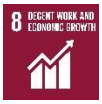

Financial Development, Governance Systems and Economic Freedom as Determinants of Financial Inclusion

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Abstract

As a response to the United Nations urgent call for action by all countries -developed and developing- to embrace a global partnership for reaching the Sustainable Development Goals, this paper addresses the question of how financial development, governance systems, and economic freedom determine people´s financial inclusion. By using the information from the Financial Access Survey published by the IMF for the period 2004-2020 with a sample of 110 countries. Panel data technique is used in the empirical analysis to deal with the heterogeneity problems. Our results confirm low levels of financial inclusion in the countries' sample and shed light on the benefits of having more developed financial and governance systems, as well as more countries' economic freedom. We provide several policy implications from our findings.

Keywords: sustainable development goals, financial inclusion, financial development, governance systems, economic freedom

Introduction

The Universal Declaration of Human Rights states that everyone has the basic right to an adequate standard of living, emphasizing social and economic rights as a necessity to the healthy growth and development of individuals as well as communities. These socio-economic rights provide a foundation on which people can establish themselves to be not just members of the global community, but as independent, economically self-governing citizens who have an inherent freedom to influence their own livelihoods.[1] One of the numerous contributing factors that differentiate communities with more developed socio-economic rights from those with less is that of financial inclusion (Arner et al., 2020), a factor that accounts for a population's involvement in formal financial systems including banks, credit unions, cooperatives, post offices, or microfinance institutions (Allen et al., 2016).

Along with the Universal Declaration of Human Rights, countless other influential, multinational entities and edicts have credited financial inclusion as being a major constituent in, and thus tool to, advancing living standards around the world. The World Bank, the IMF, the Alliance for Financial Inclusion, and the Consultative Group to Assist the Poor, all agreed to collaborate in expanding the presence of formal accounts with the Universal Financial Access 2020 initiative (Gálvez-Sánchez et al., 2021), marking a turning point on the road to global financial inclusivity

at the historic 2009 Pittsburgh Summit. In this same era that is defined by an increase in recognition for the topic, the United Nations (UN) also identified financial inclusion as an enabler for at least seven of their seventeen Sustainable Development Goals (SDGs) for 2030.[2] The issue's repeated reference from such a broad range of supranational institutions-as well as numerous disciplines from the UN's very own SDGs-highlights the robust and expansive extent to which these entities believe that financial inclusion integration can, in an all-encompassing manner, reduce poverty, provoke prosperity, and drive development.

The World Bank identifies about 1.7 billion adults who do not have an account[3] with a financial institution or a mobile money provider, nearly half of which are living in just seven developing economies (Demirgüç-Kunt, 2018): China, India, Indonesia, Pakistan, Nigeria, Bangladesh, and Mexico. Therefore, we find it necessary to explore the determinants of financial inclusion with the aim of providing insights and recommendations to policy makers with the ultimate goal of having a more financially included global population.

Certainly, it is clear that financial inclusion is a growing area of focus. Previous academic studies and researches have concluded that much of the financial exclusion around the world is condensed into particular geographic regions and demographic categories (Demirgüç-Kunt, 2018, Khera et al., 2022), illustrating the high potential for sweeping impacts in underbanked communities when targeted. Overwhelmingly, previous studies establish (Hajilee et al., 2017, Van et al., 2021) a positive correlation between economic growth and financial inclusion with particularly suggestive results coming from developing economies (Khera et al., 2022), paving the way for the optimistic technical approach in our own index development. In supporting this ever-growing consensus, these bodies of literature recognize other relevant factors in their definitions of financial inclusion, such as social inclusion (Aziz and Naima, 2021) and digital assimilation of the community (Khera et al., 2022) .These other interpretations exhibit a deeper social consideration and embrace financial inclusion as a proposal that seeks to unlock development opportunities to improve the lives of all, especially those of the poor and marginalized (Allen et al., 2016) by expanding access to catalytic financial tools (Arner et al., 2020) as suggested by the United Nations. Referenced but not utilized, these studies fail to accurately incorporate and quantify the relevance of said dimensions into a functioning, empirical index.

Our goal in this study is to analyze how the development of the financial system, the efficiency of the world governance indicators per country as well as the country's economic freedom impact with the financial inclusion index. However, we attempt to enhance the existing, well-demonstrated technical approach by tackling our index from a tri-dimensional perspective, incorporating the traditional index to combine with previously underrecognized factors. Our Encompassing Financial Inclusion Index proportionally draws from three components: i) a financial systems development, ii) a quality of country's governance, and iii) economic freedoms. Specifically, in our sub-index that incorporates the relevant economic information pertaining to the development and health of financial systems, we have selectively decided to (within the limits of our data) pursue the proven technique carried out by Sarma and Pais (2011) with their Index of Financial Inclusion(IFI). Defining the three standard dimensions of financial inclusion as

accessibility, usage of banking services, and depth of the financial system, they create a comprehensive tool that acts as a cornerstone in our empirical studies.

Our empirical model illuminates the role of financial systems, governance quality, and economic freedoms as determinants in reaching financial inclusion and allows data-based conclusions to be drawn from various, previously uncombined perspectives. Given this uniqueness of precisely chosen variables and research studies, our methodology is contributory and novel as we construct the Encompassing Financial Inclusion index based on three complementary economic arguments to provide empirical, cross-country analyses. Additionally, our methodology incorporates multiple measures of each component to ensure robustness of our findings. Results are later contrasted with changes in the dependent variable by considering the access, use, and depth of the financial system. This applied econometric technique allows for control of the unobservable heterogeneity problem for each sampled country.

Altogether, low levels of financial inclusion in the country sample were unsurprisingly confirmed. Also, we encountered a significant monopoly power of the banking systems worldwide. Big banks have the capacity to provide financial services to financially excluded individuals, but in practice, evidence suggests a negative relationship between bank profitability and financial inclusion. Furthermore, results reveal that when capital markets drive resources to the corporate sectors, households will have less opportunities to be financially included. Additionally, we observe that countries' institutions play a fundamental role in financial inclusion, as demonstrated when analyzing the world governance indicators. Finally, according to previous research identified and utilized in our literature review, the economic freedom of the country positively affects financial inclusion. All these results reveal the importance of implementing national regulations for improving financial and governance systems while simultaneously encouraging the pursuit of economic freedoms.

The ultimate goal for the UN is decent economic growth. Consistently, academic studies have proven that financial exclusivity inhibits economic growth and severely impacts the most marginalized peoples around the world. By focusing on emerging markets where immediate inclusion can create exponential societal advancements, we seek to provide valuable insight and information to contribute to the UN’s goal.

The rest of the study continues as follows: Section 2 describes the literature review and develops the research hypotheses. Section 3 discusses the methodological strategy used in the empirical analysis. Section 4 presents our results and discussion. Section 5 explains our conclusions and policy recommendations.

Literature Review

Chibba (2009) highlights four key pillars to establish the nexus between financial inclusion, poverty reduction, and SDGs: private sector development, financial literacy, microfinance, and public sector support. More recently, Kabakova and Plaksenkov (2018) highlight the necessity of not only reinforcing the financial markets, but also the political, economic, social and technological

environment. In this assertion, the complex presence of financial inclusion in emerging economies becomes obvious. Consequently, we have grouped determinants of financial inclusion into three main categories, as detailed below, to parallel the development of the tenants in our Encompassing financial inclusion index.

Quality of the Countries´ Governance and Financial Inclusion

As our world becomes more global, supranational institutions, such as the Financial Stability Board and the Basel Committee on Banking Supervision, have been working to develop international financial standards. Academic arguments, such as that from Jones and Knaack (2019), suggest the requirement of given standard-setting bodies in international finance to analyze and implement national efforts for financial inclusion and economic development. Moreover, they propose relevant reforms that would eventually integrate into governmental policies and laws. Regardless of whether governments are persuaded by supervisional organizations, it is certain that they have a huge role in influencing financial health within their countries' and the region.

Research is minimal in understanding the exact manner in which government regulations improve financial inclusion (Kodongo, 2018). Governments indeed play a fundamental role in the process of inclusivity, but the direct correlations are not yet fully realized. Only very recent studies, such as Muhammad et al. (2021) provide early analytical data that government quality enhances financial inclusion while taking into account specific governmental indicators.

On the other hand, it is known that unfavorable regulatory systems restrict the frequency of people engaging in financial transactions and can diminish financial inclusion (Muhammad et al., 2021). For the specific example of Sub-Saharan Africa, Anarfo et al. (2020) find that strong conservative regulations could negatively impact financial inclusion goals. Kabakova and Plaksenkov (2018), by conducting an analysis of the ecosystems of 43 countries, highlight the importance of proper regulation and governmental support for the improvement of financial inclusion, along with other influential factors such as well-being and economic opportunities. Similarly, Avom et al. (2021) find that the nonlinear relationship between bank concentration and financial inclusion depends on the levels of protection of property rights, control of corruption, regulatory quality, and other factors.

Okello Candiya Bongomin et al. (2019) suggest fiscal policies such as tax exemptions as a tool for promoting digital financial innovations to improve financial inclusion. Therefore, the literature supports the growing prevalence of digitalization and its interconnectedness with financial inclusion. In this line, Arner et al. (2020) asserts that governments can adopt less expensive cash transfers, cut back on government expenditure, and allow for marginally higher-valued benefits to be captured with the help of digital financial tools.

Another important component of the quality of a country’s governance system is its integrity, which also plays a fundamental role in economic development. Sha'ban et al. (2020) find a positive relationship between government integrity and financial inclusion in the development of their own

cross-country financial index. On a similar page, Dzhumashev (2014) and Pulok and Ahmed (2017) develop models that conclude that the incidence of corruption declines with economic development. Finally, Al Mamun et al. (2017), using a sample of 50 exporting oil companies, find that the most important driver of economic growth is the quality of the governance system.

Therefore, the proposed hypothesis is:

H1: Improvements in the Quality of the Country's Governance System will Drive More Financial Inclusion.

Development of the Financial Systems and Financial Inclusion

Financial systems are composed of institutions such as central banks, private banks, microfinance entities, among others and their developmental policies affect the financial inclusion of the citizens in a particular country. As highlighted by Arner et al. (2020) restructuring financial systems to support the United Nations SDGs is a growing movement that enables financial inclusion to play an increasing role in the digital financial transformation. Ensuring this financial inclusion thus manifests a more inclusive society, hence the incorporation of financial systems in our index as it can be distinctly measured and advanced in a society Aziz and Naima (2021).

Banking System

Financial inclusion is a question to be considered by central banks, firstly, because of the impact it has on economic growth and poverty reduction and secondly, for the implications it has for monetary and financial stability. For instance, more inclusion facilitates the efforts of the central bank to keep prices under control and drives stable inflation and output growth for emerging markets (Vo et al. 2021). Notwithstanding, it should be noted that more financial inclusion doesn't implicitly have positive repercussions to an endless degree. As explained by Mehrotra and Yetman (2015), financial inclusion in the specific scenario of fast credit growth in the banking sector could conversely increase the risks in the financial system. Overarchingly however, negative side effects are trifling, and central banks proposedly support financial inclusivity among citizens and private companies.

Both private and public banks play a critical role in the path for financial inclusion. For instance, Inoue (2019) explains how since the late 1960s, the Indian government has implemented different policies to expand banking services in the country. Among those policies, he finds how public sector banks have contributed to poverty reduction with their influence as they hold more than 70% of market share of banking assets. Hence, the impactful role of the public sector banks is illustrated as they financially serve the poor and those marginalized in society without solely seeking to maximize their profits.

Similarly, Diniz et al. (2012) present a trailblazing case study of financial inclusion in the *Autazes* region, a part of the Amazon not served by banks until 2002. They found financial inclusion as an important driver for socio-economic development, but simultaneously found problems such as

low-income populations and over-indebtedness that highlight the necessity for first financial education before assimilation into the private banking sector. In this sense, the combination of both private and public banking resources are relevant in how effectively people are admitted into the overall financial system.

Finally, Dinh Thi Thanh and Nguyen Ha (2019) reflect on specific indicators of a healthy financial system's presence in a community. A larger number of bank branches and ATMs correlates to an increase in formal financial resources, promoting financial literacy, they explain. Allen et al. (2016) also acknowledges that low bank account costs and proximity to financial intermediaries are other indicators that positively affect inclusivity. Hence, according to Huston (2010), analyzing the pertinence of financial inclusion in a community is necessary not only to understand the educational influence but also to pinpoint the barriers that people experience when attempting to make an effective financial decision with a bank. Consequently, we direct our index and this literature review to further understand financial inclusion's relationship with banks in emerging economies.

Capital Markets

According to Lim (2014), financial development and institutional quality are relatively vigorous determinants of investment into capital markets. More specifically, Rojas Cama and Emara (2022) Rojas Cama and Emara (2022) affirm this statement and specify it, saying that financial inclusion itself acts as a determinant factor for an investment. Together, these bodies of literature reflect a macroeconomic stance on financial inclusion's role in capital markets as a catalyst and a worthy variable in deciding the investment capabilities in a country (Md and Jianguo, 2019).

Continuing with the large scale perspective, Lim (2014) examines the institutional and structural factors that contribute to differing investment activities between countries. Indeed, the author states that national policies looking to improve investment financing should improve financial sector development, including but not limited to financial inclusion development. Accordingly, Md and Jianguo (2019) suggest that policymakers in emerging economies implement directed financial policies that strengthen the capital markets and promote financial inclusion to thus attract funds from international investors.

Notably, this identified accumulation of research studies the level of financial inclusion as a reason *to* invest in capital markets. As the already limited research becomes more sectoral, however, it narrows on the intermarket correlation between capital market participation and financial inclusion, as seen in the subsequent literature.

From a regional perspective, Rojas Cama and Emara (2022) similarly connect financial inclusion to capital markets in their study of MENA countries. Upon researching gross capital formation and related fields, they find that financial inclusion has the potential to promote economic growth through, for example, allocating capital more effectively. With efficient capital allocation, the cost of capital can be reduced (Sarma and Pais, 2011), while the availability of capital can be increased (Hajilee et al., 2017, Kusuma, 2020); inevitably this leads to smoother access to the

financial system for excluded people as the combination of capital enhancements bidirectionally stimulate the capital market. That being said, a more indirect causal chain leads to this conclusion, illustrating the possibility of a lack of robustness, potential for errors, or decrease in correlation.

From a single country perspective, Agnes Akpene et al. (2022) highlight these conclusion instabilities with their Ghana case study. While devising their standalone regression model -with key variables tested being financial literacy, financial inclusion, and stock market participation- they show that connection between the first two stated variables on stock market participation is not actually statistically significant. Numerous other optimistic conclusions are derived, but those relating to financial inclusion in emerging markets indicate that the use of capital markets as a variable may have marginally positive impacts, if not negative implications.

Seemingly, results regarding this interconnectedness between financial inclusion and capital markets are mixed, particularly when taking the necessary steps to differentiate between interactions within a country and between countries. Altogether, the development of the financial system is crucial to enhancing financial inclusion. Given the data available, literature focus has been directed toward banking systems and capital markets with further analyses investigated in the conclusion section.

Therefore, the proposed hypothesis is:

H2: Improvements in the Development of the Financial System will Drive Financial Inclusion

Economic Freedom and Financial Inclusion

According to the Heritage Foundation,[4] economic freedom is the fundamental right of every human to control his or her own labor and property. Accordingly, Ram (2014) highlights the importance of this economic freedom as an appropriate indicator of a country's institutional and political environment. Thus, this body of literature explains the interconnectedness of financial inclusion, economic freedom and quality of the institutional system. Indeed, Muhammad et al. (2021) explain that high governance quality combined with economic freedom can increase the financial services available to people and can subsequently increase the country's inclusivity.

Although this explanation contributes to the justification of the two factors in building an encompassing financial inclusion index, it is still essential to distinguish economic freedom as an independent variable to be considered, as it does not perfectly correlate to governance quality. As shown in the Fraser Institute's own categorization of economic freedom,[5] governance is merely a component, along with size of government, regulation, sound money, and others being identified by Gwartney et al. (2021)[6].

Muhammad et al. (2021) further elaborates on the importance of economic and financial freedom; economically free environments, where restrictions are not overly excessive or prohibitive, allow for natural business competition which in turn stimulates financial inclusion strategies among

organizations. As explored in their robust study, free-market economies can financially include their non-banked individuals more effectively with the help of directive government regulations. Finally, their methodological findings eloquently depict economic freedom and government quality as “mutually reinforcing and their ambidextrous performance enhance financial inclusion”.

In a pioneering study, Chortareas et al. (2013) designed a two-stage approach to definitively measure the impact of financial freedom on financial inclusion effectiveness. Effectiveness scores are derived for the 27 European Union member states, which are then regressed against a variety of economic freedom control variables. Results indicate a strong correlation between financial factors of economic freedom and overall bank efficiency and financial stability.

The economic freedom data from the study of Chortareas et al. (2013) come from the Heritage Foundation’s Index of Economic Freedom.[7] Today, this Index[8] evaluates 12 governmentally affiliated areas that impact national prosperity, such as fiscal health, labor freedom, and government integrity. Both Heritage Foundation[9] and the Fraser Institute have developed reliable, methodologically backed indices that translate relevant social factors into digestible data. Although the economic freedom rankings are similar, we decided to use data from the Heritage Foundation as it represents mainly policy variables under a government’s control.

Therefore, the proposed hypothesis is:

H3: Improvements in Economic Freedom will Drive Financial Inclusion.

Methodology

Variables Definition and Source of Information

The goal of this study is to analyze how the development of the financial systems, the efficiency of the world governance indicators per country, and the country's economic freedom impact financial inclusion. Hence, the dependent variable will correspond to a metric of the encompassing financial inclusion index. In order to build an efficient metric of financial inclusion, we follow Khera et al. (2022) and Sha'ban et al. (2020) approaches. Khera et al. (2022) considers the access and the usage for digital financial services to build their index, whilst Sha'ban et al. (2020) include the depth of the financial system to build their index. Therefore, by consolidating both similar approaches, this study incorporates the three complementary dimensions of financial inclusion: the use, access, and depth. The information was obtained from the Financial Access Survey published by the IMF and corresponds to a supply-side data set on the access and use of financial services to measure and monitor financial inclusion. Regarding the dimensions, the use of the financial system represents the outreach of available financial services in each country by adults, which is measured by the number of deposit accounts with commercial banks per 1,000 adults and by the number of loan accounts with commercial banks per 1,000 adults. The access to the financial system represents the demographic outreach of banks’ physical outlets and is also measured with two indicators, represented by the number of commercial bank branches per 100,000 adults and by the number of ATMs per 100,000 adults. Finally, the depth of the financial

system represents the actual usage of financial services. This dimension is measured with two indicators represented by the outstanding deposits with commercial banks as a share of the GDP and the outstanding loans from commercial banks as a share of the GDP.

Following Sha'ban et al. (2020) and Svirydzenka (2016), the construction of the encompassing financial inclusion index is done in three different steps. In the first one, we normalize the three different dimensions (e.g., use, access, and depth) of financial inclusion to let the metric run from 0 to 1. In order to do so, a non-parametric approach is used that allows one to get an equally-weighted composite index. The estimation is conducted by applying $l_{itc} = (I - Min)/(Max - Min)$, where l_{itc} is the value of financial inclusion indicator i in period t for country c; Min and Max are the minimum and maximum value, respectively, for indicator i over the sample period for all sample countries. Therefore, the normalized value represents the indicator's deviation from the minimum and maximum limits across the sample, that is, it relates a country's extent of financial inclusion to the global minimum and maximum across all countries and years. Since the metric runs from 0 to 1, the higher the value of the indicator, the higher the degree of financial inclusion.

In the second step, the six normalized indicators (e.g., two indicators for each of the three measures of use, access, and depth) are used to calculate three dimensional indices. The dimensional index corresponds to the average of the two relevant indicators. Finally, in the third step, the three dimensional indices are aggregated into the encompassing financial inclusion index (FII) using the geometric mean as follows:

$$FII = \sqrt[3]{I_{use} \times I_{access} \times I_{depth}} \quad (1)$$

The independent variables are grouped in three categories: i) development of the financial systems, ii) the efficiency of the world governance indicators per country and iii) the country's economic freedom. Since financial systems are complex structures, we decided to subsequently break it down into its development of the banking system and development of capital markets as its two most important components to gain granular understanding of the drivers of financial inclusion. The information was obtained from the Financial Development and Structure Dataset published by the World Bank and developed according to Beck et al. (2000). The degree of development of the banking system will be measured with: i) the claims on domestic real nonfinancial sector by the Central Bank as a share of GDP $(FinDevBank1)$, ii) bank credits to bank deposits measured as the private credit by deposit money banks as a share of demand, time, and saving deposits in deposit money banks $(FinDevBank2)$, iii) net interest margin computed as the accounting value of banks' net interest revenue as a share of its interest-bearing (total earning) assets $(FinDevBank3)$, iv) bank concentration measured as the assets of three largest banks as a share of assets of all commercial banks $(FinDevBank4)$, v) banks´ ROA computed as the average return on assets $\left(\frac{Net\ Income}{Total\ Assets}\right)$ $(FinDevBank5)$, vi) banks´ ROE calculated as the average return on equity $\left(\frac{Net\ Income}{Total\ Equity}\right)$ $(FinDevBank6)$, and vii) the banks´ Z-

Score ($FinDevBank7$) which is estimated as $\left(ROA + \frac{Total\ Equity}{Total\ Assets}\right)/\sigma_{ROA}$, where σ_{ROA} is the standard deviation of ROA.

The corresponding measures of the development of the capital markets are: i) stock market capitalization ($FinDevMkt1$) computed as value of listed shares to GDP, ii) the stock market turnover ratio ($FinDevMkt2$) which is the ratio of the value of total shares traded to average real market capitalization, iii) private bond market capitalization to GDP ($FinDevMkt3$) computed as the private domestic debt securities issued by financial institutions and corporations as a share of GDP, iv) the public bond market capitalization to GDP estimated ($FinDevMkt4$) as the public domestic debt securities issued by the government as a share of GDP, v) international debt issues to GDP ($FinDevMkt5$) which is the international debt securities (amortization outstanding) as a share of GDP, and vi) and the net remittance inflows to GDP ($FinDevMkt6$).

The second category of independent variables correspond to measures of the quality of a country's governance systems. These variables are obtained from the World Governance Indicator data set publicly available from the World Bank. These indicators measure six dimensions of governance which go from approximately −2.5 (weak) to 2.5 (strong) (Kaufmann et al. 2011): i) Voice and Accountability ($GovSys1$) which is the process by which governments are selected, monitored, and replaced; ii) Political Stability and Absence of Violence/Terrorism ($GovSys2$) which measures the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism; iii) Government Effectiveness ($GovSys3$) which corresponds to the quality of public and civil services, and the degree of their independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies; iv) Regulatory Quality ($GovSys4$) which measures the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development; v) Rule of Law ($GovSys5$) which reflects the confidence of the agents in the rules of society and whether they abide by them, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence; and finally vi) the Control of Corruption ($GovSys6$) which measures the perceptions of the extent to which public power is exercised for private gain, including both petty and major forms of corruption, as well as "capture" of the state by elites and private interests. Additionally, a seventh measure of the quality of the country's governance system is included ($GovSys7$) that is calculated as the average of the previous six dimensions of governance.

Finally, the last group of variables corresponds to the degree of the country's economic freedom published by The Heritage Foundation. The economic freedom index is a country´s indicator of the advancement in economic freedom, prosperity, and opportunity. This construct of economic freedom is recorded in this study with the following 4 indicators: i) financial freedom ($EconFree1$), ii) business freedom ($EconFree2$), iii) trade freedom ($EconFree3$), iv) investment freedom ($EconFree4$). In addition to these 4 indicators, we computed an overall score by averaging them,

with equal weights being given to each of them ($EconFree5$). Each of these indicators of economic freedom is graded on a scale of 0 to 1.

The total sample includes 110 countries which allows compound panels for each of them with data that goes from 2004 to 2020.

Baseline Model

Given that we account with cross sectional and time series data, panel data technique arises as a suitable econometric method for the regression outcomes. Hence, our general firm fixed-effect model is:

$$FII_{ct} = \beta_0 + \sum_{j=1}^{J} \delta_j DevFinSys_{ct} + \sum_{k=1}^{K} \theta_k GovSys_{ct} + \sum_{l=1}^{L} \rho_l EconFree_{ct} + \varepsilon_c + \varepsilon_{ct} \quad (2)$$

Where FII_{ct} represents the measure of encompassing financial inclusion index for the c country in the t period. $DevFinSys$ is the vector of J measures of the development of the financial system, and $GovSys$ is the vector of K measures of governance system in each country, and $EconFree$ is the vector of the different L measures of economic freedom. Finally, ε_c and ε_{ct} represents the country fixed-effect and the stochastic error, respectively.

Results and Discussion

Descriptive Statistics

Given that our encompassing financial inclusion index (FII) is an unobservable construct compounded by three elements (e.g., access, use and depth of the financial system) that in turn are individually formed out of two more elements, it is necessary to run a reliability test of each indicator. This test is conducted using Cronbach's Alpha which examines whether the components of each indicator (e.g., access, use, depth of the financial system, and the encompassing financial inclusion index) have internal consistency and stability. The value 0.6 or above in the scale reliability coefficient of the Cronbach´ Alpha is considered acceptable to pass the test (Ararat et al., 2021). In table 1, the scale reliability coefficients of the three financial inclusion dimensions are presented. Among the three dimensions, the depth index has the highest coefficients (α=0.989), indicating that the items are highly internally consistent and generalizable to others. The financial inclusion access index has a coefficient more than the threshold value (α=0.723) which also denotes that the test results are consistent over time. However, the use index coefficient is relatively small (α=0.648) compared to the access and depth indices, although it passes the test. Overall, the financial inclusion (FII) has an acceptable and justified reliability coefficient (α=0.609).

Table 1: Reliability Statistics: Cronbach's Alpha

	Access Index	Use Index	Depth Index	FII
Average interitem covariance:	0.0101	0.0063	0.0023	0.0030
Number of items in the scale:	2	2	2	3
Scale reliability coefficient:	0.7230	0.6476	0.9895	0.6086

The summary of the descriptive analysis of the dependent variable corresponding to financial inclusion, and the independent variables (development of the financial systems, world's governance indicators, and country's economic freedom) are shown in Table 2. The result shows that the three dimensions of financial inclusion access, use, and depth index have little variation among them in terms of mean value and their maximum values are close to 1. However, the maximum value of the financial index is 0.262, which indicates a very low level of financial inclusion in the countries´ sample. The variables denoting the development of the banking system have significant differences among them. For instance, the mean value of central bank assets to GDP $(FinDevBank1)$ and net interest margin $(FinDevBank3)$ is 5.1% and 4.7%, respectively. The other measures of banks profitability indicate that the average return on assets $(FinDevBank5)$ and the return on equity $(FinDevBank6)$ are 1.4% and 11.8%, respectively, but with a high volatility. Indeed, it is observed that the minimum and maximum values of return on equity are about 80% in negative and positive values. The results also exhibit that the three biggest banks in each country hold more than 57% of the banks assets in the financial system. This finding reveals the significant monopoly power observed in the banking systems worldwide. Regarding the development of the capital market, we observe that the stock market capitalization $(FinDevMkt1)$ represents more than 21% of the countries´ GDP, with a stock market turnover ratio $(FinDevMkt3)$ of almost 15 times. Moving to the aggregated world governance indicator $(GovSys7)$, we observe that the mean value is negative (-0.144), denoting that the governance structure of the selected sample is relatively poor. With respect to the economic freedom index $(EconFree5)$, the sampled economies have a considerably good average index of 60/100 which indicates that the economic freedom of the economies acts as a reinforcement for enhancing financial inclusion.

Table 2: Deceptive Statistics

Acronym	Variable´s Concept	Obs	Mean	Std. Dev.	Min	Max
Access	Access index normalized	1,318	0.127	0.118	0.001	0.969
Use	Use index normalized	1,318	0.108	0.099	0.000	0.998
Depth	Depth index normalized	1,318	0.017	0.048	0.000	0.964
FII	Encompassing financial inclusion index	1,318	0.055	0.041	0.000	0.262
FinDevBank 1	Central bank assets to GDP	1,188	0.051	0.094	-0.971	0.737

FinDevBank2	Bank credit to bank deposits	1,188	0.887	0.407	-0.085	3.119
FinDevBank3	Net interest margin	1,188	0.047	0.031	-0.194	0.232
FinDevBank4	Bank concentration	1,188	0.571	0.297	-0.306	1.436
FinDevBank5	Bank´s roa	1,188	0.014	0.017	-0.085	0.238
FinDevBank6	Bank´s roe	1,188	0.118	0.121	-0.851	0.816
FinDevBank7	Bank Z-score	1,188	0.131	0.097	-0.077	0.595
FinDevMkt1	Stock market capitalization	1,188	0.211	0.392	-0.864	3.284
FinDevMkt2	Stock market total value traded	1,188	0.088	0.255	-0.807	2.154
FinDevMkt3	Stock market turnover ratio	1,188	0.146	0.396	-1.085	4.550
FinDevMkt4	Private bond market capitalization	1,188	0.045	0.142	-0.361	0.802
FinDevMkt5	Public bond market capitalization	1,188	0.090	0.266	-0.411	2.108
FinDevMkt6	International debt issues to GDP	1,188	0.135	0.259	-0.204	1.798
FinDevMkt7	Remittance inflows to GDP	1,188	0.052	0.070	-0.002	0.370
GovSys	World governance index	1,316	-0.144	0.728	-1.903	1.727
EconFree	Economic freedom index	1,176	60.002	8.649	21.400	79.100

Notes: This table represents the summary statistics of the financial inclusion, financial system, world governance indicators, and country's economic freedom. The financial index is calculated for 1318 observations; the development of the banking system and the development of the capital market index are calculated for 1188 observations; the world governance indicator is calculated for 1316 observations, and the economic freedom index is calculated for 1176 observations.

Multivariate Analysis

This section represents the regression result of the fixed-effect model for exploring the impact of the financial system development on financial inclusion. The metrics of financial system development are divided into two broad groups that identify the development of the banking system and the development of capital markets. The first seven variables exhibited in Table 3 correspond to the banking system development while the rest denotes the capital market development. The central bank asset to GDP $(FinDevBank1)$ is found to be statistically significant in the first three models. Regarding the conversion of bank deposits into credits $(FinDevBank2)$, this is statistically significant in all the models at 1% confidence level. This is a clear symptom of financial inclusion when the access to credit gets to the final consumer. Moving to the net interest margin $(FinDevBank3)$ however, the relationship is found negative, indicating that more profitable banks have lower financial inclusion. When banks make more money from the customer in order to increase the margin for internal profits, the barriers to access to the financial system get higher and with more friction, preventing the final consumer from taking advantage of banking services.

This finding is in line with the banks return on equity ($FinDevBank6$), which indicates that there is a transfer of wealth from final customers to banks that gets more difficult the access to the financial system. This finding is also related to the metric of bank risk ($FinDevBank7$) which is positive and statistically significant. However, given the construction of this variable, the interpretation of the estimated coefficient is in the opposite direction. In this case, it means that as bank operating risk increases, the financial inclusion is constrained. This can be interpreted as a hedging strategy followed by financial intermediaries that restrict the access to financial services to people when risk increases. Regarding the bank concentration ($FinDevBank4$) which represents a measure of the monopoly power of the bank, the last model indicates that big banks have the capacity to provide more financial tools to the people for getting access to the financial system.

The second broad group corresponds to the development of the capital markets. The evidence indicates that stock market capitalization to GDP ($FinDevMkt1$) is negatively associated with financial inclusion (p=0.0021) at a 1% level confidence level. One plausible explanation of such a diminishing relationship is that the stock market capitalization variable measures the development of corporate sectors more than the financial development of households. Also, when banks and financial institutions start investing in the stock markets rather than focusing on credits and loans to people, the consumers are deprived of getting smoother access to financial tools. Such concentration in the stock markets may technically diminish the development of the financial system. This finding is concomitant with the stock market turnover ratio ($FinDevMkt2$) which is also negatively related to the financial inclusion index (FII). This finding indicates that when total shares are continuously traded and they change hands very often, the financial system lubricates such transactions through allocating resources and financial services in the corporate sector, and consequently, giving less opportunities to households to take advantage of financial services.

Two additional metrics of development of capital markets are the private bond market capitalization($FinDevMkt3$) and the international debt issues ($FinDevMkt5$). The findings indicate that the two of them impact positively on our metri of financial inclusion (FII), revealing that the development of alternative investment as well as credit tools which are focused on sophisticated investors permeate the changes of households to take advantage of these instruments. This consequently leads to greater financial inclusiveness.

Therefore, the findings describe a portrait in which the banking can encourage financial inclusions through some variables, but also discourage inclusion when banks take excessive operating risks and when capitalize on abnormal profits in detriment of the inclusiveness opportunities of households. Similarly, when capital markets drive resources to the corporate sector, there are fewer opportunities for households to be financially included.

Table 3: Financial Inclusion and Development of the Financial System

VARIABLES	(1) FII	(2) FII	(3) FII	(4) FII	(5) FII	(6) FII
FinDevBank1=central bank assets to GDP (%)	-0.0135**	-0.0130**	-0.0133**			-0.0085

	(0.0058)	(0.0058)	(0.0058)			(0.0058)
FinDevBank2=bank credit to bank deposits (%)	0.0158***	0.0154***	0.0159***			0.0156***
	(0.0018)	(0.0018)	(0.0018)			(0.0017)
FinDevBank3=net interest margin (%)	-0.0473***	-0.0379**	-0.0565***			-0.0445***
	(0.0162)	(0.0160)	(0.0161)			(0.0155)
FinDevBank4=bank concentration (%)	0.0026	0.0025	0.0019			0.0030*
	(0.0018)	(0.0018)	(0.0018)			(0.0017)
FinDevBank5=Bank ROA	-0.0114					
	(0.0273)					
FinDevBank6=Bank ROE		-0.0100***				
		(0.0035)				
FinDevBank7=Bank Z-Score			0.0176*			0.0165*
			(0.0104)			(0.0099)
FinDevMkt1=stock market capitalization to GDP (%)				-0.0036*	-0.0002	-0.0030
				(0.0021)	(0.0021)	(0.0020)
FinDevMkt2=stock market turnover ratio (%)				-0.0041***	-0.0038***	-0.0050***
				(0.0013)	(0.0013)	(0.0012)
FinDevMkt3=private bond market capitalization to GDP (%)				0.0246***	0.0285***	0.0216***
				(0.0049)	(0.0048)	(0.0048)
FinDevMkt4=public bond market capitalization to GDP (%)				0.0049	0.0036	0.0058
				(0.0037)	(0.0036)	(0.0035)
FinDevMkt5=international debt issues to GDP (%)					0.0318***	0.0285***
					(0.0041)	(0.0039)
FinDevMkt6=remittance inflows to GDP (%)					0.0139	0.0224
					(0.0155)	(0.0151)
Constant	0.0432***	0.0441***	0.0414***	0.0554***	0.0496***	0.0353***
	(0.0020)	(0.0020)	(0.0022)	(0.0006)	(0.0011)	(0.0024)
Observations	1,188	1,188	1,188	1,188	1,188	1,188
R-squared	0.0856	0.0923	0.0879	0.0554	0.1075	0.182
Number of iden	99	99	99	99	99	99
Country-Year FE	YES	YES	YES	YES	YES	YES

Notes: this table represents the fixed-effect analysis between financial inclusion and the development of the financial system for 1188 observations. Here the development of the financial system is divided into the development of the banking system and the development of the capital market. The central bank asset to GDP (%), the deposit money bank assets to GDP(%), bank credit to bank deposit (%), net interest margin (%), bank concentration, and bank Z-score denote the "banking system development" group; the stock market capitalization to GDP (%), the stock market total value traded to GDP (%), stock market turnover ratio (%), private bond capitalization to GDP(%), public bond capitalization to GDP(%), international debt issues to GDP(%) and remittance inflows to GDP(%) represent the "capital market development" group. The sign ***, ** and * denotes the statistical significance level at 1%, 5% and 10% respectively. The p values are shown in the parenthesis.

Table 4 represents the fixed-effect model for the financial inclusion-world governance indicators relationship paradigm, which describes to what extent the quality of the governance system in a country affects financial inclusion. All of the corresponding measures of the world governance indicators are found statistically significant and positive. The finding implies that the more formal and better the institutional system, the higher the financial inclusion in the country. The finding further provides evidence that financial inclusion is a broader concept that includes not only the financial but also the institutional perspectives. Additionally, the very last model includes the variables financial development as well as the overall score of the World Governance Index $(GovSys7)$. In this case, the estimated coefficients are qualitative and quantitative similar to those obtained in the previous table.

Table 4: Financial Inclusion and World Governance Indicators

VARIABLES	(1) FII	(2) FII	(3) FII	(4) FII	(5) FII	(6) FII	(7) FII	(8) FII

FinDevBank1=CENTRAL BANK ASSETS to GDP (%)								-0.0039
								(0.0055)
FinDevBank2=BANK CREDIT to BANK DEPOSITS (%)								0.0144***
								(0.0016)
FinDevBank3=NET INTEREST MARGIN (%)								-0.0276*
								(0.0146)
FinDevBank4=BANK CONCENTRATION (%)								-0.0001
								(0.0016)
FinDevBank7=BANK Z-SCORE								0.0062
								(0.0094)
FinDevMkt1=STOCK MARKET CAPITALIZATION to GDP (%)								-0.0026
								(0.0019)
FinDevMkt2=STOCK MARKET TURNOVER RATIO (%)								-0.0046***
								(0.0012)
FinDevMkt3=PRIVATE BOND MARKET CAPITALIZATION to GDP (%)								0.0244***
								(0.0045)
FinDevMkt4=PUBLIC BOND MARKET CAPITALIZATION to GDP (%)								0.0012
								(0.0033)
FinDevMkt5=INTERNATIONAL DEBT ISSUES to GDP (%)								0.0240***
								(0.0037)
FinDevMkt6=REMITTANCE INFLOWS to GDP (%)								0.0120
								(0.0142)
GovSys1=Voice and accountability	0.0111***							
	(0.0018)							
GovSys2=Political stability		0.0070***						
		(0.0012)						
GovSys3=Government effectiveness			0.0191***					
			(0.0017)					
GovSys4=Regulatory quality				0.0117***				
				(0.0015)				
GovSys5=Rule of law					0.0165***			
					(0.0018)			
GovSys6=Control of corruption						0.0159***		
						(0.0016)		
GovSys7=World Governance Index							0.0255***	0.0265***
							(0.0022)	(0.0022)
Constant	0.0555***	0.0557***	0.0568***	0.0553***	0.0570***	0.0569***	0.0584***	0.0430***
	(0.0003)	(0.0003)	(0.0004)	(0.0003)	(0.0004)	(0.0004)	(0.0004)	(0.0024)
Observations	1,316	1,316	1,309	1,309	1,309	1,309	1,316	1,186
R-squared	0.0304	0.0289	0.101	0.0462	0.0675	0.0805	0.0993	0.276
Number of iden	109	109	108	108	108	108	109	98
Country-Year FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: This table shows the fixed-effect analysis between financial inclusion and world governance indicators. Here VA= voice & accountability; PS=political stability; GE= Government effectiveness; RQ= regulatory quality; RL=Rule of law; CC= control of corruption; WGI=the aggregate value of the World governance indicators. The sign ***, ** and * denotes the statistical significance level at 1%, 5% and 10% respectively. The p values are shown in the parenthesis. Table 5 displays the estimations for examining the impact of economic freedom metrics on encompassing financial inclusion index. Here, all the corresponding indicators of economic freedom (financial freedom, business freedom, trade freedom, and investment freedom) are positive and significantly associated with the financial inclusion variable. This signifies that the greater the economic freedom, the higher the financial inclusion for the country. The very last output exhibited in the table describes a comprehensive model where the development of the financial system variables, as well as the development of the country's governance system and the economic freedom metrics are all included. Again, the estimated coefficients are alike those estimated in the previous tables, providing a source of robustness to our general findings.

Table 5: Financial Inclusion and Economic Freedom

VARIABLES	(1) FII	(2) FII	(3) FII	(4) FII	(5) FII	(6) FII
FinDevBank1=CENTRAL BANK ASSETS to GDP (%)						-0.0015
						(0.0055)
FinDevBank2=BANK CREDIT to BANK DEPOSITS (%)						0.0133***

						(0.0017)
FinDevBank3=NET INTEREST MARGIN (%)						-0.0275*
						(0.0151)
FinDevBank4=BANK CONCENTRATION (%)						-0.0013
						(0.0019)
FinDevBank7=BANK Z-SCORE						0.0078
						(0.0097)
FinDevMkt1=STOCK MARKET CAPITALIZATION to GDP (%)						-0.0022
						(0.0019)
FinDevMkt2=STOCK MARKET TURNOVER RATIO (%)						-0.0044***
						(0.0011)
FinDevMkt3=PRIVATE BOND MARKET CAPITALIZATION to GDP (%)						0.0251***
						(0.0045)
FinDevMkt4=PUBLIC BOND MARKET CAPITALIZATION to GDP (%)						0.0007
						(0.0033)
FinDevMkt5=INTERNATIONAL DEBT ISSUES to GDP (%)						0.0240***
						(0.0037)
FinDevMkt6=REMITTANCE INFLOWS to GDP (%)						-0.0055
						(0.0150)
GovSys7=World Governance Index						0.0247***
						(0.0025)
EconFree1=Financial Freedom	0.0001*					
	(0.0001)					
EconFree2=Business Freedom		0.0002***				
		(0.0001)				
EconFree3=Trade Freedom			0.0006***			
			(0.0000)			
EconFree4=Investment Freedom				0.0003***		
				(0.0000)		
EconFree5=Overall Economic Freedom Score					0.0008***	0.0002**
					(0.0001)	(0.0001)
Constant	0.0506***	0.0411***	0.0146***	0.0373***	0.0088	0.0328***
	(0.0028)	(0.0036)	(0.0036)	(0.0020)	(0.0060)	(0.0068)
Observations	1,176	1,186	1,178	1,186	1,176	1,146
R-squared	0.00322	0.0143	0.110	0.0742	0.0535	0.277
Number of iden	101	102	102	102	101	97
Country-Year FE	YES	YES	YES	YES	YES	YES

Notes: this table denotes the regression analysis between financial inclusion and economic freedom for 1176 observations. Here Ff=financial freedom; BF=business freedom; TF= Trade freedom; IF=Investment freedom. The sign ***, ** and * denotes the statistical significance level at 1%, 5% and 10% respectively. The p values are shown in the parenthesis.

Finally, Table 6 represents the overall regressions by combining the aspects of the financial development, the world governance indicators, and the economic freedom indicators and their impact of the three composite elements of our encompassing financial inclusion index: access index, use index, and depth index. The very first six variables correspond to the development of the banking system whose coefficients denote that the greater the development of the banking system, the higher the financial inclusion. The next seven variables represent the development of the capital market. Here, the coefficients of the capital market development provide a mixed finding- some variables have a negative impact on financial inclusion while some have a positive one, as mentioned before. In addition to that, the quality of the institutional system (world governance indicators), and the economic freedom index are found positive and statistically significant to financial inclusion.

To check the robustness of the obtained findings, this study further incorporates three more measures of the financial inclusion index namely access index, use index and depth index. In

general, the results of the study are found to be robust across all the measures. The robustness results explore that the depth index is the only measure that changes over time across the variables. For instance, the central bank assets to GDP (%) is negatively associated with the depth index of the financial inclusion (p=0.0071) in the banking system development group. This signifies that the greater the size of the central bank, the higher the regulatory system which will provide less opportunity to the commercial banks for escalating financial inclusion. Furthermore, the bank credit to bank deposits is negative to the depth index (p=0.0022). one possible explanation of such a negative relationship is that all the commercial and public banks have less scope to give credits to the customers since they must deposit a bigger portion of their total deposits to the central banks for security as per the law. For the rest of the variables of the banking system development, the direction of the relationship remains the same across all the measures except for the net interest margin (%). Moving to the next group of financial system development, the relationship patterns of the private and public bond market capitalization to GDP (%) differ significantly to the depth (p=0.0060) and use (p=0.0080) index respectively. Moreover, the international debt issues to GDP (%) and remittance inflows to GDP (%) are significantly negative (p=0.0047) and positive (p=0.0187) respectively. Regarding the world governance indicators, the coefficients are significant across all the indexes except the depth one. Lastly, the overall score of the economic freedom index is significantly negative only to the depth index. It is thus recommended that both a good institutional system and economic freedom should be in place in order to enhance the actual usage of the financial services (depth index).

Table 6: Overall Model of Financial Inclusion and Subindices

VARIABLES	(1) Access Index	(2) Use Index	(3) Depth Index
FinDevBank1=CENTRAL BANK ASSETS to GDP (%)	-0.0116	-0.0081	-0.1660***
	(0.0180)	(0.0137)	(0.0078)
FinDevBank2=BANK CREDIT to BANK DEPOSITS (%)	0.0344***	0.0276***	0.0030
	(0.0054)	(0.0041)	(0.0023)
FinDevBank3=NET INTEREST MARGIN (%)	0.0230	-0.0848**	-0.0145
	(0.0491)	(0.0373)	(0.0212)
FinDevBank4=BANK CONCENTRATION (%)	-0.0029	-0.0009	0.0022
	(0.0061)	(0.0046)	(0.0026)
FinDevBank7=BANK Z-SCORE	-0.0115	0.0094	-0.0092
	(0.0315)	(0.0239)	(0.0136)
FinDevMkt1=STOCK MARKET CAPITALIZATION to GDP (%)	0.0017	-0.0099**	-0.0014
	(0.0062)	(0.0047)	(0.0027)

FinDevMkt2=STOCK MARKET TURNOVER RATIO (%)	-0.0111*** (0.0037)	-0.0106*** (0.0028)	-0.0027* (0.0016)
FinDevMkt3=PRIVATE BOND MARKET CAPITALIZATION to GDP (%)	0.1287*** (0.0146)	0.0314*** (0.0111)	-0.0348*** (0.0063)
FinDevMkt4=PUBLIC BOND MARKET CAPITALIZATION to GDP (%)	-0.0017 (0.0108)	-0.0248*** (0.0082)	0.0235*** (0.0046)
FinDevMkt5=INTERNATIONAL DEBT ISSUES to GDP (%)	0.0621*** (0.0120)	0.0388*** (0.0091)	0.0054 (0.0052)
FinDevMkt6=REMITTANCE INFLOWS to GDP (%)	-0.0461 (0.0487)	-0.0349 (0.0370)	0.0708*** (0.0210)
GovSys7=World Governance Index	0.0710*** (0.0081)	0.0603*** (0.0061)	-0.0003 (0.0035)
EconFree5=Overall Economic Freedom Score	0.0004 (0.0003)	0.0006*** (0.0002)	-0.0003* (0.0001)
Constant	0.0762*** (0.0222)	0.0625*** (0.0169)	0.0367*** (0.0096)
Observations	1,146	1,146	1,146
R-squared	0.264	0.2214	0.321
Number of iden	97	97	97
Country-Year FE	YES	YES	YES

Notes: this table represents the overall fixed effect estimation for the financial inclusion, and the subindices including financial system development, world governance indicators and the economic freedom for 1146 observations. The central bank asset to GDP (%), the deposit money bank assets to GDP(%), bank credit to bank deposit (%), net interest margin (%), bank concentration and bank Z-score denote the banking system development group; the stock market capitalization to GDP (%), the stock market total value traded to GDP (%), stock market turnover ratio (%), private bond capitalization to GDP(%), public bond capitalization to GDP(%), international debt issues to GDP(%) and remittance inflows to GDP(%) represent the capital market development group; the WGI is the world governance indicators and the overall score represents the economic freedom index. The robustness of the findings is checked using three more measures including access index, use index and depth index. The sign ***, ** and * denotes the statistical significance level at 1%, 5% and 10% respectively. The p values are shown in the parenthesis.

Conclusions

This study examines the impact of financial development, the quality of governance and institutional systems, and economic freedom on financial inclusion. For this purpose, a tri-dimensional, encompassing financial inclusion index is developed incorporating the dimensions

of access, use, and depth of financial systems. The empirical analysis reveals that the banking system plays a critical role in promoting the financial inclusivity of households when converting deposits into credits. Nevertheless, the results also reveal that the monopoly power of the banking system restricts access to financial services when banks focus on maximizing private benefits and net interest margin. Comparatively speaking, the development of the capital markets also describes a situation where the financial flows of money as well as financial instruments are mostly focused on the corporate sector; less resources are devoted to the integration and inclusion of households. Nevertheless, there are certain aspects like the private bond market development as well as the international debt market development that entail greater financial inclusion. Consequently, when the financial system develops in certain aspects, it does not necessarily involve lowering the barriers to the financial services for households.

The results exhibit consistent indications that the development of a sound institutional system vis-à-vis the promotion of economic freedom in their multiple facets are strongly correlated to the enhancement of financial inclusion. Therefore, we conclude that the financial inclusion as an instrument to promote economic growth and mechanism to mitigate unemployment and poverty, does not depend solely on frictionless financial systems, but also on a sound institutional system and granted economic freedoms.

The findings of this study have implications for the authority of financial institutions as well as policymakers. For instance, proceeding regulation and policies that relate to financial development and efficient markets should extend to all engaging parties in the ecosystem, including households and final users of the financial system instead of the usual corporate sector and sophisticated investors. Therefore, financial inclusion must be understood as an integrative component of economic development. Private companies and the corporate sector are key economic players that benefit from financial development, along with households and end users. Hence, the regulatory framework that promotes financial development should take into account both parties too. Such policy implications should be built by reinforcing the quality of the institutional system and the promotion of economic freedom, which together act as intertwined in mutually escalating the actual financial inclusion (Muhammad et al., 2021).

This research is subject to some limitations. In this study we focused only on a broad conceptualization of financial inclusion. We purposely excluded the digital component of financial inclusion; the access to new digital technologies in online bank transactions is expanding the scale and scope of banks operations, particularly in younger end users. Nevertheless, there is evidence observed in developed countries with significant elderly population indicating that they are falling behind in the use of digital services (i.e. mobile banking). The argument in this case is rooted in the asymmetric speed of digital advances and the capacity of the users to absorb such technology. None of these aspects have been considered in this study. This endeavor is left for subsequent development in this field.

Similarly, the financial inclusion may differ across levels of country development. This study looks at the encompassing financial inclusion index for an aggregated sample without digging deeper

in the economic stage of the countries included in the sample. Future research may benefit from comparing financial inclusion across developed and developing countries.

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