9	0	71.6	14.1	68.8	38	3.7	11.5	53.7	9.1	8.3
Georgia	2014	54.1	9.8	37.2	33.6	19.4	24.3	58.5	17.2	46.9	13.5	1	1.3	3.3	1	42	42	0	31.2	18.5	39.9	34.8	8	21.4	22.5	11.4	20.9
Georgia	2017	54.1	10.7	36.2	34.2	18.9	31.1	61.1	7.8	48	14.7	4.7	2.5	2.1	2.6	64.3	64.3	2.1	42.2	15.7	51.1	46.7	10.7	15.8	26.3	19.5	9.8
Kazakhstan	2014	53.6	18.2	44.8	27.7	9.3	23.3	67.5	9.2	63.1	32.2	9	3	3.1	6.3	58.4	58.4	0	34.8	12.9	42.1	45.9	9.3	13.5	49.7	15.5	14.2
Kazakhstan	2017	53	17.7	43.6	29.4	9.4	22.4	67.1	10.4	53	38.4	15.3	4.5	11.8	20.4	63.5	63.5	0	44.4	22.5	52.6	49	9.5	18.7	49.7	17.2	12.4
Kosovo	2014	50.6	21.9	42.3	25.8	10	7.4	39.9	52.7	64	36.6	7.5	3.1	6.8	16.9	49.4	49.4	0	35.7	14.5	43.3	37.6	15.8	20.9	21.5	6.4	18.7
Kosovo	2017	52.2	20	40.3	29	10.7	7.9	40.8	51.2	76.4	38.5	9.1	3.7	12.9	13.1	56.3	56.3	0	41.3	11.2	42.8	44	18.3	22.2	22.3	11.5	12.1
Kyrgyz Republic	2014	54.1	21	45.5	27.3	6.2	14.3	74.4	11.3	80.1	35	5.1	10.2	10.2	4.7	20	20	0	7.4	3.4	9.1	39.3	7.1	24	24	9.2	35
Kyrgyz Republic	2017	53	20.3	46	27.3	6.4	14.6	73	12.4	76.6	25.6	3.4	6.9	9.4	3.5	43.3	41.6	3.4	21.2	4.2	21	34.6	5.7	26.2	33.6	8.8	32.2
Macedonia, FYR	2014	50.9	13.3	36	34.9	15.7	15.8	75.1	9.2	70.2	38.6	14.6	4.8	5.9	14	74.9	74.9	0	55.8	22.5	64.4	40.8	8.8	12.3	36.2	16.2	14

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Macedonia, FYR	2017	51.7	10.9	35.6	36	17.5	15.8	47.3	36.9	75.8	35.9	17.6	0.4	8.1	16.5	80	80	0	56.1	18.5	65.8	39.4	9.9	9.2	33.4	11.5	10.7
Moldova	2014	52.9	20	36.7	35	8.3	16.3	66.7	17.1	70	45.2	7.1	5.3	8.1	11.7	18.6	18.6	0	16.9	6.7	16	47.7	17.6	20.9	43.7	15.4	17.1
Moldova	2017	52.1	13.8	37.7	34.6	13.9	17.7	67.9	14.4	74.4	55.4	9.3	20.1	11.2	17.8	44.6	44.6	0	25.8	18.2	26.9	54.9	18	17.8	48.5	16.1	22.1
Montenegro	2014	53	12.6	35.3	34.4	17.6	11.3	65.2	23.4	68.9	28	5.8	3.4	2.8	7.4	62.9	62.9	0	36.5	16.5	55.9	52.3	7.7	12.6	40.5	12.1	13.7
Montenegro	2017	52.4	12.2	38.1	33.3	16.3	12.6	65	22.3	79.6	29.5	10.8	1.7	9.9	10.8	72.1	72.1	0	39.1	18	60.9	46.9	8.7	16.3	43.8	11.1	10.4
Romania	2014	51.6	9.8	37.8	31.8	20.7	12	60.5	27.5	53.6	36.2	14.1	6.7	4.6	16.2	62.6	62.6	0.5	47.7	11.8	53.3	45.6	13.6	14.3	40.4	15.5	6.2
Romania	2017	53.4	10.7	36.5	32	20.8	13	58.4	28.6	68.5	34.3	14.5	5.5	9	20.2	57.9	57.8	3.1	49.6	12.4	49.6	40.5	7	15.6	43.5	9.4	5.7
Russian Federation	2014	56.9	11.9	37.5	35.3	15.4	26	62.5	11.5	76	41.9	16.3	1.7	3.6	15.6	69.7	69.7	0	46.8	22	58.4	30.7	3.9	12.1	59.5	22.3	10.2
Russian Federation	2017	55.5	11.1	37.4	35.2	16.3	27.3	60.7	11.9	59.8	35.6	14.3	1.9	5.9	15.6	77.2	77.2	0	58.7	21.6	63.4	42.1	7.7	20.4	54.5	24	6.1
Serbia	2014	52.9	9.6	32.9	37.3	20.2	17.3	52	30.6	65.7	28.4	9.2	2.4	4	12.8	83.1	83.1	0	58.8	16.1	75	32.8	4.4	11.6	42.5	7.8	14.3
Serbia	2017	52.7	9.8	32.6	35.6	21.9	17.5	53.1	29.4	74.9	31	13	3.6	12.4	19.8	73.7	73.7	0	61.7	18.2	68.8	41.2	10.7	12.4	38.4	7.9	11.1
Tajikistan	2014	50.6	26.6	45.8	22.3	5.4	13.8	64.2	22	65.5	32.9	1.7	3.7	3.9	7.9	12.6	12.6	0	4.7	0.8	8.2	26.3	7.5	16	27.3	3.6	19.7
Tajikistan	2017	51.2	24.7	45.6	22.7	7	14.8	63	22.2	42.5	33	11.6	8.7	14.2	12.9	47	47	0	17.5	6.4	19.8	33.8	8	22.2	21.5	10.3	21.5
Turkey	2014	52.2	14.6	45.3	32.2	7.9	9.9	55	35.2	39.7	37	9.3	10.8	5.6	10	61.1	60.9	0.8	47.2	36.2	43.8	51.4	12.1	22.6	30	8.1	5.4
Turkey	2017	50.3	17	44	31	8	10.2	55.4	34.4	69.7	40.5	24.2	11.5	12.4	21.1	70.8	69.8	17.2	65.6	44.4	59.8	60.7	10	20.4	41.5	10.9	11.6
Turkmenistan	2014	49.5	20.8	46.6	26.8	5.8	7	70.4	22.5	92.5	60	0.7	2.7	12.4	28.5	1.9	1.9	0	1.4	0	1.8	55.9	13.9	27.9	44.6	30.2	42.3
Turkmenistan	2017	50.5	18.6	47.4	25.3	8.6	9	88.5	2.5	76.2	54	5.2	4.6	16.1	20.2	43.7	43.7	0	40.9	0	36.3	38	16.5	23.1	46.9	15.8	15.1
Ukraine	2014	56.6	10.5	37	33.8	18.7	20.2	65.5	14.3	77.7	40.8	8.3	3.1	3.3	15.2	54.2	54.2	0	41.7	29	45.5	36	10.7	10.2	50.8	28.1	17.9
Ukraine	2017	58.3	8.5	36.9	34.8	19.8	22.7	65.3	12	76.9	39.2	13.8	2.4	7.7	12.4	64.5	64.5	0	52.6	28.9	53.6	47	14.1	15.4	43.7	46.6	14.3
Uzbekistan	2014	51.7	20.6	47.2	24.9	7.3	10.9	66.7	22.4	86.3	45.2	2.1	16.5	8.4	10.6	45.7	45.7	0	28.2	1.6	30	18.9	4.9	8.6	36.3	10.6	31.3
Uzbekistan	2017	54	20.6	47.2	25.6	6.6	11	67	22	78.8	40.3	2.4	14	9	10.4	40.8	40.8	0	27	0.7	28.2	21.2	3.6	8.3	31.4	7.5	21.4
North America, Europe & Central Asia																											
HICs																											
Austria	2014	51.7	13.1	36.4	30.6	20	12.6	82.9	4.4	76.5	80	61	0	14	49.7	97.5	97.5	0	81.9	40.6	94.1	33.1	5.4		52.4	25.7	
Austria	2017	51.7	11	34.1	33.4	21.5	12.5	79.9	7.6	77.3	80.1	57.3	0	9.3	57	98.5	98.5	0	91.7	48.5	95.4	62.8	5.7		54.2	22.9	
Belgium	2014	51.6	11	31.3	40.1	17.7	35.5	55.2	9.3	70.7	74.2	56.4	0	5.6	46.1	99.4	99.4	0	95.2	45.5	95.4	30	3.8		56.9	28.1	
Belgium	2017	51.9	10	32.8	34.3	22.9	34.1	58.5	7.3	69.8	70.4	56.5	0	7.4	53	99.2	99.2	0	95.5	50.1	95.3	55	2.2		54.7	30.4	
Canada	2014	52.4	11.3	33	38.1	17.5	29.2	62.9	7.9	79.4	82.9	63.7	0	7.4	53.8	99.2	99.2	0	94.3	79.8	98.3	51	3.5		59.9	36.5	

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Canada	2017	51.4	10.5	32.6	36.9	20	27.4	70.4	2.1	84.3	80.5	69	0	11.6	60.7	99.7	99.7	0	97	84.5	98.4	88.3	3.3		61.7	33.4	
Croatia	2014	51.6	8.1	33.4	34.9	23.7	16.8	58.7	24.5	52.2	52.4	29.3	9.1	7	36.8	89.2	89.2	0	78.2	41	86.4	55.9	5.9	14.8	49.8	14.1	7.7
Croatia	2017	51.8	8.1	34.1	34.3	23.5	18.2	58.1	23.8	55	49.7	38.5	8.5	10.6	30.5	92	92	0	73.2	38.2	83.6	54.2	4.8	18.5	45.4	10.6	6.2
Cyprus	2014	51.5	14	35.4	32.8	17.7	29.2	48.3	22.4	63.2	41.3	22.7	0	4.8	13.5	92.2	92.2	0	50.1	27.7	84	33	7.4		40.4	28.2	
Cyprus	2017	51.6	12.1	40.1	30.8	17	29.8	46.8	23.4	64	41.8	26.1	0	7.8	27.4	91	91	0	60.3	23.9	83.5	44.8	9.9		55	26.6	
Czech Republic	2014	51.5	10.8	36.8	33.2	19.2	13.8	71.1	15.1	67.6	63.6	39.4	4.1	6.8	41	84	84	0	66.9	27	80.4	32	1.9	15.6	53.9	28.3	4.3
Czech Republic	2017	50.9	9	37.4	34	19.6	13.9	72.2	14	66.6	69.7	49.4	6.2	18.2	44.5	85.2	85.2	0	79	26.6	83.9	40	1.5	15.7	57.3	21.9	2
Denmark	2014	51.1	12.9	29.8	37.2	20.1	11.5	82	6.5	86.2	81	65.5	0	3.3	46.6	100	100	0	95.9	37.5	99.9	38.6	3.3		64.6	45	
Denmark	2017	50.5	11	31.5	33.2	24.3	13.7	80.4	5.9	87	80.7	64.1	0	11	51.7	99.9	99.9	0	97.5	45.6	98	52.8	2.2		60.6	43.8	
Estonia	2014	55.1	9.3	34.8	33.3	22.7	33.5	45.9	20.6	60.8	52	32.4	1.9	9.7	29.6	98.7	98.7	0	94.9	33	97	37	4.5	17.8	64	33.7	3.2
Estonia	2017	54.7	8	35.5	32.8	23.7	35.6	48.6	15.8	72.8	66.7	48.3	3.9	19.3	37.2	98.8	98.8	0	94.1	30.6	96.8	40.4	2.1	15.2	66.7	32.5	1.6
Finland	2014	52.2	9.4	30.3	31.7	28.6	13.7	58	28.3	80.1	70.9	57.4	0	5.5	33	100	100	0	96.7	63.6	98.6	46.5	1.2		59.4	40.9	
Finland	2017	52.2	9.1	30.8	33.7	26.4	13.9	60.6	25.4	87.1	72.9	55.6	0	5.8	40	99.8	99.8	0	98.3	64.2	99.1	62.2	0.8		61.6	41	
France	2014	51.1	7.7	32.1	42	18.2	19.1	76.2	4.7	68.4	67.4	52.9	0	7.8	31.4	98.7	98.7	0	85.8	46.9	91.9	27.5	2.2		56.9	19.8	
France	2017	51.9	10.1	32.6	34.7	22.5	20.1	64.1	15.9	76.5	64.7	49.6	0	7.6	33.5	96.5	96.5	0	88.3	43	91.8	53.7	5.6		58.2	18.5	
Germany	2014	51.1	11	24.9	40.2	23.9	26.4	68.9	4.7	84.3	79.8	57.5	0	10.5	57	99.1	99.1	0	93	46.8	94.7	32.4	2.3		51.3	13.7	
Germany	2017	52	12	27.1	36.3	24.7	26	70.1	3.9	89	76.8	56.7	0	8.4	56.3	99.2	99.2	0	91.5	54.5	94.3	65.2	4.9		61.3	7.4	
Greece	2014	51.3	8.3	34.8	32.9	24.1	19.4	52.2	28.4	48.8	23.8	12.8	0.7	1.2	9.7	90.9	90.9	0	58	12.2	78.1	28.2	4.1	14.8	30	36.4	7.3
Greece	2017	52.4	8.1	34.4	33.5	24.1	19.7	51.5	28.8	56.4	21.7	13.4	1.5	2.9	8.9	88.9	88.9	0	74.4	12.7	79.4	27.4	6.3	14	40.6	19.6	5.2
Hungary	2014	52.5	9.9	36.7	32.7	20.6	17.5	56.2	26.3	41.8	37.7	20.4	2.4	4.3	18.2	74.5	74.5	0	62.5	12.2	69.7	32.7	3.9	10.8	48.9	21.5	3.6
Hungary	2017	53.9	9.1	34.5	35.3	21	18	55.7	26.3	55.7	36.7	24.7	3	7.2	22.7	76.5	76.5	0	71.2	13.9	73.5	24.4	1.9	6	51.6	15.1	3.5
Ireland	2014	50.1	13.1	37.2	33.5	16.2	28.4	63.9	7.7	73.9	69.5	49.1	0	11.3	31.8	95.5	95.5	0	87.8	47.4	92.7	36.8	5		47	35.2	
Ireland	2017	50.6	12.1	42.4	30.2	15.3	27.3	67.7	5	71.2	73.3	49.8	0	15.8	42.1	96.6	96.6	0	87.8	53.3	93.2	64.8	7.9		45.4	41.2	
Italy	2014	52.3	9	28.5	41.1	21.4	11.3	42.6	46	70	55.2	32.8	0	2.5	26.1	89.8	89.8	0	67.1	37.9	80.9	42.5	6.1		38.8	8.3	
Italy	2017	52	7.3	33.4	33.5	25.7	8.6	40.9	50.6	72	64.7	46.8	0	4.3	32.1	96.2	96.2	0	87.3	44	93	57.9	1.4		49.6	13.1	

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Latvia	2014	55.5	10.5	33.3	33.1	23.1	24	55.8	20.2	65.6	44.3	26.2	4.3	4.1	16.6	92.2	92.2	0	86.5	22.7	90.7	37.9	6.7	23.4	59.7	38.2	4.2
Latvia	2017	55.7	7.4	33.6	34.4	24.6	24.3	56.9	18.8	60.4	54.1	28.8	6.7	7.5	22.3	95.1	95.1	0	88	17.5	91.3	37.2	4.5	19.6	59.4	42.6	5.3
Lithuania	2014	55.4	8.4	33.8	34.5	23.3	29.2	54.5	16.2	55.1	57.7	31.5	4.2	5.7	30.1	84.9	84.9	0	71.3	11.2	80.4	37.7	9	20.2	53.5	33.9	12.1
Lithuania	2017	54.9	8.6	33	34.4	24	31.4	58.2	10.4	72.3	64.1	37.4	8.6	15.3	37.7	86.4	86.4	0	61.7	18.5	80.2	46.8	16	23	58.9	33.1	10.9
Luxembourg	2014	50.3	10.7	41.1	33.9	14.3	17.3	69.8	12.9	72.9	77.5	59.8	0	8.8	38.1	97.4	97.4	0	86.6	72.4	94.6	37.7	5.9		56.4	27.4	
Luxembourg	2017	48.8	9.8	37.9	34.2	18.1	23.7	61.9	14.5	79.5	77.8	63.3	0	7.8	45.6	99.4	99.4	0	91.2	71.7	96.2	79.9	5.8		65.5	27.6	
Netherlands	2014	50.9	12.7	30.6	37.2	19.5	29.3	64.6	6.1	77.6	74	59.3	0	4.9	31.9	99.6	99.6	0	98.7	34.9	97.4	27.1	3.3		63.1	35.3	
Netherlands	2017	50.6	10	31.6	35.5	22.9	30.7	64.9	4.4	78.4	78.1	59.9	0	8.3	44.3	99.6	99.6	0	98.8	41	95.7	45.5	1		62.3	31.1	
Norway	2014	49.2	11.8	28.3	35.5	24.5	34.6	48.7	16.7	83	89.7	78.6	0	8.3	42.6	100	100	0	98.9	71.8	99.2	47.4	2.3		68.7	41.6	
Norway	2017	49.8	9.7	34.4	33.5	22.4	35.3	47.6	17.2	93.9	90.4	80.1	0	13.7	62.2	99.7	99.7	0	98.5	73	99.1	78.5	1.8		70.7	50.4	
Poland	2014	51.7	11.9	37	33.7	17.4	19.3	63.4	17.3	67	46.7	22.1	2.7	8.8	16.8	80.3	80.3	0	52.3	17.5	75.4	36	4.7	10.2	47.6	15.1	5.1
Poland	2017	53.2	8.1	39.2	33.8	19	20.9	66.2	12.9	41.3	54	35.7	4	9.3	22.2	89.9	89.9	0	83.8	18.3	87.3	51.8	6.7	18.7	61.5	18.1	6.7
Portugal	2014	52.3	7.9	35.7	36.4	20	20.1	27.5	52.4	41.6	52.5	25.1	0	7.4	28	88.7	88.7	0	68.3	29.4	84.5	30.9	6.1		38	20.9	
Portugal	2017	51.9	9.7	35.4	32.7	22.2	14.8	47.6	37.6	57	54.3	32.3	0	15.2	33.3	93.5	93.5	0	84.6	34.3	86.5	41.4	3.9		50.9	18.9	
Slovak Republic	2014	53.4	9.2	39.8	34.7	16.3	18.3	70	11.6	69	66.9	48.4	2.4	4.9	37.5	83.3	83.3	0	76.4	18.4	81.8	36.8	3.4	13.5	52.3	36.6	4
Slovak Republic	2017	53.7	9.5	39.8	34.6	16.1	18.3	69	12.7	74	66.7	53.4	4.3	19.9	45.5	88.2	88.2	0	80.3	23.9	86.1	41.2	4.1	17.1	59.7	24.4	4.8
Slovenia	2014	52.1	10.1	33.6	34.5	21.8	1.4	78.2	20.4	64.6	65.3	33	0	9.9	31.8	98.3	98.3	0	93	35.5	92.4	38.8	4.2		48.9	18.6	
Slovenia	2017	51.4	9.3	35.7	34.8	20.2	3.8	76.6	19.5	72.9	67	30.7	0	20.4	40.5	97.6	97.6	0	94.1	42.5	89.8	48.1	1.5		54.5	18.6	
Spain	2014	50.1	7	51	35.5	6.5	4.1	83.8	12.2	63.3	67.5	49	0	14.3	27.4	98	98	0	83.1	54.8	92.8	47	5.2		50.5	24.5	
Spain	2017	48.9	7.9	48.7	28.4	15	4.6	67.3	28.1	82.8	70.7	52.7	0	18.7	27.9	96.6	96.6	0	87.4	55.8	91.2	61.7	4.9		48.4	20.5	
Sweden	2014	50.7	15.9	25.5	33.5	25.2	22.3	70.5	7.2	82.3	85.5	76.6	0	5.9	53.7	99.9	99.9	0	98.3	48	98.9	48.7	3		68.7	34.2	
Sweden	2017	50.7	10.4	30.8	32.3	26.5	23.8	69	7.2	90.9	84.3	77.8	0	7.9	60	99.9	99.9	0	98.4	46.8	99.2	55.1	1		68.7	35.9	
Switzerland	2014	51.5	5.8	35.3	36	22.9	33.5	47.1	19.3	81.5	75	55.6	0	5.5	49.4	98.7	98.7	0	86.4	57	95.2	24	2.3		62	19.2	
Switzerland	2017	51.3	7.3	35.1	35.4	22.2	40	28.4	31.6	83.2	82.7	62.6	0	13.4	62.2	99	99	0	89.9	69.6	94.4	70.1	2.9		48.4	13.7	

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
United Kingdom	2014	50.9	10.1	35	34.8	20.1	32.8	62.4	4.7	78.5	72.9	53.7	0	10.3	41.4	98.9	98.9	0	96.3	62.7	95.9	40.2	3		54.8	20.6	
United Kingdom	2017	51.4	13.6	32.8	31.9	21.7	29.6	53.6	16.7	80.9	74.5	64.8	0	9.4	43.7	97.3	97.3	0	92.4	66.7	94.6	75	8.1		59.8	22.7	
United States	2014	51.2	12.8	33.4	35.6	18.2	31.2	66	2.8	65.9	75.9	55.5	0	9.8	46.9	94.2	94.2	0	78.7	62.5	91.9	50.9	7.9		56.8	24.7	
United States	2017	50.4	13.9	32.3	33.8	20	32.1	64.6	3.3	73.1	79.4	62.2	0	15	54.8	93.4	93.4	0	81	66.5	90.3	77.5	6		60.6	28.6	
South Asia, East Asia & Pacific																											
LMICs																											
Afghanistan	2014	48.2	30.1	45.6	20.2	4.1	5.3	23	71.7	60.5	26.6	3.5	8.2	8	12	10.7	10.7	0.2	2	1.3	5.8	34.6	18.6	17.7	17.8	3.5	41.6
Afghanistan	2017	49.8	32	44.1	22.1	1.7	3.8	22.7	73.4	57.8	14.4	4	0.9	6.9	7.7	16.3	15.9	1	3	1.2	10.5	35.4	15.3	10.2	18.8	2.1	24.1
Bangladesh	2014	50	23.3	49.5	20.8	6.5	2.3	44.2	53.5	54.9	24.5	7.9	5.6	4	6.2	32.6	30.9	2.7	5.4	0.4	21.7	50.2	10.1	14.7	13.8	1.7	24.6
Bangladesh	2017	50.2	22.4	47.6	25.1	4.8	3.5	53.5	43	65.3	28.6	10.7	12.5	7.9	9.3	51.7	43.1	21.4	6.7	0.2	28.1	37.5	11.8	22.5	15	6.3	27.8
Cambodia	2014	56	22.1	45.8	24.6	7.5	3.1	7.6	89.3	69.6	66.6	3.9	14.3	26	29	22.7	12.7	13.9	5.8	3	7	62.2	20.6	23.3	28.8	3.3	50.7
Cambodia	2017	53.7	22.6	45.8	24.8	6.8	2	7.2	90.8	64.7	51.8	5.5	11.2	22.3	21.6	22.8	18.6	5.9	7.9	0.6	9.7	59.3	12.6	29.7	32.1	4.4	36.5
China	2014	49.3	12.6	46.6	31.6	9.3	6.4	29.3	64.4	78.3	73.3	42.6	2.6	22.8	40.1	80.3	80.3	0	50.1	16.3	70.9	36.8	8.2	18	38	14.6	35.5
China	2017	49.6	10.5	51.5	29.2	8.8	5.3	33.3	61.4	61.8	51.3	35.8	4.3	16.1	22.1	80.7	80.7	0	69.4	21.5	65.8	45.2	6.6	18.8	35.9	12.2	14.6
India	2014	49.3	21	45.7	26	7.3	4.4	40	55.5	49.8	38.9	14.9	9.8	7.5	10.8	55	54.6	2.5	23.5	4.4	30.7	47	22.6	10.5	20.9	10.1	22.4
India	2017	49.3	21.4	45.3	25.5	7.8	4.9	40.3	54.8	47.2	34.4	20.8	8.9	10.1	12.1	81.1	81.1	2.2	34.6	3.3	41.7	44.2	14.5	16.7	22	8.2	14.3
Indonesia	2014	52.7	14.9	49.8	30.3	5	5.3	48.4	46.4	47.8	72.1	28.9	27.5	24.5	29.7	38.2	38.1	0.5	28.4	1.8	33.5	57.9	17.2	31.2	31.2	19.9	30.5
Indonesia	2017	51.7	16.5	49.5	28.7	5.4	4.7	48.4	46.9	50.5	62.5	22.2	31.1	20.9	29.1	50.6	50.1	3.3	32.7	2.5	30.7	57	12.9	24.8	39	15.7	21.9
Lao PDR	2017	51.8	28.4	43.6	22.7	5.3	7.1	25.9	67	59.1	61.2	19.9	14.7	15.5	29.7	30	30	0	14	0.5	20.4	42.8	6.3	19.2	27.3	4.4	53.1
Malaysia	2014	47.4	19	48.4	27.7	4.9	19.3	66	14.7	53.2	81.7	35.7	9.5	18.4	55.9	82.9	82.9	3	43.9	21.6	67.9	56.5	7.1	25.9	47.2	31.9	8.4
Malaysia	2017	47.4	25	43.6	25	6.3	22.1	72.9	5.1	39.3	63.1	38.4	10.2	14.4	42.6	85.8	85.6	10.9	75.3	21.5	68.1	39.2	5.8	23.5	39.2	26.2	2.9
Mongolia	2014	51.6	19.1	49.3	25.4	6.2	23.3	54.5	22.3	67.8	46.4	32.8	5.3	9.5	8.6	93	93	5.4	68.5	1.2	82.1	57.3	7.5	38.2	37.3	31.6	25.2
Mongolia	2017	52.1	18.5	50.1	25.9	5.5	24.3	52.4	23.3	55.5	29.6	19.5	2.7	9.3	9.4	95.1	95.1	23.3	79.6	3.5	87.6	52.2	9.3	33.3	44.3	26.5	11.5
Myanmar	2014	51.6	21.5	44.2	25.8	8.6	6.3	28.2	65.5	90.3	46.5	13.3	6	19.1	16	23.6	23.4	0.2	1.8	0	19.2	43.6	12.5	11.4	24.6	1.4	42.1
Myanmar	2017	53.5	17.3	45.6	29.1	8.1	4.4	27.6	68.1	67.3	37	8.9	9	18.7	12.8	28.4	27.9	0.8	5.4	0.1	15.2	45.2	7.2	10.6	34.9	2.9	31.1
Nepal	2014	53.6	23.8	42.9	25.8	7.5	2.5	15.6	81.9	61.7	45	17.2	15	12.8	9.8	34.9	34.9	0.4	7.3	0.4	27.5	60.9	20.8	25	20	7.3	35.3
Nepal	2017	55.8	22.3	43.8	23.8	10.2	2.8	16.9	80.4	75.8	47.3	18.1	24.8	16.7	13.2	47.3	47.3	0	9.6	0.7	31.4	67.2	26.7	20.6	26	10	33.9
Pakistan	2014	48.5	26	45.2	24.2	4.7	3.8	15.8	80.4	50.9	32.7	3.6	11.3	13.2	5.2	13.2	9.3	5.5	3.3	0.1	6.8	50.8	22.9	25.5	22.9	2.9	21.4
Pakistan	2017	48.9	26.9	44.9	23	5.2	5.6	24.1	70.3	48.8	36.2	6.7	21.9	9.7	16.2	22.3	19.3	7	9.1	1.1	10.3	38.6	4.5	13.5	14.9	2.4	11.4
Philippines	2014	51.1	19.6	46.8	24.3	9.3	13	55.3	31.8	51.5	67.4	15.8	9.6	24.5	26.3	32.7	29.5	4.3	22	3.5	22.6	71.3	29.5	34.2	37.2	17.8	23.5

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Philippines	2017	50.5	18.8	47.4	25.4	8.4	12.7	57.5	29.8	51.8	58.9	12.8	8.5	27.9	27.8	36.1	33.9	4.2	23.8	2.2	27.6	60.1	28.3	32.8	41.9	20.7	21.7
Sri Lanka	2014	53.2	17.9	31.8	31.7	18.6	2.9	47.2	50	35	46.2	31.8	11	7.4	14.6	83	83	0.1	25.9	4	58.2	30.6	3.2	17	23.4	10.6	21.3
Sri Lanka	2017	54.5	14	33.4	29.9	22.7	4.7	43.8	51.5	41.1	43.5	29.1	13.6	8.7	20.4	74.3	74.2	1.9	34.2	5.9	45.3	36.2	4.9	13.8	21.9	14.1	13.6
Thailand	2014	53.1	13.4	40.1	37	9.5	5.5	34	60.4	59.6	81.5	40.7	8.7	16.9	61.6	79.4	79.4	1.4	55.9	5.9	75	51.6	21.5	46.1	25.2	23.2	38.4
Thailand	2017	54.1	11.8	42.3	35	11	7.4	38.9	53.7	52.9	62.4	40.7	18	27.4	44.7	82.4	82.2	7.9	63	9.9	66.1	48.1	4	38.7	39	37	28.9
Vietnam	2014	50.9	16.6	45.5	30.3	7.5	11.5	49.9	38.6	72.7	64.3	15.6	12	13.3	24.8	32.6	32.5	0.5	28.2	2.1	24.5	48.1	8.1	17.4	27	8.1	28.2
Vietnam	2017	52.7	15.5	46.4	29.8	8.3	10.3	51.1	38.5	76	57.7	15.1	14.9	22.3	19.5	32.4	31.8	3.3	28.4	4	24.6	50	9.8	18.1	29.9	10.4	25.7
South Asia, East Asia & Pacific																											
HICs																											
Australia	2014	52.1	12.9	33.6	34.9	18.6	24.3	70.3	5.3	79.5	82.2	63.5	0	9.4	41.7	99.3	99.3	0	90.8	60.6	97.9	43.6	7.2		59.4	45.8	
Australia	2017	50	9.2	31.2	37.5	22	26.9	69.3	3.8	82	80.9	64.3	0	8.9	52.4	99.7	99.7	0	92	61.4	97.5	72.4	6.2		60.2	41.1	
Hong Kong SAR, China	2014	54.9	10.2	36.9	37.6	15.4	26.2	55.1	18.7	76.6	67.1	50.2	0	9.3	41	97.2	97.2	0	72.4	67	89.8	25.1	2.3		51.8	15.5	
Hong Kong SAR, China	2017	54.2	10.9	38	38.5	12.6	27.3	58.2	14.5	74.9	61.2	51.4	0	6.3	38	96.4	96.4	0	84.4	67.1	93	67	1.3		59.6	15.3	
Japan	2014	53.4	6.1	29.7	33.7	30.5	22.6	66.6	10.8	83.2	73.9	62.9	0	5.2	46.5	98.5	98.5	0	92.5	70.1	95	22.5	2.5		51.7	11.8	
Japan	2017	55.2	5.1	29.2	34	31.8	22.7	64.8	12.6	82.2	78.3	66.2	0	16.9	53	99	99	0	89.5	70.6	95.3	58	0.7		59.5	28.3	
New Zealand	2014	54	9.7	34.3	36.8	19.2	23.6	68.4	8	83.9	87	72.1	0	12.7	55.3	99.6	99.6	0	97.2	66.6	99	54.8	5.9		62.8	40	
New Zealand	2017	54.8	11.1	33.7	35.7	19.6	22.9	65.1	12	81.4	87.1	71.5	0	14.1	64	99.6	99.6	0	98.1	65.8	97.9	80.2	5.1		63.3	41.3	
Singapore	2014	51.8	12.5	38.1	35.4	14	18.9	60.9	20.2	80.2	73.6	52.8	4.9	11.3	54.1	97	97	6.4	91.5	37.5	89.3	21.5	2.4	17.1	50.5	27.8	2.4
Singapore	2017	53	10.4	36.4	37.5	15.8	23.9	58	18.1	73.2	77.3	68.6	2.3	9.6	53.6	98.1	98.1	9.9	93.2	51.1	94.3	52.4	1.9	12.8	63.1	24.4	0.1
South Korea	2014	51.2	17.6	33.4	33	16	39	41.2	19.8	76.1	74.5	54.2	0	27.6	44.5	96.5	96.5	0	68.8	60.2	90	39.5	4.3		46.2	17.8	
South Korea	2017	50.8	11.9	38.8	33.3	16	37.3	48.7	14	80.7	69.5	57	0	35.6	43.7	96	96	0	77.8	67.4	94.8	74.9	2.4		56	27.4	
Taiwan, China	2014	50.2	9.9	39.1	38.1	12.8	33.1	45.2	21.7	62.1	71.1	41.4	0	20.4	45.8	94.1	94.1	0	74.3	58.9	83.4	29.6	1.3		47.4	10.7	
Taiwan, China	2017	52	10.2	36.8	38.6	14.4	33.3	44.6	22.1	63.6	74.7	67.7	0	14.1	42.8	95.3	95.3	0	77.6	57.1	86.9	62	1.3		55.2	16.7	

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Latin America & Caribbean																											
LMICs																											
Bolivia	2014	51.7	24.7	42.7	22.7	9.9	11	65.6	23.4	77.3	65.6	24.9	14.9	26.8	18.6	44.1	42.9	2.9	24.5	6.6	37.4	36.7	8	19.1	31.9	18.7	13.6
Bolivia	2017	52.3	21.8	45.2	23	10	13.2	49.3	37.4	72.1	54.9	17.6	6.6	24.9	21.2	58.3	55	7.3	30.9	8	38.5	46.4	12.8	19.7	30.5	17.7	11.1
Brazil	2014	52.4	18.6	43.2	27.5	10.7	4.5	49.5	46.1	36.4	28.2	13.1	3.6	7.3	3.9	72	72	0.9	62.5	34.4	64.6	23.6	4.4	6.4	36.3	16.1	3.9
Brazil	2017	52.8	16.1	44.6	29.3	10	6.7	58.9	34.4	46.8	32.3	15.8	4.1	13.8	11.3	74	74	4.9	63.9	29.6	59.3	42.5	10.3	8.3	38	20	3.2
Colombia	2014	52.4	18.6	41	28.7	11.7	15.7	57.1	27.2	54.1	44.7	12.9	5.5	14	13.7	41.4	40.7	2.4	32.2	14.7	32.3	41.4	7.8	19.1	34.8	8.9	5.2
Colombia	2017	54	18.2	41.2	29.6	11.1	11.5	52.8	35.7	37.9	39.2	8.9	5.4	16.2	13.7	48.2	47.3	5.1	27.9	15.1	31.8	42.7	9.9	19.3	30.7	12.9	3.6
Costa Rica	2014	52.4	20.4	41.8	26.4	11.3	25.3	36.3	38.4	51.5	58.8	24.9	6.5	15.4	20.2	66.2	66.2	0	55.4	15.3	57.5	40.9	9.9	18.5	36.2	8.8	5.3
Costa Rica	2017	52.6	21	41.5	25	12.5	14.9	49.9	35.2	45.9	57.4	23.7	7.6	17.1	17.3	68.9	68.9	0	52.8	14.5	56.7	36.3	8.8	21.2	36.7	12	2.7
Dominican Republic	2014	51	20.6	44.4	24	11.1	18.1	25.8	56.1	62.9	57.3	28.5	14.8	17.3	12.3	57.8	57.7	2.6	24.8	11.8	48	55.9	18.5	28.8	40.5	12.8	5.3
Dominican Republic	2017	49.5	19.3	45.5	25.4	9.9	0.1	47.5	52.4	53.1	51.7	20.6	19.1	21.5	13.7	60.4	59.2	3.9	35.4	18.4	46.1	54	18.9	28	37.3	13.3	5.9
Ecuador	2014	51.9	20.5	43.7	25.3	10.5	7.3	67.1	25.6	43.3	34.5	15.5	1.5	10.1	7.3	49.1	49.1	0	27.4	6	43.9	24.6	7.5	7.9	27	6.1	5.8
Ecuador	2017	52	20.6	43.9	24.4	11.1	7.5	64.3	28.1	44.7	34.2	12.7	5.4	13.6	11.8	53.9	53.8	2.9	30.9	9.2	39.7	32.7	12	12.3	26.5	6.9	6.4
El Salvador	2014	53.3	20.4	48.5	22.8	8.3	17.5	27.1	55.3	55.6	56	14.9	7.1	15.7	15.8	38.9	37	4.5	23.1	8.8	28.4	45	13.2	16	34.9	17.8	5.4
El Salvador	2017	56.2	22.1	43.7	24	10.3	10.7	41.8	47.4	44.8	38.2	11.6	5.5	13.4	10.3	31.7	31	3.4	20.7	6.2	21.8	23.4	7.2	9.3	25.9	9.2	3.6
Guatemala	2014	54.1	25.3	45.5	21	8.2	14	39.4	46.6	49.8	55.4	15.9	12.2	18.4	16.4	43.8	43.2	1.7	18.2	7.1	30.2	44.5	19.6	12.9	23.7	7.9	11.1
Guatemala	2017	54.9	24.8	44.4	21.6	9.2	6.5	38.9	54.6	43.9	41.8	12.2	9.7	18.9	16.1	45.7	45.2	1.9	18	7.4	28.8	32.5	13.3	13.8	20.9	5.6	9.1
Haiti	2014	50.8	29.5	43.8	20.6	6.1	2.3	63.9	33.8	49.8	45	10.2	5.5	15.2	11.8	20	18.7	4	4.8	4.5	7.9	47.9	20.4	21.6	9.7	8.2	21.4
Haiti	2017	51.6	28.3	44.3	22.2	5.2	3	59	38	49.9	46.6	13.8	26.7	12.9	10.9	35.6	31.3	14.4	11.9	7.6	15.9	41.3	12	33.3	10.1	6.8	25.1
Honduras	2014	51.4	25	46.3	21.3	7.4	7.5	31.9	60.6	53.2	39.6	15.9	5	11.2	11.6	34.4	33	3.7	16	6.8	24.5	41.7	23.7	15.6	18.4	9.7	9
Honduras	2017	53.2	26	43.9	21.4	8.7	9.8	30.7	59.5	50.7	41.3	15.9	6.2	13.1	13.7	48.2	46.1	6.2	18.7	5.1	27.3	34.9	14.7	18.8	24.8	8.6	10.2
Mexico	2014	50.5	19.8	46.4	24.9	8.9	15.3	39.4	45.2	49.3	60.2	16.1	18.3	14.2	22.8	40.9	40.4	3.4	29.6	20	30.7	52.1	29.2	12.1	34.6	18.5	13.9
Mexico	2017	54.1	21	44.1	23.7	11.2	16.7	47	36.3	28	40.7	10.5	12.4	12.8	14.1	37.3	36.5	5.1	26.3	9.6	22.2	31.9	12.1	11.2	28.9	12.6	5.2
Nicaragua	2014	50.4	26	45.8	22.1	6	23.7	37.4	38.9	60.9	51.1	8.8	9.2	15.5	10.8	21	20.4	1.1	12.4	3.9	12.7	43.5	15.9	14.9	28.8	6.9	8.2
Nicaragua	2017	52.9	28.9	43.9	20.4	6.9	13.6	50.5	35.9	63	45.5	8.9	5.8	19.8	15.4	32.6	30	4.3	17.3	5.5	17.9	30.5	7.6	16.5	32.2	8.9	5.5
Paraguay	2017	49.4	21.2	44.6	23.8	10.5	17	44.1	38.8	56.2	27.5	6.9	2.1	11.3	8.8	51.4	33.2	30.2	16.9	7.1	25.6	37.1	11.5	25.3	43.1	9.1	11.5
Peru	2014	51.5	20	45.4	24.7	9.9	8.7	70.6	20.7	54	41.1	13.4	7.2	13.9	10.5	31.6	31.6	0	23.6	12.8	27.3	28.8	9.1	15.7	31.4	5.1	11
Peru	2017	50.8	18.4	45.4	24.5	11.6	11.1	71.3	17.6	50.3	39.7	8.9	8.5	14.8	14.9	45.5	45.2	2.7	30.7	12.7	32.7	37.9	10.5	14.9	30.6	6	9.7
Venezuela, RB	2014	52.4	16.9	45.5	29.1	8.6	12.4	61.5	26	62.2	49.4	25.2	11.3	11.2	17.4	61.3	61.2	3.3	54.3	23.5	54.4	25.9	12.7	9.5	24.4	3.4	4.3
Venezuela, RB	2017	53.2	16.7	43.1	28.6	11.6	16.1	61.3	22.6	47.3	41.7	19.9	13.2	14.8	9.4	77.1	76.8	11.4	69.7	31	70.7	46.3	9.6	20.2	39.1	11.6	2.6

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Latin America & Caribbean																											
HICs																											
Argentina	2014	54	18.8	39	25.7	16.5	4.8	55.3	39.8	58.3	23.6	4.1	1.6	4.9	4.7	52	52	0.5	46.2	27.8	47.1	19.2	1.9	10.1	35.6	14.9	1.3
Argentina	2017	53	19.1	39.2	26.3	15.4	5.9	54.1	39.9	36.2	29.8	7.6	3.2	10.6	7	50.7	50.1	2.3	43.7	25.2	40.1	38.1	6.4	7.3	34.1	15.6	1.4
Chile	2014	53.1	15.4	37.8	31.6	15.3	16	60.6	23.4	49.2	35.8	15.7	1.8	6.1	13.7	65.3	65.2	4	56.1	29.6	52.6	29.9	5.6	14.7	48.3	18.8	2.5
Chile	2017	52.3	13.4	38.4	30.8	17.4	16.7	58.6	24.7	43.9	49.6	22	8.1	17.6	18.5	75.7	75.4	19.3	61.4	31.5	63.9	47.2	10.4	16.8	46.1	22.5	2.3
Panama	2014	50.5	17	44.6	27.2	11.2	21.8	53.2	25	59.9	64.5	22.2	20.1	13.7	18.2	45.8	45.6	1.7	27.5	10.4	34.1	50	22.2	22.7	34.5	12.4	5.8
Panama	2017	52	16.6	43.9	26.4	13.1	16.2	57.5	26.3	44.6	49.2	15.3	14.1	17.2	15.4	47.9	47.2	3.9	30.8	8.6	33.4	32.6	10	21.5	31	16	3.5
Trinidad and Tobago	2017	51	12.4	42	32.8	12.8	15.2	58.2	26.5	62.1	70.7	38.9	22.7	24.4	40.7	83.2	83.2	0	65.9	18	69	48.3	7.5	16.8	51.7	16.2	6.5
Uruguay	2014	54	14.7	34.8	31.5	19	12.1	50.2	37.7	61.3	38.4	13	2.4	6.4	8.9	47.8	47.7	1.1	39.9	42.2	40.2	41.6	5.1	14.3	40.8	14.2	3.3
Uruguay	2017	54	14.7	35.5	31.1	18.7	14.3	54.2	31.5	48.4	37.3	12.2	3	10.1	12.2	66.4	66.4	0	58.2	43.2	57.2	55.7	7.7	12.3	40.7	19	1.4
Middle East & North Africa																											
LMICs																											
Algeria	2014	50.4	33.7	45	18.6	2.7	2.4	26.8	70.9	72.1	46.8	14.5	3.6	11.4	11.9	52.4	52.4	0	22.6	6.4	37.8	23.7	7.3	12.9	22.2	9.2	12.6
Algeria	2017	50.1	25	45.7	23.7	5.7	5.7	35.4	58.9	67.7	39.6	12.4	4.6	14.5	13.2	44.7	44.7	0	21.4	3.6	29.3	30	5.7	19.9	19.7	4.9	5.5
Egypt, Arab Rep.	2014	51.3	23.5	45.5	27.1	3.9	9.9	42.7	47.4	48	25.4	4.6	12.2	3	2.4	15.2	14.8	0.9	10.9	2.1	11.8	35.5	12	8.5	16.2	2.4	5.5
Egypt, Arab Rep.	2017	49.4	20.1	43.7	31.8	4.4	12.6	51	36.4	39.8	30.4	6.6	16.7	4.7	4.4	34.9	34.2	1.8	27	3.7	24.9	52	14	14	30.5	7.3	6.3
Iran, Islamic Rep.	2017	50.1	19	48	25.6	7.3	18.4	61.6	20	35.8	41.1	25.6	0	16.2	15.8	94.4	93.7	25.1	81.8	8	83.8	70.5	23.2		25.9	65.8	
Iraq	2014	50.1	27.7	49.5	20.7	2.1	9.1	35	55.9	42.7	47.4	3.6	16.8	12.8	15.8	11	11	0	3.6	2.2	3.6	69.7	27	14.8	6.3	5.1	6.6
Iraq	2017	49.3	26	51.3	20.6	2	6.5	28.9	64.6	41.8	30.7	1.7	0	11.4	6.9	22.7	20.4	4.2	6.5	1.9	4	63.9	32.4		18.2	6.8	
Jordan	2014	50.4	28.2	46.4	19.7	5.6	10.9	61.4	27.7	47.3	30.2	4.1	15.6	3.5	2.1	27.6	27.6	0.5	21.6	2.6	23.7	35	2.1	9.9	15.7	5.7	2.5
Jordan	2017	47.2	24.8	45.2	23.3	6.8	14.4	58.9	26.8	65.9	44.6	11.4	19.4	7.9	12.9	46.8	46.7	0.9	35	2.9	38.2	51.4	11.5	17.4	27.3	8.8	2.5
Lebanon	2014	52.8	18	49.4	25.6	7	15.9	46.3	37.7	67.4	48.3	18.5	3.7	8.9	6.9	49.8	49.8	0.7	35.5	11.1	46.1	37	6.4	15.7	34.2	7.3	7
Lebanon	2017	51.2	20.2	44.5	26.2	9.1	12.7	55.2	32.1	81.5	51.9	21.3	10.4	8.9	14.4	45.3	45.3	0	35.3	15	40.2	36.5	4.6	13.7	30.6	2.2	3
Libya	2017	45.5	24.1	54.1	19.7	2.1	22.2	64.6	13.3	71.2	61.6	17.4	0	29.3	12.9	67.5	67.5	0	23.8	10.6	46.5	58.2	12.4		30.1	7.5	
Morocco	2017	52.4	17.9	44.9	28.7	8.5	5.9	20.1	74	48.8	22	6.8	4.7	3.3	5.2	30.7	30.6	0.6	22.8	0.2	23.8	27.6	12.7	15.7	18.3	2.3	6.2
Tunisia	2014	49.8	21.6	46.4	24.6	7.4	4.2	40.7	55.1	49.4	38.5	10.9	1.4	6.9	8.9	28.8	28.6	0.7	13.1	7.3	19	35.2	8.7	15.4	13.3	3.6	8.8
Tunisia	2017	50.4	14.3	44.9	30.4	10.4	9.5	42.4	48.1	40.6	40.9	19.3	3.1	11.4	14.5	38.6	38.6	2.1	24.8	7.6	32	46.6	9.6	25.2	19.9	7.2	11.5
West Bank & Gaza	2014	51.7	29.5	42.7	20.3	7.5	8	59.6	32.4	48	22.8	5.8	7.1	3.1	4.1	28	28	0	12.5	1.4	19.4	41.7	9.5	8.2	19.8	5	3.9
West Bank & Gaza	2017	51.8	27	44.9	21.8	6.4	8	62	30	55.1	26.9	7	13.4	3.8	4.3	29.4	29.4	0	17	3.6	21.7	31.3	5.1	10.7	22.1	4.9	2.4

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Middle East & North Africa																											
HICs																											
Bahrain	2014	33.8	15.9	62.1	20.3	1.6	36.6	57	6.4	60	66.2	35.8	0	22.9	26.2	84.9	84.9	0	78.3	29	71.9	61.6	14		39.9	11.9	
Bahrain	2017	33.1	13	62	23.1	1.9	33.2	59.7	7.1	56.3	54.1	30.7	0	16.4	23.1	83.6	83.6	0	81.2	30.5	78.5	60.9	11		68.1	16.2	
Israel	2014	51.8	15.3	40.9	30.5	13.3	31.2	65	3.8	88.3	66.3	58.8	5.3	11.9	31.2	95.5	95.5	0	34.7	82.6	93.7	69	7.7	21.8	60.7	31.7	8.7
Israel	2017	51.2	17.4	39.5	30.2	12.9	32.5	62.8	4.7	84.4	66.4	55.9	7.9	21	44.8	96.3	96.3	0	31.9	78.4	94	86.6	4.1	17.1	64.5	32.8	0.5
Kuwait	2014	41.3	15.1	62.3	20.6	2	38.4	52.7	8.9	56.1	61.6	26.6	0	18.3	18.2	74.6	74.6	0	72.6	27.7	63.5	54.1	8.5		35.7	3.7	
Kuwait	2017	35.3	11.9	61.2	25.8	1.1	39.2	57.5	3.3	44.5	47.2	26.9	0	10.2	16.1	80.2	80.2	0	78.3	22.4	74.9	46.5	3.1		61.6	5.2	
Malta	2014	52.7	6.1	32.2	35.1	26.6	11.8	74.1	14.2	68.5	70.6	41.4	0	4.5	35.7	97	97	0	80.4	42.3	88.8	19.9	0.7		37.2	38.6	
Malta	2017	50.8	12	33.7	34	20.3	17.7	71.9	10.5	77.9	72.5	46.5	0	9.9	48.9	97.6	97.6	0	86.7	47.2	90.1	46.6	2.2		53.9	32.5	
Saudi Arabia	2014	41.9	20.3	59.3	17.7	2.7	18.3	56.8	25	50.2	45.2	15.6	0	13.3	9.1	70.4	70.4	0	64.4	11.7	48.5	53.6	12.3		16.9	8.5	
Saudi Arabia	2017	39.8	18.1	54.2	25.4	2.3	28.6	58.7	12.7	48.4	43.8	14.5	0	16.2	12.9	72.7	72.7	0	67.9	16.7	61.6	54.2	10.5		44	5.1	
United Arab Emirates	2014	27.1	18.6	66.3	12.9	2.2	57.6	39.1	3.3	68.5	66.5	33	0	18.8	25.7	85.4	84.9	11.9	79.1	38.5	75.7	50.3	10.6		48.9	5.3	
United Arab Emirates	2017	27.3	7.2	75.6	15.4	1.9	60.1	36.5	3.4	53.7	57.1	29.1	0	17	24.5	89.1	88.3	21.6	83.7	46.1	81.3	64.1	11.3		73.6	4.4	
Sub Saharan Africa																											
LMICs																											
Benin	2014	51.8	25.6	49.2	18.1	7.1	0.7	19.7	79.6	46	63.8	8.1	39.6	18.1	6.3	18.5	17.8	2.3	5.8	1.6	12.6	41.2	10.1	24.9	12.9	2.3	35.7
Benin	2017	51	28.8	48.4	18.8	4	3.2	24.8	72	43.7	50.2	10.2	29.6	22	12.5	40.1	32.8	18.6	10.9	6.7	19.6	47.3	17.2	25.6	16.1	2.6	27
Botswana	2014	51.1	27.4	48.5	16.4	7.6	8.3	58.4	33.3	57	59.2	27.7	37	17.4	17.6	53.2	50.3	21.7	36.4	10.2	43.5	70.4	10.9	49.9	35.6	21.5	27.8
Botswana	2017	55.3	24.6	47.5	19.1	8.8	7.5	46.6	45.9	22.3	47.9	18.9	26.6	11.6	15.2	52.4	46.2	25.5	28.8	7.9	31.3	37.3	5	24.5	27.8	10.6	8
Burkina Faso	2014	50.7	24	51.2	19.5	5.3	0.8	12.1	87.1	46.8	56.8	10.2	20.5	18	8.9	16	15.1	3.4	5	3.2	11.9	50.5	22.8	28.6	11	5.2	40.5
Burkina Faso	2017	49	29.1	49.2	18.4	3.3	0.7	19.1	80.1	61.6	55.5	12.8	28.8	26.4	15	45.6	25	35	13.4	4.6	22.3	54.6	16.4	39.5	18.9	9.9	39.8
Cameroon	2014	49.4	26.1	47.9	20.2	5.7	1.1	37.7	61.2	54	67.1	8.8	37.1	18.5	8.2	13.3	12.4	2	6.8	0.6	11.1	58.2	22.1	38.5	15.8	2.5	45.9
Cameroon	2017	50.2	25.2	49.8	19.2	5.8	1.1	38	60.9	47.4	59.2	12.2	34.5	25.4	10.5	37.1	28.9	15.2	12.3	3.5	19.6	54.5	22.9	37.6	21.6	3.4	29.8
Central African Republic	2017	51.8	26.6	49.2	21	3.1	10.7	11.3	78	29.6	41.6	6.1	22.8	16.6	10.4	13.6	13.6	0	4.3	2.8	5.3	36.3	17.8	17.9	11.3	3.9	29.6
Chad	2014	51.9	27	46.9	21.1	5	0.2	12.2	87.7	51	51.6	5.3	22.4	24.6	2.8	13.8	8.4	6.4	3.3	1.4	4	44.8	20	32	12.1	5	55.2
Chad	2017	52.2	26.2	47.8	20.8	5.2	0.6	13.2	86.2	38	28.9	3	16.6	14.5	5.8	22.8	9.6	15.5	3.6	3.1	4.3	38.8	19.8	21.4	10.5	3.2	27.9
Congo, Dem. Rep.	2014	51.5	24.7	51.1	20.1	4	11.2	46.9	42	54.7	69.1	5.4	17.2	29.3	5.4	19.1	12.5	9.8	4.6	2.1	9.7	62.8	28.7	39.3	18.8	6.9	52.3

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Congo, Dem. Rep.	2017	48.8	27.6	49.2	18.9	4.2	10.3	60.3	29.4	43.4	40.4	5.1	11	16.7	6.5	28.3	16.5	17.8	7.6	1.6	11.8	36.2	14.4	27.4	15.7	2.1	18.9
Congo, Rep.	2014	50.4	20.1	52	20.7	7.2	1.1	47.3	51.6	44.5	60.7	11.4	27.5	20.7	14	19	18.6	2.1	11.5	2.2	14.3	46.4	24.3	27	18.1	5	33
Congo, Rep.	2017	50.1	22.6	49.9	20.6	6.8	2	54	43.9	34.2	46.3	8.3	17.4	18.9	9.6	27.3	24.2	6.4	13.1	4.3	11.9	41.4	20.2	28.1	17.6	2.6	17.4
Cote d'Ivoire	2014	48	24.9	50.2	20.6	4.3	1.1	21.5	77.3	58.7	66.1	9.5	23.9	24.8	12.6	35.6	15.6	25.3	5.5	1.2	15.2	51.4	17.4	37.3	17.5	2.5	33.1
Cote d'Ivoire	2017	47.5	26.9	49.1	20.2	3.8	0.5	24.6	74.9	52.4	50	6.4	21	21.1	9.8	42.2	14.9	34.4	7.5	1.4	13.5	39.8	13.4	37.6	16.4	2.2	22.5
Ethiopia	2014	50.7	23.7	49.4	20.4	6.5	0	12.9	87.1	61.2	50.2	14.8	32.1	16.7	8.7	23.4	23.4	0	0.9	0.5	16.5	43.7	10.3	9.5	9.3	5.3	41.5
Ethiopia	2017	51.3	26.6	47.5	18.9	7	0	15	85	59.3	65.6	28.7	40.9	29.9	9.8	37.6	37.6	0.4	5.3	0.4	31.5	42	8.7	16.2	16.8	7.9	60.5
Gabon	2014	51.5	20.7	49.5	22	7.7	3.7	44.8	51.4	39.6	61.7	20.3	27.5	21	19	35.6	32.8	6.6	20.7	6.5	28.9	40.7	14.5	38.5	25.6	17.5	27.3
Gabon	2017	51.3	24.5	49.4	20.5	5.7	3.1	47.8	49	31.7	61	14.3	30.3	17.5	14.1	60.1	34.5	45.5	17.2	6	32.9	57	24.1	47.5	32.9	9.6	11.5
Ghana	2014	51.2	25.1	46.9	22.3	5.7	4.7	50.4	45	52.3	57.4	19.9	22.5	26.1	14.7	43.1	37.2	13.6	11	1	29.5	37.7	9.4	37.6	15.8	3.8	31
Ghana	2017	50.8	24.6	49	20.9	5.6	3.4	49.6	47	55.6	52	16	21.2	22.5	17.8	60.1	44.1	40.6	19.4	6	33.8	41.2	10.9	43.9	23.3	9.4	28.7
Guinea	2014	49.7	21.2	48.2	23.4	7.2	6.1	13.7	80.3	36.7	48.6	3.3	20.2	21.3	5.5	8	7.2	1.5	4.4	2.3	4.6	54.2	26.3	35	12.4	3.3	47.8
Guinea	2017	49.8	25.6	46.1	19.3	9	6.6	14.9	78.4	42.8	40	7.1	20.5	16.6	8	24.1	15.2	13.9	6.4	2.7	6.7	39.9	19	27.5	15.4	5.6	23.8
Kenya	2014	53.7	26.3	45.6	24.3	3.8	8	41.4	50.6	57.8	77.9	31.4	41.8	39.1	18.9	77.8	57.5	61.4	37.4	5	55.8	80.6	32.9	63.4	29.1	11	55.9
Kenya	2017	52.3	28.2	48.7	17.3	5.8	7.7	52	40.3	52.2	72.4	27.8	36.1	38.7	15.1	84.1	57.8	75.3	39	5.8	63.8	65.8	14.7	56.7	37	12.8	34.1
Lesotho	2017	51.4	20.8	50.6	16.6	11.9	3.8	28.5	67.6	30.2	41.7	9.8	16.1	6.4	8.8	48.2	35.3	29.4	22.4	3.7	21.9	49	19.3	35.1	23.5	9.9	17.7
Liberia	2017	50	26.8	48.8	17.5	6.9	1.7	31.4	66.9	71.8	71	11.9	44.7	37.7	11.8	36.8	22.8	20.9	4.4	1.3	16.5	57.2	25.6	37.5	21.2	4.3	34.9
Madagascar	2014	52.5	23.8	46.3	22.8	7	0.1	15.3	84.6	33.4	41.5	3.5	1.6	13.4	6.5	9.2	6.1	4.7	1.6	0.1	4.7	59.1	26.8	23.7	29.2	0.5	64.7
Madagascar	2017	52.7	24.4	46.6	23.1	5.9	0.4	15.5	84.1	31.7	44.7	4.2	3.9	27.3	16.5	18.4	9.7	12.5	3.4	0.9	6.8	49.1	26.5	22.4	30.6	2.3	53.3
Malawi	2014	52.9	28.3	47.9	17.1	6.7	0.6	23.5	75.9	47.3	63.1	7.9	30.1	23.8	4.2	19.5	17.3	4.3	12.8	1.7	12.4	67.7	32.5	27.2	19.9	5.3	38.7
Malawi	2017	52.7	29.3	48.3	16.1	6.3	0.8	27.8	71.5	37.7	53	9.6	33.1	21.9	4.2	36.3	24.8	22	13	1.5	16.9	52.4	12.7	23.3	26.1	6.6	14.4
Mali	2014	50.9	25.6	46.6	20.7	7.1	3	16.3	80.7	57.1	47	3.2	24.5	15.1	5	21.6	14.3	12.4	4.5	0.8	8.9	42.8	8.9	33.2	6.9	4.2	44.1
Mali	2017	49	26.2	46.2	22.2	5.4	2.6	20.1	77.4	49	54.4	6	28.9	22.9	15.5	36.9	19.4	24.6	10.3	6.7	13.7	44.9	12.2	31.8	17	8.9	29.3
Mauritania	2014	52.1	26	45.7	22.7	5.6	3.4	29.4	67.2	63.3	43.5	11.8	12.7	13.1	11.1	23.7	21.4	6.3	12.3	5.1	16.5	46.9	14.7	45.7	19.9	9.9	24
Mauritania	2017	49.7	24.1	47	22.9	6	3.4	32.3	64.3	66.6	44.7	10.5	18.8	19.5	12.1	22.8	20.7	4.2	11.2	3.9	15.5	47.4	10.5	35.8	19.7	5.5	15.9
Mauritius	2014	52.4	15.1	39.1	35.5	10.3	8.6	46.2	45.2	40.7	55.9	37	6.1	3.9	24.2	84.6	84.6	0.9	65.4	18.4	73.6	30.1	0.8	6.1	43.6	16.5	2.7
Mauritius	2017	51.1	14	39.9	34.2	11.9	14.2	44.6	41.2	42.5	59.4	25	0	10.7	32.8	91.5	91.1	6	78	25.7	78.4	39.1	6.3		49	10	
Mozambique	2017	53	27	47.9	19.1	6	0	18.2	81.8	44.1	42.7	10.3	19.4	10.8	7.4	42.7	34.5	21.6	21.1	8.5	21.6	49.5	16.2	22.8	21	9.6	31.2
Namibia	2014	53.3	25.5	46	18.5	10	5.4	52	42.6	25.7	59.8	29.6	10.1	16.9	17.3	62.9	62.2	10.9	52.9	9.2	51.3	46	14.7	35.1	31.2	10.8	14.3
Namibia	2017	54.3	30.8	46.6	17.8	4.8	7.5	57.3	35.2	37	64.1	36.2	12.5	25.4	14.9	82	79.2	44.6	67.1	15.3	68.6	63.9	15.3	57.3	40.5	18.7	13.2
Niger	2014	50.4	25.2	48.1	20.2	6.4	0	4.8	95.1	70.5	62.8	2.4	28.6	26.6	1.1	7	3.5	4.1	0.5	1.6	1.9	73	30.7	50	12.3	8.1	58.1

			Age group				Educational attainment			Resilience	Savings behaviors					Financial tools						Borrowing behaviors		Income sources			
Country	Year	Women	18-25	25-45	45-65	65+	Tertiary	Secondary	Primary	Can raise 1/20 of GNI in the next month	Saved in past year	Saved formally	Saved socially	Saved for production	Saved for old age	Financial institution or mobile money account	Financial institution account	Mobile money account	ATM card	Credit card	Active account (12 month basis)	Borrowed in past year	Borrowed for a health care in past year	Social network transfers	Wages or salary from employer	Government transfers	Sales of agricultural goods
Niger	2017	48.5	25	48.3	20.9	5.8	0.1	6.1	93.9	48.2	26.3	2.3	12.7	12.7	4	17.2	10.3	9.7	3.2	2.3	4.8	52.5	24.1	22.2	11.1	6.9	33.2
Nigeria	2014	47.8	30	45.9	17.5	6.7	2.8	54.4	42.8	63.2	71.3	28.6	24.4	33.3	17.3	46.2	45.9	2.5	37.4	3	37.9	46.1	9.9	46.1	16.9	7.5	31.6
Nigeria	2017	49.1	25.7	49.6	19.1	5.7	1.5	53.1	45.4	47.9	63.7	22.6	27	33.1	13.7	43.8	43.6	6.1	35.2	3	36.4	39.7	8.4	41.4	20.1	2.9	25.4
Rwanda	2014	50.3	24.8	50.5	19.4	5.3	0.1	13	86.9	50.7	58.4	27.6	25.5	23.3	5.4	45.1	41.3	19.3	4.7	1.4	39.4	54.2	10.7	38.3	17.5	5.2	50.9
Rwanda	2017	52.8	25.5	48.1	19.7	6.6	0	13.9	86.1	35.9	64.7	20.5	47	16.9	10.5	52.3	38.6	32.2	4.8	0.8	31.5	67.1	24.5	35.9	35	9.2	41.4
Senegal	2014	52.1	25.7	47.9	20.8	5.7	1.4	23.1	75.5	55	62.5	7.2	31.2	25.6	9.6	16.9	13.1	6.8	6.4	1.2	12.3	59.4	16	49.8	16.2	4.2	29.8
Senegal	2017	53	25.9	48.5	20.3	5.3	0.9	24.4	74.7	58.2	48.1	8.1	26.4	17.1	7.6	44.8	21.9	34	10.6	3.1	14.7	46.7	10.1	39.1	15.4	7.8	20.8
Sierra Leone	2014	50.8	24.8	47	20.2	7.9	2.1	23.8	74.1	38.9	65.8	12.1	39.1	25.5	20.7	16.9	15.6	4.6	5.8	0.6	11.4	56.8	29.2	49	11.2	6	40
Sierra Leone	2017	53.4	22.9	48.1	21	8	2	19.9	78.1	45	56.2	5.7	36.2	17.7	9.4	20.4	13	11.4	2	1.8	7.3	51.5	16.7	25.6	12.7	4.4	37.5
South Africa	2014	52.2	21.5	47.4	22	9.1	5.3	67.3	27.4	43.2	68.3	33.9	33.8	11.6	17.3	73.9	72.2	15.6	58.6	14.9	62.9	86.9	19.3	55.3	36.4	35.6	11.2
South Africa	2017	52.1	22.3	46	24.9	6.8	5.2	69.8	25	28.5	58.9	22.5	31.1	13	10.4	69.7	67.8	19.6	35.9	9.2	51.1	52.7	11.5	39	34.3	27.4	2.6
South Sudan	2017	50.8	28.8	47.7	18.7	4.9	0.4	9.3	90.3	23.3	34.7	3.9	14	12.7	14.6	8.9	8.9	0	2.2	1.8	3	39.3	20.4	19.2	12.1	4	33.7
Tanzania	2014	51.9	24.8	50.3	17.7	7.3	1.2	19.3	79.4	58.7	61.1	9.5	14.8	35.3	7.9	42.7	19.8	35.2	12.6	0.8	14.7	57.7	28.8	49.1	10.2	3.8	54.8
Tanzania	2017	51.9	25.7	48.9	17.5	7.9	1.4	20.7	77.9	40.7	50.6	7	20.1	24.3	6.2	48.8	21.4	41.3	13.7	0.6	16.6	42.7	10.9	38.1	15	4.9	27.2
Togo	2014	50.9	25.3	48.1	19.8	6.8	0.3	26.2	73.6	30.4	40	7.4	20	9.7	5.7	19.5	18.9	1.4	2.5	0.6	13.2	30.7	12	20.1	11.2	1.7	29
Togo	2017	50.3	24	50.2	21.4	4.4	3.1	35.6	61.3	48	46.2	12.3	24	17.9	9	45.7	34.2	21.1	14.1	3.3	23	41.4	15.8	26.8	17.3	6.8	21.1
Uganda	2014	50.5	29.9	48.9	16.5	4.6	0.5	38.8	60.7	55.1	77.8	18.2	40.2	37.5	9.7	48	30.2	37.8	20.1	2	30.3	80.8	41.6	58.4	21.8	4.3	70.5
Uganda	2017	51.7	32.5	47.5	15.6	4.4	0.3	43.2	56.5	44.2	70.4	13.8	40.1	30.4	15.1	61.5	34.6	52.3	18.4	2.2	29.6	68.1	29.2	42.9	25.1	9.7	50.1
Zambia	2014	50.5	28.1	49.9	16.8	5.1	5	38.1	56.8	31.8	72.7	18.2	26.3	33.8	4.3	37.3	33.1	12.5	20.6	2.1	23.2	70.1	18	36.7	22.4	2.7	33.5
Zambia	2017	51.7	26.8	50.6	18.7	3.9	3.6	49.6	46.8	16.1	60.2	14.4	24.7	31.5	7.6	47.8	37.6	28.7	21.3	4.6	24.7	49.7	18.2	35.7	23.4	7.1	29.7
Zimbabwe	2014	52	28	50.5	15	6.5	2.4	58.5	39.1	45	53.6	5.8	19.2	14.9	3.5	33.8	18.3	22.4	15	1.8	17.1	64.4	22.7	43.4	14.8	6.2	22.2
Zimbabwe	2017	52.7	25.8	52.5	14.4	7.4	3.9	58.4	37.7	44.8	54.7	5.8	21.9	23.5	5.2	58.3	30.4	50.8	24.1	1.5	32.5	48.3	11.8	46.7	24.1	10.6	18.6
Excluded from analysis (no 2017 data)																											
Angola	2014	48.7	24.6	47.9	21.2	6.2	0.3	29.6	70.1	32.3	58.5	17.7	13.8	13.9	5.9	33.3	33.3	0	25.3	5.3	29.1	33.4	17.2	22.1	22.9	1.9	34
Belize	2014	52.2	23.1	47.1	22.1	7.8	4.4	67	28.6	63.6	60.6	22.7	9.9	15.2	20.2	49.7	49.7	0	24.5	10.5	33.3	54.1	14.6	18.3	30	13.4	16.1
Bhutan	2014	45.8	21.6	48.6	21	8.7	3.7	19.7	76.7	70.9	34.7	24.4	1.2	10.1	7.9	35.7	35.7	0	18.5	0.3	30.6	19.7	2	12.8	9.4	2.3	45.6
Burundi	2014	50.9	27.7	46.2	21.9	4.2	0	11	89	35.1	36.2	4.5	8.7	6.9	3.2	7.8	7.6	0.9	1.5	0.3	5.5	66.3	31.6	14.8	7.3	0.8	36.6
Jamaica	2014	51.3	19.7	46.2	24.3	9.8	14.1	58.4	27.5	60.8	73.6	30.7	27.8	25.5	33.4	78.7	78.6	1	46.8	14.3	61.1	45.1	6.4	33.4	36.2	11.4	14.6
Puerto Rico	2014	51.9	15.4	33.9	30.2	20.6	18.8	58.3	23	45.8	45.6	25.2	10.1	4.2	20.7	72.2	72.2	0	62.3	25.5	60.4	27.2	6.7	12.8	30.8	15.6	1.1
Somalia	2014	49.6	21	53.4	20.4	5.2	4.5	12.7	82.8	47.3	38.3	3.3	16.4	16.6	2.8	39.2	8.3	37.6	2.5	0.6	5.6	57.4	31	24	13.7	4.7	32.6
Sudan	2014	48.3	20.6	53.1	19.5	6.9	17.7	20.6	61.8	52.6	42.1	7.8	22.4	13.7	2.6	15.7	15.7	0	11.2	0.4	12	46.1	20.9	22.7	18.5	2.6	18
Yemen, Rep.	2014	49.7	26	48.8	19.8	5.4	3.7	27	69.2	43	21	1	4.3	3.8	1.5	7.1	7.1	0	2.1	0.4	5.7	66.3	30.3	19.2	9.9	4.2	22.4

Annex 3: Country-level predictors considered for analysis

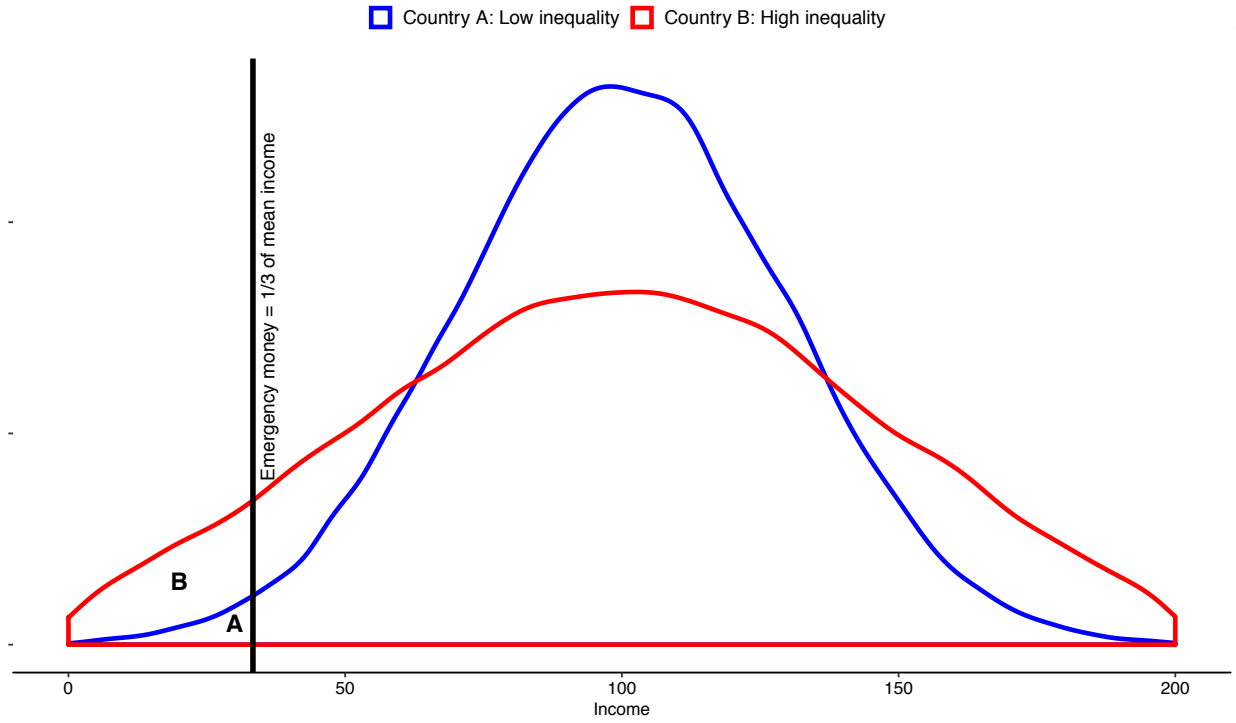
Category	Variable	Used in analysis	Source	Coverage (% of Findex economy-years with data)
Income	Mean monthly household income	✓	World Bank Povcalnet	100
	Gini coefficient	✓	World Bank Povcalnet	92.4
	Remittances	✓	World Bank	93.5
Macro conditions	Average yearly GDP growth per capita since 2012	✓	World Bank	93.1
	Average consumer inflation since 2012	✓	World Bank	93.1
Labor market/ livelihoods	Informal employment (% of employed)		ILO estimates	23.6
	Vulnerable employment (% of employed)		ILO estimates	97.8
	Wage and salary employment (% of employed)		ILO estimates	97.8
	Agricultural employment (% of employed)		ILO estimates	97.8
	Unemployment rate (% of labor force)	✓	ILO	97.8
	Female labor force participation rate	✓	ILO	97.8
	Collective bargaining, trade union density		ILO	66.8
Trade & Finance liberalization	Trade openness (% of GDP)		World Bank, WDI	97.1
	Foreign Direct Inflows (% of GDP)		World Bank, WDI	97.8
Government spending & social protection	Total government spending (% of GDP)	✓	World Bank, WDI	96
	Government health expenditure (% of GDP)		World Bank, WDI	95.7
	Out of pocket health expenditures exceeding 10 percent of consumption	✓	World Bank/ WHO	90.6
	Out of pocket health expenditures exceeding 25 percent of consumption		World Bank/ WHO	90.6
	Share of population participating in social insurance, social safety net, and unemployment benefits and active labor market programs		ILO	69.6
	Share of poorest 20% participating social insurance, social safety net & other programs		ILO	63.8
	Universal health coverage index		World Bank/ WHO	96.7
Human Capital	Expected years of schooling		World Bank, Human Capital Project	47.6

Annex 4: Inequality and financial resilience

That inequality is so strongly correlated with financial resilience across countries can be in part understood given the way the resilience measure is constructed. Figure 10 shows the income distributions of two countries (A and B) with the same mean income (100), but Country B has higher inequality than Country A. Country B will have larger shares of the population with an income lower than any fraction of the mean income than country A. Assuming the ability to access savings, loans or extraordinary income flows (such as one-time remittances or gifts) are similar in both countries, low income earners in Country B will be less able to finance an emergency need in one month from current income alone.

Figure 1.

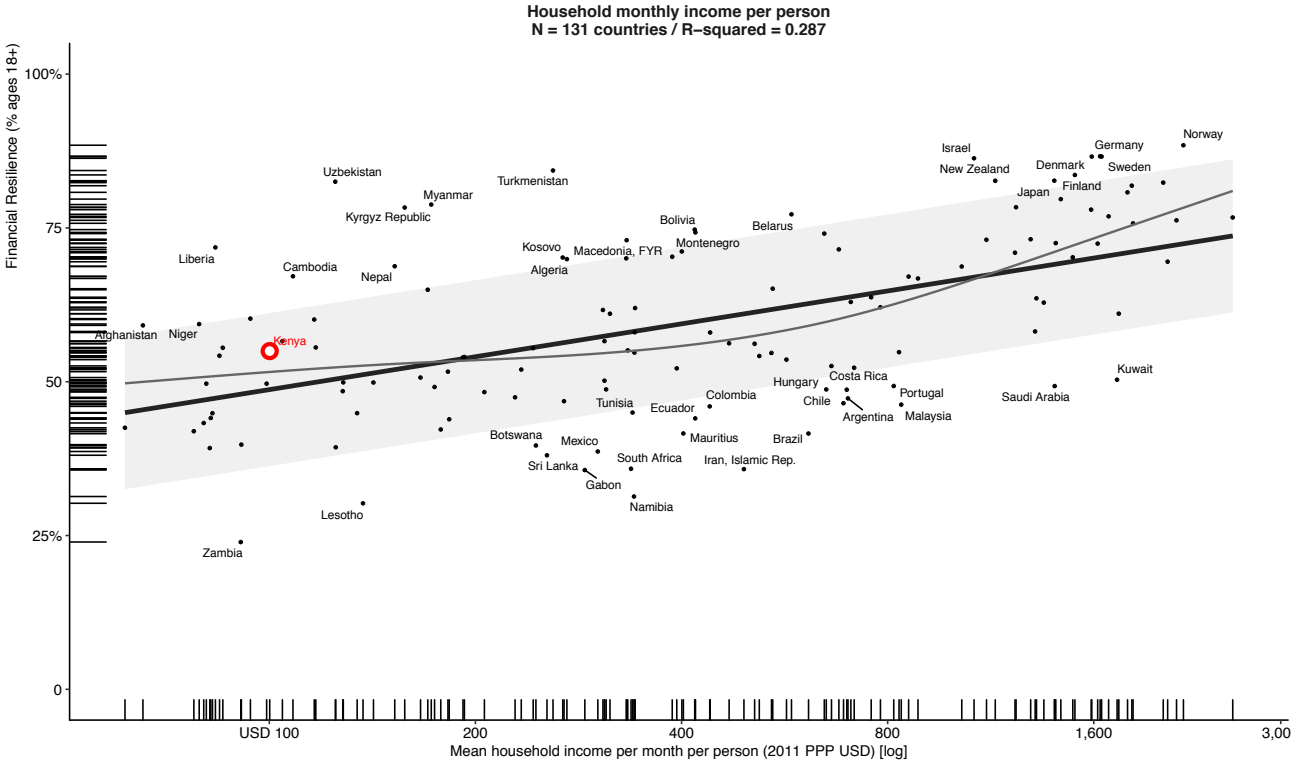
Holding mean income constant, a country with high inequality is more likely to have a higher percentage of the population with incomes lower than the emergency money requirement than a country with lower inequality.



Annex 5: Cross country relationship of income levels, income inequality and poverty with financial resilience

Figure 1.

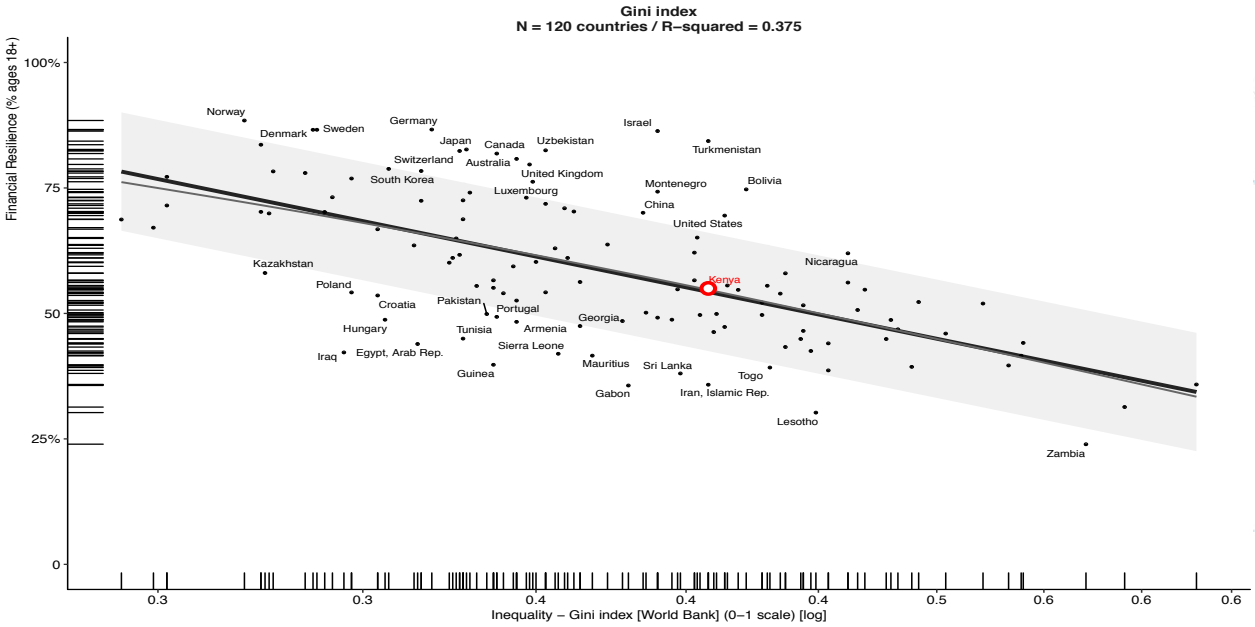
The relationship between financial resilience and household monthly income per person



Source: Author's calculations based on World Bank Findex and household income from World Bank Povcalnet.Notes: The black line shows the OLS fit. The light grey line is a non–parametric fit intended to show whether there is evidence of a non–linear relationship. The grey area depicts the typical range of the residuals (the root mean squared error) around the OLS prediction. Observations above and below that typical range are labeled.

Figure 2.

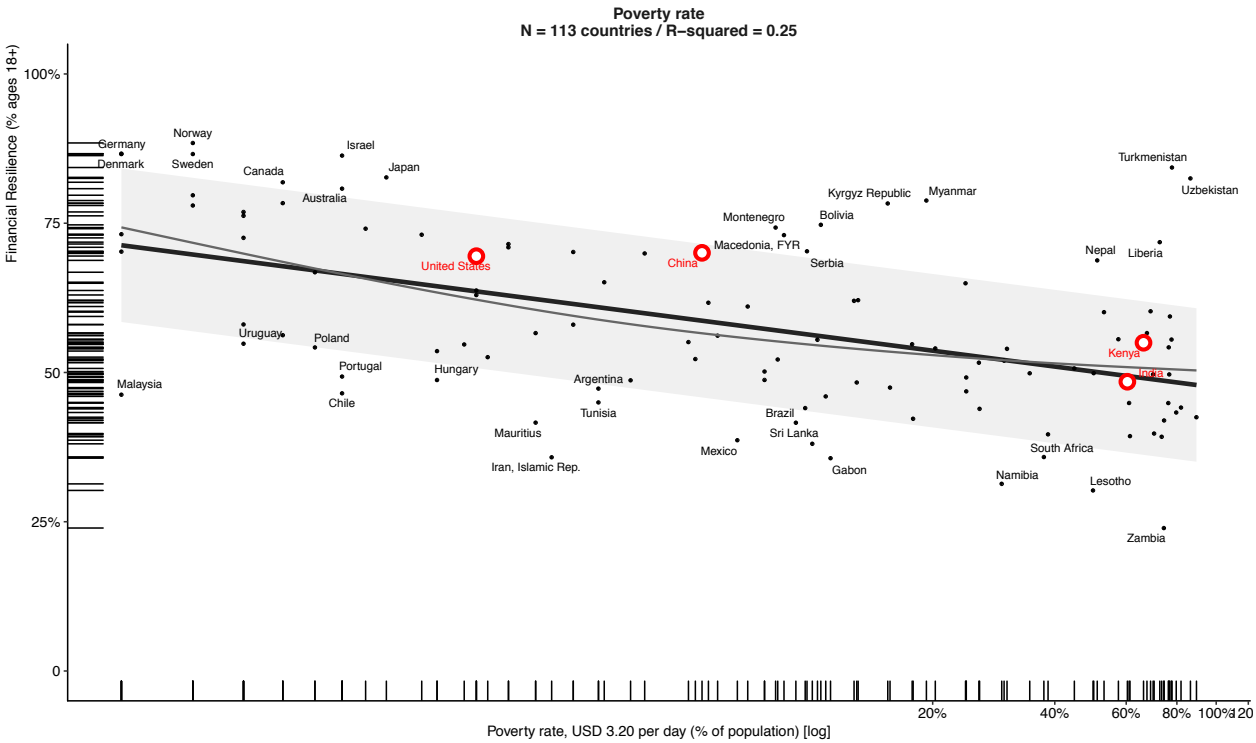
The relationship between financial resilience and income inequality



Source: Author's calculations based on World Bank Findex and Gini index from World Development IndicatorsNotes: The black line shows the OLS fit. The light grey line is a non–parametric fit intended to show whether there is evidence of a non–linear relationship. The grey area depicts the typical range of the residuals (the root mean squared error) around the OLS prediction. Observations above and below that typical range are labeled.

Figure 3.

The relationship between financial resilience and poverty

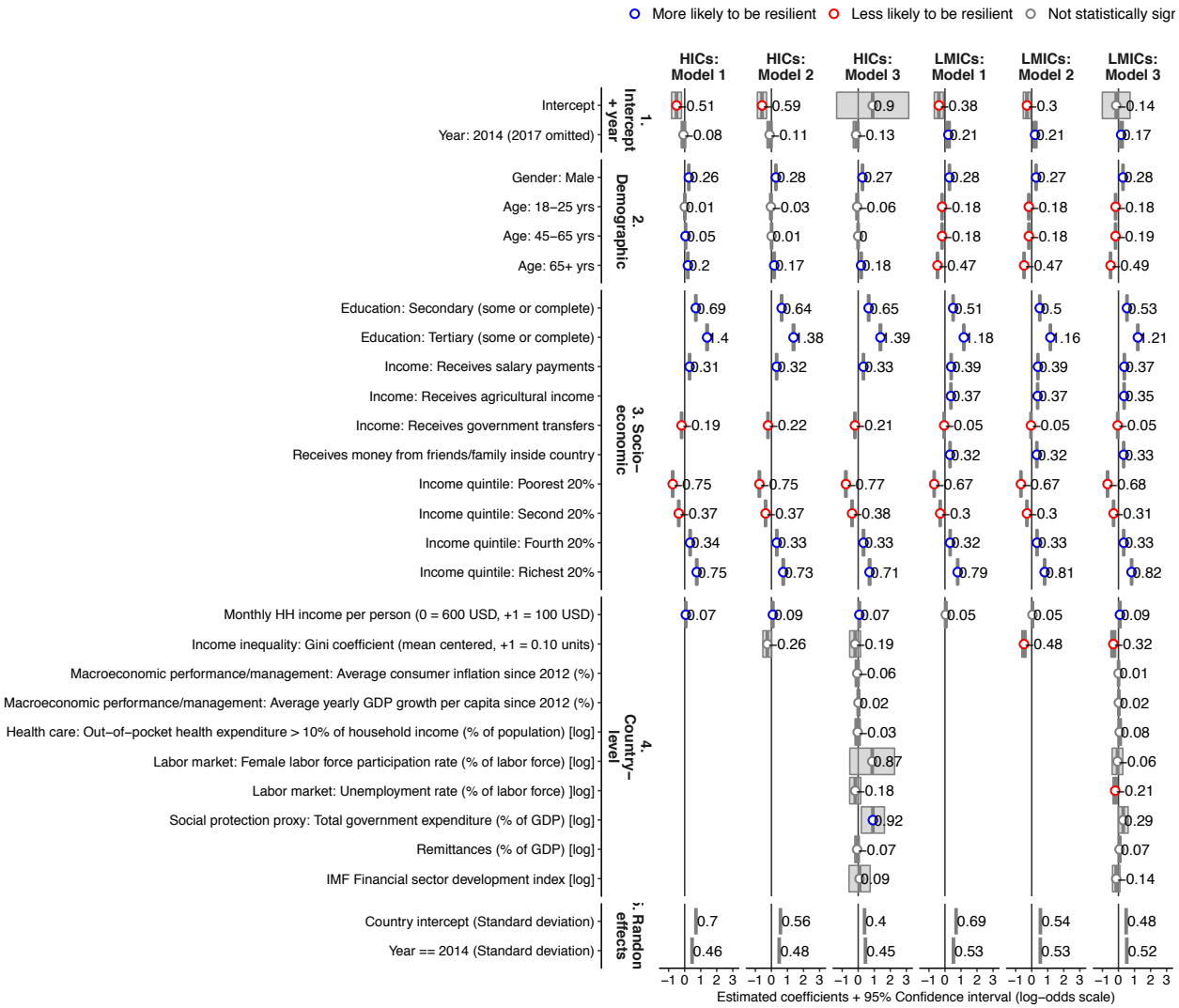


Source: Author's calculations based on World Bank Findex and GNI per capita from World Bank WDI.Notes: The black line shows the OLS fit. The light grey line is a non–parametric fit intended to show whether there is evidence of a non–linear relationship. The grey area depicts the typical range of the residuals (the root mean squared error) around the OLS prediction. Observations above and below

Annex 6: Supplemental multi-level models

Figure 1.

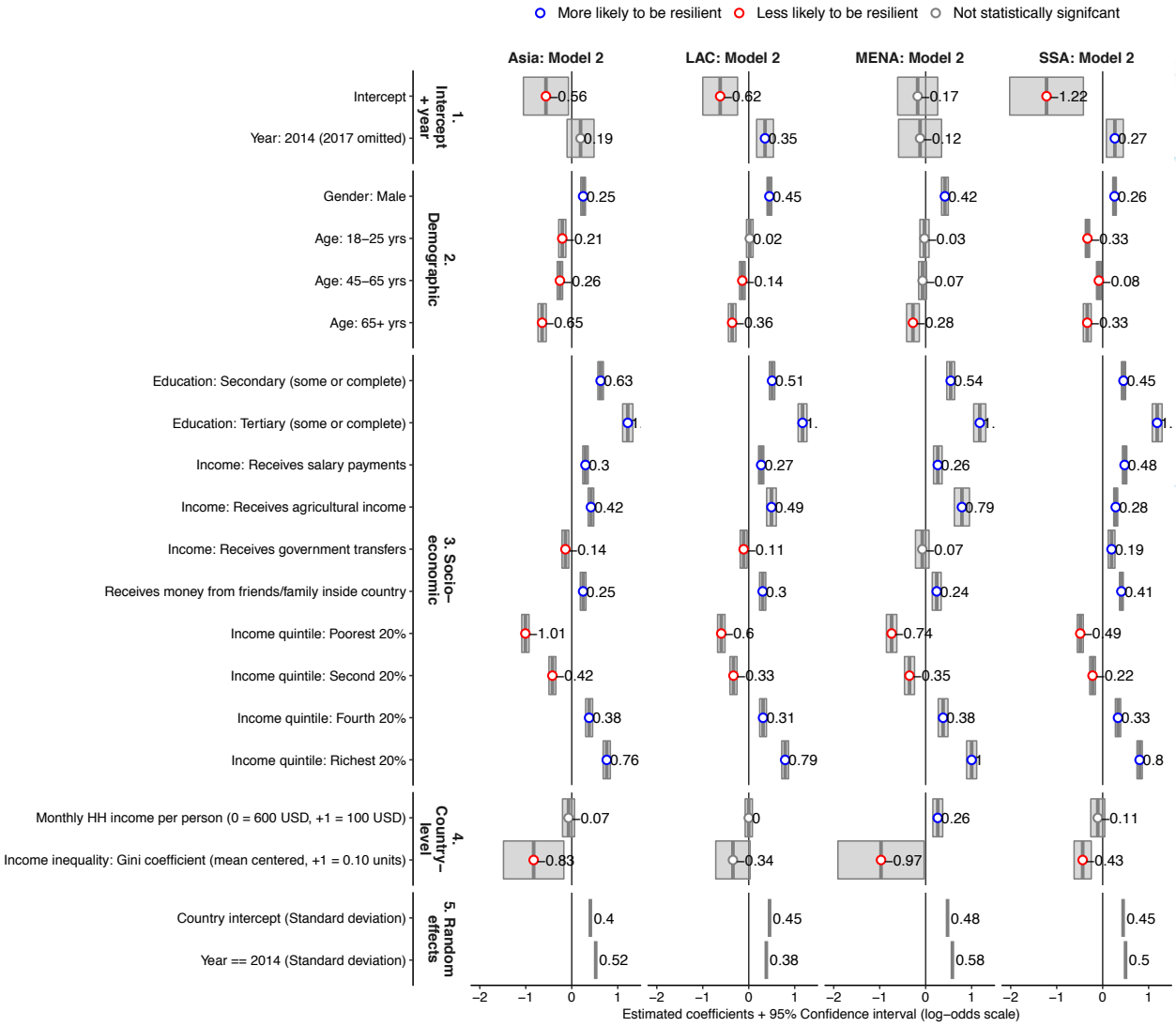
Changes in the log–odds of financial resilience associated with access to financial services, demographic and socio–economic factors



Source: Author's calculations based on 2014 and 2017 World Bank Findex.

Figure 2.

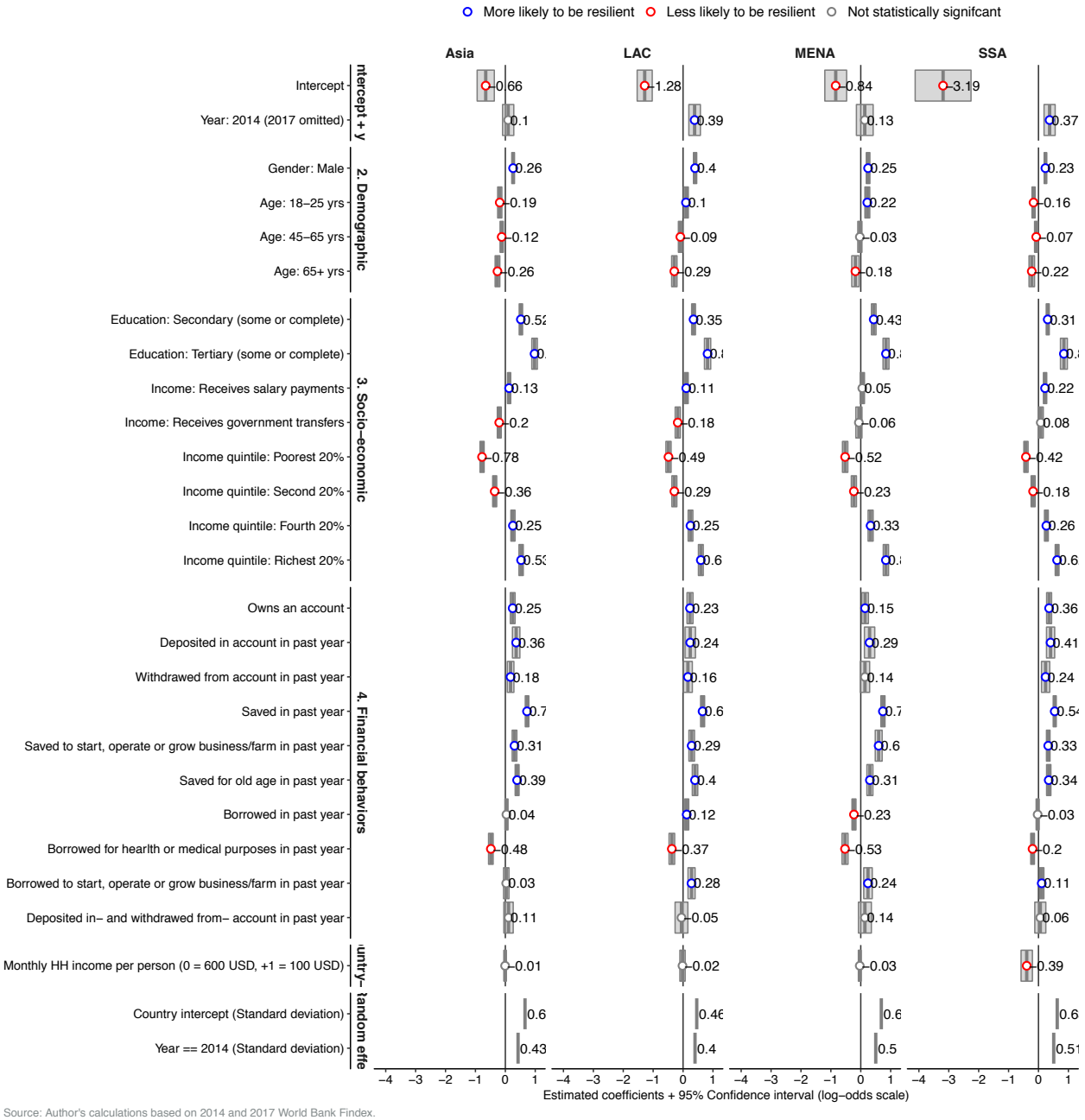
Changes in the log–odds of financial resilience associated with demographic and socio–economic factors, by region.



Source: Author's calculations based on 2014 and 2017 World Bank Findex.

Figure 3.

Changes in the log–odds of financial resilience associated with access to financial services, financial behaviors, demographic and socio–economic factors, by income group

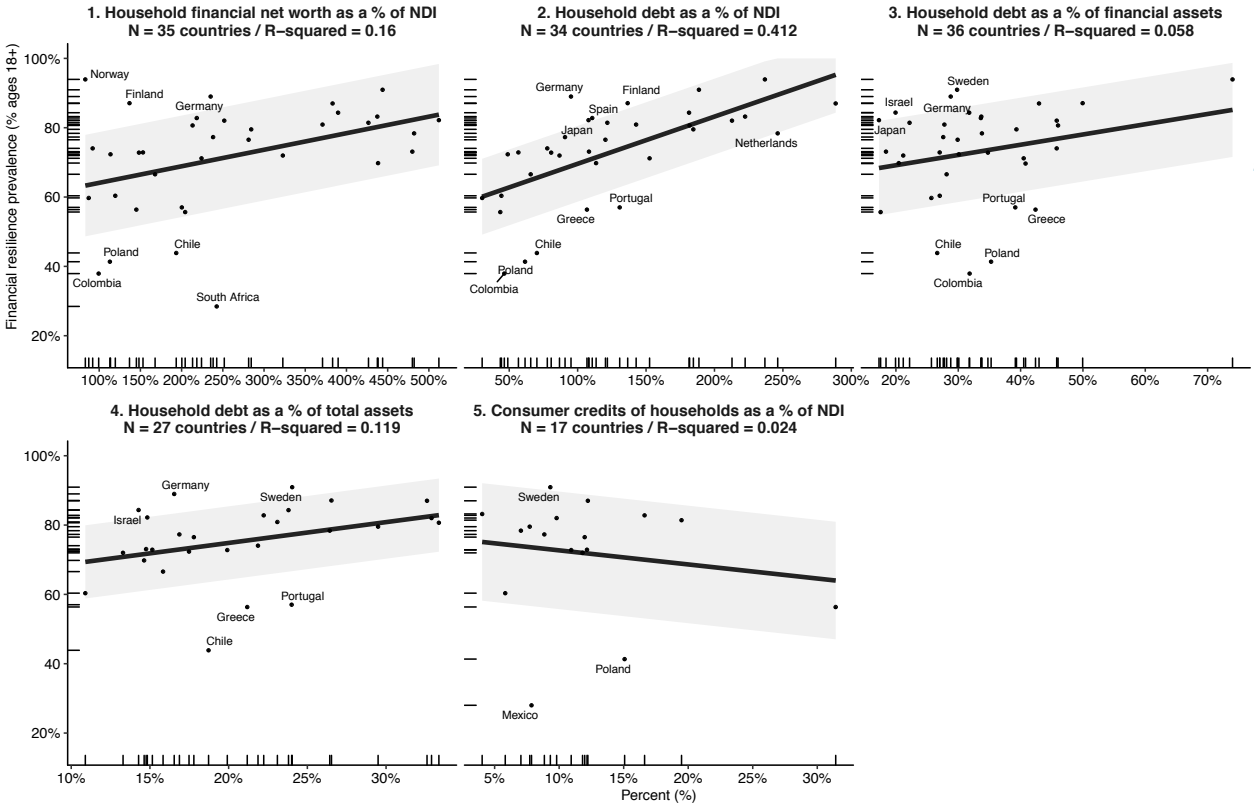


Source: Author's calculations based on 2014 and 2017 World Bank Findex.

Annex 7: Financial resilience and wealth indicators in select OECD countries

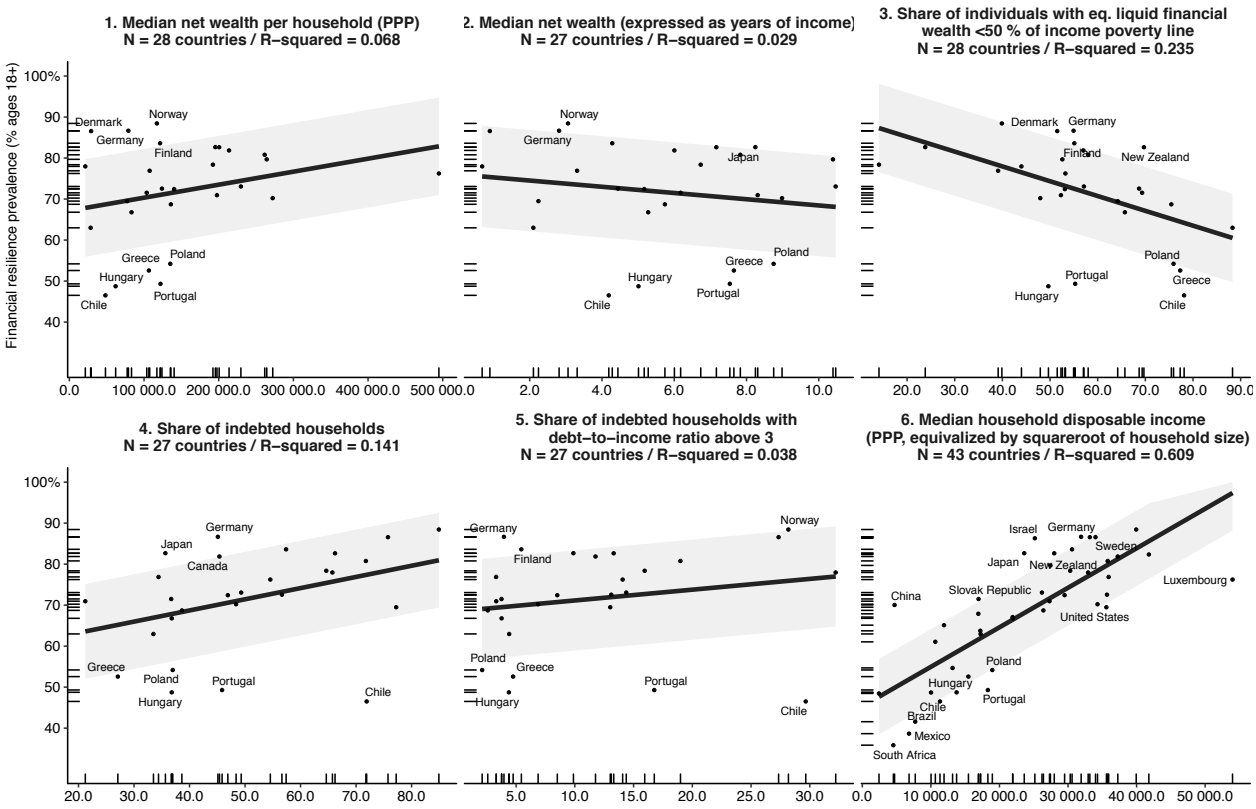
Through the system of national accounts, data on the household sector's financial assets and liabilities is available for select countries through the OECD statistics portal. Figures 1 and 2 show the relationship between the prevalence of financial resilience and national accounts-based measures of household wealth using aggregate data (Figure 1) and distributional data (Figure 2) for a subset of countries.

Figure 1.



Source: Author's calculations based on World Bank Findex and OECD household wealth indicators. Notes: Wealth indicators include not for profit institutions serving households (NPISH). NDI = Net disposable income. Notes: The black line shows the OLS fit. The light grey line is a non–parametric fit intended to show whether there is evidence of a non–linear relationship. The grey area depicts the typical range of the residuals (the root mean squared error) around the OLS prediction. Observations above and below that typical range are labeled.

Figure 2.



Source: Author's calculations based on World Bank Findex and OECD household wealth indicators. The y–axis represents the mean financial resilience of countries between 2014 and 2017. Notes: The black line shows the OLS fit. The light grey line is a non–parametric fit intended to show whether there is evidence of a non–linear relationship. The grey area depicts the typical range of the residuals (the root mean squared error) around the OLS prediction. Observations above and below that typical range are labeled.

Annex 8: Existing research and definitions of financial health

Project/ Year / Institution	Sample size/ Geographic scope	Objective	Measurement construct & definition	Measurement methodology/ survey items
Understanding and improving consumer financial health in America 2014 Financial Health Network (formerly CFSI)	USA (Adults 18+) Online survey with 7,152 adults (individuals with incomes below $50,000 were over-sampled).	To assess the current state of financial health in America and to glean insights that can inform cross-sector efforts to improve consumer outcomes.	**Financial health** When an individual's daily financial systems help them build resilience and pursue opportunities over time. Financial health comprises: 1. Smooth and effective management of day-to-day financial life 2. Resilience in the face of life's inevitable ups and downs 3. Capacity to seize opportunities leading to financial security and mobility	Candidate questions for the financial health survey instrument were identified from consultations with industry experts and review of existing industry research and surveys including the Federal Reserve Board's Survey of Household Economic Decision-making (SHED), the Federal Deposit Insurance Corporation's (FDIC) biennial National Survey of Unbanked and Underbanked Households, Financial Industry Regulatory Authority's (FINRA) National Financial Capability Study, the United Kingdom's 2005 Financial Capability Study. Rather than quantify the level of financial health for survey respondents, factor analysis in conjunction with a segmentation model was used to cluster survey respondents into 7 groups based on the pattern of their responses to the 20+ survey items shown below. **Day to day financial management** 1. Does your household have a budget or spending plan that you use to guide how your money gets spent each month? 2. When you plan for your household's day-to-day living expenses, which of these time frames is most important to you? 3. How much do you agree or disagree with the following statement? "I always find myself living paycheck to paycheck" 4. How well is your household keeping up with your bills and credit payments at the moment? 5. How often do you have to juggle which bills get paid when? 6. In the past 12 months, how often has your household run out of money before the end of the month, including when you had to use credit to get by? 7. Households' financial obligation ratio 8. Does your household plan ahead to make sure you have the money to pay for large irregular expenses? **Resilience** 9. Do you or others in your household have life insurance? 10. How confident are you that you could come up with $2,000 if an unexpected need arose within the next month? 11. How long could your household make ends meet if you faced unemployment, a longer-term illness, job loss, economic downturn, or other emergency that caused a drop in income? **Opportunity** 12. When you think about saving money for the future, which of these time frames is most important to you? 13. Which one of the following statements comes closest to describing your, and/or your spouse's or partner's, saving habits? 14. Using a scale of 1 to 5 where 1 is "Very Poor" and 5 is "Excellent", where do you think your credit score falls? 15. Households' non-mortgage debt-to-income ratio

Project/ Year / Institution	Sample size/ Geographic scope	Objective	Measurement construct & definition	Measurement methodology/ survey items
				Attitudes 16. How would you describe your current financial situation compared with one year ago? 17. How much do you agree or disagree with the following statement? "I am highly satisfied with my present financial condition" 18. How much do you agree or disagree with the following statement? "I have too much debt right now" 19. How much do you agree or disagree with the following statement? "I use technology to manage my money far more than other people I know" 20. How much do you agree or disagree with the following statement? "Friends and family rely heavily on me to help with their finances" 21. How much do you agree or disagree with the following statement? "I am comfortable having some debt if it allows me to accomplish other goals" 22. How much do you agree or disagree with the following statement? "I have the skills and knowledge to manage my finances well" 23. How much do you agree or disagree with the following statement? "I prefer to pay as few fees as possible, even if it means trading off a level of service or benefits"
CFPB Financial well-being scale development technical report 2017 Consumer Financial Protection Bureau (CFPB)	USA (Adults 18+) Initial concept/ questionnaire item development involved 59 in-depth consumer interviews + 19 cognitive interviews to test and refine candidate items. Development of the scale score involved three rounds of online surveys, totaling over 14,000 respondents that were roughly similar to the US population but not nationally representative.	To create a financial well-being scale that can be used for all adults in the United States.	**Financial well-being** Financial well-being is a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life. Financial well-being includes four elements: 1. Having control over day-to-day, month-to-month finances. 2. Having the capacity to absorb a financial shock. 3. Being on track to meet your financial goals. 4. Having the financial freedom to make the choices that allow you to enjoy life. Financial well-being is the feeling of having financial security and financial freedom of choice, in the present and when considering the future.	The CFPB uses factor analysis and item response theory (IRT) modeling to reduce an initial sample of 46 candidate questionnaire (identified based on qualitative research) items to 10. IRT provides measures of the strength of the relationship of each item with the underlying construct (financial well-being) as well as severity measures which indicate how much financial well-being is required for a respondent to select a particular response. In this way, IRT provided a methodology for CFPB researchers to winnow down the candidate items so that the resulting set relates strongly to financial well-being as well as being able to discriminate levels of financial well-being across a diverse population. Using a set of weights generated by IRT, each of the 10 individual items are aggregated into a single scale score (ranging from 0-100) which represents a person's financial well-being state. The 10-item scale score was validated against self-assessments of credit record (very bad to very good), ability to raise $2,000 in one month in case of emergency, availability of emergency savings, self-assessments of current financial situation and material hardship (e.g. going without food or medicine when needed). **How well does this statement describe you or your situation?** [Response options: Describes me completely, describes me very well, describes me somewhat, describes me very little, does not describe me at all] 1. I could handle a major unexpected expense 2. I am securing my financial future 3. Because of my money situation, I feel like I will never have the things I want in life 4. I can enjoy life because of the way I'm managing my money 5. I am just getting by financially 6. I am concerned that the money I have or will save won't last.

Project/ Year / Institution	Sample size/ Geographic scope	Objective	Measurement construct & definition	Measurement methodology/ survey items
				How often does this statement apply to you? [Response options: Always, Often, Sometimes, Rarely, Never] 7. Giving a gift for a wedding, birthday or other occasion would put a strain on my finance for the month 8. I have money left over at the end of the month 9. I am behind with my finance 10. My finances control my life
Beyond Financial Inclusion: Financial Health as a Global Framework 2017 Dalberg, Center for Financial Inclusion, Financial Health Network (formerly CFSI). Funded by BMGF.	Kenya & India (urban & rural settings) 89 qualitative interviews Quantitative survey with 1,000 respondents (not nationally representative)	To explore the validity of financial health as a framework in developing country contexts To develop a set of indicators to measure financial health of consumers in developing country contexts	**Financial Health** An individual is financially healthy when they: 1. Balance income and expenses 2. Builds and maintains reserves 3. Manages existing debts and has access to potential resources 4. Plans and prioritizes 5. Manages and recovers from financial shocks 6. Uses an effective range of financial tools	Several indicators (based on one or more of the quantitative survey question items) that map against the different components of the definition of Financial Health were presented in the report for this project, but they were not aggregated to provide an overall estimate of financial health. Some of these indicators and Kenya's survey results are presented in parentheses below: 1. Ability to meet basic needs: Are you able to meet basic needs (food, clothing, transportation and school fees) a. Cannot meet basic needs (9%) b. Can met some basic needs (food only) (17%) c. Can meet most basic needs (57%) d. Have money left over after meeting basic needs (13%) 2. Ability to build a reserve: How much could you raise in one week by using up all of your savings, selling your assets, borrowing or taking money from friends, family, community etc? (Mean: USD 551) 3. Manageability of debt: How manageable is your debt? a. My debt is very difficult to manage (10%) b. My debt is difficult to manage (21%) c. My debt is neither easy or difficult to manage (21%) d. My debt is manageable (29%) e. My debt is easily manageable (20%) 4. Ability to raise emergency funds: Can you access 5% of GNP per capita in one week? a. Easy or somewhat easy to raise funds (22%) b. Neither easy or difficult (16%) c. Difficult (62%)

Project/ Year / Institution	Sample size/ Geographic scope	Objective	Measurement construct & definition	Measurement methodology/ survey items
Measuring Global Financial Health* 2017-2019 Innovations for Poverty Action *Fieldwork is complete but final empirical results are still pending	8 small non-representative quantitative surveys ranging from 500 to 1,200 respondents in: • Afghanistan • Bangladesh • Colombia • Dominican Republic • Peru • Philippines • Uganda – Refugees • Uganda – Host 1 nationally representative survey in: Ghana (N = 4,565)	To develop a standardized set of metrics for measuring financial health that can be used in a variety of contexts	**Financial Health** Building off of the work done by Dalberg, CFI and Financial Health network, IPA narrows down financial health to one key outcome, **the ability of households to access liquidity quickly and affordably.** They conceptualize this outcome as being a function of access to formal financial services and behaviors (eg. regular savings, planning for short and long term, good borrowing and repayment behavior, self-control in regard to spending, autonomy over spending).	Now, imagine that you have an emergency and you need to pay [insert 1/20 of GNI per capita in local currency units]. What would be the MAIN source of money that you would use to come up with [insert 1/20 of GNI per capita in local currency units] within the NEXT 30 DAYS? (Read 1-6) [**Response options:** Savings, Family and friends, Money from working, Borrowing from a bank, employer, or private lender, selling assets, some other source] How difficult would it be for you to come up with [insert 1/20 of GNI per capita in local currency] within the NEXT 30 DAYS? Would it be very difficult, somewhat difficult or not difficult at all? [**Response options:** Very difficult, Somewhat difficult, Not difficult at all] How difficult would it be for you to come up with [insert 1/20 of GNI per capita in local currency] within the NEXT 7 DAYS? Would it be very difficult, somewhat difficult or not difficult at all? [**Response options:** Very difficult, Somewhat difficult, Not difficult at all]
Global Financial Health study 2018 MetLife foundation & Gallup	Nationally representative surveys of at least 1,500 respondents in 10 countries: Japan, South Korea, United Kingdom, United States, Kenya, Vietnam, Greece, Chile, Colombia, and Bangladesh.	To investigate the relationships between the various aspects of financial health and develop a statistically valid measure of financial control.	**Financial control & security** Financial control has 4 components: 1. Locus of control (belief of having power over events in one's life) 2. Resilience (confidence in ability to come up with solutions and apply knowledge so as to not be overly affected by small shocks), 3. Self-efficacy (extent to which people believe that their effort influences future outcomes) and 4. Autonomy (perception of having decision-making power).	**Financial security** 1. Suppose you lost your income and had to survive only on your savings or things you could sell. How long would you be able to cover ALL of your basic needs, like food, housing, and transportation? Less than one month or more than one month? 2. (If the respondent said "more than one month" in the previous item) Again, suppose you lost your income and had to survive only on your savings or things you could sell. Would you be able to cover ALL of your basic needs, like food, housing, and transportation for 1-3 months, 4-6 months, or more than 6 months? 3. Do you, personally, owe any money to a financial institution, such as a bank or a credit card company? This could be money you owe for things like a loan or other types of debt. 4. Do you, personally, owe money to another person? 5. (If respondent owes money either to a financial institution or a person and is actively paying the debt back) Does making payments to pay back the money you owe make it very difficult, somewhat difficult, or not at all difficult for you to pay for the other things you need? **Three levels of Financial Security are developed:** • Financially Insecure: Respondents who said they had less than a month of savings or assets OR said their debt made it "very difficult" to pay for other things. • Financially Stretched: Neither Insecure nor Secure. • Financially Secure: Respondents who said they had more than six months of savings and, if they have debt, paying back that debt is "not at all difficult".

Project/ Year / Institution	Sample size/ Geographic scope	Objective	Measurement construct & definition	Measurement methodology/ survey items
				Financial control 1. Do you think that no matter what you do, your financial future will stay the same? 2. Do you think you can overcome any financial problem that you might face? 3. If you had a financial emergency today, do you think you would be able to pay for it? 4. Do you have people in your life who can help you financially if you ever need it? 5. When you spend money on something you don't need, do you usually regret the decision later? 6. Have you tried to save money in the past, but have not been able to? 7. Do you avoid thinking about how you are going to pay for things in the future? 8. Do you enjoy planning what you are going to do with your money in the future? 9. Are you satisfied with how much input you have in financial decisions in your household? 10. Do you think you will ever be able to pay back all the money you owe? Respondents who answer between 8-10 items positively (or about one standard deviation above the overall sample average) are considered as having the highest level of financial security.
Multidimensional Financial Health Index 2016, 2019 FSD Kenya	Nationally representative survey (N = 8,000+)	To provide a measure of population health hat complements other indicators of financial access.	**Financial Health** 1. Ability to manage day-to-day 2. Ability to cope with risk 3. Ability to invest in the future and livelihoods	FSD Kenya constructs an overall financial health headcount ratio using 9 indicators corresponding to the 3 financial health domains: **Managing day to day** 1. Do not have trouble making money last between income payments 2. Have a plan for how to allocated money for things like food, clothing, bills & other month to month needs 3. Do not go without food to eat at some point in last year **Coping with risk** 4. Regularly keep money aside for emergencies or unexpected expenses 5. Able to raise approximately 1 month of income in 3 days 6. Do not go without medicines or medical treatment when needed in last year **Investing in the future and livelihoods** 7. Regularly set aside money for specific purpose in the future 8. Uses savings or credit to invest in assets, education 9. Intend to (or currently are if age > 65) using, savings, pension or investment income to make ends meet in old age

fsd Kenya Creating value through **inclusive finance**

About FSD Kenya

The Financial Sector Deepening Kenya (FSD Kenya) is an independent trust dedicated to the achievement of an inclusive financial system that supports Kenya's long-term development goals. We work closely with government, the financial services industry and other partners to develop financial solutions that better address the real word challenges faced by low-income households, enterprises and underserved groups such as women and youth.

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