

## **Measuring Financial Inclusion Explaining Variation Across and Within Countries**

Asli Demirguc-Kunt, World Bank  
Leora Klapper, World Bank

Final Conference Draft to be presented at the Spring 2013 Brookings Panel on  
Economic Activity March 21-22, 2013

Embargoed until 1:00 PM, Thursday, March 21, 2013

# Measuring Financial Inclusion

## Explaining Variation Across and Within Countries

Asli Demirguc-Kunt and Leora Klapper \*

**Abstract:** This paper summarizes the first global dataset of publicly available indicators that measure how adults in 148 countries save, borrow, make payments, and manage risk. We use the data to benchmark financial inclusion around the world and investigate the significant country- and individual-level variation in how adults use formal and informal financial systems to manage their day-to-day finances and plan for the future. While the data show that 50 percent of adults worldwide have an account at a formal financial institution, account penetration varies across countries by economic development and across income groups within countries. Although half of adults around the world remain unbanked, reported barriers to account use—such as cost, distance and documentation requirements—may be possible to overcome through public and private sector-led initiatives to expand financial inclusion.

*Keywords:* Financial Inclusion; Financial Institutions; Emerging Markets

*JEL Codes:* G2, G21, O16

---

\* Demirgüç-Kunt: World Bank, ademirguckunt@worldbank.org; Klapper: World Bank, lklapper@worldbank.org. We thank Franklin Allen, Oya Pinar Ardic Alper, Thorsten Beck, Massimo Cirasino, Robert Cull, Maya Eden, Tilman Ehrbeck, Michael Fuchs, Xavi Gine, Markus Goldstein, Ruth Goodwin-Groen, Raul Hernandez-Coss, Richard Hinz, Jake Kendall, Aart Kraay, Alexia Latortue, Sole Martinez Peria, Ignacio Mas-Ribo, Jonathan Morduch, Nataliya Mylenko, Mark Napier, Douglas Pearce, Bikki Randhawa, Richard Rosenberg, Armida San Jose, Kinnon M. Scott, Peer Stein, Gaiv Tata, Jeanette Thomas, Klaus Tilmes, Asli Togan Egrican, Augusto de la Torre, Rodger Voorhies, and Alan Winters for their valuable and substantive comments during various stages of the project. The team is also appreciative for the excellent survey execution and related support provided by Gallup, Inc. under the direction of Jon Clifton. We are especially grateful to the Bill & Melinda Gates Foundation for providing financial support making the collection and dissemination of the data possible. This paper was prepared with outstanding assistance from Atisha Kumar and Douglas Randall. This paper's findings, interpretations, and conclusions are entirely those of the authors and do not necessarily represent the views of the World Bank, their Executive Directors, or the countries they represent.

## 1. Introduction

Well-functioning financial systems serve a vital purpose, offering savings, payment, credit, and risk management products to people with a range of needs. Inclusive financial systems—allowing broad access to appropriate financial services—are especially likely to benefit poor people and other disadvantaged groups. Without inclusive financial systems, people must rely on their own limited savings to invest in their education or become entrepreneurs—and small enterprises on their limited earnings to take advantage of promising growth opportunities. This can contribute to persistent income inequality and slower economic growth.<sup>1</sup>

This paper explores country- and individual-level variation in how adults around the world use formal and informal financial products to manage their day-to-day finances and plan for the future. We define financial inclusion as use of financial services and investigate how patterns of financial inclusion—along income and gender lines—vary across countries at different levels of income. Next, we examine the barriers to financial inclusion and document the relationship between subjective and objective barriers to access. Finally, we discuss the potential of public and private sector-led initiatives to expand financial inclusion.

Our paper contributes to a growing literature examining household finance and especially the borrowing and savings decisions of households.<sup>2</sup> Qualitative evidence from financial diaries demonstrates that poor people juggle complex financial transactions every day and use sophisticated techniques to manage their finances, whether they use the formal financial system or not (Collins et al., 2009). Field experiments find that people with access to savings accounts or simple informal savings technologies are more likely to increase consumption, productivity and income, increase investment in preventive health, and reduce vulnerability to illness and other unexpected events (Dupas and Robinson 2009, 2011, Ashraf, et al., 2010). Yet the

---

<sup>1</sup> See, for example, King and Levine (1993); Beck, Demirguc-Kunt, and Levine (2007); Beck, Levine, and Loayza (2000); Demirguc-Kunt and Levine (2009); Klapper, Laeven, and Rajan (2006); and World Bank (2008a).

<sup>2</sup> For a detailed literature review, see World Bank (2008a) and references therein. Campbell (2006) also provides an overview of the household finance field.

evidence from field experiments that increase access to microcredit find more modest effects in promoting investment and entrepreneurship, mostly for households with existing businesses (Banerjee and Duflo, 2010, Karlan and Murdoch, 2010).

Yet until now little had been known about the global reach of the financial sector—the extent of financial inclusion and the degree to which groups such as the poor and women are excluded from formal financial systems. Systematic indicators of the use of different financial services had been lacking for most countries.

The Global Financial Inclusion (“Global Findex”) database provides such indicators, measuring how adults in 148 countries around the world manage their day-to-day finances and plan for the future. The indicators are constructed with survey data from interviews with more than 150,000 nationally representative and randomly selected adults over the 2011 calendar year.<sup>3</sup> The database is publicly available online and includes over 40 indicators related to account ownership, payments, saving, borrowing, and risk management.<sup>4</sup>

The Global Findex data show sharp disparities in the use of financial services between high-income and developing countries, confirming the findings of previous studies (see, for example, Beck, Demirguc-Kunt, and Martinez Peria (2007); and Cull, Demirguc-Kunt, and Morduch, 2013). For instance, the share of adults in high-income countries with an account at a formal financial institution is more than twice that in developing countries. The data also highlights significant variation in financial inclusion within countries, across individual characteristics such as income and gender. Around the world, wealthier men make greater use of formal financial services. For instance, in developing countries, adults in the highest 20 percent of earners are more than twice as likely to have an account as those in the lowest 20 percent of earners. And women in developing countries are significantly less likely than men to use formal financial services, even after including country fixed effects. While 46 percent of men have a formal

---

<sup>3</sup> The Bill & Melinda Gates Foundation funded three triennial rounds of data collection through the complete questionnaire. The next data collection will be in 2014.

<sup>4</sup> The database and questionnaire are available at: <http://www.worldbank.org/globalfindex>

account, only 37 percent of women do. Indeed, there is a persistent gender gap of 6–9 percentage points across income groups within developing countries.

Consistent with previous findings, the Global Findex data show that the vast majority of adults actively engage in financial systems – formal or informal – to manage their day-to-day finances and plan for the future. We find that 75 percent of adults worldwide use at least one of the financial management tools included in the Global Findex survey while half of all adults report having an individual or joint account at a formal financial institution. These accounts are used for a wide range of purposes including receiving wage payments, government transfers and remittances from family living elsewhere.

Novel cross-country data on self-reported reasons for not having a formal account make it possible to identify barriers to financial inclusion. Moreover, the ability to disaggregate data by individual characteristics allows researchers and policy makers to identify population groups that are excluded from the formal financial system and better understand what characteristics are associated with the use of certain financial behaviors.

Worldwide, by far the most common reason for not having a formal account—cited by 65 percent of non-account-holders—is lack of enough money to use one. This speaks to the fact that having a formal account is not costless in most parts of the world. Individuals with small or irregular income streams might view an account as an unnecessary expense given the relatively high cost. Other common reasons reported for not having an account are that banks or accounts are too expensive (cited by 25 percent of adults without a formal account) and that banks are too far away (cited by 20 percent).

We examine the percentage of adults that put aside money, or save, in the past year, and find that most savings in developing countries is done informally—even for adults that have an account. Worldwide, 36 percent of adults report having saved or set aside money in the past year with 22 percent of savers doing so at a formal financial institution in the past 12 months. In

developing countries, for instance, 12 percent of account holders save using informal methods. The use of informal community-based savings methods (such as rotating savings clubs) is also widespread, particularly in Sub-Saharan African countries such as Nigeria, Cameroon, and Kenya.

We also find that most borrowing by adults in developing countries is from informal sources. Globally, 9 percent of adults report having originated a new loan from a formal financial institution in the past 12 months. But in developing countries, adults are three times as likely to borrow from family and friends as from formal financial institutions. In high-income countries, the most commonly cited purpose of an outstanding loan is to purchase a home, while emergency and health reasons are most frequently cited by adults in the developing world.

There is clear potential for private and public sector-led breakthroughs in expanding financial inclusion and the Global Findex data bear this out. In Kenya, 68 percent of adults report having used a mobile phone in the past 12 months to pay bills, send or receive money. The spread of mobile money products, the increasing proliferation of bank agents, and the increasing movement towards dispensing government payments via formal accounts all offer potential to significantly alter the ways in which adults manage their day-to-day finances. Future rounds of data will allow us to document the pace of change in these behaviors.

## **2. Indicators and Methodology**

The Global Findex indicators measure the *use* of financial services, which is distinct from *access* to financial services. *Access* most often refers to the supply of services, while use is determined by demand as well as supply factors.<sup>5</sup> *Use* refers to the levels and patterns of use of different financial services among different groups, such as poor people, youth, and women. We

---

<sup>5</sup> World Bank 2008a.

cannot assume that all those who do not use formal financial services are somehow constrained from participating in the formal financial sector—access and use are not the same thing.

## *2.1 Indicators*

The first set of indicators focuses on the ownership and use of an account at a formal financial institution. For most people, a formal account serves as an entry point into the formal financial sector. A formal account facilitates the transfer of wages, remittances, and government payments. It can also encourage saving and open access to credit. Accounts are also a simple and consistent metric with which to measure financial inclusion across countries. The ownership and use of accounts are relatively clear cut and basic checking and savings accounts are fairly similar across countries.

The Findex survey includes several questions on accounts that investigate the mechanics of the use of accounts (frequency of use, mode of access); the purpose of accounts (personal or business, receipt of payments from work, government, or family); barriers to account use; and alternatives to formal accounts (mobile money).

Importantly, the account penetration indicator measures individual or joint ownership of formal accounts—accounts at a formal financial institution such as a bank, credit union, cooperative, post office, or microfinance institution. It includes those who report having a debit or ATM card tied to an account.

The second set of indicators focuses on savings behavior. Savings allow individuals to smooth consumption, make large investments in education or starting a business, and mitigate uncertainty and risk. The concept of savings is inherently more subjective than questions about account ownership and use. Individuals and cultures may have varying definitions of what constitutes “saving.” We focus on the purposeful action of saving, rather than the subtle or

gradual act of consuming less than one's earnings. We collect data on general savings behavior, as well as the use of formal accounts and community-based methods to save.

The third set of indicators focuses on borrowing. Most people need to borrow money from time to time. They may want to buy or renovate a house, to invest in education, or to pay for a wedding or funeral. When they lack enough money to do so, they turn to someone who will lend it to them—a bank, a cousin, or an informal lender. And in some parts of the world many people may rely on credit cards to obtain short-term credit. We gather data on the sources of borrowing (formal and informal); purposes of borrowing (mortgage, emergency or health purposes, and the like); and use of credit cards.<sup>6</sup>

## 2.2 *Data coverage*

The Global Findex indicators are drawn from survey data collected over the 2011 calendar year, covering more than 150,000 adults in 148 countries and representing approximately 97 percent of the world's population.<sup>7</sup> The survey was carried out by Gallup, Inc. in association with its annual Gallup World Poll. The Gallup World Poll has been used in previous academic studies, mostly to study wellbeing and social capital. For example, Deaton (2008) uses Gallup World Poll questions on life and health satisfaction and looks at the relationships with national income, age, and life expectancy. Gallup World Poll questions are also used by Stevenson and Wolfers (2008) and Sacks, Stevenson, and Wolfers (2010) as part of their research to analyze relationships between subjective well-being and income; by Clausen,

---

<sup>6</sup> In a few instances surveyors and supervisors reported that respondents were somewhat taken aback at the series of questions, given the personal nature of the topic. This concern was particularly relevant in countries with large security risks, such as Mexico and Zimbabwe, and in countries where personal finance is widely regarded as a private matter, such as Cameroon, Italy, and Portugal. There were also reports from the field that the terminology and concepts used in the survey were entirely new to some respondents. Although efforts were made to include simple definitions of such terms as accounts and debit cards, the unfamiliarity and complexity of the topic were still reported to be a hurdle in several countries, including Afghanistan, Cambodia, Chad, and rural Ukraine. Overall, however, the rate of “don't know” or “refuse” answers was very low. For the core questions (those not filtered by other questions), “don't know” or “refuse” responses made up less than 1 percent of the total and no more than 2 percent in any region.

<sup>7</sup> The income group classifications are those used by the World Bank, available at <http://data.worldbank.org/about/country-classifications>.



Kraay, and Nyiri (2011) to analyze the relationship between corruption and confidence in public institutions; by Demircuc-Kunt, Klapper, and Zingales (2013) to study changes in trust in banks over the financial crisis; and by Stevenson and Wolfers (2011) to examine trust in institutions over the business cycle.

As part of the World Poll, since 2005, Gallup has surveyed about 1,000 people annually in each of up to 157 countries,<sup>8</sup> using randomly selected, nationally representative samples.<sup>9</sup> The target population is the entire civilian, noninstitutionalized population aged 15 and above. Surveys are conducted in the major languages of each economy.<sup>10</sup>

Relative to other demand-side data efforts, one significant advantage of the Global Findex data is that it is consistent and comparable across countries and over time. Two commonly cited cross-country user-side data collection efforts are the FinMark Trust's FinScope initiative, a specialized household survey in 14 African countries and Pakistan,<sup>1</sup> and the European Bank for Reconstruction and Development's Life in Transition Survey (LITS), which covers 35 countries in Europe and Central Asia and includes several questions on financial decisions as part of a broader survey. The Global Findex country-level estimates of account penetration are generally insignificantly different or higher than those of the FinScope surveys, perhaps because of the difference in timing (most of the FinScope surveys were carried out in the mid-2000s) and the variation in the definition of an account (Findex only includes accounts that can be used for both deposits and withdrawals). The Global Findex country-level estimates of account penetration are within 7 percentage points of the LITS estimates for the majority of

---

<sup>8</sup> The worldwide aggregates omit countries for which Gallup excludes more than 20 percent of the population in the sampling either because of security risks or because the population includes non-Arab expatriates. These excluded countries are Algeria, Bahrain, the Central African Republic, Madagascar, Qatar, Somalia, and the United Arab Emirates. The Islamic Republic of Iran is also excluded because the data were collected in that country using a methodology inconsistent with that used for other countries (the survey was carried out by phone from Turkey). The exclusion of the Islamic Republic of Iran has a nontrivial effect on regional aggregates because its population is larger and wealthier than those of other countries in the Middle East and North Africa. For example, account penetration in the region is estimated to be 18 percent when the Islamic Republic of Iran is excluded but 33 percent when it is included.

<sup>9</sup> In some countries oversamples are collected in major cities or areas of special interest. In addition, in some large countries, such as China and the Russian Federation, sample sizes of at least 4,000 are collected.

<sup>10</sup> For details on the data collection dates, sample sizes, excluded populations, and margins of error, see: [www.worldbank.org/globalindex](http://www.worldbank.org/globalindex).

countries, with discrepancies perhaps explained by the fact that the LITS financial access question is less descriptive than those in the Global Findex survey<sup>11</sup>.

Three key variations in user-side data include the definition of an account and its use, the units of measurement such as age cutoffs, and when the data was collected. However, it is important to keep in mind that while broadly consistent, some nontrivial differences exist between the results of the Global Findex data and earlier efforts. Compared to data collected from the providers of financial services (financial institutions), the Global Findex data may fill a gap by going beyond data collected only from regulated financial institutions and allowing disaggregation of the data by demographic characteristics.<sup>12</sup>

### 2.3 *Survey methodology*

The survey methodology for the Global Findex data is that used for the Gallup World Poll. Surveys are conducted face-to-face in countries where telephone coverage represents less than 80 percent of the population.<sup>13</sup> In most countries, the fieldwork is completed in two to four weeks. In countries where Gallup conducted face-to-face surveys, the identification of primary sampling units, consisting of clusters of households, constitutes the first stage of sampling. The primary sampling units are stratified by population size, geography, or both, and clustering is achieved through one or more stages of sampling. Where population information is available, sample selection is based on probabilities proportional to population size; otherwise, simple random sampling is used. Random route procedures are used to select sampled households.

---

<sup>11</sup> The exact question in the LITS survey is: “Does anyone in your household have a bank account”.

<sup>12</sup> On the provider side, the International Monetary Fund collects indicators of financial outreach (such as number of bank branches and ATMs per capita and per square kilometer as well as the number of loan and deposit accounts per capita) directly from country regulators. These data sets are important sources of basic cross-country indicators developed at a relatively low cost. Yet indicators based on data collected from financial service providers have several important limitations. First, data are collected only from regulated financial institutions and thus provide a fragmented view of financial access. Second, aggregation can be misleading because of multiple accounts or dormant accounts (See Beck, Demirguc-Kunt and Martinez Peria for a discussion). Most important, this approach does not allow disaggregation of financial service users by income or other characteristics. That leaves policy makers unable to identify segments of the population with the lowest use of financial services, such as the poor, women, or youth.

<sup>13</sup> Croatia, the Czech Republic, Estonia, Greece, Hungary, Poland, Singapore, and the Slovak Republic are high-income countries where phone coverage is less than 80 percent and surveys are therefore conducted face to face. The Islamic Republic of Iran is the only developing economy where the survey is conducted by phone.

Unless an outright refusal occurs, interviewers make up to three attempts to survey the sampled household. If an interview cannot be obtained at the initial sampled household, a simple substitution method is used. Respondents are randomly selected within the selected households by means of the Kish grid.<sup>14</sup>

In countries where telephone interviewing is employed, random digit dialing or a nationally representative list of phone numbers is used. In selected countries where cell phone penetration is high, a dual sampling frame is used. Random respondent selection is achieved by using either the latest birthday or Kish grid method.<sup>15</sup> At least three attempts are made to reach a person in each household, spread over different days and times of day.

#### 2.4 *Data weighting*

Data weighting is used to ensure a nationally representative sample for each economy. First, base sampling weights are constructed to account for oversamples and household size. If an oversample has been conducted, the data are weighted to correct the disproportionate sample. Weighting by household size (number of residents age 15 and above) is used to adjust for the probability of selection, as residents in large households will have a disproportionately lower probability of being selected for the sample. Second, poststratification weights are constructed. Population statistics are used to weight the data by gender, age, and, where reliable data are available, education or socioeconomic status. Finally, approximate study design effect and margin of error are calculated. The average country-level margin of error for the account

---

<sup>14</sup> The Kish grid is a table of numbers used to select the interviewee. First, the interviewer lists the name, gender, and age of all permanent household members age 15 and above, whether or not they are present, starting with the oldest and ending with the youngest. Second, the interviewer finds the column number of the Kish grid that corresponds to the last digit of the questionnaire and the row number for the number of eligible household members. The number in the cell where the column and row intersect is the person selected for the interview. In countries where cultural restrictions dictate gender matching, respondents are randomly selected using the Kish grid from among all eligible adults of the interviewer's gender.

<sup>15</sup> In the latest birthday method an interview is attempted with the adult in the household who had the most recent birthday.

penetration indicator is plus or minus 3.9 percent. All income group aggregates are also weighted by country population (age 15 and above).

### **3. Individual- and Country-level Variation in Financial Inclusion**

In this section, we discuss the main findings from the Global Findex database. We also analyze the individual- and country-level variation in the use of formal and informal financial services. As it is beyond the scope of this paper to explore each indicator in the database, we focus on several indicators that we believe are particularly important to understanding the financial behaviors of adults. These indicators include the ownership and use of formal accounts, the prevalence of formal and informal savings behavior, and the source and purposes of borrowing. Additionally, we discuss the use of mobile money, bank agents, and government-to-person transfers in Section 4.

#### *3.1 Accounts and payments*

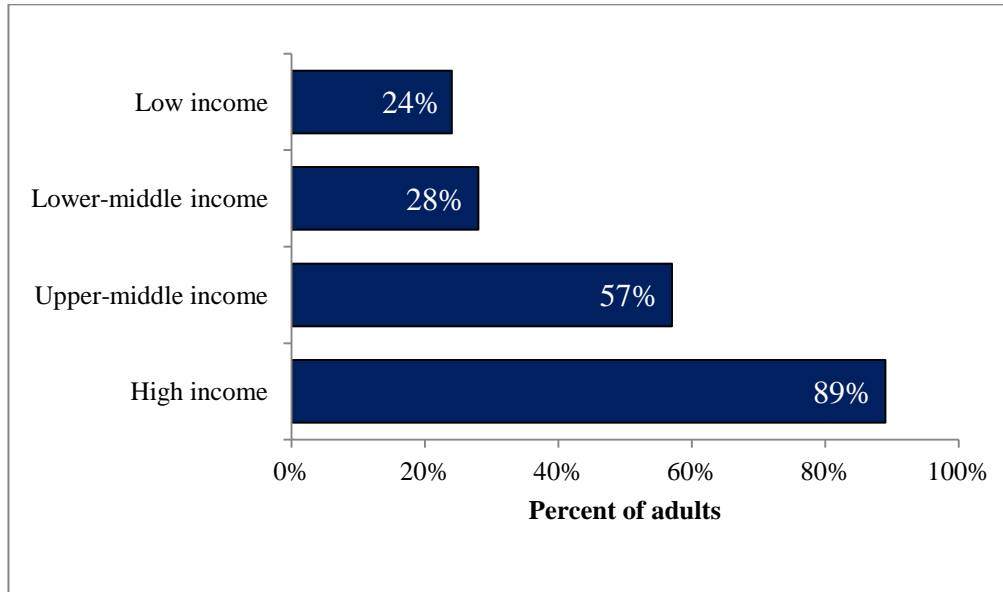
##### *3.1.1 Explaining Variation in Account Penetration*

Account penetration differs enormously between high-income and developing countries. While it is near universal in high-income countries, with 89 percent of adults reporting that they have an account at a formal financial institution, it is only 24 percent in low income countries (figure 1). Globally, 50 percent of the world's population - more than 2.5 billion adults - does not have a formal account. The majority of this group resides in developing countries.<sup>16</sup> In several countries around the world—including Cambodia, the Democratic Republic of Congo, Guinea, the Kyrgyz Republic, Turkmenistan, and the Republic of Yemen—more than 95 percent of adults do not have a formal account (map 1).

---

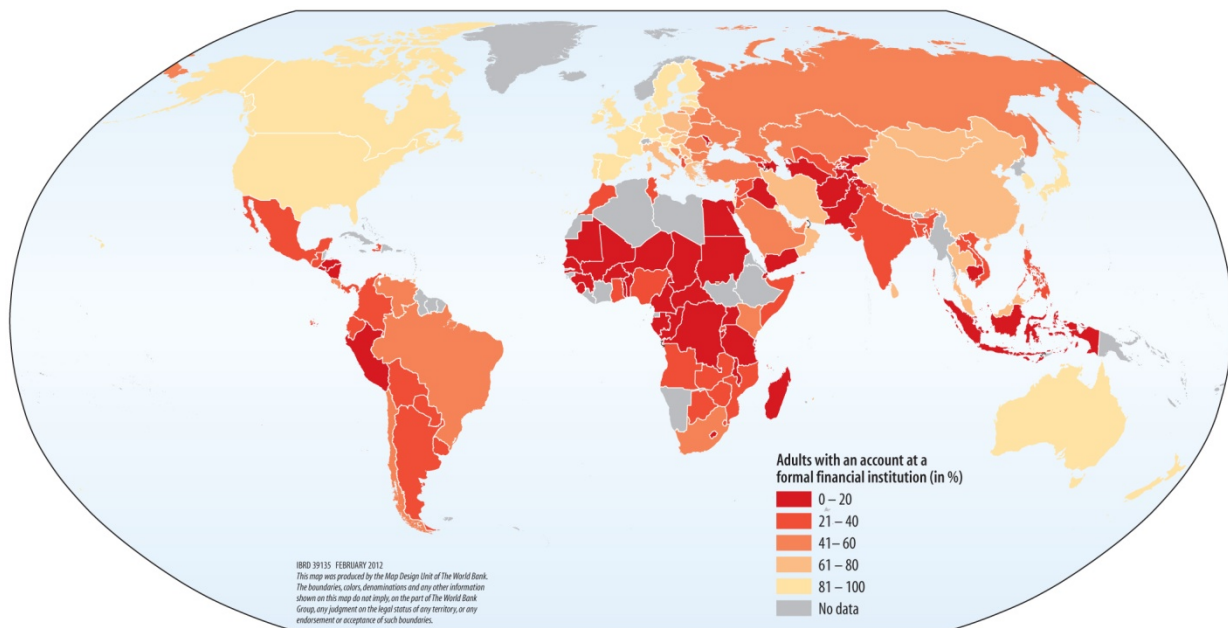
<sup>16</sup> According to the latest available data from the World Bank's World Development Indicators database, there are 5.08 billion adults age 15 and above worldwide.

**Figure 1: Has an Account at a Formal Financial Institution, by Income Group**



Source: Authors

**Map 1: Has an Account at a Formal Financial Institution, by Economy**



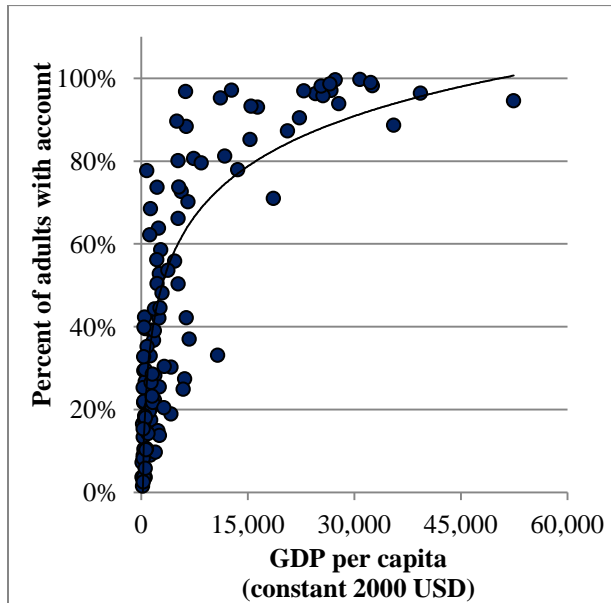
Source: Authors

Why is account penetration in Denmark almost universal while it remains almost negligible in Niger? GDP per capita explains much of the variation in account penetration across countries (figure 2). Denmark is among the world's richest countries while Niger is among the poorest. In most countries with a GDP per capita of \$15,000 or higher, account penetration is

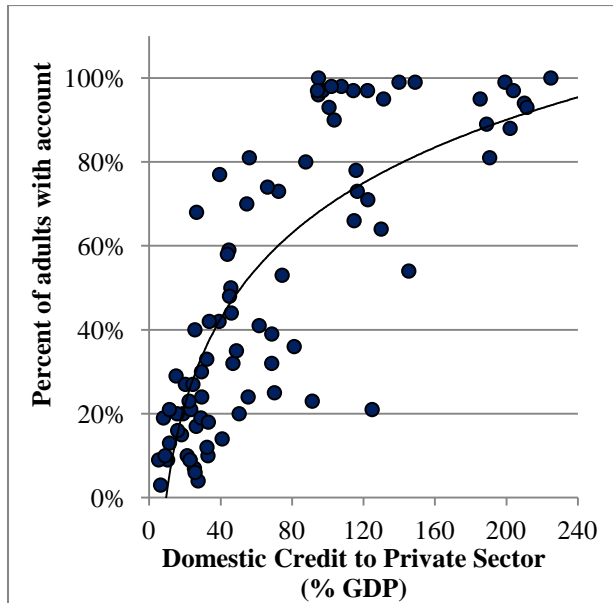
virtually universal.<sup>17</sup> Indeed, regression analysis shows that national income is significantly associated with account penetration and explains about 70 percent of the variation among the world’s countries in the share of adults with a formal account.<sup>18</sup>

**Figure 2: Financial Inclusion, GDP Per Capita, and Financial Development, All countries**

*Panel A: GDP Per Capita*



*Panel B: Financial Development*



Source: Authors and WB-WDI Statistics

National-level financial development —domestic credit to the private sector as a percentage of GDP— is also significantly associated with account penetration, even when controlling for GDP per capita. However, these correlations are strong but imperfect. Large amounts of credit in a financial system—both commercial and consumer—do not always correspond to broad use of financial services, because the credit can be concentrated among the largest firms and wealthiest individuals. For instance, domestic credit to the private sector amounting to 125 percent of GDP in Vietnam, but only 21 percent of adults in the country have a formal account. Conversely, in the Czech Republic, with relatively modest financial depth (with

<sup>17</sup> Exceptions include, for example, Italy (with an account penetration of 71 percent) and the United States (88 percent).

<sup>18</sup> Reported *R*-squared of a country-level ordinary least squares (OLS) regression of account penetration on the log of GDP per capita.

domestic credit to the private sector at 56 percent of GDP), account penetration is relatively high (81 percent).

This suggests that financial depth and financial inclusion are related, but distinct dimensions of financial development—and that financial systems can become deep without delivering access for all. A more formal investigation of the country-level determinants of financial inclusion is beyond the scope of this paper, but the theme is explored further using Findex data in Allen et al. (2012).

### *3.1.2. Account Penetration across Individual Characteristics*

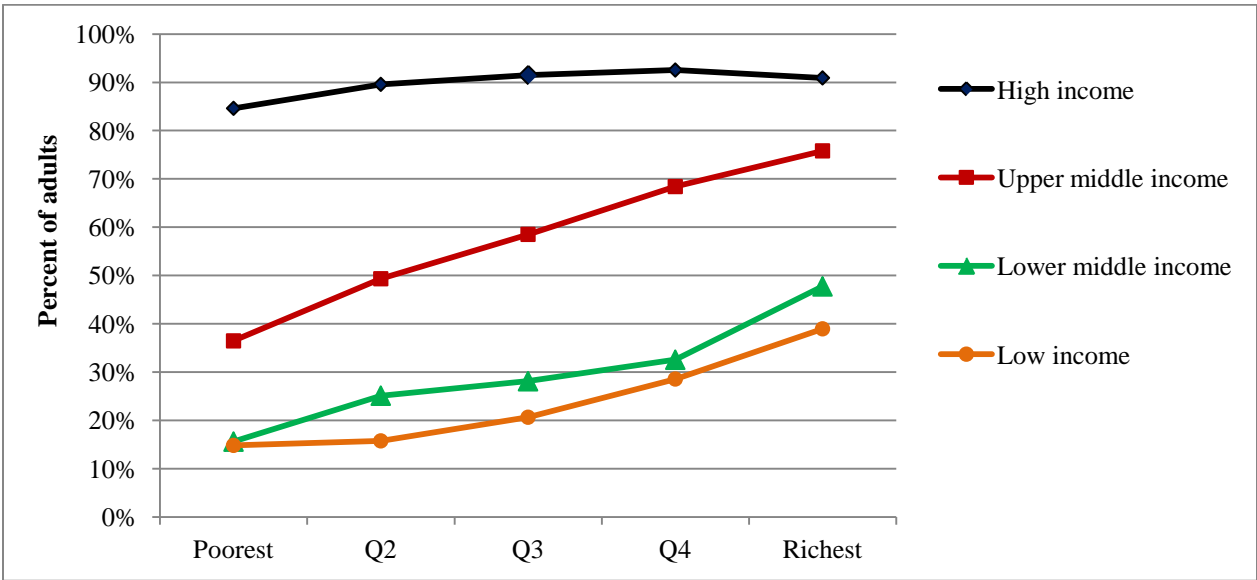
Beyond cross-country variation, there is also significant variation in account penetration across individuals within countries. Comparing account penetration across gender sheds light on the gender gap. Examining relative within-economy income quintiles highlights differences in account penetration among the poor across country-level income groups (figure 3).

The difference in slope of the lines in figure 3—that is, the difference in account penetration between income quintiles—is a rough measure of the gap in financial inclusion between the rich and poor within countries. Because the upper limit is 100 percent, there is little absolute difference in length between the bars for high-income countries. In these countries, on average, poorer adults are not significantly less likely than richer adults to have a formal account. But stark differences exist in account penetration within most developing countries. In upper-middle income countries, the slope of the line is very steep, but relatively constant. The richest adults in these countries are more than twice as likely as the poorest adults to have a formal account, with an approximate 10 percentage point gap separating each of the quintiles. In lower-middle income countries, there are sharp differences between the poorest and middle-class, as well as between the middle-class and the rich, highlighted by the kinks in the curve. In low

income countries, account ownership does not vary significantly across the bottom two income quintiles, but it increases steadily as income increases after that point.

It is also striking that account penetration in the poorest quintile in high-income countries is 9 percentage points higher on average than in the richest quintile in upper-middle income countries. And account penetration in the richest quintile in low income countries is only 2 percentage points higher than in the lowest income in upper-middle income countries.

**Figure 3: Has an Account at a Formal Financial Institution, by within-country income quintiles**

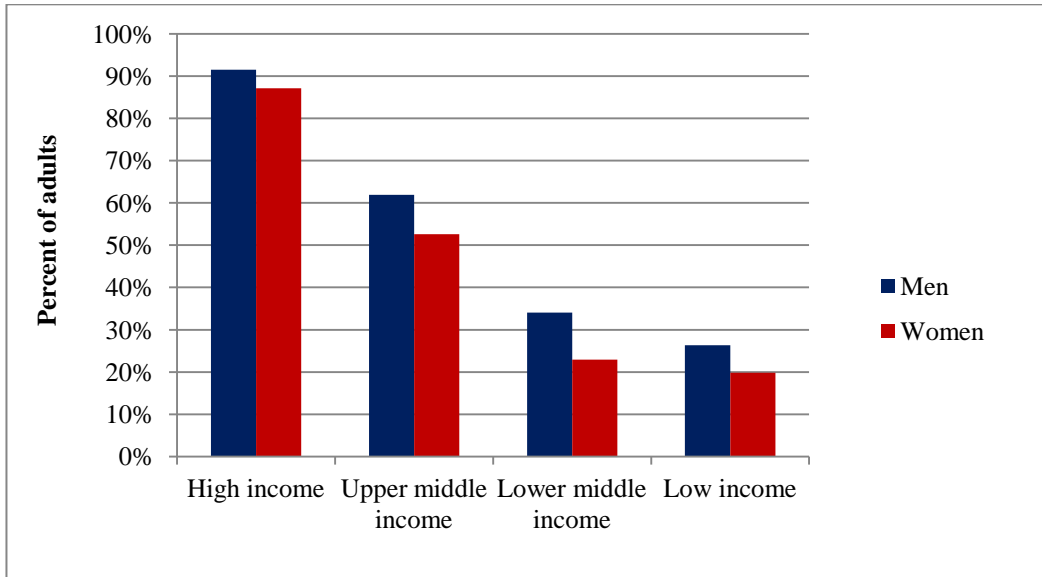


Source: Authors

Account penetration also differs in important ways by other individual characteristics. There are significant disparities in account penetration along gender lines. In high-income countries, women are, on average, 5 percent less likely than men to have a formal account, while in the developing world, women are 20 percent less likely to have one (figure 4). These shares reflect the use of both individually and jointly owned formal accounts, as the Global Findex survey captures the ownership of an account together with a family member.



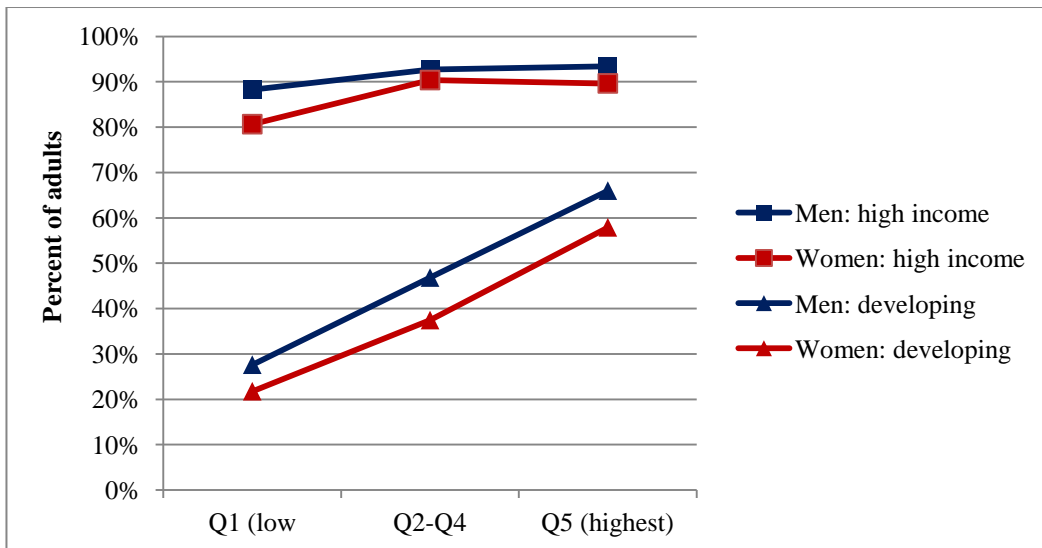
**Figure 4: Has an Account at a Formal Financial Institution, by Gender**



Source: Authors

The gender gap in account penetration persists across income quintiles. In developing countries, women are less likely to have a formal account than men across all income quintiles, with the differences in account penetration averaging between 6 and 9 percentage points (figure 5). In high-income countries, however, the average difference exceeds 4 percentage points only for women in the poorest fifth of the population.

**Figure 5: Has an Account at a Formal Financial Institution, by Gender and Income Quintile**

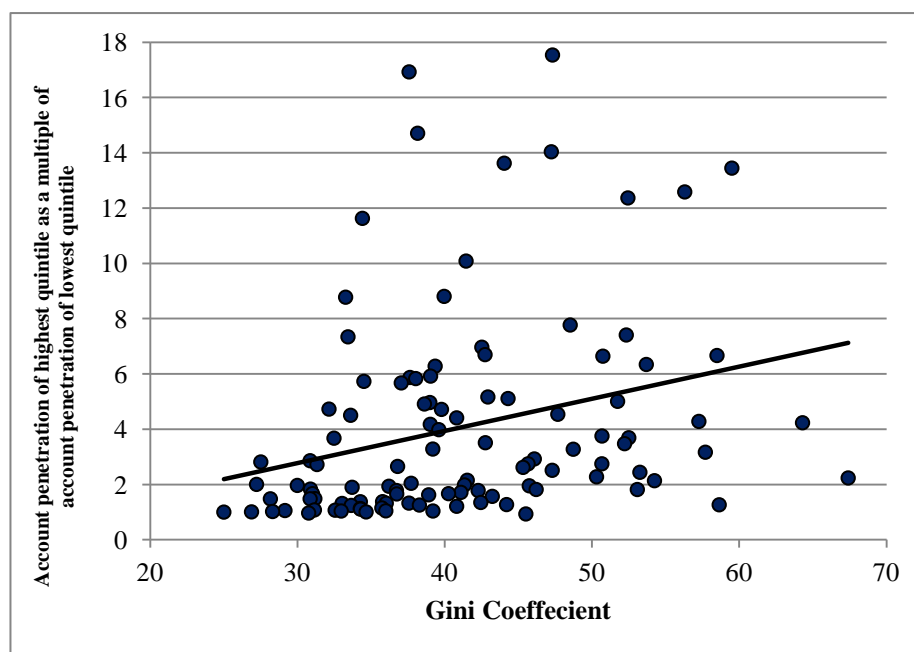


Source: Authors

### 3.1.3. Account Penetration and across- and within-country Inequality

There is a strong correlation between within-country inequality in the use of formal accounts and between-country income inequality as measured by the Gini coefficient (with higher values indicating a more unequal income distribution). The contrasting situations in two countries illustrate this point. In Sweden, which has one of the lowest Gini coefficients (25) in the world, account penetration in the poorest income quintile is essentially the same as in the richest fifth of the population (resulting in a value of close to 1 on the vertical axis of figure 6). In Paraguay, at the other end of the spectrum with a Gini coefficient of 52, there is a large gap in account penetration: only 4 percent of adults in the poorest quintile have a formal account, compared with 51 percent in the richest (resulting in a value of 13 on the vertical axis).

**Figure 6: Has an Account at a Formal Financial Institution, by within-country income quintiles**

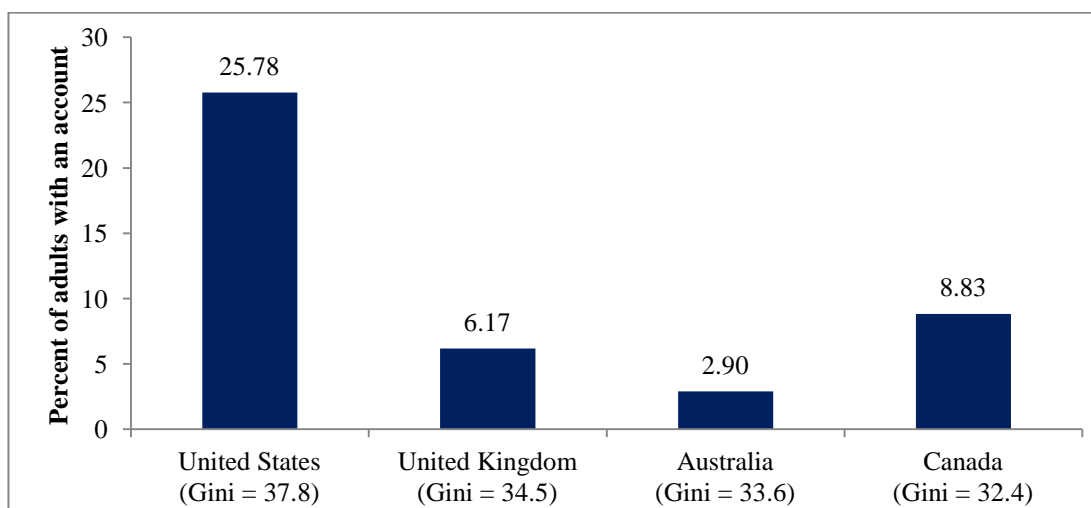


Source: Authors; World Bank, World Development Indicators database (2011 edition)

The correlation between these two measures of financial and economic inequality (0.42) shows a strong relationship. This association continues to hold even when controlling for national income. Consider the example of the United Kingdom and the United States (figure 7). These two countries have relatively similar GDP per capita and relatively similar account

penetration among adults in the top four income quintiles (92 percent in the United States and 98 percent in the United Kingdom). But the Gini coefficient in the United Kingdom is smaller than in the United States—which may help explain the sharp difference in account penetration in the poorest income quintile. In the United States, 26 percent of adults in this group report having no formal account. However, in the United Kingdom, only 6 percent have an account. A 2011 FDIC survey found a similarly large gap in account penetration between rich and poor households within the United States (FDIC, 2011). A comparison with account penetration in the poorest quintile in Australia and Canada—two other countries with broadly similar economic development and legal traditions to those of the United States, but with smaller Gini coefficients—further supports the hypothesis that income inequality may help explain the variation in the use of formal accounts.

**Figure 7: Adults in the poorest income quintile without an account at a formal financial institution (%)**



Source: Authors and OECD Statistics

### 3.1.4. Features of Account Ownership

Beyond the simple ownership of formal accounts, how frequently people access those accounts, and the methods they use to do so, mark a stark difference in the use of financial services between high-income and developing countries. For instance, financial activity varies considerably for account holders across different countries. In developing countries, 10 percent

of adults with a formal account—more than 150 million people worldwide—maintain what can be considered an inactive account: they make neither withdrawals from nor deposits into their account in a typical month (although they may keep a positive balance). In contrast, only two percent of account holders in high-income countries have an inactive account.

The majority of adults with a formal account in developing countries make deposits or withdrawals only once or twice in a typical month. In high-income countries, more than half of account-holders withdraw money from their accounts six or more times in a typical month. ATMs and electronic payment systems (debit cards, electronic bill payments, and the like) facilitate access to accounts. Indeed, adults with a formal account in high-income countries report most commonly using ATMs for withdrawals. Those in developing countries report most commonly making withdrawals over the counter in a branch of their bank or financial institution.

People also have myriad reasons for maintaining an account at a formal financial institution. Using a formal account to receive wages is most common in high-income countries, where 50 percent of adults report using an account for this purpose, as compared to 14 percent of adults in developing countries. Relying on an account to receive money or payments from the government is also most common in high-income countries where 42 percent of all adults (and 47 percent of account holders) report having used their account for this type of transaction in the past year, compared to 6 percent of adults in developing countries. Accounts were also used to send or receive money from relatives by eight percent of all adults (and 21 percent of account holders) in developing countries.

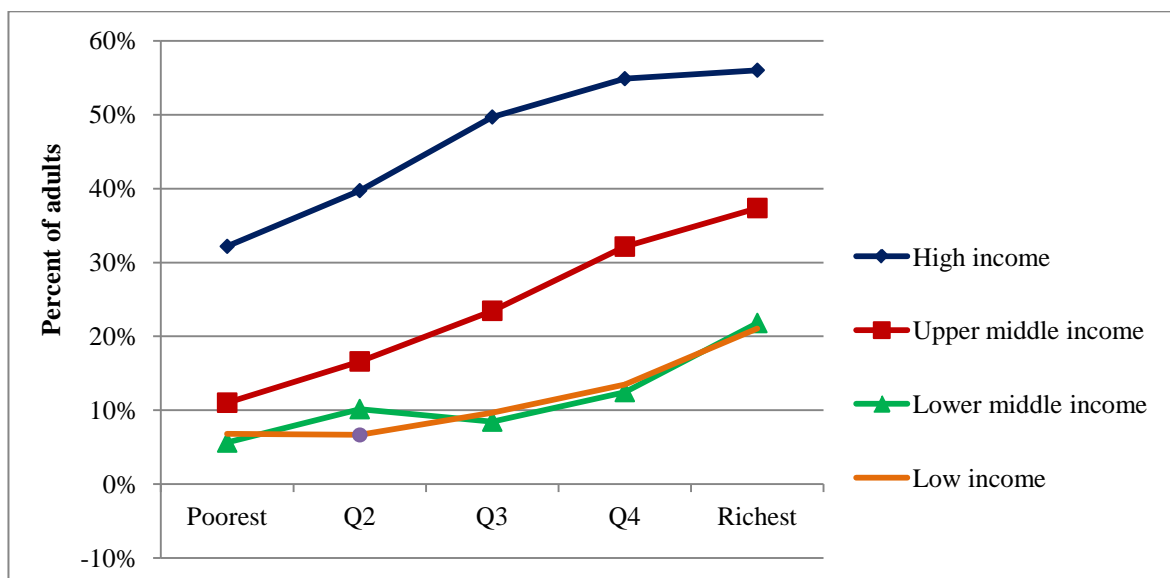
### 3.2 *Saving*

Saving to cover future expenses—education, a wedding, a big purchase—or to provide against possible emergencies is a universal tendency. Not only does the propensity to save differ across and within countries, but the mode and purpose of savings also varies. Globally, 36 percent of adults report having saved or set aside money in the past year, though this ranges from

30 percent in low-income countries to 58 percent in high-income countries. It bears repeating that the Findex questionnaire is designed to elicit responses about *purposeful* savings behavior, rather than documenting any gaps between income and consumption.

More interesting, marked differences exist in *how* people save. A proportion of adults who save do so using a formal account. Many others, including some who own a formal account, turn to alternative methods of saving. Worldwide, about one-fourth of adults report having saved at a bank, credit union, or microfinance institution in the past year. This ranges from 45 percent in high-income countries, to 24 percent in upper-middle income countries, to 11 percent in lower-middle and low-income countries. As with account penetration, formal savings behavior also varies by individual characteristics within countries. As seen in Figure 8, the change in prevalence of formal savings behavior in high-income countries rises sharply as income increases from the lowest quintile but flattens out as income rises from the middle quintile to the highest quintiles. This suggests that while those in the middle class (Q3) are significantly more likely to save formally than the poor (Q1) in high-income countries (50 percent vs. 32 percent), the rich are only marginally more likely than the middle class to do so (56 percent vs. 50 percent). In contrast, in upper-middle income countries, a 6 percentage point gap exists between each income quintile in the proportion that formally saves. And in lower-middle and low-income countries, the trend is reversed. There is almost no difference in formal savings prevalence between the middle class and the poor (9 percent vs. 6 percent) but the rich are more than twice as likely to save formally as the middle class (21 percent vs. 9 percent).

**Figure 8: Saves at a Formal Financial Institution, by within-country income quintiles**



Source: Authors

As with account ownership, men are more likely to report having saved at a bank, credit union, or microfinance institution in the past 12 months. However, the gender gap for savings is not statistically significant in high-income or upper-middle income countries, after controlling for individual and country characteristics.

Despite having a formal account, individuals may not necessarily use it to save. Savings behavior varies even among account holders. Worldwide, about 43 percent of account holders report having saved or set aside money at a formal financial institution in the past year, with relatively little variation across country-level income groups. However, in many Sub-Saharan African countries, such as Liberia and Uganda, more than 65 percent of account holders report saving formally. This suggests that in these countries the ability to save in a secure location may motivate individuals to open and maintain a formal account. In contrast, in many European and Central Asian countries, individuals do not primarily use their accounts to save. In the region, less than one in six adults with a formal account report having saved or set aside money using a formal account in the past year. In Georgia, just 3 percent of account holders (and 1 percent of all adults) report having saved using a formal account in the past year. Adults in Europe and Central

Asia are especially likely to use their accounts to receive wages and government payments. The transfer of payments, rather than savings, may thus be a key reason why these adults own formal accounts.

Many adults, despite having a formal account, save solely using other methods. These people, who might be classified as the “underbanked,” constitute 12 percent of account holders worldwide. Individuals may be choosing an informal savings method rather than their formal account due to prohibitively high costs of actively using their account. Barriers such as balance and withdrawal fees and physical distance often raise the cost of opening and maintaining a formal account. It is also possible that wage accounts set up by employers are not conducive to saving. Policymakers or commercial banks could introduce new products to encourage existing account holders to save in formal financial institutions. Such products could be especially important in countries with aging populations.<sup>19</sup>

In developing countries, savings clubs often serve as an alternative (or complement) to saving at a formal financial institution. One common form of such savings clubs is the rotating savings and credit association (ROSCA). It is known as a *susu* in West Africa, an *arisan* in Indonesia, and a *pandero* in Peru. These clubs generally operate by pooling the weekly deposits of their members and disbursing the entire amount to a different member each week.

Community-based savings methods such as savings clubs are widely used in some parts of the world. They are most commonly found in low-income countries. In Sub-Saharan Africa, 19 percent of adults report having saved in the past year using a savings club or person outside the family. Among just those who report any savings activity in the past 12 months, 48 percent use community-based savings methods. The practice is particularly common in Nigeria, where ROSCAs are called *esusu*, *ajo*, *cha*, or *adashi*. In Nigeria, 44 percent of adults (and 69 percent of those who save) report using a savings club or person outside the family. Perhaps because of the

---

<sup>19</sup> See for example Chawla, Betcherman, and Banerji (2007), who provide an overview of the challenges of aging populations in Eastern Europe and the former Soviet Union.

widespread use of this savings method, the share of Nigerians who report any type of saving in the past year is equal to that in Canada and the Republic of Korea and far higher than that in other developing countries.

The popularity of savings clubs speaks to their advantages, but these arrangements also have downsides. Their defining characteristic—informality—is accompanied by risks of fraud and collapse. It is important to note that often formal accounts are also not immune to these risks, especially in many developing countries where explicit government-run deposit insurance is absent or inadequate. In addition, individuals may find that the cyclical nature of contributions and disbursements is too rigid for some people. A fixed schedule may not serve their needs to deposit surplus income when available or quickly withdraw funds for an emergency.

Community-based savings methods and formal financial institutions are not the only options for saving. A large share of adults around the world who report having saved or set aside money in the past year did not use a formal financial institution, informal savings club, or person outside the family. While the Global Findex survey did not gather data on other alternative methods, they might include saving through asset accumulation (such as gold or livestock) and saving “under the mattress.”<sup>20</sup> These adults account for 29 percent of savers worldwide and constitute more than half of savers in 55 countries.

### 3.3 *Borrowing*

Most people need to borrow money from time to time. They may want to buy or renovate a house, to invest in an education, or to pay for a wedding. When they lack the money to engage in these activities, they often turn to someone who will lend it to them: a bank, a cousin, or an informal lender. Further, in some parts of the world, many people may rely on credit cards for short-term credit.

---

<sup>20</sup> Because of the sensitivity of household finances and the inhibitions brought about by face-to-face surveys, the Global Findex survey did not probe deeply into the practices of “under the mattress” saving in the home.



The introduction of credit cards has had a large effect on the demand for and use of short-term formal credit. In high-income countries, half of the adult population reports having a credit card. Despite a surge in recent years, credit card ownership in developing countries still lags far behind that in high-income countries. Only 7 percent of adults in low and middle-income countries report having a credit card, though there are some notable exceptions including Brazil, Uruguay, and Turkey where the proportion of adults with a credit card exceeds 35 percent.

As a result of the extensive ownership of credit cards, adults in high-income countries may have less need for short-term loans from financial institutions. This may help explain why the share of adults in these countries who report having received a loan in the past year from a formal financial institution (such as a bank, cooperative, credit union, or microfinance institution) is not particularly high. Indeed, if the adults in high-income countries who report owning a credit card are included in the share of those who report borrowing from a formal financial institution in the past year (a measure that may not include credit card balances), that share increases by 40 percentage points—from 14 percent to 54 percent.<sup>21</sup> The remainder of the discussion in this chapter focuses on measures of borrowing activity that do not include credit card ownership.

The overall rate of the origination of new loans—formal and informal—remains fairly steady across income groups and individual characteristics. On average, almost one-third of adults report having borrowed money in the past year in both high-income and developing countries. However, measures of new (or rolled-over) household debt are sensitive to the business cycle and current economic factors and future rounds of data collection may yield significantly different estimates. Moreover, the use of credit is sensitive to the tax, legal, and regulatory environment of a given country. For example, the provision of private credit is higher in countries with better creditor protection and broader credit information coverage.<sup>22</sup> Beyond

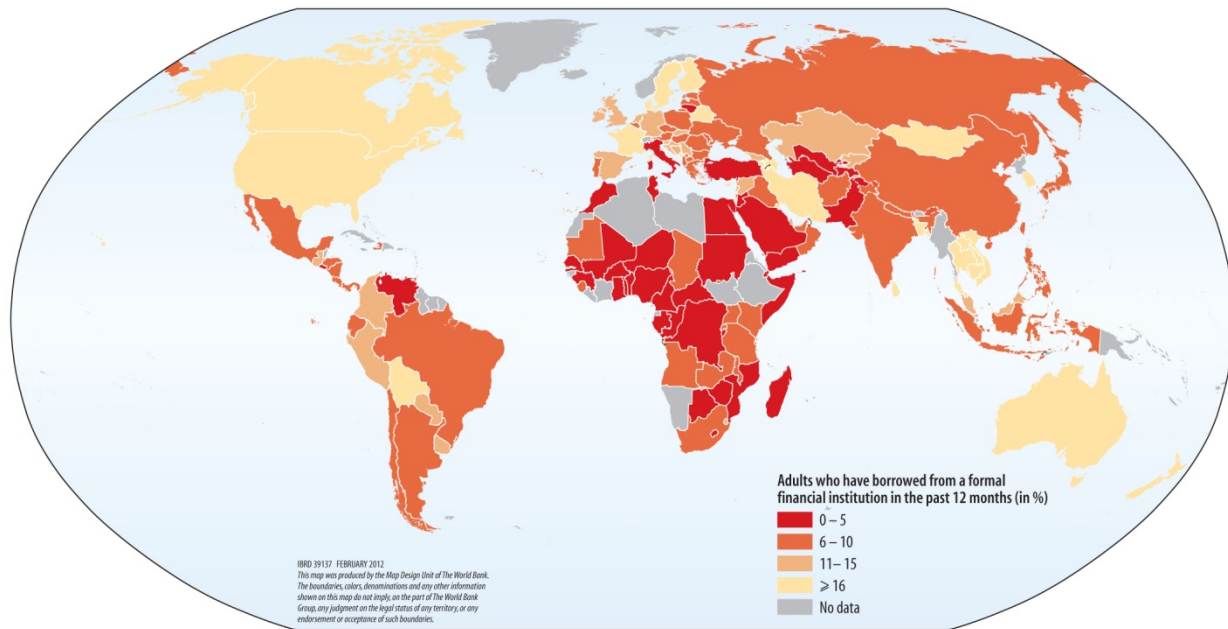
---

<sup>21</sup> The Gallup World Poll collects information on the ownership of credit cards but not their use.

<sup>22</sup> Djankov, McLiesh, and Shleifer 2007.

the overall rate of new borrowing, high-income and developing countries do not exhibit much commonality in the sources and purpose of credit.

**Map 3.2 Origination of new formal loans around the world**



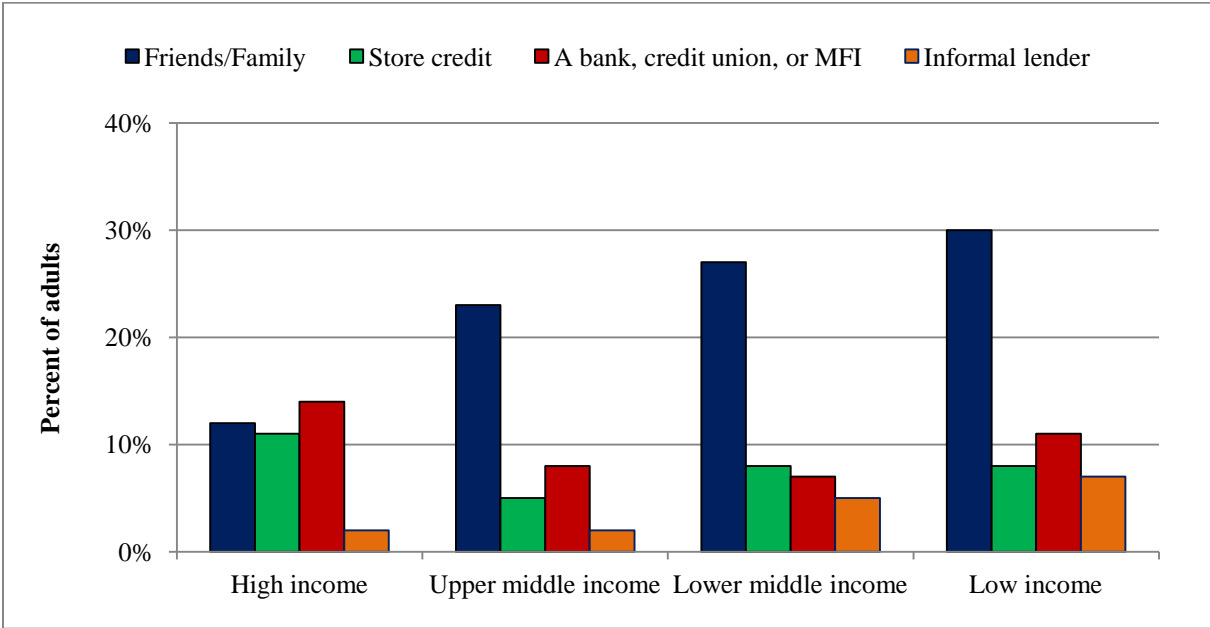
*Source:* Authors

Individuals in higher-income countries are more likely to borrow from formal sources, while those in lower-income countries tend to rely more heavily on informal credit channels. To illustrate, in Finland, 24 percent of adults report having borrowed money from a formal financial institution such as a bank, credit union, or microfinance institution in the past year (map 3.2). In Ukraine, only 8 percent report having done so, and in Burundi, only 2 percent report having formal credit. The pattern is reversed with respect to the proportion of adults with informal credit. 37 percent of adults in Ukraine and 44 percent in Burundi report having borrowed money from family or friends in the past 12 months. In Finland, however, only 15 percent have credit from family or friends.

This propensity toward informal rather than formal lending persists across low and middle income countries. Friends and family are the most commonly reported source of new

loans in upper-middle, lower-middle and low-income countries, but not in high-income countries (figure 9). In low-income countries, 20 percent of adults report friends or family as their only source of new loans in the past year. In contrast, only 6 percent of adults report a formal financial institution as their only source. Adults in poorer countries are also more likely to report having borrowed money from a private informal lender in the past year. An important caveat to this finding is that social norms may have a significant effect on the degree to which this type of borrowing is reported.

**Figure 9: Sources of new formal and informal loans, (%)**



*Note:* Respondents could report borrowing from more than one source

*Source:* Authors

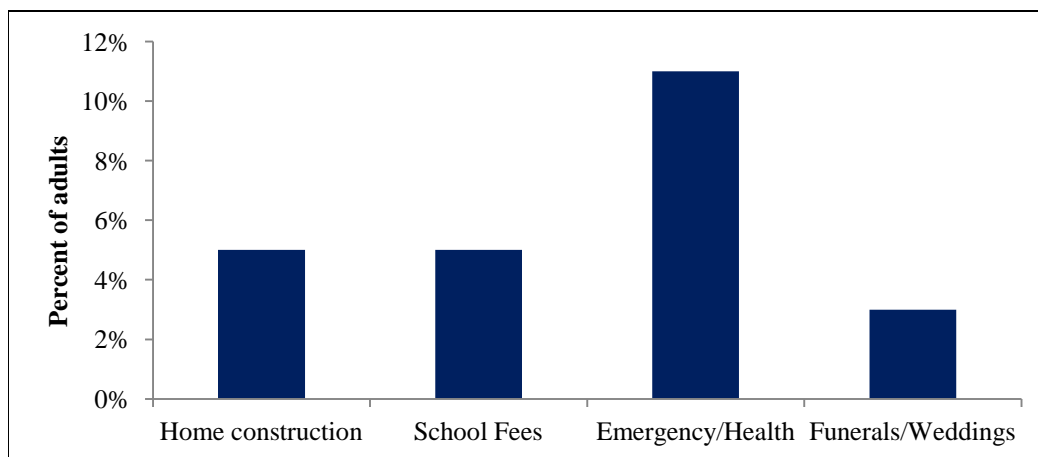
Individual characteristics such as income are also associated with formal borrowing and the direction of association varies across developing and high-income countries. On average, the differences in the origination of new formal loans between the poorest and richest income quintiles are not statistically significant. However, in high-income countries, those in the richest income quintile are almost twice as likely on average as those in the poorest to report having originated a new formal loan in the past year. In both high-income and developing countries, a

significantly larger share of men than women report having originated a new loan from a formal financial institution in the past year.

Why do people borrow? Similar to the differences in sources of credit across countries and individual characteristics, the purpose of borrowing also exhibits variation. Data gathered in developing countries highlight that emergency or health purposes are the most common reason for having an outstanding loan (figure 10).<sup>23</sup> Adults in the poorest income quintiles also commonly report emergency and health loans. On average, in developing countries, 14 percent of adults in the poorest quintile had a loan for emergency or health purposes, compared with 8 percent of those in the richest fifth of the population.

The data also highlights variation in the reason for borrowing across regions. In Sub-Saharan Africa, 8 percent of adults report borrowing to pay school fees. In the developing world as a whole, outstanding loans for funerals or weddings are reported by 3 percent of adults in the developing world. However, they are significantly more common in fragile and conflict-affected states such as Afghanistan (29 percent), Iraq (13 percent), Somalia (11 percent), and West Bank and Gaza (11 percent).

**Figure 10: Purpose of outstanding loans reported by borrowers in developing countries ( % )**



*Source:* Authors

<sup>23</sup> Data on the main purpose of outstanding loans were gathered only in developing countries because Gallup, Inc. enforces a time limit for phone interviews conducted in high-income countries, limiting the number of questions that can be added to the core questionnaire. Respondents chose from a list of reasons for borrowing so it is possible that reasons not listed (borrowing to start a business, for example) are also common.

How common is the use of mortgages in high-income countries vs. developing countries or across different regions? Data on the use of mortgages show a large difference between countries at different income levels. In high-income countries, 24 percent of adults report having an outstanding loan to purchase a home or apartment. The corresponding number is only 3 percent in developing countries. Even within the European Union, there is large variation in the use of mortgages, with very low rates of use in some of the new member states. For example, while 21 percent of adults in Germany have an outstanding mortgage, only 3 percent in Poland do (map 3.3). Such differences may, in part, reflect differences in housing finance systems across countries—such as in product diversity, types of lenders, mortgage funding, and the degree of government participation. Studies have found that these factors may affect the availability of loans to individuals (IMF, 2011). Collateral and bankruptcy laws that define legal rights of borrowers and lenders have also been shown to affect housing finance (Warnock and Warnock, 2008). And to develop fully in the first place, a mortgage market requires the existence of formal property rights and an efficient framework to record ownership of property (De Soto, 2000).

#### **4. Barriers to Financial Inclusion**

Income levels and individual characteristics clearly help explain some of the differences in the use of accounts around the world. But what do people themselves say when asked why they do not have an account? The Global Findex survey, by asking more than 70,000 adults without a formal account the reasons for not having one, provides novel data on the barriers to financial inclusion. In this section, we discuss each self-reported barrier individually. Each one represents a distinct dimension that policymakers must consider when designing policies to improve financial inclusion. We also examine these self-reported barriers by country-level income group and individual characteristics. This allows us to document robust relationships

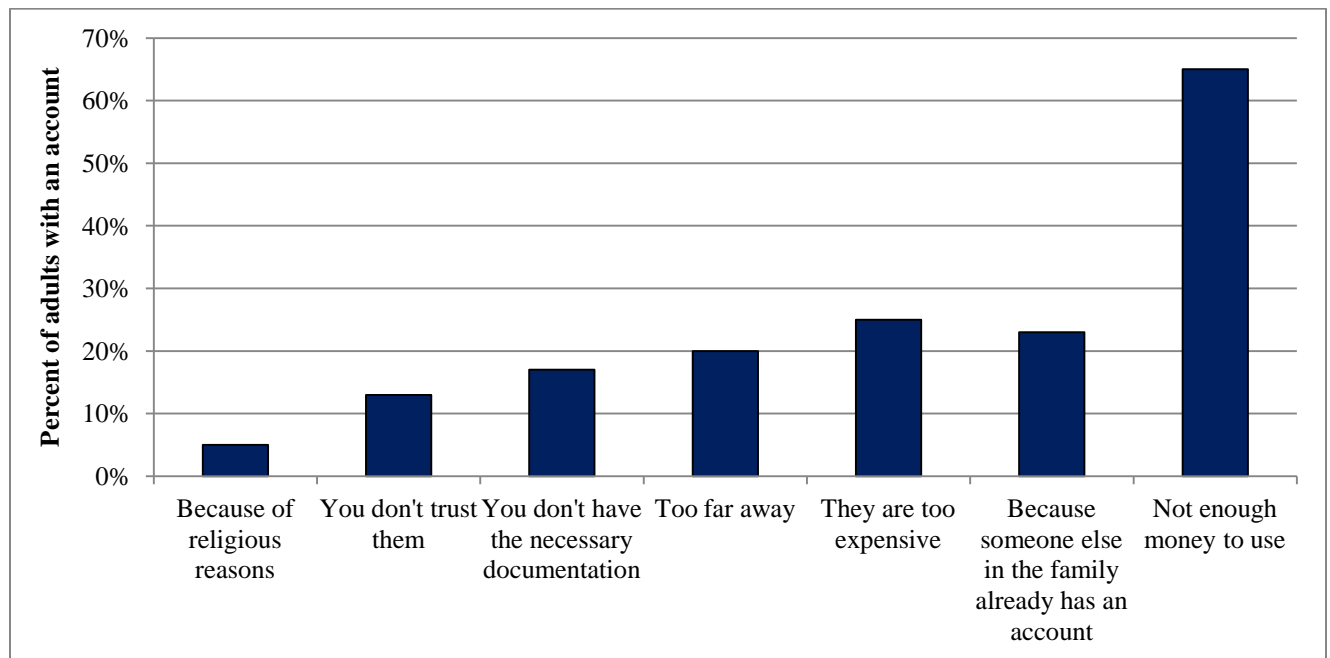
between subjective and objective assessments of barriers to financial access, even when accounting for GDP per capita.

Globally, the most frequently cited reason for not having a formal account is the lack of enough money to use one (figure 11). This is the response given by 65 percent of adults without a formal account, with 30 percent citing this as the only reason (multiple responses were permitted).<sup>24</sup> The next most commonly cited reasons for not having an account are that banks or accounts are too expensive and another family member already has one. Each of these is cited by about a quarter of adults without an account. The other reasons reported (in order of importance) are banks being too far away, lack of the necessary documentation, lack of trust in banks, and religious reasons. On average, respondents chose 1.7 responses, including most commonly the lack of enough money to use an account along with a second barrier. However, in low-income countries, adults gave 1.91 responses, on average. Adults in these countries were significantly more likely to cite distance, cost, documentation, and lack of money as compared to adults in other country-level income groups. Lack of trust and someone else in the family already having an account were more commonly cited in middle- and high-income countries.

---

<sup>24</sup> Among respondents, 12 percent chose none of the given reasons for not having an account.

Figure 11: Reported Reasons for not having a Bank Account



Note: Respondents can choose more than one reason

Source: Authors

As previously mentioned, the most commonly cited reason for not having an account at a formal financial institution is a lack of money. At first glance it may appear that the segment of the population for whom this is a concern is less likely to be bankable. Those who report not having an account because one of this reason are likely suggesting that, *under current circumstances*, the costs of having an account do not outweigh its benefits. It seems reasonable to assume, however, that if individuals found it easier or cheaper to use accounts, or if they provided benefits such as the ability to receive remittances or government transfers, then for some proportion of the respondents, the costs associated with having an account would be outweighed by the benefits.

The next most commonly cited reason was that another member of the family already has an account, a response identifying indirect users. Women and adults living in high-income and upper-middle income countries (where relatives are most likely to have an account) were significantly more likely to choose this reason. A recent study shows that lack of account ownership (and personal asset accumulation) limits women's ability to pursue self-employment

opportunities.<sup>25</sup> Hence, while such voluntary exclusion may be linked to individual preferences or cultural norms, or it may indicate a lack of awareness of financial products or lack of financial literacy more generally.<sup>26</sup>

As already mentioned above affordability is an important barrier to account ownership. High costs are cited by a quarter of unbanked respondents on average, and 32 percent in low-income countries. Fixed transaction costs and annual fees tend to make small transactions unaffordable for large parts of the population. Maintaining a checking account in Sierra Leone, for example, costs the equivalent of 27 percent of GDP per capita in annual fees alone. So it is no surprise that 44 percent of non-account-holders in the country cite high cost as a reason for not having a formal account. Analysis finds a significant relationship between cost as a self-reported barrier and an objective measure of costs (Figure 12). Fixed fees and high costs of opening and maintaining accounts also often reflect lack of competition and underdeveloped physical or institutional infrastructure.

Twenty percent of unbanked respondents cited distance as a key reason for not having a formal account. The frequency with which this barrier was cited increases sharply as one moves down the country-level income scale, from 10 percent in high-income countries to 28 percent in low-income countries. Among developing countries, there is a significant relationship between distance as a self-reported barrier and objective measures of providers such as bank branch penetration. To illustrate this point, Tanzania has a large share of non-account-holders who cite distance as a reason for not having an account—47 percent—and also ranks near the bottom in bank branch penetration, averaging less than 0.5 bank branches per thousand square kilometers.<sup>27</sup>

Documentation requirements for opening an account may also exclude workers in the rural or informal sector, who are less likely to have wage slips or formal proof of residence. As Figure 13 shows, there is a significant relationship between subjective and objective measures of

---

<sup>25</sup> Hallward-Driemeier and Hasan 2012.

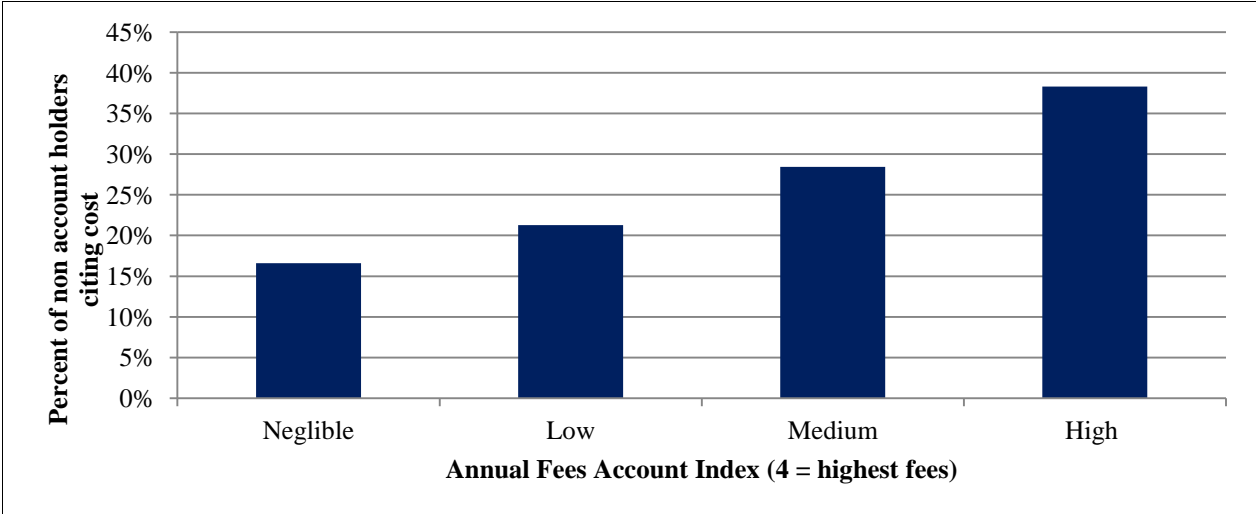
<sup>26</sup> The institutional barriers to financial inclusion are further analyzed in Allen and others (2012).

<sup>27</sup> World Bank Global Payment Systems Survey, 2010.



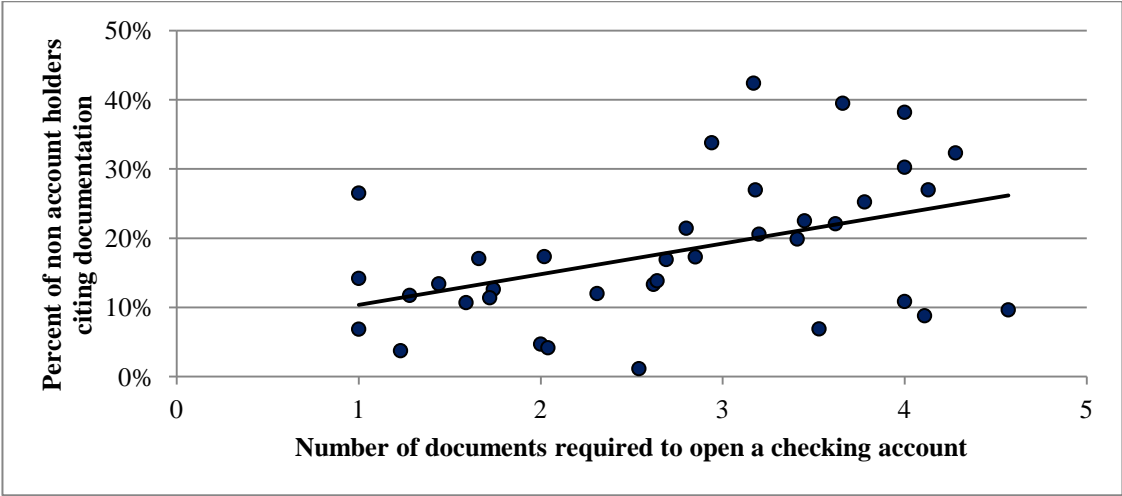
documentation requirements as a barrier to account use, which holds even after accounting for GDP per capita. Indeed, the Financial Action Task Force, recognizing that overly cautious Anti-Money Laundering and Terrorist Financing (AML/CFT) safeguards can have the unintended consequence of excluding legitimate businesses and consumers from the financial system, has emphasized the need to ensure that such safeguards also support financial inclusion.<sup>28</sup>

**Figure 12: Subjective vs. Objective Measures of Cost as a Barrier to Access**



*Source:* Authors; Bank Regulation and Supervision Database (2008); Beck, Demirguc-Kunt, and Martinez Peria (2008)

**Figure 13: Subjective vs. Objective Measures of Documentation and cost as a Barrier to Access**



*Source:* Authors

<sup>28</sup> For more on documentation requirements and safeguards against money laundering, see Yikona and others (2011) and FATF (2011).

Distrust in formal financial institutions is also a nontrivial barrier to wider financial inclusion, and one that is difficult to address in the short-term. Thirteen percent of adults without a formal account cite lack of trust in banks as a reason why they do not own an account. This distrust can stem from cultural norms, discrimination against certain population groups, past episodes of government expropriation of banks, or economic crises and uncertainty. In Europe and Central Asia, 31 percent of non-account-holders cite lack of trust in banks as a reason for not having an account—a share almost three times that in other regions on average.<sup>29</sup>

Finally, only 5 percent of unbanked respondents cite religious reasons for not having a formal account, though the proportion is higher in some Middle Eastern and South Asian countries like West Bank & Gaza and Afghanistan. In these regions, developing financial products compatible with religious beliefs (Islamic finance) could potentially increase account penetration.

This systematic evidence on barriers to the use of financial services allows researchers and policy makers to understand reasons for non-use of financial services and to prioritize and design policy interventions to promote financial inclusion. Since we currently only have one complete round of data from 2011, we cannot use the cross-section to determine the impact of policies to address these self-reported barriers. Measuring this impact requires future rounds of data collection and rigorous evaluation. Such analysis is beyond the scope of this paper. Further, people often face multiple barriers to the use of formal accounts. Thus, addressing individual constraints may not increase the use of accounts if other barriers continue to bind.

## **5. Mobile Money, Branchless Banking, and Beyond**

As documented in Section 3, there is a strong correlation between national income and financial inclusion. However, it would be a mistake to conclude that policy innovations cannot

---

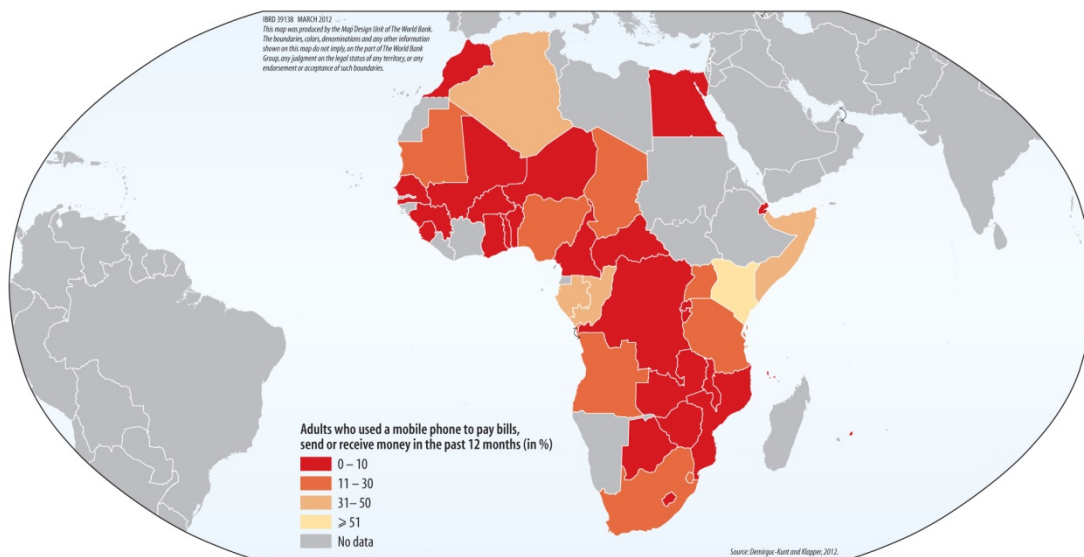
<sup>29</sup> In the core Gallup World Poll questionnaire respondents are asked to rate their trust in banks, and again respondents in Europe and Central Asia—account holders and non-account-holders—report the least amount of trust (Demirguc-Kunt, Klapper, and Zingales 2012).

bring about more inclusive financial systems at low levels of income. The Global Findex database allows us to observe how public- and private-sector led initiatives might change how people engage with the formal financial system. And future rounds of data will allow us to trace the evolution of new products and reforms as well as facilitate research to better identify relationships between financial inclusion and other development outcomes.

The success of mobile money illustrates the transformative potential for technical progress and innovation on financial. Mobile money—sometimes a form of branchless banking—has allowed people who are otherwise excluded from the formal financial system to perform financial transactions in a relatively cheap, secure, and reliable manner (Jack and Suri, 2011). Individuals using mobile money maintain a type of account allowing them to make deposits and withdrawals through cash transactions at a network of retail agents. They can then transfer money or pay bills using text messages. Many mobile money accounts—such as those provided by M-PESA in Kenya or GCash in the Philippines—are not connected to an account at a financial institution, though the providers are often required to store the aggregate sums of the accounts in a bank. Customers are ordinarily charged a fee for sending money to others or making a withdrawal from their accounts.

Mobile money has achieved the broadest success in Sub-Saharan Africa, where 16 percent of adults report having used a mobile phone in the past 12 months to pay bills or send or receive money (map 2). The share of adults using mobile money is less than 5 percent in all other regions—though a few countries are notable exceptions to regional patterns, including Haiti and the Philippines.

## Map 2: Use of Mobile Money in Sub-Saharan Africa



Source: Authors

The degree to which mobile money is capturing the unbanked market differs across countries. In Kenya, 43 percent of adults who report having used mobile money in the past 12 months do not have a formal account. In Sudan, 92 percent do not own an account. This may reflect the varied and fast evolving regulations surrounding mobile money. When M-PESA was launched in Kenya, it had no association with the formal banking sector and mobile banking customers there were exempt from the documentation requirements imposed by banks. But governments are increasingly favoring bank-led models in which mobile money providers have partnerships with or formed directly through banks. In India, the government introduced regulations in 2008 requiring that mobile money schemes be operated by banks, making it difficult for an M-PESA-type market entrant to lead the nascent mobile money movement in the country (CGAP, 2010). This may have contributed to the slow growth of mobile money in India, where only 4 percent of Global Findex respondents used a mobile phone in the past year to pay bills or send or receive money.

In recent years, the proliferation of “branchless banking” has also received growing attention as a way to increase financial access in developing countries, particularly among

underserved groups.<sup>30</sup> One mode of branchless banking centers on bank agents, who often operate out of retail stores, gas stations, or post offices. By capitalizing on existing infrastructure and client relationships, operators can expand financial access in a more cost-efficient manner. Bank agents can also be mobile, making daily or weekly rounds among clients. Few account holders currently report relying on bank agents (whether over the counter at a retail store or from some other person associated with their bank) as their main mode of withdrawal or deposit. But in several Asian countries—including Bangladesh, the Lao People’s Democratic Republic, Nepal, and the Philippines—more than 10 percent of account holders already report using bank agents.

There is also enormous scope for the public sector to bring about transformative change in how adults around the globe interact with the formal financial sector. Increasingly, governments are using formal accounts to disburse transfer payments. In Brazil, the government allows recipients of conditional cash transfers (as part of its *Bolsa Familia* program) to receive payments via no-frills bank accounts, though many more chose to receive payments via a virtual account that does not allow deposits or indefinite storage (CGAP, 2011). Still, according to Findex data, 20 percent of adults in Brazil report receiving government transfers via a bank account, among the highest in the developing world. In India, the government recently began depositing government pension and scholarship payments directly into the bank accounts of almost 250,000 people in 20 districts. Officials plan to expand the program and hope it will prevent corruption as well as expand financial access (Harris, 2013). These types of reforms have the potential to dramatically expand the reach of the formal financial sector to the poorest individuals.

---

<sup>30</sup> For more information, see Mas and Kumar (2008).

## 6. Conclusion

For most people, having an account at a financial institution serves as an entry point into the formal financial sector. A formal account can encourage saving and open access to credit. It can also make it easier to transfer wages, remittances, and government payments. Broad-based access to accessible and affordable formal accounts is a hallmark of an inclusive financial system, the absence of which can contribute to persistent income inequality and slower economic growth.

Yet until now little had been known about the global reach of the financial sector and financial inclusion—the extent of account ownership and the use of formal payments, savings, and credit—and the degree to which such groups as the poor are excluded from formal financial systems. Systematic indicators of the use of different formal and informal financial services had been lacking for most countries.

The Global Financial Inclusion (Global Findex) database provides a new set of indicators that measure how adults in 148 countries save, borrow, make payments, and manage risk. The indicators are constructed with survey data from interviews with more than 150,000 nationally representative and randomly selected adults age 15 and above in 148 countries during the 2011 calendar year. This dataset will next be updated in 2014.

As the first public database of indicators that consistently measure people's use of financial products across countries and over time, the Global Findex database fills a big gap in the financial inclusion data landscape. The data show wide gaps in account penetration between high-income and developing countries and between the poor and rich within countries. Also, the data show variation in the use of formal and informal savings and credit. By enabling policy makers to identify segments of the population excluded from the formal financial sector, the data can help in the design and prioritization of reforms.

## References

- Allen, F., A. Demirguc-Kunt, L. Klapper, and M. S. Martinez Peria. 2012. "The Foundations of Financial Inclusion: Understanding Ownership and Use of Formal Accounts." Policy Research Working Paper 6290, World Bank, Washington D.C..
- Ashraf N., Aycinena, C., Martinez, A., Yang, D., (2010). Remittances and the problem of control: A field experiment among migrants from El Salvador. Mimeo.
- Aterido, R., T. Beck, and L. Iacovone. 2011. "Gender and Finance in Sub-Saharan Africa: Are Women Disadvantaged?" Policy Research Working Paper 5571, World Bank, Washington, DC.
- Beck, T. 2009. "FinAccess 2009: Trends, Analysis and Policy Conclusions." Consultant report for FSD Trust Kenya, Nairobi.
- Beck, T., and M. Brown. 2011. "Use of Banking Services in Emerging Markets: Household-Level Evidence." European Banking Center Discussion Paper 2011-024, Tilburg University, Netherlands.
- Beck, T., A. Demirguc-Kunt, and R. Levine. 2007. "Finance, Inequality, and the Poor." *Journal of Economic Growth* 12 (1): 27–49.
- Beck, T., A. Demirguc-Kunt, and M. S. Martinez Peria. 2007. "Reaching Out: Access to and Use of Banking Services across Countries." *Journal of Financial Economics* 85 (2): 234–66.
- . 2008. "Banking Services for Everyone? Barriers to Bank Access and Use around the World." *World Bank Economic Review* 22 (3): 397–430.
- Beck, T., R. Levine, and N. Loayza. 2000. "Finance and the Sources of Growth." *Journal of Financial Economics* 58 (1): 261–300.
- Campbell, J. 2006. "Household Finance." *Journal of Finance* 61 (4): 1553–604.
- CGAP (Consultative Group to Assist the Poor). 2010. "Technology Program Focus Country: India."
- CGAP (Consultative Group to Assist the Poor). 2011. "CGAP G2P Brazil Country Report"
- Chawla, M., G. Betcherman, and A. Banerji. 2007. *From Red to Gray: The "Third Transition" of Aging Populations in Eastern Europe and the Former Soviet Union*. Washington, DC: World Bank.
- Chen, S., M. Ravallion, and P. Sangraula. 2010. "The Developing World Is Poorer Than We Thought But No Less Successful in the Fight against Poverty." *Quarterly Journal of Economics* 125 (4): 1577–625.
- Clausen, B., A. Kraay, and Z. Nyiri. 2011. "Corruption and Confidence in Public Institutions: Evidence from a Global Survey." *World Bank Economic Review* 25 (2): 212–49.
- Cole, S., T. Sampson, and B. Zia. 2011. "Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets?" *Journal of Finance* 66 (6): 1933–67.
- Collins, D., J. Morduch, S. Rutherford, and O. Ruthven. 2009. *Portfolios of the Poor: How the World's Poor Live on Two Dollars a Day*. Princeton, NJ: Princeton University Press.
- Cull, R., A. Demirguc-Kunt, and J. Morduch. 2013. *Banking the World: Empirical Foundations of Financial Inclusion*. Cambridge, MA: MIT Press.

- Deaton, A. 2008. "Income, Health, and Well-Being around the World: Evidence from the Gallup World Poll." *Journal of Economic Perspectives* 22 (2): 53–72.
- Demirguc-Kunt, A., and L. Klapper. 2012. "Measuring Financial Inclusion: The Global Findex Database." Policy Research Working Paper 6025, World Bank, Washington, DC.
- Demirguc-Kunt, A., L. Klapper, and L. Zingales. 2012. "Trust in Banks." Working paper, Development Research Group, World Bank, Washington, DC.
- Demirguc-Kunt, A., and R. Levine. 2009. "Finance and Inequality: Theory and Evidence." *Annual Review of Financial Economics* 1: 287–318.
- de Soto, Hernando. 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York: Random House.
- Djankov, S., C. McLiesh, and A. Shleifer. 2007. "Private Credit in 129 Countries." *Journal of Financial Economics* 2 (84): 299–329.
- Dupas, P., and J. Robinson. 2009. "Savings Constraint and Microenterprise Development: Evidence from a Field Experiment in Kenya." NBER Working Paper 14693, National Bureau of Economic Research, Cambridge, MA.
- . 2011. "Why Don't the Poor Save More? Evidence from Health Savings Experiments." NBER Working Paper 17255, National Bureau of Economic Research, Cambridge, MA.
- EBRD (European Bank for Reconstruction and Development). 2011. *Life in Transition: After the Crisis*. <http://www.ebrd.com>.
- FATF (Financial Action Task Force). 2011. *FATF Guidance on Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion*. FATF/OECD: Paris.
- FDIC (Federal Deposit Insurance Corporation). 2011. FDIC National Survey of Unbanked and Underbanked Households. FDIC: Washington, DC.
- Hallward-Driemeier, M., and T. Hasan. Forthcoming. *Empowering Women: Legal Rights and Economic Opportunities in Africa*. Development Forum Series. Paris: Agence Française de Développement; Washington, DC: World Bank.
- Harris, G. 2013. "India Aims to Keep Money for Poor Out of Others' Pockets." *New York Times* January 5 2013.
- Honohan, P. 2008. "Cross-Country Variation in Household Access to Financial Services." *Journal of Banking and Finance* 32: 2493–500.
- IMF (International Monetary Fund). 2011. *Global Financial Stability Report: Grappling with Crisis Legacies, September 2011*. Washington, DC: IMF.
- Jack, W., and T. Suri. 2011. "Mobile Money: The Economics of M-PESA." NBER Working Paper 16721, National Bureau of Economic Research, Cambridge, MA.
- Johnston, D., and J. Morduch. 2008. "The Unbanked: Evidence from Indonesia." *World Bank Economic Review* 22 (3): 517–37.
- Karlan, D., Zinman, J., (2010). Expanding credit access: Using randomized supply decisions to estimate the impacts. *Review of Financial Studies* 23 (1), 433-464.
- King, R. G., and R. Levine. 1993. "Finance and Growth: Schumpeter Might Be Right." *Quarterly Journal of Economics* 108 (3): 717–37.
- Klapper, L., L. Laeven, and R. Rajan. 2006. "Entry Regulation as a Barrier to Entrepreneurship." *Journal of Financial Economics* 82: 591–629.



- Klapper, L., and I. Love. 2011. "The Impact of the Financial Crisis on New Firm Registration." *Economics Letters* 113: 1–4.
- Mas, I., and K. Kumar. 2008. "Banking on Mobiles: Why, How, for Whom?" Focus Note 48, Consultative Group to Assist the Poor, Washington, DC.
- Ratha, D. 2006. "Leveraging Remittances for Development." *Federal Reserve Bank of Dallas Proceedings*, pp. 173–85.
- Sacks, D., B. Stevenson, and J. Wolfers. 2010. "Subjective Well-Being, Income, Economic Development and Growth." NBER Working Paper 16441, National Bureau of Economic Research, Cambridge, MA.
- Stevenson, B., and J. Wolfers. 2008. "Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox." *Brookings Papers on Economic Activity* 39 (1): 1–102.
- . 2011. "Trust in Public Institutions over the Business Cycle." *American Economic Review Papers and Proceedings* 101 (3): 281–87.
- Warnock, V. C., and F. E. Warnock. 2008. "Markets and Housing Finance." *Journal of Housing Economics* 17 (3): 239–51.
- World Bank. 2008a. *Finance for All? Policies and Pitfalls in Expanding Access*. Washington, DC: World Bank.
- . 2008b. *Global Purchasing Power Parities and Real Expenditures: 2005 International Comparison Program*. Washington, DC: World Bank.
- Yikona, S., B. Slot, M. Geller, B. Hansen, and F. el Kadir. 2011. *Ill-Gotten Money and the Economy: Experiences from Malawi and Namibia*. Washington, DC: World Bank.