ISSN 2057-1461

LSE Global South Unit

WORKING PAPER SERIES

SUSTAINABLE DEVELOPMENT INITIATIVE (SDI)

LSE GSU Working Paper – Volume 8 No. 1 (2022)

The Sustainable Practices of Multinational Banks as Drivers of Financial Inclusion in Developing Countries

By Fernando Úbeda[a], Alvaro Méndez[bc] and Francisco Javier Forcadell[d]

[a] Univesidad Autónoma, Madrid, Spain
[b] London School of Economics and Political Science, LSE IDEAS, London, United Kingdom.
[c] Fudan University, Institute for Global Public Policy, Shanghai, China
[d] Universidad Rey Juan Carlos, Madrid, Spain

LSE GLOBAL SOUTH UNIT | LSE !deas

Abstract.
Lack of access to banking is a major problem that contributes to inequality in the developing world. For this reason, financial inclusion is a crucial objective of the Sustainable Development Goals (SDGs). In this study, we investigate the impact of the sustainable practices of multinational banks (MNBs) on financial inclusion. Drawing from a sample of 24 developing countries and 28,089 individuals, we obtain robust evidence about the positive effect of sustainable practices on financial inclusion. We find that MNBs increase the use of mobile bank accounts in the developing world. We also find that when these MNBs follow sustainable practices, the use of mobile bank accounts positively intensifies. These findings are consequential because mobile banking is one of the most powerful means to achieve financial inclusion in the developing world.

Keywords
Sustainable Banking, Financial Inclusion, Mobile Bank Accounts, Sustainable Development Goals.

JEL Classifications
G00, G20, G21, Q01, Q56, D63

Global South Unit
London School of Economics and Political Science
Houghton Street. London WC2A 2AE. United Kingdom
Fax: +44 (0)20 7955 7446. Email: gsu@lse.ac.uk
www.lse.ac.uk

1. Introduction

Financial inclusion, or the use of financial services by the poor (Allen, Demirguc-Kunt, Klapper, & Martinez Peria, 2016; Kendall, Mylenko, & Ponce, 2010), has emerged as a policy issue as its importance to sustainable development has become better known (Beck & De La Torre, 2007). Families and small businesses need inclusion in financial services to make long-term plans and surmount life's most pressing necessities. Bank account holders are likelier to seek credit and insurance; start up new enterprises; get an education; or see the doctor, all of which contribute to greater well-being. For this reason, financial inclusion is a crucial objective of the Sustainable Development Goals (SDGs) set by the United Nations (UN) in 2015. Specifically, SDG 8.10 exhorts us to enhance the capacity of financial institutions to promote and expand financial inclusion. At present, 69% of adults on earth have access to banking, meaning that a too large number are still left out (World Bank, 2021). Financial exclusion is particularly acute in the global South, where only 63% have a bank account compared to 91% in the developed world (Demirgüç, Klapper, Singer, Ansar, & Hess, 2018).

2. Multinational Banks, Sustainable Practices and Financial Inclusion

Multinational banks (MNBs) are more efficient and competitive than domestic banks (Bonin, Hasan, & Wachtel, 2005; Kebede, Selvanathan, & Naranpanawa, 2021). They may be able to boost promote financial inclusion in the developing world (Lu, 2007): their multi-nationality, organisational size, and world market scope give them clout, normative reach, autonomy, and motive to act more than others (Rugman & Doh, 2008; Ruggie, 2018). Moreover, unlike local competitors, they are flush with capital and outfitted to meet developing countries' vast need for finance (De Haas & Van Lelyveld, 2010). MNBs have more resources to invest in technological innovations that facilitate financial inclusion (Rugman & Doh, 2008; Gopalan & Rajan, 2018).

Despite this upbeat outlook, evidence shows that the impact of MNBs on financial inclusion in the developing world is deficient; in particular, outreach to the neediest classes of prospective clients has been substandard ever since MNBs arrived in these countries in the 1990s (Beck & Martinez Peria, 2010; Detragiache, Tressel, & Gupta, 2008). MNBs can even undermine financial inclusion: their competition squeezes smaller local banks that afforded some services for the needy. Competition forces them to harden their business model to cater more for affluent clients, lest they risk insolvency by losing these most profitable customers (Gormley, 2010; Sarma & Pais, 2011). Critics of the thesis of MNBs' constructive role assert that, even if they supply innovation and scarce capital, the effect on financial inclusion is inconsequential, their overriding drive being business self-interest (Gormley, 2010). MNBs are likelier than local banks to be short-termist and profiteering, and "cherry-pick" markets and clientele to maximise immediate return on investment (Buch & DeLong, 2004; Stiglitz, 2005). In the global South, MNBs generally serve large, established customers who are seen as creditworthy and easy to deal with (Focarelli & Pozzolo, 2005), which discriminates against those who most need financial inclusion.

What makes banks sustainable is incorporating ESG criteria into their operations (Murè, Spallone, Mango, Marzioni, & Bittucci, 2021; Aracil, Nájera-Sánchez, & Forcadell, 2021). Sustainable practices empower MNBs to promote financial inclusion (Ubeda, Forcadell, & Suárez, 2021), and capital poverty is an opportunity to attract new, capital-hungry clients who normally lack access to financial services (Bihari & Pradhan, 2011). Sustainable banks are also likelier to have internal "financial inclusion policies" that help seek out the under-served (Ahamed, Ho, Mallick, & Matousek, 2021). Incorporating ESG practices into their business model actuates "sustainable win/win" possibilities (Prahalad, 2005) and "mutual prosperity" transactions (Forcadell & Aracil, 2017) that are known to expand inclusion without sacrificing profit (Porter, Serafeim, & Kramer, 2019). The ESG criteria boost financial inclusion by tending to multiply access points that make services more available to more clients (Vo, Tran, Hoang, & Van, 2021). Practising ESGs establishes rapport with clients, mitigates financial risk, and expands financial inclusion (Ramzan, Amin, & Abbas, 2021).

We hypothesise and empirically test if the presence of MNBs and their sustainable practices promote financial inclusion in developing countries. Using the Findex Global survey, the BankScope database, and the Thomson Reuters database, we create a sample of 24 developing countries, 707 banks, and 28,089 individuals. The findings confirm that the presence of MNBs practising sustainability promotes financial inclusion in developing countries.

3. Data & Methods

3.1. Variables

DEPENDENT VARIABLE

We use an individual indicator (Pesqué-Cela et al. 2021), i.e., ownership of a deposit account, to measure financial inclusion (Allen et al., 2016). We identify account ownership using the Findex Global survey[1] of 2017 (see: Demirgüç et al., 2018). $Account_{ij}$ is a dummy variable that takes value 1 if individual i in country j has a formal account at a bank or other type of financial institution, and 0 otherwise (See Annex, Table 6). The proliferation of mobile phone use globally, especially in developing countries, has allowed access to financial services by previously excluded people (Tram, Lai, & Nguyen, 2021). Mobile money accounts have become an important transaction platform in less developed countries.[2] Even when mobile money apps are not directly connected to a formal account, they provide financial transaction services like classical accounts. Mobile money accounts can therefore be considered a proxy of financial inclusion (Donovan, 2012; Mehrotra & Nadhanae, 2016; Tram et al., 2021; Xu, 2020). Accordingly, $Mobile\_Account_{ij}$ is a dummy variable that takes the value 1 if individual i of country j has used a mobile phone to make payments, to buy things, or to send or receive money, and 0 if not (See Annex, Table 6).

[1]Additional information about the Global Findex, including the complete database, can be found at: http://www.worldbank.org/globalfindex; see also http://www.gallup.com/strategicconsulting/en-us/worldpoll.aspx.
[2]The use of mobile technology in banking depends largely on consumers' trust in banks and on the technological infrastructure (Gefen, Karahanna, & Straub, 2003; Xu, 2020).

INDEPENDENT VARIABLES

Our independent variables of interest are the presence of MNBs in a host country ($MNBj$) and their sustainable practices (SBj). We use the BankScope database provided by Bureau van Dijk and Fitch Ratings (Ahamed et al., 2021) to update the database of bank ownership compiled by Claessens and van Horen (2015). They consider Bank A a subsidiary if more than 50% of its shares are held by Headquarters H. This criterion allows us to identify both the subsidiaries of MNBs (domestic and foreign). To forestall double counts, we use the consolidated counts of headquarter of domestic banks and the subsidiaries of MNBs. To forestall double counting, we use the consolidated counts of banks excluding subsidiaries of MNBs. To forestall double counting, we use the consolidated counts of banks excluding subsidiaries' assets. Accordingly, A^{d}_{ijt} is the volume of assets controlled by domestic banks and A^{f}_{ijt} is that by MNBs. We identify 1,418 commercial banks in 109 developing countries, of which 564 are subsidiaries of MNBs. Therefore, $A_j = \sum_{i=1}^{nj} A^{d}_{ij} + A^{f}_{ij}$ is the total bank assets in country j, where n_j is the number of banks located in country j. The presence of MNBs in country j $\left(MNB_j = \frac{A^{F}_{j}}{A_j}\right)$ is measured by the percentage of the total assets controlled by subsidiaries. We estimate MNBs' sustainability from the scores of ESG-dimension provided by Thomson Reuters (Cheng, Ioannou, & Serafeim, 2014; Dahlsrud, 2008; Forcadell, Aracil, & Ubeda, 2020).

These scores exhibit objective performance data on more than 280 key performance indicators (Dahlsrud, 2008). We use the ESG score of the headquarters (H) of MNBs as a proxy of the sustainable practices of MNBs i in country$_j$ (SB_{ij}). Thence we develop a country-level index of sustainable practices of MNBs: $(SB_j) = \sum_{i=1}^{kj} \frac{A^{F}_{ij}}{A_j} SB_{ij}$, where k_j is the number of subsidiaries in country$_j$, A^{f}_{ij} is the volume of assets controlled by MNBs i in country j, A_j is the total assets of banks in country j, and SB_{ij} is the ESG score of the headquarters of MNBs i in country j. We select 24 developing countries where the assets of MNBs which have ESG ratings exceeded 50% of the assets controlled by all MNBs (See Table 1).

CONTROL VARIABLES

We include some control variables at individual and country levels. $Gender_{ij}$ is a dummy variable that takes the value 1 if an individual is female; Age_{ij} is age in years; $Inc(d)_{ij}$ are dummy variables, derived from the ordinal variable, which divide individuals' incomes into five identifiable levels, where d takes value 1 for the lowest income group and 5 for the highest; $Educ(2)_{ij}$ is a dummy variable identifying those with secondary education, $Educ(3)_{ij}$ with tertiary or more education; $BTrust_j$ is the average level of trust in banks in country j; $BConc_j$ is bank concentration measured by summing the assets of the five largest banks and dividing by the sum total of commercial banking assets; RL_j is a rule of law indicator taken from the World Governance Indicators which captures the quality of contract enforcement, property rights protection, and court system efficiency; $NoInt_j$ quantifies non-interest-related activities as a percentage of banks' total income.

Global South Unit
London School of Economics and Political Science
Houghton Street. London WC2A 2AE. United Kingdom
Fax: +44 (0)20 7955 7446. Email: gsu@lse.ac.uk
www.lse.ac.uk

Table 1: Presence and Sustainability of Multinational Banks

Country	MNB_j	SB_j
Argentina	0.277	76.865
Bolivia	0.152	27.050
Brazil	0.151	73.165
Chile	0.389	85.273
China	0.003	79.643
Colombia	0.179	83.049
Cyprus	0.319	63.918
Ecuador	0.016	81.140
Egypt	0.195	60.099
Indonesia	0.279	57.104
Jordan	0.199	45.638
Kazakhstan	0.250	60.482
Lebanon	0.000	0.000
Malaysia	0.168	57.173
Mexico	0.727	80.15
Pakistan	0.056	73.837
Peru	0.431	79.039
Philippines	0.085	59.317
Serbia	0.881	66.943
Thailand	0.191	64.437
Turkey	0.296	71.524
Ukraine	0.376	49.297
Vietnam	0.034	77.951

MNB_j: Assets controlled by MNBs in country j in 2017.
SB_j: index of foreign banks in country j in the analysis period.

3.2. Sample Statistic

We merge different data sources (BankScope, EIKON-Thomson Reuters, Global Findex) to configure a sample of 24 developing countries, 707 banks, and 20,498 individual respondents surveyed in 2017. Table 2 presents the summary statistics. Table 3 presents the correlation matrix, while no multicollinearity problems are apparent (See Annex 1, Table 3).

TABLE 2: SUMMARY STATISTICS

	Mean	Std. Dev.	Min	Max
$Account_{ij}$	0.513	0.500	0	1
$Mobile\_Account_{ij}$	0.056	0.229	0	1
MNB_j	0.211	0.168	0	0.887
SB_j	72.478	16.948	0	87.605
$BTrust_j$	2.602	0.403	1.926	3.169
$Gender_{ij}$	0.573	0.245	0	1
Age_{ij}	41.576	17.749	16	99
$Inc(2)_{ij}$	0.178	0.382	0	1
$Inc(3)_{ij}$	0.193	0.395	0	1
$Inc(4)_{ij}$	0.206	0.405	0	1
$Inc(5)_{ij}$	0.235	0.424	0	1
$Educ(2)_{ij}$	0.530	0.499	0	1
$Educ(3)_{ij}$	0.109	0.311	0	1
$Employed_{ij}$	0.609	0.488	0	1
RL_j	-0.279	0.489	-1.488	1.117
$BConc_j$	74.867	16.457	32.208	98.420
$Branch_j$	13.694	8.166	0.454	50.455
$NoInt_j$	30.056	9.729	14.748	78.912

3.3. Analytical Approach

We analyse the effects of MNBs and their sustainable practices in developing countries, estimated to country level, on financial inclusion, measured at individual level. This multilevel frame violates the assumption of independence of observations, leading to downwardly biased standard errors if ordinary regression is used (Krull & MacKinnon, 2001; Preacher, Zyphur, & Zhang, 2010). Both variables used to measure financial inclusion (*Accountij*, *Mobile_Accountij*) are binary; therefore, we estimate a multilevel probit regression.

$$FI_{ij} = \beta_1 + \beta_2 BS_j + \beta_3 MNB_j + \beta_4 CV1_{ij} + \beta_5 CV2_j + \zeta_{1j} + E_{ij} \quad (1)$$

where FI_{ij} is the financial inclusion of individual i from country j. The effects on financial inclusion of sustainable practices by MNBs (BS_j), and of the presence of MNBs (MNB_j), are measured, respectively, by the coefficients β_2 and β_3. $CV1_{ij}$ and $CV2_j$ are, respectively, the control variables at individual and country levels. ζ_{1j} is the intercept, which varies over individuals, and $\zeta_{1j} \sim N(0,\psi_{11})$. E_{ij} are the errors, and $E_{ij} \sim N(0,\theta)$.

4. Results

In Model 1 (Table 4), the coefficients of SB_j and MNB_j are not significant. The presence of MNBs and their sustainable practices do not affect using a bank account. However, in Model 2, the coefficients of SB_j and MNB_j are positive and significant; therefore, MNBs increase the use of mobile accounts in developing countries. This positive effect intensifies when the MNBs follow sustainable practices.

Table 4: Multilevel Probit Regression

	Model 1 $Account_{ij}$	Model 2 $Mobile\_Account_{ij}$
SB_j	0.002	0.012****
	(0.003)	(0.004)
MNB_j	0.217	1.133****
	(0.446)	(0.429)
$BRrust_j$	0.289	0.807****
	(0.277)	(0.211)
$Gender_{ij}$	-0.114**	-0.176****
	(0.054)	(0.070)
Age_{ij}	0.027****	0.009
	(0.007)	(0.008)
Age_{ij}^2	-0.000****	-0.000****
	(0.000)	(0.000)
$Inc(2)_{ij}$	0.120****	0.075**
	(0.029)	(0.075)
$Inc(3)_{ij}$	0.268****	0.161
	(0.038)	(0.110)
$Inc(4)_{ij}$	0.402****	0.322
	(0.056)	(0.095)
$Inc(5)_{ij}$	0.609****	0.458****
	(0.057)	(0.103)
$Educ(2)_{ij}$	0.430****	0.298****
	(0.042)	(0.054)
$Educ(3)_{ij}$	1.018****	0.692****
	(0.0763)	(0.054)
$Employed_{ij}$	0.350****	0.337****
	(0.047)	(0.048)
RL_j	0.007	0.207****
	(0.062)	(0.064)
$BConc_j$	0.000	0.0158****
	(0.005)	(0.004)
$Branch_j$	0.017**	0.037****
	(0.007)	(0.007)
$NoInt_j$	0.0172***	-0.009
	(0.006)	(0.007)
Constant	-2.909****	-6.778****
	(0.975)	(0.899)
$Wald - \chi_1^2$	2089.35****	578,990.65****
Observations	28,089	18,372
Number of Countries	24	24

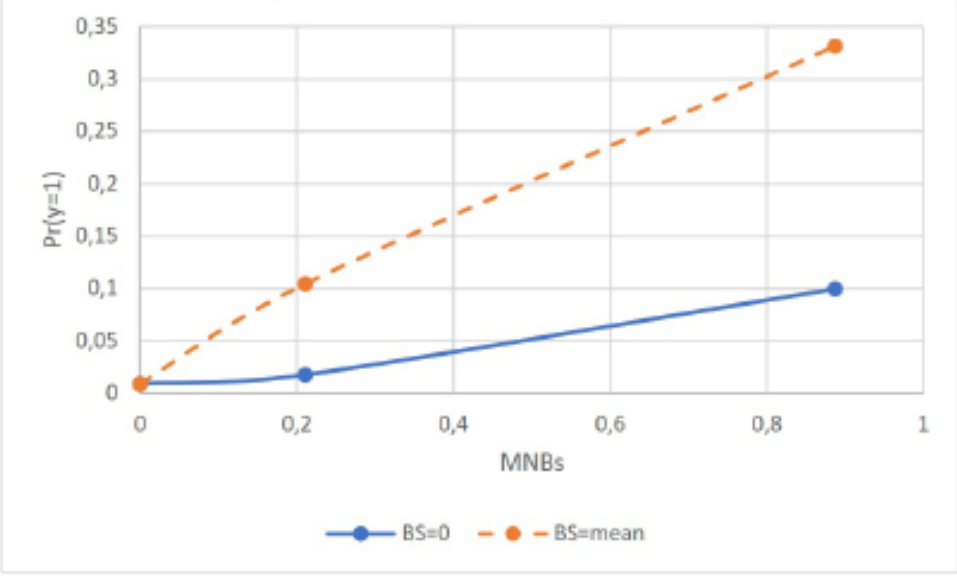
Global South Unit
London School of Economics and Political Science
Houghton Street. London WC2A 2AE. United Kingdom
Fax: +44 (0)20 7955 7446. Email: gsu@lse.ac.uk
www.lse.ac.uk

Our estimations could be biased by omitting country-specific effects and simultaneity. The relation between financial inclusion and trust in banks, income distribution, education, and institutional development is not unidirectional and may include reverse causality (Beck, Demirgüç-Kunt, & Levine, 2010; Neaime & Gaysset, 2018; Xu, 2020). Trust in banks is necessary for financial inclusion, but financial inclusion also improves trust in banks (Xu, 2020). Poverty alleviation and education increase demand for banking services, but financial integration reduces inequalities (Neaime & Gaysset, 2018) and facilitates access to education. Institutional development creates a framework appropriate for financial inclusion, but the development of the financial system depends on improving the institutional framework. Using a function control in a standard two-stage method (Wooldridge, 2015) can alleviate, if not solve, endogeneity bias and doubts about the direction of causality. In the specification of the control function, we include some instrumental variables (Bjørnskov, 2007; Xu, 2020) (See Annex, Table 6).

In Model 3 (Table 5), the coefficient of SB_j is not significant, but the coefficient of MNB_j is positive and significant. Thus, after controlling for endogeneity, the MNBs have a positive effect on the use of bank accounts, i.e. financial inclusion. This effect is not affected by MNBs' sustainable practices. In Model 4, the coefficients of SB_j and MNB_j are positive and significant. Thus, the presence of MNBs already has a positive effect on the setting up of mobile accounts. The sustainable practices of MNBs increase this effect (See Annex, Table 5)

In Figure 1, a baseline case is represented wherein the country is defined by the average values of the several variables, and there is no presence of MNBs. Their mere presence of MNBs in a developing country increases the probability of using a mobile bank accounts from 0.009 to the maximum value of 0.099; however, sustainable banking increases this probability to 0.331. Thus, sustainable practices accelerate financial inclusion by incentivising the use of mobile accounts.

Figure 1: Probability to use Mobile Account



Global South Unit
London School of Economics and Political Science
Houghton Street. London WC2A 2AE. United Kingdom
Fax: +44 (0)20 7955 7446. Email: gsu@lse.ac.uk
www.lse.ac.uk

5. Conclusion

We find strong empirical evidence confirming our hypothesis that the sustainable practices of MNBs promote financial inclusion in developing countries. In particular, we find that the presence of MNBs increases the use of mobile bank accounts in developing countries. We also find that if MNBs follow sustainability practices, this intensifies the use of mobile bank accounts. These findings are consequential because mobile banking is one of the most powerful means to achieve financial inclusion in the developing world (Donovan, 2012).

Our study fills important gaps in research, contributing to the limited literature which addresses SDG 8.10 in particular. Our study also adds to the literature inquiring into how the presence of MNBs affects financial inclusion in the developing world (Grittersova, 2014). Finally, we advance the literature identifying mobile banking as one of the most important tools to augment financial inclusion in the global South (World Bank, 2012).

Several relevant policy implications follow, which may help practitioners, policy-makers, and researchers understand the pivotal role of sustainable banking in addressing the 2030 Agenda, particularly the financial inclusion challenges in SDG 8.10. Banking practitioners at MNBs should note that adopting the ESG criteria empowers host-market publics to approach them and demand financial services with confidence that they will be treated fairly. Policy-makers in developing countries might direct MNBs in their jurisdictions to adhere to these criteria in the knowledge that this would contribute to financial inclusion by bridging the persistent gap of trust in banks that is likely holding back their country's development. Researchers could undertake further studies inquiring whether and how sustainable banks are related to financial inclusion. Although financial inclusion has improved in the last several years, 31% of adults in the world still lack access to banking services, a marginalisation afflicting the developing world almost exclusively.

Funding: The publication of the LSE GSU Working Paper Series has been supported by Project PID2021-124641NB-I00 of the Ministry of Science and Innovation (Spain).

References

Ahamed, M. M., Ho, S. J., Mallick, S. K., & Matousek, R. (2021). Inclusive banking, financial regulation and bank performance: Cross-country evidence. *Journal of Banking & Finance, 124,* 106055. doi:10.1016/j.jbankfin.2021.106055

Allen, F., Demirguc-Kunt, A., Klapper, L., & Martinez Peria, M. S. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation, 27*, 1-30. doi:10.1016/j.jfi.2015.12.003

Aracil, E., Nájera-Sánchez, J.-J., & Forcadell, F. J. (2021). Sustainable banking: A literature review and integrative framework. *Finance Research Letters,* 101932. doi:10.1016/j.frl.2021.101932

Beck, T., & De La Torre, A. (2007). The Basic Analytics of Access to Financial Services. F*inancial Markets, Institutions & Instruments,* 16(2), 79-117. doi:10.1111/j.1468-0416.2007.00120.x

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2010). Financial Institutions and Markets across Countries and over Time: The Updated Financial Development and Structure Database. *The World Bank Economic Review,* 24(1), 77-92. doi:10.1093/wber/lhp016

Beck, T., & Martinez Peria, M. S. (2010). Foreign bank participation and outreach: Evidence from Mexico. *Journal of Financial Intermediation,* 19(1), 52-73. doi:10.1016/j.jfi.2009.03.002

Bihari, S. C., & Pradhan, S. (2011). CSR and Performance: The Story of Banks in India. *Journal of Transnational Management,* 16(1), 20-35. doi:10.1080/15475778.2011.549807

Bjørnskov, C. (2007). Determinants of generalized trust: A cross-country comparison. *Public Choice,* 130(1), 1-21. doi:10.1007/s11127-006-9069-1

Bonin, J. P., Hasan, I., & Wachtel, P. (2005). Privatization matters: Bank efficiency in transition countries. *Journal of Banking & Finance,* 29(8-9), 2155-2178. doi:10.1016/j.jbankfin.2005.03.012

Buch, C. M., & DeLong, G. (2004). Cross-border bank mergers: What lures the rare animal? *Journal of Banking & Finance*, 28(9), 2077-2102. doi:10.1016/j.jbankfin.2003.08.002

Buriak, A., Vozňáková, I., Sułkowska, J., & Kryvych, Y. (2019). SOCIAL TRUST AND INSTITUTIONAL (BANK) TRUST: EMPIRICAL EVIDENCE OF INTERACTION. *Economics & Sociology,* 12(4), 116-129,331-332. doi:http://dx.doi.org/10.14254/2071-789X.2019/12-4/7

Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal,* 35(1), 1-23. doi:10.1002/smj.2131

Claessens, S., & van Horen, N. (2015). The Impact of the Global Financial Crisis on Banking Globalization. *IMF economic review,* 63(4), 868-918. doi:10.1057/imfer.2015.38

Dahlsrud, A. (2008). How corporate social responsibility is defined: an analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management, 15*(1), 1-13. doi:10.1002/csr.132

De Haas, R., & Van Lelyveld, I. (2010). Internal capital markets and lending by multinational bank subsidiaries. *Journal of Financial Intermediation,* 19(1), 1-25. doi:10.1016/j.jfi.2009.02.001

Demirgüç, A., Klapper, L., Singer, M. R., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: *Measuring Financial Inclusion and the Fintech Revolution.* Retrieved from Washington, DC:

Detragiache, E., Tressel, T., & Gupta, P. (2008). Foreign Banks in Poor Countries: Theory and Evidence. *The Journal of Finance,* 63(5), 2123-2160. doi:10.1111/j.1540-6261.2008.01392.x

Donovan, K. (2012). Mobile Money for Financial Inclusion. In World Bank (Ed.), *Information and Communications for Development 2012: Maximizing Mobile* (pp. 61-74). Washington, D.C.: The World Bank.

Focarelli, D., & Pozzolo, Alberto F. (2005). Where Do Banks Expand Abroad? An Empirical Analysis. *The Journal of business (Chicago, Ill.),* 78(6), 2435-2464. doi:10.1086/497052

Forcadell, F. J., & Aracil, E. (2017). Sustainable banking in Latin American developing countries: Leading to (mutual) prosperity. *Business Ethics A European Review,* 26(4), 382-395. doi:10.1111/beer.12161

Forcadell, F. J., Aracil, E., & Ubeda, F. (2020). Using Reputation for Corporate Sustainability to Tackle Banks Digitalization Challenges. *Business Strategy and the Environment,* 29, 2181-2193.

Fungáčová, Z., Hasan, I., & Weill, L. (2019). Trust in banks. *Journal of economic behavior & organization,* 157, 452-476. doi:10.1016/j.jebo.2017.08.014

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in Online Shopping: An Integrated Model. *MIS quarterly,* 27(1), 51-90. doi:10.2307/30036519

Gopalan, S., & Rajan, R. S. (2018). Foreign Banks and Financial Inclusion in Emerging and Developing Economies: An Empirical Investigation. *Journal of International Development,* 30(4), 559-583. doi:https://doi.org/10.1002/jid.3354

Gormley, T. A. (2010). The impact of foreign bank entry in emerging markets: Evidence from India. *Journal of Financial Intermediation,* 19(1), 26-51. doi:10.1016/j.jfi.2009.01.003

Grittersova, J. (2014). Transfer of reputation: Multinational banks and perceived creditworthiness of transition countries. *Review of International Political Economy,* 21(4), 878-912. doi:10.1080/09692290.2013.848373

Kebede, J., Selvanathan, S., & Naranpanawa, A. (2021). Foreign bank presence, institutional quality, and financial inclusion: Evidence from Africa. *Economic Modelling, 102,* 105572. doi:10.1016/j.econmod.2021.105572

Kendall, J., Mylenko, N., & Ponce, A. (2010). Measuring Financial Access Around the World. *World Bank Policy Research Working Paper(5253).* Retrieved from https://books.google.co.uk/books?id=IrnekQEACAAJ

Krull, J. L., & MacKinnon, D. P. (2001). Multilevel Modeling of Individual and Group Level Mediated Effects. *Multivariate behavioral research, 36(2),* 249-277. doi:10.1207/S15327906MBR3602_06

Lu, Q. (2007). *Long-Term Commitment, Trust and the Rise of Foreign Banking in China.* Oxford, UK: Chandos Publishing.

Mehrotra, A., & Nadhanae, G. V. (2016). Financial Inclusion and Monetary Policy in Emerging Asia. In S. Gopalan & T. Kikuchi (Eds.), *Financial Inclusion in Asia* (pp. 93-127): Palgrave.

Murè, P., Spallone, M., Mango, F., Marzioni, S., & Bittucci, L. (2021). ESG and reputation: The case of sanctioned Italian banks. *Corporate social-responsibility and environmental management,* 28(1), 265-277. doi:10.1002/csr.2047

Neaime, S., & Gaysset, I. (2018). Financial inclusion and stability in MENA: Evidence from poverty and inequality. *Finance Research Letters, 24,* 230-237. doi:10.1016/j.frl.2017.09.007

Porter, M., Serafeim, G., & Kramer, M. (2019). Where ESG Fails. *Institutional Investor.* Retrieved from https://www.institutionalinvestor.com/article/b1hm5ghqtxj9s7/Where-ESG-Fails

Prahalad, C. K. (2005). *The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits.* Upper Saddle River, NJ: Wharton School Publishing.

Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A General Multilevel SEM Framework for Assessing Multilevel Mediation. *Psychological methods,* 15(3), 209-233. doi:10.1037/a0020141

Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A General Multilevel SEM Framework for Assessing Multilevel Mediation. *Psychological methods,* 15(3), 209-233. doi:10.1037/a0020141

Ramzan, M., Amin, M., & Abbas, M. (2021). How does corporate social responsibility affect financial performance, financial stability, and financial inclusion in the banking sector? Evidence from Pakistan. *Research in International Business and Finance,* 55, 101314. doi:https://doi.org/10.1016/j.ribaf.2020.101314

Ruggie, J. G. (2018). Multinationals as global institution: Power, authority and relative autonomy. Regulation & Governance, 12(3), 317-333. doi:10.1111/rego.12154

Rugman, A. M., & Doh, J. P. (2008). *Multinationals and Development.* New Haven, CT: Yale University Press.

Sarma, M., & Pais, J. (2011). Financial Inclusion and Development. *Journal of International Development,* 23(5), 613-628. doi:10.1002/jid.1698

Stiglitz, J. E. (2005). Finance for Development. In M. Ayogu, M. D. Ayogu, & D. Ross (Eds.), *Development Dilemmas: The Methods and Political Ethics of Growth Policy.* London: Routledge.

Tram, T. X. H., Lai, T. D., & Nguyen, T. T. H. (2021). Constructing a composite financial inclusion index for developing economies. *The Quarterly Review of Economics and Finance.* doi:https://doi.org/10.1016/j.qref.2021.01.003

Ubeda, F., Forcadell, F. J., & Suárez, N. (2021). Do formal and informal institutions shape the influence of sustainable banking on financial development? Finance Research Letters, 102391. doi:https://doi.org/10.1016/j.frl.2021.102391

Vo, D. H., Tran, N. P., Hoang, H. T.-T., & Van, L. T.-H. (2021). Do corporate social responsibility and bank performance matter for financial inclusion in Vietnam? *Journal of Asia Business Studies,* 13. doi:10.1108/jabs-11-2020-0462

Wooldridge, J. M. (2015). Control Function Methods in Applied Econometrics. *The Journal of Human Resources,* 50(2), 420-445. doi:10.3368/jhr.50.2.420

World Bank. (2021). Financial Inclusion:. Retrieved from https://www.worldbank.org/en/topic/financialinclusion

World Bank (Ed.) (2012). *Information and Communications for Development 2012: Maximizing Mobile.* Washington, D.C.: The World Bank.

Xu, X. (2020). Trust and financial inclusion: A cross-country study. *Finance Research Letters, 35,* 101310. doi:10.1016/j.frl.2019.101310

ANNEX

Table 3: Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.- MNB_j	1.000															
2.- SB_j	0.148	1.000														
3.- $BTrust_j$	-0.603	-0.007	1.000													
4.- $Gender_{ij}$	0.025	0.012	-0.027	1.000												
5.- Age_{ij}	0.068	0.019	-0.051	0.017	1.000											
6.- $Inc(2)_{ij}$	0.002	0.014	0.001	0.039	-0.035	1.000										
7.- $Inc(3)_{ij}$	0.018	-0.002	-0.015	0.028	-0.007	-0.008	1.000									
8.- $Inc(4)_{ij}$	0.003	-0.005	-0.013	-0.029	0.009	0.007	-0.238	1.000								
9.- $Inc(5)_{ij}$	0.004	-0.010	-0.005	-0.090	0.023	0.018	-0.258	-0.272	1.000							
10.- $Educ(2)_{ij}$	0.098	-0.046	-0.138	-0.041	-0.305	-0.298	0.000	0.038	0.041	1.000						
11.- $Educ(3)_{ij}$	-0.015	-0.046	0.018	-0.049	-0.075	-0.085	-0.085	-0.049	0.008	0.207	1.000					
12.-$Employed_{ij}$	0.004	0.010	0.005	-0.248	-0.137	-0.187	-0.029	-0.003	0.016	0.076	0.084	1.000				
13.- RL_j	0.161	0.273	-0.033	0.019	0.075	0.071	0.021	0.004	-0.001	-0.031	0.007	0.084	1.000			
14.- $BConc_j$	-0.110	0.240	-0.355	-0.030	-0.044	-0.040	-0.002	0.001	0.013	-0.005	-0.028	0.027	0.001	1.000		
15.- $Branch_j$	0.141	-0.586	-0.270	0.029	0.016	0.029	-0.011	0.003	-0.002	0.016	0.045	-0.031	0.040	-0.263	1.000	
16.- $NoInt_j$	-0.110	0.430	0.478	-0.013	0.016	0.001	-0.003	-0.017	-0.011	-0.002	-0.121	-0.085	-0.018	-0.164	0.124	1.000

Global South Unit
London School of Economics and Political Science
Houghton Street. London WC2A 2AE. United Kingdom
Fax: +44 (0)20 7955 7446. Email: gsu@lse.ac.uk
www.lse.ac.uk

Table 5: Multilevel Probit Regression (control function)

	Model 3 *Multilevel probit* $Account_{ij}$	Model 4 *Multilevel probit* $Mobile\_Account_{ij}$
SB_j	-0.003	0.011***
	(0.003)	(0.004)
MNB_j	0.878****	0.944****
	(0.129)	(0.176)
Control Variables	[···]	[···]
λ_{BTrust}	-2.049****	1.100****
	(0.122)	(0.167)
λ_{Inc}	0.351	-0.6219
	(0.296)	(0.420)
λ_{Educ}	-0.083	0.020
	(0.210)	(0.227)
λ_{RL}	0.001	0.322
	(0.212)	(0.095)
Instrumental variables (first stage regressions)		
	$BTrust_j$	$BTrust_j$
$Protestant_j$	0.701****	0.701****
	(0.002)	(0.002)
$Population_j$	0.079	0.079****
	(0.000)	(0.000)
	$Inc(d)_{ij}$	$Inc(d)_{ij}$
$GDP.pc_j$	$-4.52x10^{-6}$	$-4.52x10^{-6}$
	$(3.73 x10^{-6})$	$(3.73 x10^{-6})$
$Politic_j$	0.077****	0.077****
	(0.015)	(0.015)
$Population_j$	0.044****	0.044****
	(0.013)	(0.013)
	$Educ(d)_{ij}$	$Educ(d)_{ij}$
$GDP.pc_j$	$3.70x10^{-5}$****	$3.70x10^{-5}$****
	$(4.42 x10^{-6})$	$(4.42 x10^{-6})$
$Politic_j$	-0.018	-0.018
	(0.020)	(0.020)
$Free_j$	0.133****	0.133****
	(0.014)	(0.014)
$Population_j$	-0.251****	-0.251****
	0.015	0.015
	RL_j	RL_j
$GDP.pc_j$	$4.44x10^{-5}$****	$4.44x10^{-5}$****
	$(5.02 x10^{-6})$	$(5.02 x10^{-6})$
$Free_j$	-0.098****	-0.098****
	(0.008)	(0.008)
$Common_j$	-0.141****	-0.141****
	(0.014)	(0.014)
$Population_j$	-0.175****	-0.175****
	(0.004)	(0.004)
Observations	20,498	18,372

Global South Unit
London School of Economics and Political Science
Houghton Street. London WC2A 2AE. United Kingdom
Fax: +44 (0)20 7955 7446. Email: gsu@lse.ac.uk
www.lse.ac.uk

Table 6: Variable Description of Financial Inclusion Models

Name	Definition
Dependent variable (financial inclusion)	
Account $Account_{ij}$	Dummy equal to 1 if respondent has an bank account at a formal financial institution (a bank, credit union, cooperative, post office, or microfinance institution). Source: Global Findex 2017. (Allen et al., 2016)
Mobile Account $Mobile\_Account_{ij}$	Dummy equal to 1 if respondent in the past 12 months has used a mobile phone to make payments, to buy things, or to send or receive money. Source: Global Findex 2017. (Xu, 2020)
Independent variable	
Index of sustainable practices of foreign MNBs SB_j	Asset-weighted average of the level of sustainable practices of foreign banks located in the country. The ESG score is based on the headquarters of foreign MNBs. Source: Thompson Reuters.
Multinational Bank Presence MNB_j	It is the percentage of assets controlled by foreign MNB located in country *j* (Ahamed et al., 2021; Allen et al., 2016; Beck et al., 2008; Claessens & Van Horen, 2015; Gopalan & Rajan, 2018; Kebede et al., 2021) Source: BankFocus.
Control variable	
Trust in Banks $BTrust_j$	The average of trust in banks in country *j* $BTrust_j = \sum_{i=1}^{n_j} \frac{BRrust_{ij}}{n_j}$, where n_j is the number of responses in country *j*, $BTrust_{ij}$ trust in banks of individual i, the scoring is None at all (1), Not very much confidence (2), Quite a lot of confidence (3), or A great deal of confidence (4), (Buriak, Vozňáková, Sułkowska, & Kryvych, 2019; Fungáčová, Hasan, & Weill, 2019). (Xu, 2020) Source: World Value Survey. Given that the trust level is stable over time (Bjørnskov, 2007), we have selected the year closest to 2017 from the surveys conducted in 2010-2014 and 2017-2021.
Gender. $Gender_{ij}$	Dummy variable equal to 1 if the respondent is female and 0 otherwise (Allen et al., 2016; Xu, 2020). Source: Global Findex 2017.
Age. Age_{ij}	Age in years. Source: Global Findex 2017. (Allen et al., 2016; Xu, 2020)
Personal Income. $Inc(d)_{ij}$	Ordinal variable 1 to 5 of the self-reported level of income of the respondent relative to his country. 1 indicates the lowest income group and 5 the highest income group in one's country. Source: Global Findex 2017 (Allen et al., 2016; Neaime & Gaysset, 2018; Xu, 2020). We used nine dummy variables equal to 1 if the respondent belongs to different income levels.
Education. $Educ(d)_{ij}$	Ordinal variable from 1 to 3 of the self-reported level of education. 1 = completed primary or less, 2 = secondary, and 3 = completed tertiary or more (Allen et al., 2016; Xu, 2020). Source: Global Findex.
Employed. $Employed_{ij}$	Dummy variable that takes the value 1 if the respondent is employed by an employer, either full- or part-time (Allen et al., 2016). Source: Global Findex 2017.
Bank Concentration. $BConc_j$	Assets of the five largest banks as a share of total commercial banking assets. A mean of three years before the survey year in each country was used. (Fungáčová et al., 2019). Source: Global Financial Development Database (OI.06)

Name	Definition
Rule of Law. RL_j	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society − in particular, the quality of contract enforcement, property rights, policing, the courts, and the likelihood of crime and violence. Ranges from −2.5 (weak) to 2.5 (strong) (Buriak et al., 2019; Fungáčová et al., 2019) Source: The World Governance Indicators.
Branch of banks. $Branch_j$	The number of commercial bank branches per 100,000 adults. Source: Global Financial Development Database (AI.02)
Noninterest income of banks. $NoInt_j$	Bank income that was generated by non-interest-related activities as a percentage of total income (net-interest income plus non-interest income). Non-interest-related income includes net gains on trading and derivatives, net gains on other securities, net fees, commissions, and other operating income. Source: Global Financial Development Database (EI.03)
Instrumental variables	
Protestant people. $Protestant_j$	The result to aggregate the individual to national means: $Protestant_j = \sum_{i=1}^{n_j} \frac{Protestant_{ij}}{n_j}$, where n_j is the number of responses in country j; $Protestant_{ij}$ dummy variable take value 1 if the respondent is Protestant. (Bjørnskov, 2007). Source: World Values Survey (F025_01).
GDP per capita. $GDP.pc_j$	GDP per capita is gross domestic product divided by midyear population. GDP per capita. Data are in constant 2015 U.S. dollars (Bjørnskov, 2007; Buriak et al., 2019; Fungáčová et al., 2019). Source: World Development Indicators.
Population $Population_j$	Logarithm of adult population (Bjørnskov, 2007; Xu, 2020). Source: Global Findex 2017.
Political preferences of People. $Politic_j$	Continuous variable results to aggregate the individual political preferences: $Politic_j = \sum_{i=1}^{n_j} \frac{Politic_{ij}}{n_j}$, where n_j is the number of responses in country j; $Politic_{ij}$ is the individual political preferences of individual i in country j. The value should be between 1 and 10, the higher the value the greater the predisposition towards right-wing positions. ource: World Values Survey (E033).
Human Freedom. $Free_j$	Quartile of the index of human freedom: 1 = high freedom to 4 = low freedom (Bjørnskov, 2007). Source: Freedom House.
Country Legal System. $Common_j$	Dummy variable equal to 1 if the country's legal system is of British Common Law origin (Beck et al., 2007; Bjørnskov, 2007). Source: La Porta et al., (1998).

Global South Unit
London School of Economics and Political Science
Houghton Street. London WC2A 2AE. United Kingdom
Fax: +44 (0)20 7955 7446. Email: gsu@lse.ac.uk
www.lse.ac.uk