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Published in:
Journal of International Money and Finance

DOI:
[10.1016/j.jimonfin.2022.102678](https://doi.org/10.1016/j.jimonfin.2022.102678)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2022

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Jong, A. D., Shahriar, A. Z., & Shazia, F. (2022). Reaching out to the unbanked: The role of political ideology in financial inclusion. *Journal of International Money and Finance*, 126, [102678].
<https://doi.org/10.1016/j.jimonfin.2022.102678>

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Contents lists available at ScienceDirect

Journal of International Money and Finance

journal homepage: www.elsevier.com/locate/jimf

Reaching out to the unbanked: The role of political ideology in financial inclusion [☆]

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ARTICLE INFO

Article history:

Available online 24 May 2022

JEL Codes:

G2
G21
G51
P16

Keywords:

Financial inclusion
Government ideology
Political ideology
Mobile banking

ABSTRACT

This paper studies the effect of political ideology on household financial inclusion. Financial inclusion is the access to formal financial services and provides an entry key for people to participate in the economy. Using granular data of 65 countries, we find that financial inclusion is higher under right-wing regimes than under left-wing governments. We use regression discontinuity design and propensity-score matching to address endogeneity issues. We investigate multiple channels for the effect and conclude that right-wing market-oriented policies are more successful in enhancing financial inclusion than left-wing societal policies.

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1. Introduction

Financial inclusion, defined as access to formal financial services, has received increasing attention from policymakers due to its potential positive impact on the financial health of the economy. An inclusive financial system is a precondition for achieving financial development (Beck et al., 2007). However, evidence suggests that financial development remains a challenge for many countries worldwide, especially in developing economies, where poverty and income inequality are pervasive. One of the primary reasons behind this is that many people are underserved by the formal financial sector. According to the 2017 Global Findex database, 69% of adults worldwide have an account in a formal financial institution, which has increased drastically from 51% in 2011. Despite the substantial increase, approximately 1.7 billion people worldwide are excluded from formal financial systems, which causes two sets of concerns. First, the lack of access to formal financial services encourages people to rely on the informal or quasi-formal financial sector creating economic inefficiencies (Hasan et al., 2020; Allen et al., 2021), deepening poverty (Bruhn and Love, 2014), and posing a severe threat to combating money laundering and terrorist financing (Financial Action Task Force, 2011). Second, formal financial institutions fail to benefit from

[☆] The authors thank two anonymous reviewers, Zhe An, Galina Borisova Hale, Tony Cavoli (discussant), Silvio Contessi, Fangjian Fu, Zhiguo He, Niels Hermes, Brett Inder, Peta Mills, Hassan Naqvi, Hoa Nguyen (discussant), Yoshio Nozawa, Buhui Qiu, Kasper Roszbach (the editor), Xiaoyun Yu, and participants of the Finance, Property, Technology and the Economy Conference (2019) and the Australasian AID Conference (2020) for helpful comments. This work was not supported by a specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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economies of scale and reduced information asymmetry. Most importantly, financial institutions fail to pool and diversify risk that can be achieved easily by serving a wide range of clients (Allen et al., 2016). Therefore, it is important to understand the drivers of financial inclusion.

After the global financial crisis in 2008, researchers have criticized the inability of financial intermediaries to diversify risk across sectors (Klapper et al., 2013). They emphasize the necessity of financial inclusion that helps in diversifying risk and contributes to a country's sustainable financial development. Similarly, recent studies highlight the importance of government interventions in achieving a stable financial system (Allen et al., 2016; Chiu and Lee, 2019). Pagano and Volpin (2001) identify two channels through which governments can influence economic agents, especially the banking sector: policy formulation and direct intervention. Recent literature reiterated that the government controls the economic environment through policies, regulations, and taxes. Economic agents endorse these changes if the actions are aligned with their political preferences (Francis et al., 2016). In many cases, economic agents develop their strategies to benefit from this environment, even if it disrupts the agents' regularly planned activities, by managing their relationship with the government in power (Li et al., 2020). This study explores a political economy perspective and explains cross-country variation in financial inclusion. Specifically, we examine whether the government's political orientation, classified as left-wing and right-wing, affects household-level financial inclusion in a country. This question is nontrivial because it studies which political direction is more effective in augmenting financial inclusion.

Political economists locate politicians and political parties based on preferences on the magnitude of state control of the economy (Botero et al., 2004). In particular, leftist politicians prefer greater state control of the economy than right-wing politicians. Parties with different ideologies design different policy directives because of the distinctive redistributive impact on the economy. Left-wing parties are considered egalitarians who prioritize income redistribution (Hibbs, 1977; Alesina et al., 1997). They also increase government expenditure to channel spending to promote economic welfare and reduce unemployment. On the other hand, right-wing parties encourage a free-market economy with occasional intervention if required (White, 2013), emphasize price stability, and rely on fiscal spending cuts. By establishing their ideological position, left- and right-wing parties signal a commitment by undertaking policies favored by their constituencies. Traditionally, left-wing parties' core constituency consists of underprivileged groups in society, whereas the elite classes of society and the financial community are the main constituents of right-wing parties (Alesina et al., 1997; Dutt and Mitra, 2005). Therefore, the political economy literature uses the terms pro-labor and left-wing and the terms pro-capitalist and right-wing interchangeably.

Partisan theory (Hibbs, 1977; 1987) suggests that policymakers respond to electoral incentives as self-interested agents. Therefore, left- and right-wing governments pursue policies following the preferences of their median voters. Since the poor and underprivileged people benefit more from financial inclusion, the partisan theory implies that left-wing governments are more likely to promote financial inclusion. Despite such delegated roles of partisans according to their ideological standing, anecdotal evidence regarding which political party is more likely to promote financial inclusion is unclear. In India, for example, both left-wing and right-wing governments have played important roles in promoting financial inclusion, particularly among low-income households. The left-wing parties Indian National Congress and Janata Dal operated the world's largest state-led bank branch expansion program throughout the 1970s and 1980s. As part of this program, 30,000 bank branches opened in unbanked rural locations in India (Burgess & Pande, 2005). However, also the right-wing Bharatiya Janata Party government launched an ambitious project in August 2014 to link every Indian household with the banking system through a digital agent banking network. As of April 2020, 380 million bank accounts have been opened as part of this program.¹ Both types of parties intend to remove demand and supply barriers to access financial services. Demand-side barriers restrict an individual's capacity to access available financial products. For example, a lack of education or income could deter an individual from demanding particular financial services (Allen et al., 2016). Supply-side barriers can emerge from the lack of infrastructure development or the reluctance to offer services to specific segments of society. For example, inadequate profit prospects can discourage financial institutions from opening branches in rural areas (Brown et al., 2015). Right-wing parties spend more heavily on education and infrastructure development (Herwartz and Theilen, 2017). In contrast, left-wing parties attempt to reduce unemployment (Hibbs, 1987) and encourage banks to open branches in rural areas (Burgess and Pande, 2005). All of these factors contribute positively to financial inclusion.² Therefore, the impact of governments' ideological leaning on financial inclusion is an empirical question.

We explore the link between government ideology and financial inclusion using multiple data sources. We first collect data on government ideology from the Database on Political Institutions (DPI) compiled by the World Bank. In particular, we collect information on the political ideology of the major party (i.e., the party with the highest vote share) in government and that of its chief executive. Data on financial inclusion is collected from the World Bank's Global Financial Index, or the Global Findex database, the most granular financial inclusion database available to date. Although financial institutions provide various services, we focus on account ownership as the primary measure of financial inclusion for the following reasons. First, as Allen et al. (2016) pointed out, account ownership is more comparable among individuals and across countries. In contrast, many other services, such as credit and savings, are not comparable because these instruments vary in maturity and interest rate. Second, account ownership works as an entry key to the formal financial sector. After having an account, people can use various services offered by financial institutions. It is important to note that many people in developing countries do

¹ See <https://pmjdy.gov.in/account>.

² For details, see Allen et al. (2016).

not have access to this essential service, let alone other sophisticated financial services such as saving, borrowing, and debit and credit card transactions.

We challenge well-established partisan theory and find robust evidence that countries under right-wing parties are more likely to observe higher levels of account ownership than countries with a left-wing government. While having an either right-wing or left-wing ideology is more conducive to financial inclusion than not having an ideology, our focus is on which ideology is more conducive. Our results are in favor of the right-wing parties. While financial inclusion is also likely to increase under a left-wing government, it is less pronounced than the right-wing parties and not robust. Our estimates show that the account ownership level in countries with a rightist government is 6.5% higher than in countries under a leftist regime. These results are reinforced by a regression-discontinuity design, where party control changes at 50% of the electoral seat share in parliamentary elections and right-wing candidate winning margin for presidential elections. Moreover, to examine whether right-wing parties merely capitalize on the groundwork laid by left-wing parties to augment financial inclusion, we test our results using the data of the last five and even ten years, considering the ideology-dominated political party in power for the most years during these times. We find the same results in favor of right-wing parties.

Our findings depart from the stylized observations presented in early work on political economy, that blue-collar working people make up the core constituency of left-wing parties (e.g., Hibbs, 1977). Instead, as recent evidence from India suggests, right-wing parties have received support from low- and middle-income groups in many countries, as reflected in their policymaking.

What are the potential channels through which a right-wing government affects financial inclusion, and why do governments pursue these policies? First, rightist policies are mostly comprised of non-social spending, such as education and infrastructure development. For example, the right-wing Social Democratic Party in Albania emphasized the importance of education and made nine years of schooling free and compulsory (International Monetary Fund, 2003).³ Education improves the ability to make sound personal financial decisions (Klapper et al., 2013). Besides, right-wing parties' pro-innovation policies are likely to improve financial technology. Consistent with this channel of enhanced inclusion, we find that mobile banking has substantially increased financial inclusion in recent years, and this effect is most substantial under right-wing regimes. Right-wing economic policy initiatives aim to increase spending after enhanced financial inclusion. They aim to increase the frequency of account use and decrease savings, and thereby stimulate the economy. We find additional results consistent with this motivation since right-wing governments are associated with increased account usage and spending savings. Furthermore, rightist and leftist parties use varying levels of economic intervention to achieve their distinct economic goals. Right-wing parties, associated with less interventionist policies, advocate trade openness, while left-wing parties favor protectionism (Milner and Judkins, 2004). Our results suggest that rightist parties increase financial inclusion by intervening less in the domestic market and improving the judicial system.

We employ several robustness tests of our results. We divide the robustness analyses into four categories, i.e., political system heterogeneity, sampling, economic environment, and econometric assumptions. Under political system heterogeneity, we consider (i) the electoral system, in particular plurality voting versus proportional representation; (ii) having a finite term in office; (iii) the duration of the party in power; (iv) the type of government (single party vs. coalition); and (v) we limit the ideological orientation of the government to at most three major parties. We also alter the sample, where we exclude populist governments and consider right and left parties with left parties as a reference group. In testing for robustness to the economic environment, we consider the role of Global Financial Crisis of 2008, bank competition, and the poorest 40% of the households. Finally, we vary our econometric assumptions by clustering the standard error at the country level, changing the bootstrapping, adjusting sampling weights, and considering regime changes. We find robust evidence that right-wing policies are more likely to promote financial inclusion.

Our study makes the following contributions to the literature. First, we are the first to examine the effect of government ideology on households' access to financial services. We provide evidence that right-wing parties are more likely to promote household-level financial inclusion in a country, thus extending the financial inclusion and political ideology literature (Alesina, 1987; Allen et al., 2016; Müller et al., 2016). Prior studies on political ideology primarily focus on the ideological distinction of political parties in formulating the fiscal policies, their redistributive concerns, and their effect on economic growth (Bjørnskov, 2008). We focus on the entry point, the individual's access to the financial system rather than the macro-economic effect of ideological difference. Furthermore, recent literature on financial inclusion studies the socio-economic characteristics, bank branch proximity, or ATM proximity as determinants of financial inclusion (Brown et al., 2015; Horvath et al., 2017; Allen et al., 2021; Lu et al., 2021), while we focus on the political side.

Second, we attempt to identify the channels through which political ideology affects financial inclusion. We study a range of indicators, from individual savings and withdrawal behavior due to ideology-driven policy changes to the use of mobile banking. We find that these indicators serve as channels through which governments achieve their ideology-driven political economy goals.

Third, we extend the literature by studying individual-level data on financial inclusion, using a survey database that offers the most granular data on global financial inclusion to date. Existing studies on financial inclusion either use only country-

³ It is important to note that according to Global Findex, financial inclusion increased by ten percent point in Albania during the right-wing Social Democratic Party of Albania's regime and by only two percent point during the left-wing Socialist party of Albania's regime.

level data (Beck et al., 2007) or create an index for financial inclusion (Morgan and Pontines, 2014).⁴ It is thus challenging to disaggregate financial service users by income, education, or other characteristics.

Finally, our study contributes more broadly to the politics and finance literature (Myers, 1977; Pagano and Volpin, 2001). Prior studies have emphasized that politics significantly affect public and corporate policy formulation and decision-making. Our study provides microeconomic evidence on the politics-finance relationship.

The remainder of the paper proceeds as follows: Section 2 provides an overview of the data. Section 3 discusses the methodology. Section 4 discusses the main results. Section 5 documents the potential channel. Section 6 presents the results of additional tests. Section 7 documents the country-level analysis, and Section 8 concludes the paper.

2. Data

We use data from several sources to investigate the relationship between political ideology and financial inclusion. We start our analysis with account ownership. In line with the literature, account ownership is measured by using the following survey question: “An account can be used to save money, to make or receive payments, or to receive wages or financial help. Do you, either by yourself or together with someone else, currently have an account at a bank or another type of formal financial institution?” This indicator is used as the primary measure of financial inclusion (Demirgüç-Kunt et al., 2015). The financial inclusion data are collected from the World Bank’s Global Financial Inclusion (Global Findex) database. The Findex data are drawn from 2011, 2014, and 2017 surveys carried out by the Gallup World Poll and represent more than 140 countries. The survey participants are randomly selected individuals at least 15 years of age. The data on political ideology are collected from the Database of Political Institutions (DPI).⁵ DPI identifies party orientation for economic policies and defines a party as leftist if its name includes the term *communist*, *socialist*, *social democratic*, or *left-wing* in cross-checked sources and rightist if the party name includes *conservative*, *Christian-democratic*, or *right-wing* in cross-checked sources.⁶ We use the ideology of the chief executive for a presidential political system or if an assembly elects the president, and the ideology of the largest government party if the political system is parliamentary, where the ideology of the chief executive is coded as zero (unelected) for the presidential system and replaced with the executive’s political party, if available. The variable right-wing takes the value of one if the country is right-wing and zero otherwise. Similarly, left-wing takes the value of one if the country is left-wing and zero otherwise. The reference group represents the countries where the ideology of the government does not fall in either of the right or left-wing categories.

Fig. 1(a) portrays a wide variation in account ownership across countries clustered by income level, high-income, upper-middle-income, middle-income, lower-middle-income, and low-income countries. 93% of adults living in high-income countries have an account in a formal financial institution, decreasing monotonically across subsequent clusters. We exclude high-income economies from the analysis since account ownership is almost universal in these countries with a gross national income (GNI) per capita of USD 12,056 or more.⁷ The argument is that financial inclusion will not be a policy priority in these countries, irrespective of the government’s ideology. Figure 1(b) shows the percent of financial inclusion across countries by political ideology over the survey waves. The figure depicts that financial inclusion is higher in the right-wing countries than in left-wings across all survey waves.

We apply several selection criteria to construct our sample. First, we exclude individuals missing demographic information such as education or income. Second, we only consider countries that have data on political ideology available. The final sample consists of 193,284 observations from 65 countries.⁸ Additionally, we include other individual, macroeconomic, institutional, and regulatory variables that could affect financial inclusion. Individual-level data are collected from the Global Findex database. Data on macroeconomic and infrastructure-related variables are collected from the World Development Indicators (WDI). Variables related to institutions and politics are collected from World Governance Indicators (WGI). Table 1 provides the list of countries included in our sample, and Appendix B shows the definitions and sources of all the indicators used in this study.

Table 2 presents the summary statistics. It shows that, on average, 39% of adults in the sample have an account, 33% of adults use a formal account to save, and 23% frequently use an account when all income groups are considered. Moreover, average account ownership is lowest for the poorest 20% of the population, increasing monotonically with income levels.

Table 3 presents the mean values of the access to and use of respondents’ accounts under left- and right-wing regimes.

A *t*-test shows that the respondents of a country under the rightist regime are likely to have higher account ownership, higher frequency of account use, and a higher number of mobile banking accounts across all income levels. Savings, however, is higher in left-wing countries.

⁴ Except for Allen et al. (2016), who use the Global Findex database.

⁵ See Beck et al. (2001) for details.

⁶ DPI uses a rigorous process to identify party orientation. If the party name does not suggest its orientation immediately, it consults several other websites, Political Handbook or any other sources that specifically provides party orientation.

⁷ See also Demirgüç-Kunt et al. (2018).

⁸ Appendix A documents the sample selection.

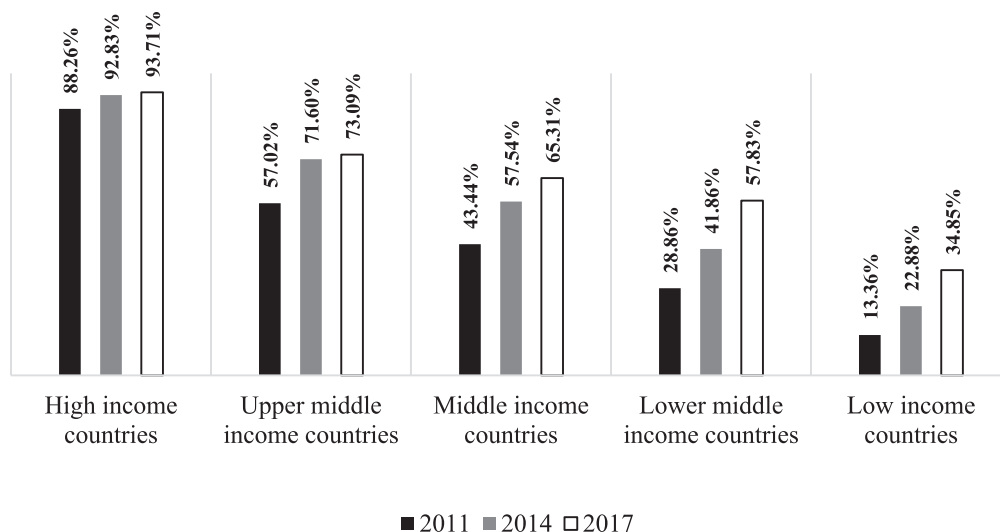
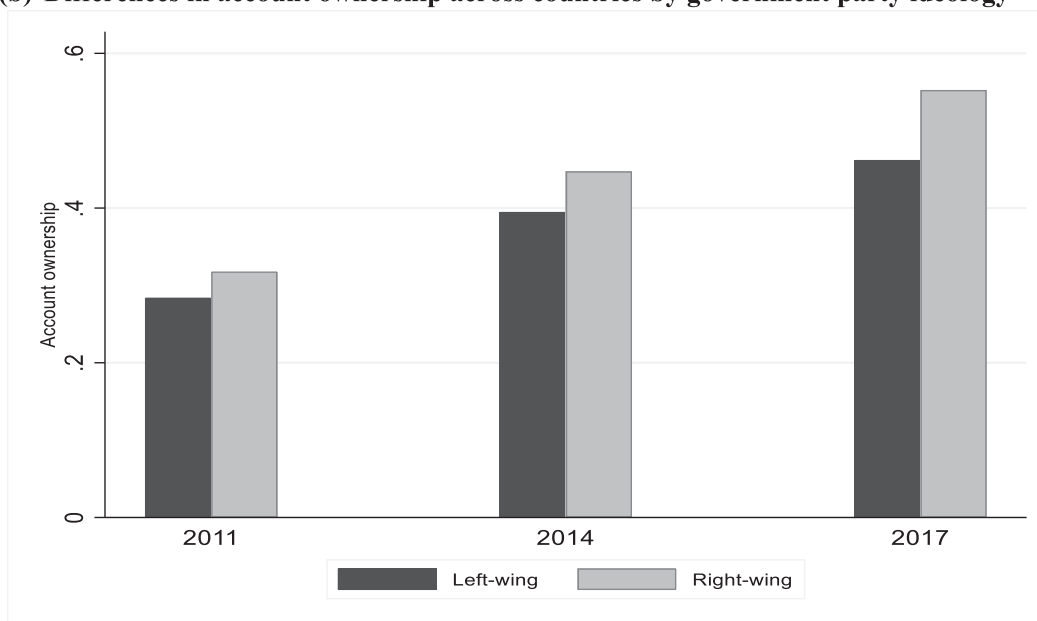
(a) Differences in account ownership across countries by income group**(b) Differences in account ownership across countries by government party ideology**

Fig. 1. Differences in account ownership. Figure (a) plots differences in account ownership across countries by income level. Account ownership refers to the percentage of survey respondents who reported having an account in a formal financial institution. The income group classification is based on the World Bank Group's fiscal year from 2017 to 2018. Source: Demirguc-Kunt et al. (2018), Global Findex Database, The World Bank. Figure (b) plots the percent of account ownership across countries by party ideology over the survey waves. Source: Global Findex Country-level Database, The World Bank.

3. Methodology

We conduct two sets of analyses. The first set uses the individual-level data, and the second set country-level data.

Account ownership in a financial institution depends on the individual's characteristics, such as the level of education and the economic or political characteristics of the country in which the individual lives. The relation between financial inclusion and political ideology thus spans multiple levels. Measures of financial inclusion are individual-level variables, whereas the ideology of the political party in power is a country-level characteristic in a particular year that does not vary across individuals. Thus, our data has a two-level hierarchical or multilevel structure, where the first-level (micro-level) variables are nested within the second-level (macro-level) variables. Therefore, we combine respondent-level (micro/first-level) and

Table 1
Country list.

Albania	Costa Rica	Malaysia	Rwanda
Algeria	Ecuador	Mauritania	Senegal
Angola	El Salvador	Mauritius	Sierra Leone
Armenia	Gabon	Mexico	Sri Lanka
Azerbaijan	Ghana	Moldova	Tajikistan
Bangladesh	Guatemala	Mongolia	Tanzania
Belarus	Honduras	Morocco	Thailand
Benin	India	Myanmar	Togo
Bolivia	Indonesia	Namibia	Tunisia
Botswana	Iraq	Nepal	Turkey
Brazil	Jordan	Nicaragua	Uganda
Bulgaria	Kazakhstan	Niger	Ukraine
Burkina Faso	Kenya	Nigeria	Vietnam
Cambodia	Lebanon	Pakistan	Zambia
Cameroon	Lesotho	Paraguay	
Chad	Liberia	Peru	
Colombia	Malawi	Philippines	

This table presents the list of the countries in our sample. Since account ownership is almost universal in high-income economies, we exclude economies with a GNI per capita \$12,056 or more. We include countries that have political ideology data available. Our final sample consists of 65 countries. All these countries are classified as developing by the World Bank.

Table 2
Summary statistics.

Panel A: Individual-level Variables						
Variables	Obs.	Mean	Std. dev.	Min	Max	
Account	193,284	0.396	0.489	0	1	
Savings	151,599	0.329	0.469	0	1	
Frequency	35,699	0.230	0.420	0	1	
Mobile account	169,112	0.108	0.310	0	1	
Age	193,284	38.131	16.585	15	99	
Primary education	193,284	0.460	0.498	0	1	
Secondary education	193,284	0.096	0.295	0	1	
Tertiary education	193,284	0.177	0.382	0	1	
Income: poorest 20%	193,284	0.193	0.395	0	1	
Income: second 20%	193,284	0.211	0.408	0	1	
Income: Middle 20%	193,284	0.251	0.434	0	1	
Income: Fourth 20%	193,284	0.541	0.498	0	1	
Income: Richest 20%	193,284	38.131	16.585	0	1	
Female	193,284	0.460	0.498	0	1	
Panel B: Country-level variables						
Variables	Obs.	Mean	Std. dev	p25	p50	p75
Right-wing	181	0.133	0.340	0.000	0.000	0.000
Left-wing	181	0.343	0.476	0.000	0.000	1.000
Employment	181	0.044	0.206	0.000	0.000	0.000
Domestic Credit	181	59.207	12.425	50.712	59.680	68.241
Ln GDP Per Capita	181	40.365	31.484	17.584	32.605	50.558
Inflation	181	8.678	0.879	7.981	8.773	9.466
Manufacturing value added	181	5.176	4.392	2.105	4.448	7.135
Regulatory quality	181	12.620	6.492	7.659	12.581	16.121
Political Stability	181	-0.309	0.512	-0.700	-0.329	0.052
Voice and accountability	181	-0.504	0.764	-1.015	-0.402	0.008
Corruption Control	181	-0.338	0.595	-0.777	-0.255	0.036

This table reports the individual- and country-level summary statistics. Panel A reports summary statistics for the individual respondents surveyed. Account represents the account ownership in a formal financial institution; Savings shows whether the respondent saved using a formal financial institution; Frequency is three or more withdrawals a month from an account, and Mobile account denotes whether the respondent has a mobile banking account. Panel B reports the summary statistics of country-level variables.

country-level (macro-level/second-level) information in our analysis. Failure to recognize the multilevel nature of the data would violate an important assumption of the Gaussian model, the assumption of the independence of the residuals (Hox, 2017). Individual-level observations are interdependent; the respondents of one country are likely to be more similar than those in other countries, resulting in underestimating the standard errors associated with the second-level variables.

Table 3
Government ideology and financial inclusion: Summary statistics.

	FI in countries where the major party in power is right-wing	FI in countries where the major party in power is left-wing	Difference <i>t</i> -test
Account	0.439	0.372	18.476
Savings	0.320	0.303	4.218
Frequency	0.257	0.227	4.247
Mobile account	0.101	0.086	5.973

This table reports the results of the difference in means in account ownership, savings, frequency of account use and mobile banking in left- and right-wing countries, using a *t*-test.

We use a two-stage multilevel logistic regression model specifically equipped for modeling a hierarchical data structure (Hox, 2017). Since the dependent variables are binary, we use the following multilevel logit model, following Solt (2008) and Fairbrother (2014):

$$\text{logit}(FI_{i,t,c}) = \gamma_{000} + \gamma_1 R_{t-1,c} + \gamma_2 X_{i,t,c} + \gamma_3 Z_{t-1,c} + \delta_t + u_{0,t,c} + e_{i,t,c} \quad (1)$$

where, *i* indexes individual respondents, *c* indexes countries and *t* indexes time,

R is the primary explanatory variable, *X* is the vector of individual-level controls, *Z* is the vector of country-level controls, δ_t is the time fixed effects, and $u_{0,t,c}$ and $e_{i,t,c}$ are country- and individual-specific error terms, respectively. Thus, the multi-level model allows us to disentangle within- and between-cluster effects by considering clusters at both respondent- and country-level.

Additionally, the residual intraclass correlation is analyzed. In the multilevel model, the intraclass correlation coefficient (ICC) is used to analyze the degree of homogeneity in the outcome variable within the group with the following equation:

$$\text{Variance Partition Coefficient} = \frac{\sigma_u^2}{\sigma_u^2 + \sigma_e^2} \quad (2)$$

where the numerator indicates the random intercept variance (second-level variance component or between-group variance) and the denominator indicates total variance (between- and within-group variance).

4. Results

4.1. Does political ideology affect account ownership?

We start with results that can be interpreted as correlations between variables and not a causal relation per se because of the cross-sectional nature of the data. In subsequent analyses, we will introduce identification techniques to allow for causal inferences. We report the coefficients from the multilevel logistic regressions in the regression tables. To discuss the economic significance of the results, we use the margin effects that describe the likelihood of changes in the regressand due to a change in the regressor, holding the other variables constant.

We start our analysis by including countries irrespective of their government's democratic or autocratic characteristics. Table 4 documents the baseline results of the relation between political ideology and account ownership.

First, in column (1), we regress account ownership on government's political ideology without any control variables. The results show that the likelihood of owning an account is significantly higher when a right-wing party is in power. Specifically, the likelihood of account ownership is 6.5% higher under the right-wing regime than under any other government. In Table 4, the results for individual-level variables are in column (2), individual and macroeconomic variables in column (3), and individual, macroeconomic, political, and institutional variables in column (4), respectively. Even after controlling for these individual- and country-level variables, the account ownership is likely to be 6% higher under a right-wing regime. Individual-level control variables indicate that the probability of account ownership is higher among males, more affluent, older, and more educated individuals. Country-level control variables show that the higher levels of the gross domestic product (GDP) per capita, manufacturing value-added, control of corruption augment account ownership. In specifications (1) to (4), the log-likelihood levels decline, suggesting that each subsequent specification is a better fit than the previous one. The ICC in column (1) of Table 4 indicates that between-country differences explain 20.5% of the likelihood of owning an account, and the remaining 79.5% is explained by within-country (individual-level) differences. The variation remains consistent even after adding individual- and country-level characteristics in columns (2) to (4).

We include country fixed effects in column (5) to account for the country heterogeneity in the error term, i.e., the possibility that all the observations of a country exhibit the same error. However, including country fixed effects eliminates all the cross-national differences. Therefore, ICC is close to zero when country fixed effects are included.

Table 4
Baseline results.

Variables	(1) Account	(2) Account	(3) Account	(4) Account	(5) Account	(6) Account	(7) Account
Right-wing	0.420*** (0.037)	0.428*** (0.040)	0.409*** (0.041)	0.387*** (0.041)	0.399*** (0.042)	0.374*** (0.043)	0.393*** (0.043)
Left-wing	0.134*** (0.037)	0.036 (0.040)	0.093** (0.040)	0.096** (0.041)	0.107*** (0.041)	0.096** (0.043)	0.116*** (0.043)
Age		0.013*** (0.000)	0.013*** (0.000)	0.013*** (0.000)	0.013*** (0.000)	0.012*** (0.000)	0.012*** (0.000)
Secondary education		0.906*** (0.013)	0.906*** (0.013)	0.905*** (0.013)	0.905*** (0.013)	0.871*** (0.015)	0.871*** (0.015)
Tertiary education		2.067*** (0.022)	2.066*** (0.022)	2.066*** (0.023)	2.067*** (0.023)	2.086*** (0.026)	2.087*** (0.026)
Income: second 20%		0.189*** (0.020)	0.191*** (0.020)	0.191*** (0.020)	0.191*** (0.020)	0.193*** (0.022)	0.193*** (0.022)
Income: middle 20%		0.406*** (0.019)	0.408*** (0.019)	0.409*** (0.019)	0.409*** (0.019)	0.404*** (0.021)	0.405*** (0.021)
Income: fourth 20%		0.670*** (0.019)	0.673*** (0.019)	0.674*** (0.019)	0.674*** (0.019)	0.680*** (0.021)	0.680*** (0.021)
Income: richest 20%		1.132*** (0.018)	1.134*** (0.018)	1.136*** (0.018)	1.137*** (0.018)	1.161*** (0.021)	1.162*** (0.021)
Female		-0.358*** (0.011)	-0.359*** (0.011)	-0.358*** (0.011)	-0.358*** (0.011)	-0.387*** (0.013)	-0.387*** (0.013)
Employment			0.024*** (0.005)	0.020*** (0.005)	0.023*** (0.005)	0.021*** (0.005)	0.025*** (0.006)
Domestic credit			-0.001* (0.000)	-0.001 (0.000)	-0.001 (0.000)	-0.005*** (0.001)	-0.006*** (0.001)
Ln GDP per capita			0.635*** (0.093)	0.480*** (0.099)	0.467*** (0.142)	0.791*** (0.121)	0.820*** (0.159)
Inflation			-0.021*** (0.002)	-0.021*** (0.002)	-0.021*** (0.002)	-0.033*** (0.003)	-0.034*** (0.003)
Manufacturing			0.010* (0.006)	0.009 (0.006)	0.008 (0.006)	-0.027*** (0.008)	-0.028*** (0.008)
Regulatory quality				0.071 (0.073)	0.076 (0.076)	0.083 (0.085)	0.088 (0.087)
Political stability				0.010 (0.028)	0.012 (0.028)	-0.031 (0.032)	-0.033 (0.032)
Voice and accountability				-0.111* (0.066)	-0.140** (0.069)	0.289*** (0.079)	0.311*** (0.082)
Corruption control				0.501*** (0.061)	0.493*** (0.062)	-0.035 (0.072)	-0.068 (0.073)
Observations	193,284	193,284	193,284	193,284	193,284	149,790	149,790
Log-likelihood	-112560.73	-100982.37	-100982.78	-100894.24	-100627.42	-78419.676	-78247.59
ICC	0.205	0.216	0.216	0.189	-	0.196	-
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	No	No	No	Yes	No	Yes
No of countries	65	65	65	65	65	49	49

This table reports the estimates of multilevel logistic regression. The dependent variable in all the columns is account ownership or the level one variable, which refers to respondents who reported owning an account at a formal financial institution. Country-level clustering is level two variable. Column (1) regresses account ownership on party ideology. Each subsequent column adds individual-level variables, macroeconomic variables, and political and institutional variables, respectively. Column (5) includes the country fixed effects. Column (6) and (7) documents results for the democratic countries only without and with country fixed effects. Standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

4.2. Does this relation hold when we consider only democratic countries?

Authoritarian governments can have very different policy agendas relative to electoral democracies. Our sample includes authoritarian countries, which can induce noise in our estimations. Therefore, we exclude these governments from our sample to assess whether they affect our results meaningfully. We use data from Freedom House that classifies countries as free, partly free, or not free. We define a government as authoritarian if the country is classified as not free. Sixteen countries in our sample fall in this category and we exclude these countries from our sample. The results are reported in column (6) and (7) of Table 4, without and with country fixed effects. The estimates confirm that account ownership increases under a right-wing government, irrespective of the nature of the government.

4.3. Is the politics-inclusion relation causal?

Estimating causal effects of political ideology on financial inclusion is challenging due to potential identification problems. Because incumbent parties are not selected randomly, omitted variables and causality biases may influence our

results. For instance, unobserved voter preferences could affect the selection of the ruling parties, which will induce an omitted-variable problem. Moreover, a correlation between the party ideology and a policy outcome does not necessarily suggest causation. For example, countries with a certain level of financial inclusion might prefer parties with particular ideologies, which will induce a reverse-causality problem in our analysis.

It is difficult to account for all variables that might affect an electorate's voting preferences, and therefore we cannot eradicate the omitted-variables problem. We mitigate this problem using the methodology proposed by Altonji et al. (2005). This approach compares coefficient estimates without controls with coefficients with elaborate controls and gauges the importance of omitted variables.⁹ Specifically, this indicates what the magnitude of the influence of unobserved factors has to be, relative to the influence of observed factors, in order to nullify the statistical impact of the variable of interest. The estimation is less affected by the observation selection if the difference between the coefficients with and without controls is small.

In our baseline results in Table 4, we focus on a comparison between column (3), where a large number of controls are included, and column (1), where only the ideology variable is included. The value of the ratio is approximately 19, meaning that the omitted variable has to be 12 times greater than the observed variables. This makes it extremely unlikely that the inclusion of additional variables will explain the influence of political ideology on financial inclusion in the form of account ownership. Similar results hold for all other specifications considered.

Larcker and Rusticus (2010) question the suitability of using instrumental variables to address the reverse causality problem when the instruments are weak or not fully exogenous. In the absence of a good instrumental variable for political ideology, we follow Girardi (2020) and Pettersson-Lidbom (2008) and perform a quasi-experiment using a regression discontinuity design (RDD) to deal with the (reverse) causality problem. RDD can produce "near" experimental causal estimates of the effect of party ideology on financial inclusion. The institutional features of an election system where parties with a majority of the votes can form the government provides an opportunity to implement the RDD. Following Girardi (2020), the assignment variable in the parliamentary elections is twice the percentage of seats a party gets with a treatment threshold of 50%. We estimate the treatment effect of electing a right-wing party on financial inclusion, as opposed to electing the other parties.

We can include 49 democratic countries because the threshold is the percentage of seats in an election, forcing us to exclude the autocratic countries from the RDD. We follow Pettersson-Lidbom (2008) and modify the bandwidth approach. We have a limited number of observations around the 50% threshold and use the control function approach to include all available data because this is the most efficient method in our context. The government party and the opposition cannot share the same ideology for the RDD estimates to be efficient and unbiased. So, we exclude three countries where the winning party and the opposition share the same ideology. We use the data of 46 countries in the RDD.

We use the DPI data with the percentage of seats the winning party receives to estimate the multilevel logistic regression model of the following form

$$\text{logit}(FI_{i,t,c}) = \gamma_{000} + \pi_1 \text{treat}_{t-1,c} + f(\text{right} - \text{wing share})\varphi + \gamma_2 X_{i,t,c} + \gamma_3 Z_{t-1,c} + \delta_t + u_{0,t,c} + e_{i,t,c} \quad (3)$$

Equation (3) is similar to Equation (1) except *treat*, which is a dummy variable that takes the value of 1 if a right-wing party wins the majority of seats and 0 otherwise. The coefficient π reflects the party effect and is the parameter of interest, $f(\text{right} - \text{wing share})$ is the control function or any low-order polynomial that denotes the percentage of seats won by the right-wing party. The results are reported in column (1) and (2) of Table 5. We use the first-order polynomial in column (1) for the control function and add control variables. In column (2), we add country fixed effects.

Estimates of Table 5 reinforce our baseline results, which implies that financial inclusion and the right-wing government have a positive association. Specifically, the results show a discontinuous jump at the threshold. The positive and significant coefficient of the treatment variable suggests a strong right-wing party effect on financial inclusion. The estimates change little when we add several control variables, providing further assurance of the validity of our baseline regression. We present a graphical visualization of our RDD in Fig. 2(a) that depicts the marginal effect of the treatment and control group on financial inclusion.

The right-side of the cut-off shows the right-wing treatment effect, and the left-side shows the control effect. The solid line in the graph shows an upward right-wing effect just after the threshold. The vertical distance between two parallel lines is measured in marginal terms and is 5.7%, implying a 5.7% jump in financial inclusion at the right-hand side of the cut-off.

For presidential elections, we follow Girardi (2020) and exclude elections in which the president is not elected by popular vote, presidential elections in purely parliamentary systems, or parliamentary elections held in the same month of a presidential election under a presidential system. We define right margin as the difference between the vote share of the first right candidate and the share of the first non-right candidate. We utilize the dataset assembled by Girardi (2020) to construct the right margin variable and complement this data by hand collecting additional information from publicly available sources for our sample. This exercise yields 76,975 observations for 39 countries. The estimates are reported in column (3) and (4) of Table 5 and are visually depicted in Fig. 2(b). The results show a discontinuous jump of about 2% after a right-wing president is elected. However, the effects are less strong than the elected right-wing government.

⁹ This measure is calculated as $\frac{\widehat{\beta}_F}{\widehat{\beta}_R - \widehat{\beta}_F}$, where $\widehat{\beta}_F$ is obtained after including all the observables and $\widehat{\beta}_R$ is obtained only after considering the main variable of interest.

Table 5
Regression discontinuity design.

Variables	(1) Parliamentary elections Account	(2) Account	(3) Presidential elections Account	(4) Account
Right-wing	0.320*** (0.033)	0.326*** (0.034)	0.049** (0.024)	0.103* (0.059)
Right-wing seat share	0.311*** (0.031)	0.336*** (0.038)		
Margin			0.002*** (0.000)	-0.000 (0.001)
Age	0.012*** (0.000)	0.012*** (0.000)	0.011*** (0.001)	0.012*** (0.001)
Secondary education	0.879*** (0.016)	0.880*** (0.016)	0.888*** (0.020)	0.982*** (0.022)
Tertiary education	2.120*** (0.027)	2.121*** (0.027)	1.826*** (0.033)	2.141*** (0.037)
Income: second 20%	0.199*** (0.023)	0.199*** (0.023)	0.120*** (0.031)	0.137*** (0.033)
Income: middle 20%	0.413*** (0.022)	0.413*** (0.022)	0.300*** (0.029)	0.363*** (0.031)
Income: fourth 20%	0.687*** (0.022)	0.687*** (0.022)	0.623*** (0.029)	0.693*** (0.031)
Income: richest 20%	1.167*** (0.022)	1.167*** (0.022)	1.093*** (0.028)	1.190*** (0.030)
Female	-0.385*** (0.013)	-0.385*** (0.013)	-0.245*** (0.017)	-0.270*** (0.018)
Employment	0.027*** (0.006)	0.032*** (0.006)	-0.013*** (0.001)	0.092*** (0.012)
Domestic credit	-0.009*** (0.002)	-0.011*** (0.002)	-0.001*** (0.000)	0.001* (0.001)
Ln GDP per capita	1.170*** (0.131)	1.360*** (0.164)	0.544*** (0.015)	-0.637** (0.300)
Inflation	-0.023*** (0.003)	-0.023*** (0.003)	0.033*** (0.002)	-0.018*** (0.004)
Manufacturing	-0.035*** (0.008)	-0.036*** (0.008)	-0.014*** (0.002)	-0.025* (0.013)
Regulatory quality	-0.162* (0.089)	-0.209** (0.091)	-0.564*** (0.028)	0.489** (0.235)
Political stability	0.070* (0.036)	0.071* (0.037)	0.092*** (0.015)	-0.177** (0.076)
Voice and accountability	0.372*** (0.092)	0.437*** (0.094)	0.198*** (0.030)	-0.539*** (0.203)
Corruption control	0.016 (0.079)	-0.029 (0.080)	0.758*** (0.038)	0.791*** (0.159)
Observations	138,802	138,802	76,975	76,975
Log-likelihood	-72473.782	-72309.426	-41635.936	-38163.321
ICC	0.217	-	0.104	-
Time fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	No	Yes
No of countries	46	46	39	39

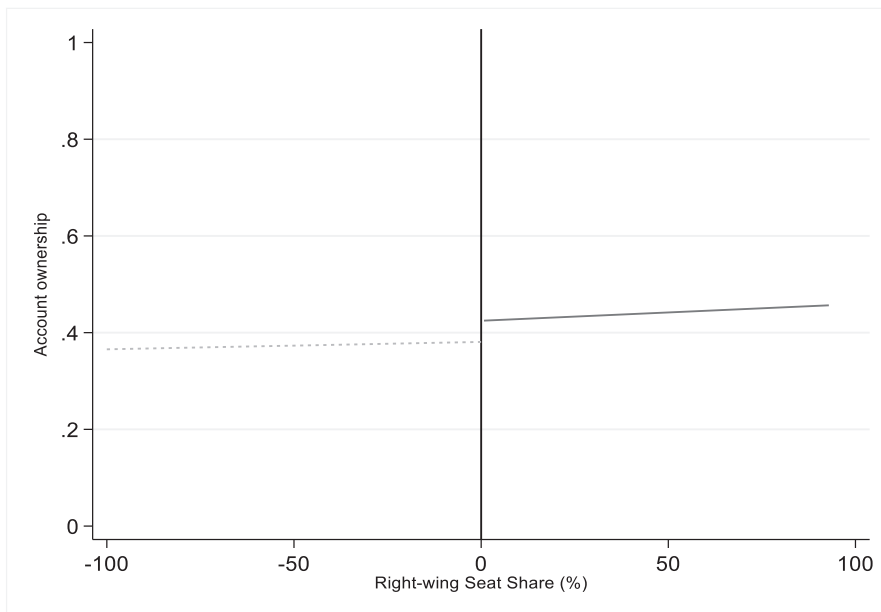
This table reports the results of regression discontinuity design. Column (1) and (2) documents the results for the parliamentary elections. The assignment variable is the right-wing margin calculated as twice the difference in right-wing seat share and the majority threshold of 50% without and with country fixed effect. Column (3) and (4) reports results for presidential elections without and with country fixed effect. The assignment variable is the right-wing winning margin. The dependent variable in all the specifications is account ownership, which refers to respondents who reported owning an account at a formal financial institution. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

4.4. Are parties capitalizing on their predecessors?

To examine whether the results postulate that rightist parties are only capitalizing on the conducive groundwork laid by leftist predecessors, we use the last five and ten years of data to find which ideological party was in power most of the time, on average, during these periods. The variables are coded as one if a rightist party was in power most of the time and zero otherwise. Table 6 documents the results. In columns (1) to (3), we include the five-year averages and in columns (4) to (6) we include the ten-year averages of the respective country-level control variables.

Table 6 shows that the baseline results are not a mere manifestation of rightists using a leftist foundation to augment financial inclusion. These findings support our baseline results and demonstrate that account ownership is higher under a right-wing regime than a left-wing one, even when longer horizons of five and ten years are considered. The negative sign of manufacturing in column (2), seemingly counterintuitive at first glance, captures the fact that, because of the global finan-

(a) Right-wing seat share in parliamentary elections



(b) Right-wing margin in presidential elections

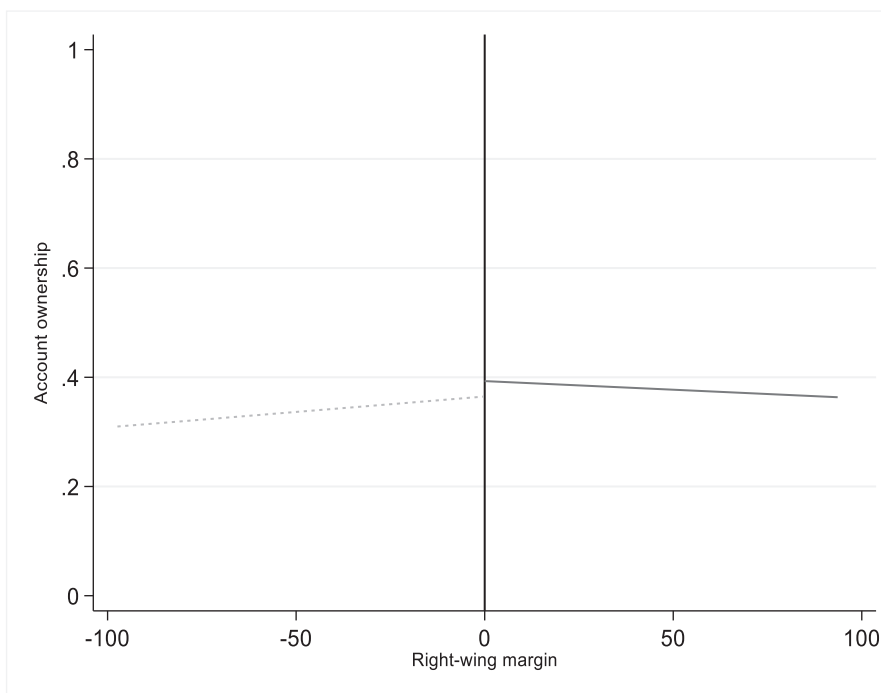


Fig. 2. Regression discontinuity design based on the type of election. This figure presents a visualization of RDD. Figure (a) portrays the RDD in parliamentary elections. The horizontal axis indicates the margin of victory which is twice the difference in right-wing seat share and the majority threshold of 50%. Figure (b) shows the winning margin of the right-wing candidate in presidential elections. The vertical axis indicates the account ownership. The right-side of the threshold shows the treatment effect and the left-side depicts the control effect. The distance of the two parallel lines is portrayed in marginal terms.

Table 6
Baseline results with five- and ten-year averages.

Panel A: Five-year averages				Panel B: Ten-year averages			
Variable	(1) Account	(2) Account	(3) Account	Variable	(4) Account	(5) Account	(6) Account
Right-wing (five-year average)	0.497*** (0.036)	0.459*** (0.040)	0.453*** (0.041)	Right-wing (ten-year average)	0.225*** (0.039)	0.209*** (0.043)	0.210*** (0.043)
Left-wing (five-year average)	0.186*** (0.035)	0.079** (0.038)	0.088** (0.038)	Left-wing (ten-year average)	0.120*** (0.030)	0.097*** (0.033)	0.106*** (0.033)
Age		0.013*** (0.000)	0.013*** (0.000)	Age		0.013*** (0.000)	0.013*** (0.000)
Secondary education		0.906*** (0.013)	0.907*** (0.013)	Secondary education		0.902*** (0.013)	0.903*** (0.013)
Tertiary education		2.067*** (0.022)	2.069*** (0.022)	Tertiary education		2.067*** (0.023)	2.070*** (0.023)
Income: second 20%		0.190*** (0.020)	0.190*** (0.020)	Income: second 20%		0.189*** (0.020)	0.189*** (0.020)
Income: middle 20%		0.408*** (0.019)	0.409*** (0.019)	Income: middle 20%		0.407*** (0.019)	0.407*** (0.019)
Income: fourth 20%		0.673*** (0.019)	0.673*** (0.019)	Income: fourth 20%		0.671*** (0.019)	0.671*** (0.019)
Income: richest 20%		1.134*** (0.018)	1.135*** (0.018)	Income: richest 20%		1.132*** (0.018)	1.132*** (0.018)
Female		-0.357*** (0.011)	-0.357*** (0.011)	Female		-0.358*** (0.011)	-0.357*** (0.011)
Employment (five-year average)		0.020*** (0.005)	0.023*** (0.006)	Employment (ten-year average)		-0.001 (0.007)	-0.012 (0.007)
Domestic credit (five-year average)		-0.008*** (0.001)	-0.009*** (0.001)	Domestic credit (ten-year average)		-0.004*** (0.001)	-0.005*** (0.001)
Ln GDP per capita (five-year average)		1.089*** (0.130)	1.516*** (0.182)	Ln GDP per capita (ten-year average)		1.349*** (0.152)	2.024*** (0.166)
Inflation (five-year average)		0.010*** (0.003)	0.010*** (0.003)	Inflation (ten-year average)		0.020*** (0.003)	0.018*** (0.003)
Manufacturing (five-year average)		-0.013* (0.007)	-0.016** (0.007)	Manufacturing (ten-year average)		0.029*** (0.007)	0.036*** (0.008)
Regulatory quality (five-year average)		-0.396*** (0.088)	-0.482*** (0.092)	Regulatory quality (ten-year average)		-0.225** (0.107)	-0.322*** (0.109)
Political stability (five-year average)		0.038 (0.037)	0.021 (0.039)	Political Stability (ten-year average)		-0.020 (0.054)	-0.059 (0.055)
Voice and accountability (five-year average)		-0.201** (0.084)	-0.272*** (0.088)	Voice and accountability (ten-year average)		-0.059 (0.107)	-0.095 (0.114)
Corruption control (five-year average)		0.177** (0.086)	0.146* (0.089)	Corruption control (ten-year average)		-0.466*** (0.122)	-0.593*** (0.124)
Observations	193,284	193,284	193,284	Observations	193,284	193,284	193,284
Log-likelihood	-112526.59	-100887.29	-100626.88	Log-likelihood	-112615.35	-100954.30	-100675.35
ICC	0.210	0.250	-	ICC	0.209	0.323	-
Time fixed effects	Yes	Yes	Yes	Time fixed effects	Yes	Yes	Yes
Country fixed effects	No	No	Yes	Country fixed effects	No	No	Yes
No of countries	65	65	65	No of countries	65	65	65

This table reports the results of a multilevel logistic regression. The dependent variable in all four columns is account ownership, which refers to respondents who reported having an account at a formal financial institution. Panel A reports the five-year averages and Panel B reports the ten-year averages. Column (1) includes the political ideology of the government in power for the majority of the time during the last five years, column (2) adds individual-level variables and the five-year average of macroeconomic, political, and institutional variables, and column (3) includes country fixed effects in addition to column (2) variables. Column (4) presents the political ideology of the government in power for the majority of the time during the last 10 years, column (5) adds individual-level variables and the ten-year average of macroeconomic, political, and institutional variables, and column (6) includes country fixed effects in addition to column (5) variables. Standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

cial crisis, access to banks declined substantially (Han and Melecky, 2013). In addition, when employment increased through economic recovery, account ownership increased at a much lower rate (Ardic et al., 2013). However, when the last ten years are considered, the relationship is positive and significant. Interestingly, the ICC is larger in column (5) for the ten-year aver-

age than in column (2) for the five-year average. This result means that country-level variance has declined over the past few years.

5. Understanding the politics–inclusion relation

What are the potential channels through which a right-wing government affects financial inclusion? Given the widespread and multidimensional impact of political ideology, it is not easy to pin down the channels. In this section, we discuss four potential channels through which government ideology influences the demand and supply factors affecting financial inclusion; public spending policy, use of mobile banking, policies for the use of accounts, and degree of intervention in the economy.

5.1. Public spending policies

It is commonly known that right-wing government public spending comprises mainly of non-social spendings, such as education and infrastructure development (Herwartz and Theilen, 2014). These two factors contribute significantly to financial inclusion (Allen et al., 2016). In all regression tables, we already control for education across two levels; secondary and tertiary. We use the GDP per capita as a proxy for economic development and manufacturing value-added as a proxy for infrastructure development. Consistent with prior literature, we find that account ownership is higher among the more educated population. Additionally, the more developed a country's economy and infrastructure, the higher the account ownership is likely to be.¹⁰

5.2. Use of mobile bank accounts

The advent of digital finance, especially mobile banking, has primarily influenced individuals' access to the formal financial sector. It presents as a promising vehicle to include the unbanked and underbanked population in the mainstream economy. The success of mobile money requires innovative measures to build the necessary governance and institutions, which in turn, rely on government policies (Suri, 2017). Wang et al. (2019) investigate the impact of government ideology on the overall technical innovativeness of 110 countries from 1995 to 2015. They argue that leftist parties undertake expansionary monetary and fiscal policies in order to decrease unemployment. Consequently, they do not promote technical innovation because technical innovation increases automation. Left-wing parties are, therefore, likely to deter financial innovation. On the contrary, rightist parties, as advocates of a free-market economy, promote engagement in research and development and stimulate the progress of new technology. Evidence suggests that the adoption of new technology, such as mobile banking, has played a critical role in increasing financial inclusion (Suri and Jack, 2016). Still, mobile banking adoption is also an outcome of individual choices, and thus we present this as indirect evidence of innovation policies.

Two examples of effective government intervention have drawn attention in the literature. In 2010, the central bank of Kenya implemented agent banking regulations, which allowed banks and other financial institutions, previously limited to brick-and-mortar operations, to directly compete with the country's largest mobile money provider, M–PESA.¹¹ The central bank of India issued licenses to several entities in 2014 to function as payments banks. The objective was to boost financial inclusion by enhancing mobile services in banking. Unlike regular banks, these new financial institutions are not allowed to extend credit, but they can take deposits, pay interest, facilitate transfer and remittances, and offer Forex services. In both cases, policy interventions have been taken by right-wing political parties—the Party of National Unity in Kenya and BJP in India. It is also worth mentioning that, this advancement in technological innovation has emerged as the primary productive force augmenting economic development (Lee and Deng, 2018). According to Wang et al. (2019), since leftist parties undertake expansionary monetary and fiscal policies in an attempt to decrease unemployment, they do not promote technical innovation since technical innovation increases automation. Left-wing parties are, therefore, likely to deter financial innovation. On the contrary, rightist parties, as advocates of a free-market economy, promote engagement in research and development and stimulate the progress of new technology. If this argument is correct, we should observe more mobile bank account ownership during a right-wing regime.

The Findex data report whether respondents had a mobile banking account.¹² The variable takes the value of one if the respondent reports having a mobile banking account and zero otherwise. The results are reported in Table 7.

Our analysis supports the findings of Wang et al. (2019). Indeed, the likelihood of mobile bank account ownership increases significantly under a rightist party, which is indirect evidence of the effects of innovation policies. The results of columns (1) to column (4) in Table 7 suggest that mobile bank account ownership is less popular among older and female

¹⁰ Beck et al. (2016) finds a positive net effect of financial innovation on economic growth.

¹¹ It could be argued that digital innovation such as the development of M–Pesa are initiated by technocrats rather than the politicians. However, literature suggests, specialty in the context of developing countries, that government plays a crucial role in sustaining these innovations. For example, M–Pesa was used as a vehicle to strategically use state resources to earn loyalty of the general population in Kenya and the profits were transferred to the political elites (Tyce, 2020).

¹² In the 2014 and 2017 waves, Findex reports whether the respondent “has a mobile money account.” In 2011, the question was as follows: “In the past 12 months, have you used a mobile phone to pay bills, send money or receive money?” For 2011, we used this question to measure mobile banking account ownership. Our results are similar, even after excluding 2011.

Table 7
Mobile banking.

Variables	(1) Mobile	(2) Mobile	(3) Mobile	(4) Mobile
Right-wing	0.654*** (0.079)	0.828*** (0.084)	1.178*** (0.086)	1.154*** (0.087)
Left-wing	-0.102 (0.065)	-0.078 (0.069)	-0.209*** (0.074)	0.202*** (0.075)
Age		-0.010*** (0.001)	-0.010*** (0.001)	-0.010*** (0.001)
Secondary education		0.675*** (0.022)	0.658*** (0.022)	0.659*** (0.022)
Tertiary education		1.260*** (0.035)	1.230*** (0.035)	1.231*** (0.035)
Income: second 20%		0.230*** (0.036)	0.232*** (0.036)	0.232*** (0.036)
Income: middle 20%		0.360*** (0.034)	0.366*** (0.035)	0.366*** (0.035)
Income: fourth 20%		0.553*** (0.033)	0.561*** (0.033)	0.561*** (0.033)
Income: richest 20%		0.877*** (0.032)	0.898*** (0.032)	0.898*** (0.032)
Female		-0.290*** (0.018)	-0.285*** (0.018)	-0.284*** (0.018)
Employment		-0.015** (0.007)	-0.000 (0.008)	-0.002 (0.008)
Domestic credit		0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)
Ln GDP per capita		0.091 (0.223)	0.256 (0.263)	1.030*** (0.295)
Inflation		0.076*** (0.005)	0.065*** (0.005)	0.067*** (0.005)
Manufacturing		0.106*** (0.013)	0.142*** (0.014)	0.154*** (0.015)
Regulatory quality			0.936*** (0.138)	0.928*** (0.142)
Political stability			-1.176*** (0.058)	-1.205*** (0.058)
Voice and accountability			1.705*** (0.125)	1.828*** (0.126)
Corruption control			0.064 (0.113)	0.023 (0.115)
Observations	159,373	169,112	169,112	169,112
Log-likelihood	-43138.372	-42890.1	-42590.3	-42328.1
ICC	0.339	0.525	0.684	-
Time fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	No	No	No	Yes
No of countries	65	65	65	65

This table reports the results of a multilevel logistic regression. The dependent variable in all three columns is mobile account ownership (Mobile), which refers to the response of the survey respondent in terms of owning a mobile bank account. Column (1) includes the political ideology, and each subsequent column adds individual-level variables, macroeconomic variables, and political and institutional variables. Standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

individuals but rises significantly with education, income, employment, domestic credit, regulatory quality, and freedom of expression measured by voice and accountability. One interesting finding is that mobile bank account ownership declines when the government becomes more effective or has more political stability. This result indicates that people prefer formal banking to mobile banking when there is political stability. In addition, as column (3) shows, between-country differences explain 68.4% of the likelihood of owning a mobile banking account.

5.3. Policies for the use of accounts

To gain a deeper understanding of the effect of political ideology, we next analyze its impact on the use of an account, that is, savings and the frequency of account use. Recent studies have emphasized that countries, where people save more and spend less, can experience secular stagnation and experience lackluster financial performance (Eggertsson et al., 2016). Moreover, the interventionist strategy of a left-wing government consists of raising the level of domestic savings (Boix, 1997). In contrast, rightist parties stimulate the economy by encouraging private consumption through tax cuts (Müller

et al., 2016). Therefore, if the ideology–inclusion relation is driven by market-oriented considerations, we should observe a negative association between rightist ideology and savings and a positive relationship between rightist ideology and frequency of account use. On the contrary, the relationship should be the opposite under a government that pursues socialistic considerations.

Information on household savings is measured by using the following question “*In the past 12 months, have you, personally, saved or set aside any money by using an account at a bank or another type of formal financial institution?*” Although a financial institution offers various services, having an account for savings is crucial since it indicates an individual’s willingness to save in a formal financial institution. The variable for savings takes the value of one if the respondent reports having saved in a formal financial institution and zero otherwise.

For the frequency of account use, following Allen et al. (2016), we focus on the number of monthly withdrawals from the account rather than deposits. Deposits can be initiated by others (e.g., salary or gifts), whereas the account holder actively initiates withdrawals. The survey question is the following: “*In a typical month, about how many times is money taken out of your account(s)? This includes cash withdrawals, electronic payments or purchases, checks, or any other time money is removed from your account(s) by yourself or others.*” The participants were asked if they made zero, one or two, three to five, or six or more withdrawals.¹³ Withdrawing funds only once or twice could be an indication of the withdrawal of a salary. Individuals who withdraw three or more times are more likely to use cards or electronic payments. Therefore, following Allen et al. (2016), frequent account use is defined as making three or more withdrawals a month. Specifically, the frequency variable takes the value of one if the respondent makes three or more withdrawals a month and zero otherwise.

Table 8 documents the results, where we find that the results are in line with capitalistic considerations.

Columns (1) to (3) of Table 8 show that savings are negatively correlated with the rightist ideology. Along with the findings of Boix (1997), these results for savings support the anecdotal evidence that, over the past decades, leftist parties in many developing countries, such as Bolivia, Ecuador, Nicaragua, Peru, and Brazil, have been using the existing banking channel and microfinance institutions to mobilize savings (Bédécarrats et al., 2012). Therefore, we expect savings to increase under a left-wing regime. Savings behavior depends significantly on individual ability and, as shown by the results in the table, increases monotonically as the level of education and income increases. Women are less likely to use formal financial accounts for savings purposes. The GDP per capita and manufacturing value added are negatively related to savings, consistent with the literature, while inflation is positively related.

Columns (4) to (6) of Table 8 document a positive relationship between a rightist orientation and frequency of account use. Right-wing policies to stimulate public expenditures are likely to increase account withdrawals. However, the frequency of use is complex and depends mainly on individual characteristics. As our results show, a more educated and wealthier economic group is more likely to use accounts frequently, but this usage declines significantly with age. Moreover, male account holders are more likely than female account holders to use the account frequently for the purpose of withdrawal. In contrast, when government efficiency declines, the frequency of account withdrawals increases significantly.

5.4. Degree of economic intervention

Rightist and leftist parties use varying levels of economic intervention to achieve their distinct economic goals. As discussed above, left-wing parties increase the level of economic intervention while rightist governments reduce intervention and amplify the disciplining effects of market mechanisms. Furthermore, right-wing parties, associated with less interventionist policies, advocate trade openness while left-wing parties favor protectionism (Milner and Judkins, 2004). In this section, we investigate the effect of these policies on financial inclusion.

We use two variables, regulatory requirements for starting a business, and trading across borders, to test the level of intervention in the economy and quality of the judicial processes to test the disciplining effect of the market mechanism. Regulatory requirements for starting a business measures the number or procedures, capital requirement, time, and cost required for firms to start and operate a business. Trading across borders measures the degree of trade openness. Quality of judicial process indicates the degree of efficiency of the judicial system in enforcing contracts and protecting property rights. We collect these data from the Doing Business indicators of the World Bank. All these variables range between 0 and 100. A lower value indicates the least business-friendly regulation. We conduct subsample analysis by dividing each indicator into two groups and assign a dummy variable one if the score of the indicator variable for an economy is above median and zero otherwise. Results are presented in Table 9.

The results of starting a business in column (1) and (2) show that more intervention has little association with financial inclusion while less intervention is likely to increase financial inclusion, and the results are more pronounced for the rightist parties. We observe similar results for a better judicial process. We also find evidence that the protectionist policy of the left-wing parties for international trade has a positive and significant effect on financial inclusion. Furthermore, an inefficient judicial system hinders financial inclusion and is more affected when leftist parties are in power. The results suggest that financial inclusion is likely driven by less government intervention in the domestic economy and a better judicial system.

¹³ This question is not available for 2017 wave. The analysis of frequency of use is, thus, limited to 2011 and 2014.

Table 8
Savings and frequency of use.

Variable	(1) Savings	(2) Savings	(3) Savings	(4) Frequency	(5) Frequency	(6) Frequency
Right-wing	−0.216*** (0.051)	−0.117** (0.054)	−0.082 (0.056)	0.524*** (0.114)	0.498*** (0.117)	0.570*** (0.141)
Left-wing	0.308*** (0.049)	0.230*** (0.052)	0.252*** (0.054)	0.226* (0.115)	0.252** (0.117)	0.177 (0.163)
Age		0.002*** (0.000)	0.002*** (0.000)		−0.009*** (0.001)	−0.009*** (0.001)
Secondary education		0.557*** (0.015)	0.556*** (0.015)		0.349*** (0.038)	0.351*** (0.039)
Tertiary education		1.219*** (0.023)	1.220*** (0.023)		0.846*** (0.046)	0.856*** (0.047)
Income: second 20%		0.244*** (0.023)	0.244*** (0.023)		0.110* (0.064)	0.109* (0.064)
Income: middle 20%		0.471*** (0.022)	0.472*** (0.022)		0.182*** (0.060)	0.181*** (0.060)
Income: fourth 20%		0.689*** (0.022)	0.689*** (0.022)		0.370*** (0.056)	0.372*** (0.056)
Income: richest 20%		1.074*** (0.021)	1.075*** (0.021)		0.717*** (0.054)	0.719*** (0.054)
Female		−0.202*** (0.012)	−0.203*** (0.012)		−0.295*** (0.027)	−0.295*** (0.027)
Employment		0.019*** (0.005)	0.023*** (0.007)		0.008 (0.006)	−0.023 (0.015)
Domestic credit		0.003*** (0.001)	0.003*** (0.001)		0.000 (0.001)	−0.000 (0.001)
Ln GDP per capita		−0.230** (0.097)	−0.673*** (0.176)		0.229** (0.106)	1.999*** (0.401)
Inflation		0.022*** (0.003)	0.020*** (0.003)		−0.002 (0.007)	−0.002 (0.007)
Manufacturing		0.023*** (0.007)	0.025*** (0.007)		−0.010 (0.010)	0.007 (0.019)
Regulatory quality		−0.099 (0.082)	−0.073 (0.089)		0.179 (0.177)	0.636** (0.319)
Political stability		−0.370*** (0.036)	−0.381*** (0.038)		−0.120 (0.081)	−0.378*** (0.134)
Voice and accountability		−0.018 (0.073)	−0.094 (0.081)		0.077 (0.147)	0.282 (0.334)
Corruption control		0.263*** (0.071)	0.223*** (0.074)		0.448*** (0.134)	0.214 (0.189)
Observations	151,599	151,599	151,599	35,699	35,699	35,699
Log-likelihood	−84849.426	−79883.088	−79677.948	−18342.206	−17670.41	17520.507
ICC	0.088	0.116	−	0.102	0.088	−
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	No	Yes	No	No	Yes
No of countries	65	65	65	65	65	65

This table presents the results of a multilevel logistic regression. The dependent variable in the first three columns is savings, and that in the next three columns is frequency, where Savings refers to respondents who reported having saved money at a formal financial institution conditional upon having a bank account, and Frequency refers to whether the respondent withdrew money from an account three or more times a month. Columns (1) and (4) include the political ideology, and each subsequent column adds individual-level variables, macroeconomic variables, and political and institutional variables. Standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

6. Additional tests

We divide this section with robustness tests into four subsections based on political system heterogeneity, sampling, various economic environments, and changing econometric assumptions. We conduct various robustness tests to ensure specific design choices do not drive our results. The robustness tests are briefly reported in Table 10, while we provide the full results in the Online Appendix.

6.1. Heterogeneity in political system

Political systems may play an important role in shaping public policies. This section explores whether government ideology has varying effects on financial inclusion depending on the electoral system (i.e., plurality voting versus proportional representation, having a finite term in office, and the duration of the party in power. In addition, we consider the type of

Table 9
Economic Intervention.

Variable	(1) Starting a business (business friendly regulation)	(2) Starting a business (stringent regulation)	(3) Trading across border (open)	(4) Trading across border (protective)	(5) Quality of judicial system (efficient)	(6) Quality of judicial system (less efficient)
Right-wing	0.779*** (0.073)	0.229 (0.140)	-0.121 (0.134)	1.395 (0.916)	4.106*** (1.041)	-0.342** (0.151)
Left-wing	0.674*** (0.057)	-0.383*** (0.132)	-0.443** (0.185)	0.283** (0.140)	2.530*** (0.652)	-0.810*** (0.115)
Age	0.009*** (0.000)	0.017*** (0.001)	0.010*** (0.001)	0.016*** (0.001)	0.013*** (0.001)	0.014*** (0.001)
Secondary education	0.800*** (0.019)	1.017*** (0.020)	0.851*** (0.025)	1.173*** (0.026)	0.788*** (0.033)	0.730*** (0.028)
Tertiary education	2.009*** (0.030)	2.139*** (0.037)	2.118*** (0.041)	2.322*** (0.044)	1.932*** (0.057)	1.951*** (0.051)
Income: second 20%	0.218*** (0.027)	0.158*** (0.031)	0.221*** (0.036)	0.126*** (0.041)	0.146*** (0.044)	0.272*** (0.043)
Income: middle 20%	0.394*** (0.026)	0.433*** (0.029)	0.449*** (0.035)	0.386*** (0.039)	0.397*** (0.044)	0.423*** (0.042)
Income: fourth 20%	0.663*** (0.026)	0.699*** (0.029)	0.743*** (0.035)	0.732*** (0.037)	0.551*** (0.043)	0.646*** (0.041)
Income: richest 20%	1.099*** (0.026)	1.194*** (0.028)	1.202*** (0.035)	1.239*** (0.036)	1.037*** (0.044)	1.052*** (0.040)
Female	-0.407*** (0.016)	-0.279*** (0.017)	-0.394*** (0.021)	-0.233*** (0.021)	-0.461*** (0.027)	-0.342*** (0.025)
Employment	0.114*** (0.011)	-0.027*** (0.008)	-0.133*** (0.028)	0.074*** (0.011)	-0.163*** (0.049)	0.037*** (0.004)
Domestic credit	-0.024*** (0.002)	-0.000 (0.001)	-0.019*** (0.004)	-0.002*** (0.001)	-0.138*** (0.050)	-0.034*** (0.003)
Ln GDP per capita	0.832*** (0.260)	2.031*** (0.377)	0.415 (0.456)	-0.483 (0.359)	-6.988*** (2.277)	2.308*** (0.157)
Inflation	-0.028*** (0.004)	-0.020*** (0.006)	0.142*** (0.036)	0.001 (0.005)	-0.728** (0.314)	-0.114*** (0.014)
Manufacturing	-0.069*** (0.015)	0.114*** (0.019)	-0.049* (0.027)	0.044 (0.027)	0.899*** (0.290)	0.089*** (0.014)
Regulatory quality	0.077 (0.138)	-0.768*** (0.148)	-0.980** (0.413)	-0.522** (0.260)	0.946* (0.536)	-3.528*** (0.294)
Political stability	-0.146*** (0.047)	-0.149** (0.071)	-0.083 (0.179)	-0.173** (0.082)	-7.070*** (2.379)	1.252*** (0.073)
Voice and accountability	0.015 (0.109)	-0.454*** (0.176)	0.007 (0.280)	-0.615 (0.374)	6.801** (2.876)	-0.223 (0.207)
Corruption control	0.294*** (0.113)	0.569*** (0.122)	0.519** (0.215)	1.612*** (0.177)	8.823*** (3.208)	0.402 (0.406)
Observations	92,229	91,579	57,953	56,888	31,091	37,876
Log-likelihood	-49757.291	-45140.851	-29489.892	-27240.137	-16978.811	-20746.207
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No of countries	43	42	35	34	25	36

This table presents the results of a multilevel logistic regression. The dependent variable in all the columns is account ownership. Regulatory requirements for starting a business, and trading across borders test the level of intervention in the economy and quality of the judicial processes test the disciplining effect of market mechanism. Standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

government (single party vs. coalition). Furthermore, we conduct tests by limiting the ideological orientation of the government to three major parties.

Legislators are elected using a winner-take-all method under “plurality” systems (coded one if plurality, zero otherwise). In “proportional representation (PR)” candidates are elected based on the percent of votes received by their party (1 if PR, 0 otherwise). Finite term in office identifies whether there is a constitutional limit on how many years a president can serve before new elections are called (one if finite term, zero otherwise). The duration of the party in power measures the number

Table 10
Robustness.

Panel A: Heterogeneity in political system									
Variable	(1)	(2)	(3)	(4)			(5)	(6)	(7)
	Plurality	Proportional representation	Finite term	Duration of the party in power			Single-party	Coalition	Limiting to three major parties
				Duration (≤ 8)	Duration (9 to 16)	Duration (> 16)			
Right-wing	1.709*** (0.515)	0.401* (0.242)	0.570*** (0.138)	1.099*** (0.341)	2.927*** (0.435)	14.004* (8.219)	1.160*** (0.135)	0.520*** (0.040)	0.616*** (0.219)
Left-wing	1.469*** (0.515)	0.185 (0.251)	0.251* (0.138)	-2.241*** (0.613)	-8.086*** (2.110)	11.934 (7.367)			0.187 (0.241)
Observations	81,529	86,669	125,032	55,253	17,973	13,939	63,438	115,879	78,235
Log-likelihood	-41516.598	-43681.491	-63380.184	-27777.404	-9640.8839	-6550.726	-31730.455	-60985.196	-40287.681
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No of countries	33	37	52	30	14	6	30	46	42
Panel B: Altering sample									
Variable	(1) Excluding populist government				(2) Considering only right and left				
Right-wing	0.401*** (0.044)				0.542*** (0.043)				
Left-wing	0.153*** (0.047)								
Observations	167,319				92,986				
Log-likelihood	-87475.605				-49926.473				
Controls	Yes				Yes				
Time fixed effects	Yes				Yes				
Country fixed effects	Yes				Yes				
No of countries	42				34				
Panel C: Economic environment									
Variable	Financial inclusion in the poorest 40% of population								
	(1) Excluding 2011 wave	(2) Account	(3) Account	(4) Account	(5) Account				
Right-wing	0.319*** (0.081)	0.568*** (0.071)	0.547*** (0.073)	0.511*** (0.073)	0.561*** (0.077)				
Left-wing	-0.206** (0.088)	0.069 (0.076)	0.105 (0.076)	0.068 (0.078)	0.123 (0.081)				
Observations	132,201	66,708	66,708	66,708	66,708				
Log-likelihood	-70998.617	-32986.925	-31756.932	-31742.544	-31560.334				
ICC	0.200	0.244	0.187	0.166	-				
Time fixed effects	Yes	Yes	Yes	Yes	Yes				
Country fixed effects	65	No	No	No	Yes				
No of countries		65	65	65	65				

Panel D: Changing econometric assumptions

Variable	(1) Clustering standard errors at country level	(2) Bootstrapping 100	(3) Bootstrapping 500	(4) Sampling weights	(5) Regime change
Right-wing	0.078* (0.046)	0.387*** (0.041)	0.387*** (0.041)	0.074*** (0.007)	
Left-wing	0.021 (0.046)	0.096** (0.041)	0.096** (0.041)	0.014** (0.006)	
Change in regime					0.395*** (0.110)
Observations	193,284	193,284	193,284	131,777	12,972
Pseudo R-squared	0.223				
Log-likelihood	-	-112560.73	-112560.73	-69807.384	-7449.382
Controls	Yes	0.205	0.205	0.227	-
Time fixed effects	Yes	Yes	Yes	Yes	Yes
No of countries	Yes	65	65	65	5

This table presents the results of various robustness tests. Panel A reports the regression results based on heterogeneity in political system depending on the electoral system (plurality voting versus proportional representation), having a finite term in office and duration of the party in power. Additionally, it reports the RDD estimates based on the type of government (single party vs coalition) and the estimates limiting ideological orientation of the government to three major parties. Panel B documents the results excluding the populist parties, and considering only right and left parties. Panel C shows the results based on different economic environment such as excluding 2011 survey wave right after Global Financial Crisis and considering poorest 40% of the households. Panel D reports results from alternative econometric assumptions such as clustering standard error at the country-level, using bootstrap, adjusting sampling weights, and considering change in regime. Standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

of years the elected party been in office. We only include the democratic countries in this test as autocratic parties occupy office without election. We also divide the data into three groups (i) eight years or less, (ii) nine to 16 years, and (iii) more than 16 years in office to gain deeper insight of the effect party duration in office.¹⁴ Column (1) to (4) of Panel (A) presents the results. We find that the right-wing coefficient is positive and significant, implying that a right-wing party has a positive effect on financial inclusion and as the right-wing party duration in office increases, so does the financial inclusion.

Governments can be formed by a single party, or by coalition. We run additional RDD analyses to examine whether the type of government affects our result. We report the results of RDD in column (5) and (6) in Panel (A) and visualize the analyses in Fig. 3. Similar to the baseline results we observe a discontinuous jump in financial inclusion when right-wing parties win elections. The coefficient is 1.16 when a single party forms government. However, the coefficient is 0.52 when the government is formed by coalition. This suggests that the effect is stronger for single-party governments than coalition governments.

To win an election, some governments may form coalitions and implement policies that are diametrically opposed to their party ideology. Following Wang et al. (2019), we solve this potential problem by excluding countries with coalition governments with three or more parties over our sample period to limit the ideological representation of the government to three main coalition parties. We report the result in column (7) of Panel (A) and find a positive and significant right-wing effect, which is consistent with our original findings.

6.2. Altering the sample

Many established democracies have seen populist parties rise and become institutionalized in recent decades. These “far-left” or “far-right” parties may undertake policies that depart from their common ideological position. For example, radical right parties can take policies that are both economically right-wing and socially conservative (Norris, 2020). We exclude these governments from our sample to remove the potential influences of populist parties on financial inclusion. We follow Norris (2020) and use the Global Party Survey Data 2019 from Harvard Dataverse that provides an ordinal measure of party populism, from strongly pluralist to strongly populist. We remove the strongly populist parties from our sample. We complement this data with the DPI data, remove the strongly populist parties in power from our sample, and conduct multilevel logistic regression. Results are reported in column (1) of Panel B. The results are not only similar to the baseline results reported in Table 4, but are stronger when we remove populist parties.

So far, our reference group includes all the parties that do not fall in the right and left categories. We test the robustness of this choice by considering only right and left governments, where the right party is our main variable of concern and thus the left-wing parties are the reference group. The results are reported in column (2) of Panel B. We find that the right-wing effect is positive and significant, and again our findings are stronger than the baseline results.

6.3. Economic environment

We conduct three tests to assess whether our results are robust across varying economic environments. First, we exclude the 2011 wave. This year closely follows the global financial crisis, and it could have affected individuals' trust in the formal financial sector and affected their decision to own a bank account. Column (1) of Panel C reports the results. Interestingly, the left-wing effect on financial inclusion becomes negative after excluding 2011, but the right-wing coefficient is stronger.

Second, bank competition can be important, and financial inclusion is likely affected by the degree of competition among financial institutions. We use bank concentration and the Boone indicator to account for this competition.¹⁵ Unfortunately, data for these two indicators are not available for all the countries during our sample period, and the number of observations suffers due to their inclusion in the regression. However, our results (not tabulated) are qualitatively similar after their inclusion.

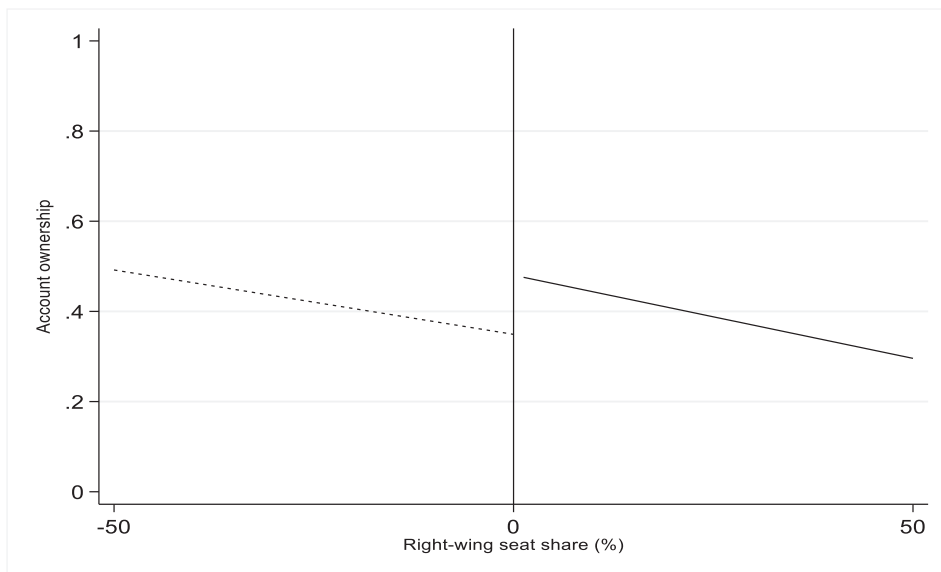
Third, we consider the poorest 40% of the households. Prior literature argues that the poor segment of the economy is particularly deprived of access to financial services (Beck et al., 2007; Demirgüç-Kunt et al., 2018). Therefore, it could be argued that, since right-wing governments focus on the richer and middle-class population, the increase in access is driven by the increase in account ownership among the rich and middle-class population, not the poorest. Therefore, we next investigate whether the increase in account ownership under a right-oriented party results from the account ownership of the middle class and rich segments of society. To test this, we regress account ownership, savings, and the frequency of account use on ideology for the poorest 40% of households. The results are documented in Column (2) to (5) of Panel C.

Similar to the full-sample results, we find that financial inclusion for the poorest 40% of households is also likely to rise under a right-wing government. Specifically, in column (2) we regress account ownership on ideology and find that account ownership among the poorest 40% of households is likely to be 9% higher under a rightist regime, compared to a leftist regime. This magnitude is even larger for this segment than when the full sample in Table 4 is considered since there is greater scope for improvement. The individual- and country-level variables show qualitatively similar results to the baseline results in Table 4. This finding shows that access to the financial sector is more likely to rise during a rightist government across all income levels of the economy, and not only in the rich or middle-income group of the population.

¹⁴ Many countries in our sample have their election held every four years. We divide the data to reflect such situations.

¹⁵ Bank concentration is the percent of asset concentration by three-largest banks in a country. Boone indicator is the elasticity of profits to marginal costs. Data of these two indicators are collected from the Global Financial Development database of the World Bank.

(a) Right-wing seat share of single party government



(b) Right-wing seat share of coalition government

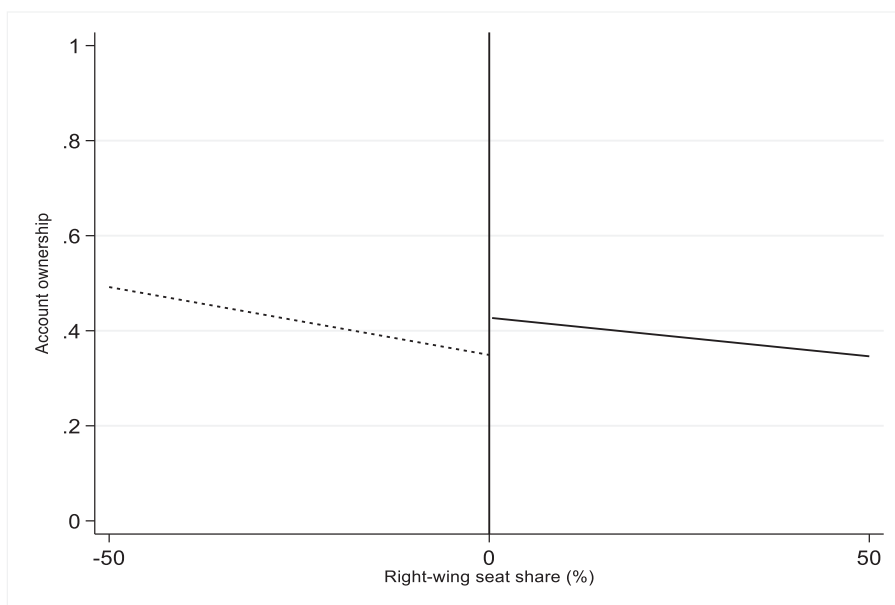


Fig. 3. Regression discontinuity design based on the type of government. This figure presents a visualization of RDD based on the type of government Fig. 3a portrays the RDD when a single party forms the government. Fig. 3b shows the RDD when the government is formed by coalition. The horizontal axis indicates the margin of victory i.e. difference in right-wing seat share and the majority threshold of 50%. The vertical axis indicates the account ownership. The right-side of the threshold shows the treatment effect and the left-side depicts the control effect. The distance of the two parallel lines is portrayed in marginal terms.

6.4. Changing econometric assumptions

We use alternative econometric assumptions and test the robustness of our findings. Specifically, we cluster standard errors at the country level, use bootstrapping, adjust sampling weights, and consider regime changes.

Estimates based on aggregate and disaggregate regression when the data is nested in nature can be too liberal or too conservative. Therefore, estimation bias can run in either direction (Bliese, 2000). Although clustering standard errors provides better estimates than non-clustering, multilevel models for the clustering of the data is an even better approach than cor-

Table 11
Country level analysis.

Variables	(1) Account	(2) Account among poorest 40%	(3) Account in rural areas	(4) Account
Right-wing	0.075*** (0.023)	0.081*** (0.030)	0.078** (0.030)	0.098*** (0.027)
Employment	0.003 (0.004)	0.003 (0.004)	0.005 (0.005)	0.000 (0.006)
Domestic credit	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.002)
Ln GDP per capita	0.135 (0.115)	0.203 (0.125)	0.115 (0.122)	0.215 (0.194)
Inflation	0.000 (0.002)	-0.001 (0.002)	-0.001 (0.002)	0.001 (0.003)
Manufacturing	0.005 (0.004)	0.000 (0.005)	0.002 (0.004)	0.006 (0.006)
Regulatory quality	-0.089 (0.062)	-0.112 (0.073)	-0.087 (0.070)	-0.057 (0.095)
Political stability	-0.034 (0.023)	-0.030 (0.023)	-0.019 (0.026)	0.023 (0.047)
Voice and accountability	0.017 (0.063)	0.007 (0.064)	0.008 (0.073)	-0.014 (0.139)
Corruption control	0.106** (0.050)	0.088* (0.052)	0.085 (0.058)	0.082 (0.077)
Observations	188	183	188	87
R-squared	0.949	0.940	0.938	0.945
Time fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
No of countries	71	71	71	37

This table presents the estimates of OLS regression of account ownership on party ideology with country-level control variables. The dependent variable in column (1), (2) and (3) is account ownership, account ownership among the poorest 40% of the household and account ownership in rural area respectively, all at the aggregate level. The specification in column (4) similar to column (1) keeping only the left-wing countries in the base. The country level financial inclusion indicator refers to respondents who reported having an account at a financial institution. All the Models include country and time-fixed effects. Standard errors, clustered by country and time, are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

recting the standard errors of the linear estimates (Cheah, 2009). Nonetheless, we check the robustness of our results by simply regressing account ownership on the right-wing variable and the controls, and cluster standard errors at the country level. The results are reported in Column (1) of Panel D. The coefficient is significant at 10% level, which provides further assurance that are original results are robust.

Our second-level variables are at the country level and we thus have relatively small numbers of cases, when compared to individual-level data. We apply bootstrapping to assess the robustness of the results of our multilevel model. The bootstrapping method resamples the existing data set many times and provides a simulated data set. We report the regression results of 100 and 500 bootstrapping replications in columns (2) and (3), respectively, of Panel D. We find that the results from the bootstrapping method are very close to our baseline estimates, providing further evidence that our baseline results are robust.

Sampling weights are used in surveys to ensure that the respondents are representative of the population. In Global Findex, primary sampling units are stratified by population size, geography, or both and clustered through one or more stages. Random route procedures are then used to select households to be surveyed. Therefore, by design and survey methodology, Global Findex data is representative of the national population.¹⁶ However, sampling and non-response errors can still exist and bias our results. We use the sampling weights to correct for these errors and report the results in column (4) of Panel (D). Again, we find that our baseline results are robust.

To further strengthen our results, we examine the effect of change in regime on financial inclusion. Since the data of financial inclusion are available for three waves, we identify the countries that experienced regime changes from one wave to another. We require that the government of a specific ideology be in power for at least two years before a wave correctly identifies the impact of that government. For example, Paraguay had a left-wing government from 2009 to 2013 and a right-wing government from 2014 to 2017. We generate a new variable, change in government, and for Paraguay, it is coded as zero (left-wing) in 2014 and as one (right-wing) in 2017 to compare the impacts of right- and left-wing policies. A similar exercise is applied to the other countries, and we identify four other countries, namely Albania, Guatemala, India, Jamaica, that experienced a similar regime change. Again, using multilevel regression, we find in column (5) of Panel D that countries

¹⁶ For detailed survey design and methodology, see Demircuc-Kunt et al. (2018).

Table 12

Right-wing government and financial inclusion: PSM.

Panel A: Comparing treatment countries and control countries				
	Mean		Test-t	
	Control	Treated	Diff	t-test
Employment	59.125	58.720	0.405	-0.150
Domestic credit	38.269	35.537	2.732	-0.470
Ln GDP per capita	8.848	8.896	-0.048	0.220
Inflation	6.412	6.913	-0.501	0.300
Manufacturing	13.439	11.613	1.826	-1.410
Regulatory quality	-0.123	-0.089	-0.034	0.230
Political stability	-0.327	-0.293	-0.034	0.150
Voice and accountability	-0.154	-0.128	-0.027	0.130
Corruption control	-0.395	-0.445	0.049	-0.320
Panel B: Regressions on the matched sample				
	(1) Account	(2) Account	(3) Account	
Right-wing	0.080*** (0.027)	0.073** (0.029)	0.090** (0.035)	
Employment		0.002 (0.006)	0.005 (0.008)	
Domestic credit		-0.002 (0.001)	-0.004 (0.003)	
Ln GDP per capita		0.375 (0.287)	0.488 (0.461)	
Inflation		-0.002 (0.003)	-0.001 (0.004)	
Manufacturing		0.005 (0.011)	-0.002 (0.018)	
Regulatory quality			-0.263 (0.295)	
Political stability			0.140 (0.095)	
Voice and accountability			-0.241 (0.329)	
Corruption control			0.030 (0.124)	
Observations	48	48	48	
R-squared	0.952	0.959	0.969	
Time fixed effects	Yes	Yes	Yes	
Country fixed effects	Yes	Yes	Yes	

Panels A and B report the results from the Propensity Score Matching (PSM). For each country with a right-wing government, we match the country with the left-wing government on the country-level macroeconomic and regulatory variables. Panel A documents the means of these variables of the group of countries with the right-wing government (treatment group) and countries with the left-wing government (control group). Panel B documents the estimates from the linear regressions on the matched sample. The dependent variable in columns (1), (2), and (3) is account ownership at the aggregate level. The country-level financial inclusion indicator refers to respondents who reported having an account at a financial institution. All the Models include country and time fixed effects. Standard errors, clustered by country and time, are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

under a right-wing regime are likely to have significantly greater financial inclusion than countries under a left-wing regime, supporting our original findings.¹⁷

7. Country-level analysis and propensity-score matching

We run several additional tests on the country-level data to examine the robustness of the baseline results. The World Bank provides the weighted average financial inclusion data at the country level for 2011, 2014 and 2017, which allows us to use Ordinary Least Squares (OLS) regression models. Similar to prior analysis, we exclude high-income countries.¹⁸ The primary variable of interest is the right-wing ideology. We exclude the individual-level control variables from the country-level analysis. Table 11 reports the results.

We begin by using the full country-level sample of account ownership as depicted in column (1) of Table 11. The dependent variable in columns (2) and (3) is account ownership among the poorest 40% of households and account ownership in rural areas, respectively. All models include country and time fixed effects. Standard errors are clustered by country and

¹⁷ A difference in mean test also provides similar results.

¹⁸ Including the high-income countries in this analysis provides similar results and assures against selection bias.

time. The results suggest that account ownership is 7.5% higher in countries under the right-wing government. Similarly, account ownership among the poorest 40% of the household and account ownership in rural areas is also higher in countries with right-wing regimes. Coefficients in specifications (2) and (3) are larger than the coefficient in specification (1), which is expected because there are more improvement opportunities for the poorer segment and rural areas. In specification (4) we compare between right and left regime countries keeping the only left-wing countries as the base. Again, the results are similar to the baseline results.

To further alleviate endogeneity concerns, we use propensity-score matching (PSM) on the country-level data. We use a matched sample where the country characteristics are similar, but one has a right-wing government and the other, a left-wing government. We use PSM based on all country-level macroeconomic, institutions, and regulatory variables. For each country-year observation with a right-wing government (treatment group), we match it with an observation of a left-wing country (control group) in the same year, where the propensity score is closest. Thus, these countries are likely to have a similar probability of selecting a right-wing government. We document the summary statistics of the matched sample in Panel A of Table 12. The results show that the macroeconomic institutions and regulatory characteristics between the two groups of countries are not significantly different from zero. Thus, we observe no difference between the treatment and the control group. Table 12, Panel B reports the estimates from linear regression on the matched sample. The coefficient right-wing in column (1) suggests that right-wing governments increase the probability of having a bank account by 8 percentage points. After controlling for the macroeconomic and regulatory variables, we observe a 9 percentage point increase. These estimates are similar to our baseline country-level analysis in Table 11.

8. Conclusion

Financial inclusion, measured as access to formal financial services, has increased substantially over the years. Despite this increase, many individuals remain outside of the financial system, especially in developing economies. In this study, we use a political economy approach to examine whether the government's political ideology affects household-level financial inclusion and, if it does, why.

Based on partisan theory, one would expect higher access to finance during a leftist regime because such a regime would focus on income distribution and would be more pro-poor (Hibbs, 1977, 1987). Using individual survey data from Global Findex, we find that account ownership in a formal financial institution is more likely to increase under right-wing regimes than their left-wing counterparts. Regression discontinuity designs also reinforce these estimates. This result is robust even when a longer horizon, such as five and ten years, of the party's office occupancy, is considered. These effects are due to the market-oriented and pro-innovation policies of rightist parties, as opposed to the societal policies of their leftist counterparts. Therefore, we conclude that capitalist policies are more conducive to access to the financial sector than socialistic policies. These results are robust to various tests. It is also important to note that individual-level characteristics also play a significant role in financial inclusion, along with the macroeconomic, political, and institutional characteristics of a country.

The results of this article raise an important question about the policies undertaken by governments in different countries. Although the interventionist strategy of leftist parties is more likely to increase savings, access to the financial sector is likely to rise during a rightist regime. However, one caveat in interpreting these results is that each country is different, and a policy that works in a particular setting can backfire in another. Besides, identifying a policy directive that achieves a net improvement in financial access is different from supposing that a keen government will implement it. It is also possible that many individuals have access to formal financial services, but they choose to voluntarily exclude themselves because they have religious or cultural reasons for not using the services or do not need them (Demirgüç-Kunt et al., 2015). The distinction between voluntary and involuntary exclusion is important for policy reasons. Individuals who are voluntarily excluded pose less of a problem for policymakers, because they reflect lack of demand. Those who are involuntarily excluded require specific policy actions, since their exclusion could be due to discriminatory policies, inadequacies in contractual and informational backgrounds, or insufficient product features. Our results only suggest that politicians have an important role to play to increase financial inclusion.

CRedit authorship contribution statement

Abe de Jong: Conceptualization, Methodology, Writing – review & editing. **Abu Zafar Shahriar:** Conceptualization, Writing – review & editing. **Farhan Shazia:** Conceptualization, Methodology, Software, Formal analysis, Data curation, Writing – original draft.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Sample selection

Description	Number of country-year observations
Global Findex data	451,372
Less: Unavailable DPI data	(96,847)
Combination of DPI and Global Findex data	354, 525
Less: Unavailable WDI data	(3,006)
Combination of Global Findex, DPI, and WDI data	351,519
Less: Unavailable WGI data	(0)
Combination of Global Findex, DPI, WDI and WGI data	351,519
Less: High-Income countries	(109,474)
Less: Missing individual and country-level observations	(44,259)
Less: Countries not having at least 2 years of data	(4,502)
Final sample: country-year observations	193,284

Appendix B. Data description and sources

Variable	Description	Source
Individual level variables		
Account ownership	Dummy equals 1 if the respondent has an account in a formal financial institution.	Global Findex
Savings (conditional on formal account)	Dummy equals to 1 if the respondent has saved or set aside money in the past 12 months using an account.	Global Findex
Frequency (conditional on formal account)	Dummy equals to 1 if the respondent has taken money out of an account three or more times in a typical month.	Global Findex
Mobile	Dummy equals 1 if the respondent has a mobile banking account.	Global Findex
Female	Dummy equals 1 if the respondent is female.	Global Findex
Age	Age of the respondent, in years.	Global Findex
Income: poorest 20%	Dummy that takes the value 1 if the respondent falls in the lowest income quintile, and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	Global Findex
Income: second 20%	Dummy that takes the value 1 if the respondent falls in the second lowest income quintile, and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	Global Findex
Income: middle 20%	Dummy that takes the value 1 if the respondent falls in the middle-income quintile, and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	Global Findex
Income: fourth 20%	Dummy that takes the value 1 if the respondent falls in the second-highest income quintile, and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	Global Findex
Income: richest 20%	Dummy that takes the value 1 if the respondent falls in the highest income quintile, and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	Global Findex
Primary education	Dummy that takes the value 1 if the respondent completed up to 8 years of education, and 0 otherwise.	Global Findex
Secondary education	Dummy that takes the value 1 if the respondent completed 9–15 years of education, and 0 otherwise.	Global Findex
Tertiary education	Dummy that takes the value 1 if the respondent completed more than 15 years of education.	Global Findex

Country-level variables		
Right-wing	Takes the value of 1 if the party in office is right-wing.	Database of Political Institution (DPI)
Left-wing	Takes the value of 1 if the party in office is left-wing.	Database of Political Institution (DPI)
Employment rate	Labor force participants aged 15 or above.	World Development Indicators (WDI)
Domestic credit to private sector (% GDP)	Indicator of financial sector development.	World Development Indicators (WDI)
Ln GDP per capita	Natural logarithm of the per capita real GDP.	World Development Indicators (WDI)
Plurality	Dummy that takes the value 1 if plurality, 0 otherwise	Database of Political Institution (DPI)
Proportional representation	Dummy that takes the value 1 if PR, 0 otherwise	Database of Political Institution (DPI)
Finite term	Dummy that takes the value 1 if finite term, 0 otherwise	Database of Political Institution (DPI)
Inflation	Measured by the Consumer Price Index.	World Development Indicators (WDI)
Manufacturing value added	Proxy for an alternative route of development associated with wage laborers.	World Development Indicators (WDI)
Regulatory quality	Captures perceptions of the extent to which government is able to formulate and implement sound policies. A higher score indicates higher ability.	World Governance Indicators (WGI)
Political stability	Political stability and absence of violence. The scale is from -2.5 to 2.5, where a higher value means a more stable government.	World Governance Indicators (WGI)
Voice and accountability	Captures the extent of freedom of expression of the country's citizen. The scale is from -2.5 to 2.5, where a higher value means a more freedom.	World Governance Indicators (WGI)
Corruption control	Indicates a country's ability to control corruption, with a scale from -2.5 to 2.5, where a higher value indicates less corruption.	World Governance Indicators (WGI)
Starting a business score	The simple average of the scores for the procedures, time, cost, and minimum capital requirement to start and formally operate a business.	Doing Business, the World Bank
Trading across borders	The score for trading across borders is the simple average of the scores for the time and cost for documentary compliance and border compliance for international trade	Doing Business, the World Bank
Quality of judicial processes index	The sum of the court structure and proceedings, case management, court automation and alternative dispute resolution.	Doing Business, the World Bank
Account ownership	Weighted average percentage of population having a bank account and are at least 15 years of age. Index: Accountage15	Global financial Inclusion country level data
Account among poorest 40%	Weighted average percentage of population (poorest 40%) having a bank account and are at least 15 years of age. Index: Accountincomepoorest40	Global financial Inclusion country level data
Account in rural areas	Weighted average percentage of rural population having a bank account and are at least 15 years of age. Index: Accountruralage15	Global financial Inclusion country level data

Appendix C. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jimonfin.2022.102678>.

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