

Challenges and Opportunities for Financial Sector Development in Sierra Leone: An Institutional and Policy Perspective

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Abstract

This paper explores the challenges and opportunities for financial sector development in Sierra Leone, a country with a fragile post-conflict and post-crisis economy. Despite various reforms aimed at strengthening the financial system, it remains underdeveloped, characterized by limited access, shallow financial depth, and inefficiencies. The study employs the IMF's Financial Development Index to measure financial sector performance and examines key factors hindering progress in the sector, including macroeconomic instability, political fragility, weak institutional frameworks, low levels of financial literacy and large informal sector. Empirical evidence shows that these factors are significant obstacles to the progress of the financial sector. However, opportunities exist for improvement, particularly through sustained financial literacy programs, legal and regulatory reforms, and macroeconomic stabilization efforts. The paper concludes by recommending prioritized interventions by the government and international development partners to address these challenges, with a focus on strengthening institutions and fostering a stable economic environment conducive to long-term financial development.

Keywords

Challenges and Opportunities, Financial Sector Development, Institutional and Policy Perspective, Sierra Leone

1. Introduction

A large body of literature has established a strong link between financial sector development and economic growth (see King & Levine, 1993: pp. 717-737; Rajan & Zingales, 1998: pp. 559-586). This relationship is evident globally, where well-

developed financial systems underpin the success of advanced economies, while underdeveloped financial systems often characterize poorer nations. Many developing countries have embarked on financial reforms to enhance sector performance and, in turn, promote economic growth, with mixed results.

Financial sector development is typically measured by how effectively the financial system performs its core functions. However, various factors influence its performance. Ngouala, Ghislain and Bongo (2021: pp. 452-468) and Johnson (2011) highlight the importance of the institutional environment, which encompasses contract enforcement and property rights. Legal traditions, as established by La Porta et al. (1997: pp. 1131-1150; 1998: 1113-1155), may also impact financial development, while Acemoglu et al. (2001: pp. 1369-1401) and Beck et al. (2003: pp. 137-181) point to the role of endowments. Rajan and Zingales (1998: pp. 559-586) and Baltagi et al. (2009: pp. 285-296) suggest that trade and financial openness are crucial to banking sector development, while Ang and Kumar (2013: pp. 43-56) emphasis on cross-border barriers to financial innovation explain differences in financial sector development.

The financial system in Sierra Leone has evolved since the establishment of the Bank of Sierra Leone (BSL, 2018) in 1964, which was tasked with maintaining price stability and ensuring the financial system's stability. However, the civil war of 1991-2001 disrupted economic activities and damaged financial infrastructure, including bank branches in key cities (see Johnson, 2022: pp. 3500-3517; UNDP, 2008). Post-war financial reforms, initiated under the guidance of the International Monetary Fund (IMF), liberalized the financial system to some extent, with market-determined interest rates and a growing presence of foreign banks (see World Bank 2017; IMF, 2004). The banking sector, dominated by 14 commercial banks (10 foreign and 4 local, including 2 state-owned), comprises over 70 percent of total financial assets (Bank of Sierra Leone, 2022). Non-bank financial institutions, such as pension funds, microfinance, and community banks, represent a smaller share, while the capital market, established in 2007, remains stagnant.

Despite the ongoing reforms, Sierra Leone's financial sector remains shallow and underdeveloped, limiting the effectiveness of monetary policy. Financial innovation, rapidly transforming global financial systems, has had little impact on Sierra Leone's rudimentary financial services. According to IMF (2008), the country's financial development is hindered by physical barriers, weak financial infrastructure, and institutional and legislative challenges. Kargbo and Adamu (2008: pp. 30-61) further argue that poor enforcement of creditor rights and commercial contracts has undermined banks' ability to recover loans, impairing the financial system's ability to allocate credit efficiently.

This paper seeks to analyze the challenges to financial sector development in Sierra Leone and identify the scope for improvement. The remainder of the paper is structured as follows: Section 2 gives the theoretical basis of the study; Section 3 outlines the data and methodology; Section 4 provides an overview of the financial sector's evolution; Section 5 discusses the challenges and opportunities for financial sector development; and Section 6 concludes with policy implications.

2. Theoretical Basis

The study is grounded in several key theoretical frameworks and empirical findings from the broader literature on financial development and economic growth. These theories provide a foundation for understanding the challenges and opportunities facing Sierra Leone's financial sector.

A substantial body of literature, including seminal works by King and Levine (1993: pp. 717-737) and Rajan and Zingales (1998: pp. 559-586), has established a strong link between financial sector development and economic growth. This relationship underscores the importance of a well-functioning financial system for economic progress, particularly relevant for developing countries like Sierra Leone. Similarly, the work of Gurley and Shaw (1960) and Diamond and Dybvig (1983: pp. 401-419) on financial intermediation explains how financial institutions, particularly banks, facilitate the flow of funds from savers to borrowers. This theory is crucial for understanding the role of Sierra Leone's banking sector, which dominates the country's financial landscape.

La Porta et al. (1997: pp. 1131-1150; 1998: pp. 1113-1155) emphasize the importance of institutional factors, including legal traditions and property rights, in shaping financial development. This perspective is particularly pertinent given Sierra Leone's challenges with weak institutional frameworks and the rule of law. Boyd et al. (2001: pp. 137-181) found a strong negative association between inflation and financial sector development, emphasizing the importance of macroeconomic stability for financial growth. This relationship is evident in Sierra Leone's experience with high and volatile inflation rates. Gulde et al. (2006) provide evidence that inadequate property rights and poor judicial performance can stifle banking sector development, particularly in Sub-Saharan Africa. These findings are directly applicable to Sierra Leone's challenges with weak rule of law and institutional quality. Rajan and Zingales (1998: pp. 559-586) and Baltagi et al. (2009: pp. 285-296) suggest that trade and financial openness are crucial to banking sector development. This perspective is relevant when considering Sierra Leone's efforts to integrate into regional and global financial systems. Ang and Kumar (2013: pp. 43-56) emphasize the role of cross-border barriers to financial innovation in explaining differences in financial sector development across countries. Their study highlights the significance of these barriers in the context of financial innovation and development. This can help explain Sierra Leone's challenges in adopting and benefiting from global financial innovations.

Overall, these theoretical frameworks provide a comprehensive basis for analyzing the challenges and opportunities in Sierra Leone's financial sector development. They highlight the complex interplay between institutional factors, macroeconomic conditions, and financial sector performance, offering valuable insights for policy recommendations.

3. Data and Methodology

This study relies on secondary data sources. The table in **Appendix 1** provides a

comprehensive list of the variables used, including their definitions and sources. Given the multifaceted nature of financial development, which encompasses various dimensions such as depth, access, and efficiency, accurately measuring it can be challenging. To address this, the study employs the International Monetary Fund's (IMF) Financial Development Index as the primary indicator of financial development. This index offers a robust and comprehensive measure that captures key elements of financial sector performance across different dimensions.

In addition to the Financial Development Index, several other variables are examined to identify the key obstacles to financial sector development in Sierra Leone. The inflation rate is used to gauge macroeconomic stability, serving as a proxy for the broader economic environment. Institutional strength is captured through variables such as political stability, the rule of law, and key indicators from the World Bank's Ease of Doing Business report. These proxies are crucial for understanding how institutional weaknesses may undermine financial sector development.

Furthermore, financial literacy is included in the analysis to assess the extent to which a lack of public knowledge and engagement with financial services may act as a constraint on the growth of the financial sector. Data on the size of the informal sector was taken from the World Bank's informal economy database. By examining these variables in conjunction with the Financial Development Index, the study aims to provide a holistic view of the barriers and scope for financial development in Sierra Leone.

4. Financial Sector Evolution

Sierra Leone's financial sector underwent significant reforms in the late 1990s following a systemic banking crisis. Key factors that contributed to the crisis include political interference, fiscal indiscipline, institutional weaknesses, poor supervision, judicial inadequacies, and macroeconomic instability (Gilpin, 1998: pp. 144-155). Prior to these reforms, the financial sector operated under direct controls, such as interest rate ceilings and credit allocation policies, which are typical of rudimentary financial systems. These controls severely constrained bank balance sheets and hindered financial sector efficiency.

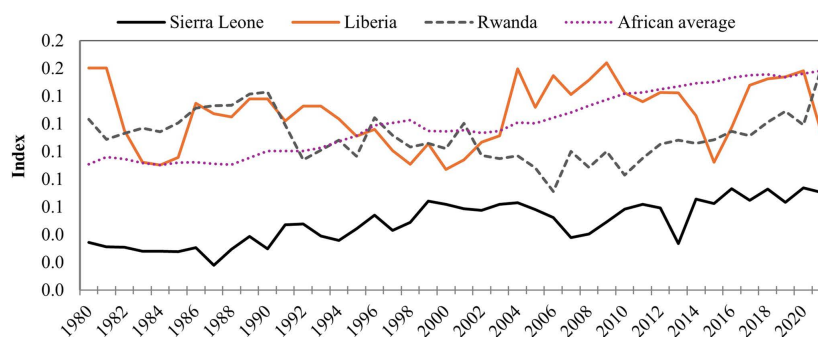
During the 1980s, economic growth averaged only 0.6 percent, while inflation was recorded at an average of 60.8 percent. This combination of stagnant growth and high inflation eroded business activities and led to a significant increase in loan defaults. Compounding the problem was a weak legal system that failed to support banks in recovering non-performing loans (NPLs). By 1990, at the height of the systemic crisis, NPLs had ballooned to 45 percent of gross loans.

In response to these challenges, a series of financial sector reforms were introduced, including the liberalization of interest and exchange rates, removal of direct credit controls, adoption of an indirect monetary policy framework, and strengthening of institutions and relevant legislation. However, the onset and intensification of the civil war in 1991 severely hampered the implementation of these reforms, leading to further deterioration of the financial sector.

Post-conflict, with the assistance of development partners such as the World

Bank and the IMF, the government made attempts to rehabilitate the financial sector. Some progress has been made, but the sector remains shallow and inefficient. As of 2021, the total assets of commercial banks, which dominate the financial system, accounted for only about 21.8 percent of GDP. The inefficiency of financial intermediation is evident in the large spread between lending and deposit rates, which stood at 13.9 percent in 2022 (Bank of Sierra Leone, 2022). Furthermore, commercial banks primarily manage their liquidity through direct interaction with the Bank of Sierra Leone (BSL), leading to a limited interbank market. Secondary markets for government securities and long-term capital markets are virtually non-existent, and money market activities are minimal.

Despite ongoing reform efforts, Sierra Leone continues to lag behind in financial sector development. According to the IMF Financial Development Index in 2021, the country's financial sector remains significantly underdeveloped compared to the African average. Figure 1 illustrates the financial development index for Sierra Leone relative to Liberia and Rwanda—two other countries with a history of conflict—as well as the average for Africa.



Source: IMF financial development index database accessed September 2024.

Figure 1. Financial development index. (1 = most developed; 0 = least developed)

5. Challenges and Opportunities for Financial Sector Development in Sierra Leone

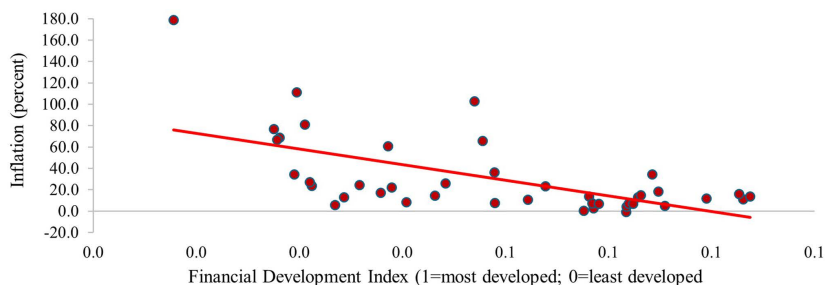
As outlined in the introduction, various studies have identified factors impeding financial sector development across different contexts, which can broadly be categorized into two main areas: poor macroeconomic fundamentals and weak institutional quality. For example, Boyd et al. (2001: pp. 137-181) found a strong negative association between inflation and financial sector development, citing that inflation increases economic uncertainty and information asymmetry, thereby obstructing financial sector growth. Regarding institutional weaknesses, Gulde et al. (2006) suggested that inadequate property rights are major barriers to banking sector development in Sub-Saharan Africa, while Mlachila et al. (2013) provide evidence that poor judicial performance stifles improvements in banking systems.

5.1. Challenges

The challenges hindering financial sector development in Sierra Leone are

discussed below, using cross-country data to analyze the link between barriers and the growth of the sector in the country.

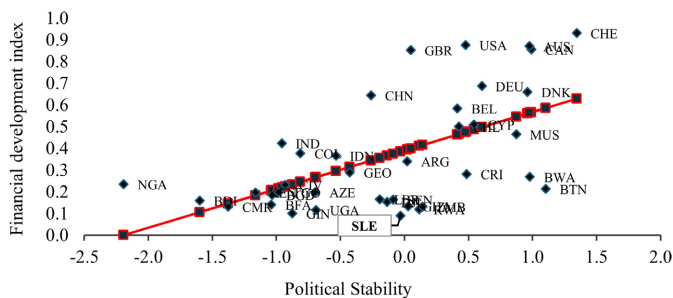
Figure 2 shows the relationship between inflation and financial development in Sierra Leone from 1980 to 2021. Sierra Leone has experienced persistently high and volatile inflation, especially after hosting the Organization of African Unity (OAU) in 1980. The scatter plot demonstrates a negative correlation, with a coefficient of 61 percent, indicating that inflation has likely been a significant impediment to financial sector growth. Weak macroeconomic fundamentals, exemplified by unstable inflation rates, appear to be a major challenge to the growth of the country’s financial sector.



Source: The inflation data is from the BSL database. The financial development index data is from the IMF Financial Development Index database.

Figure 2. Inflation vs. financial sector development in Sierra Leone 1980-2021.

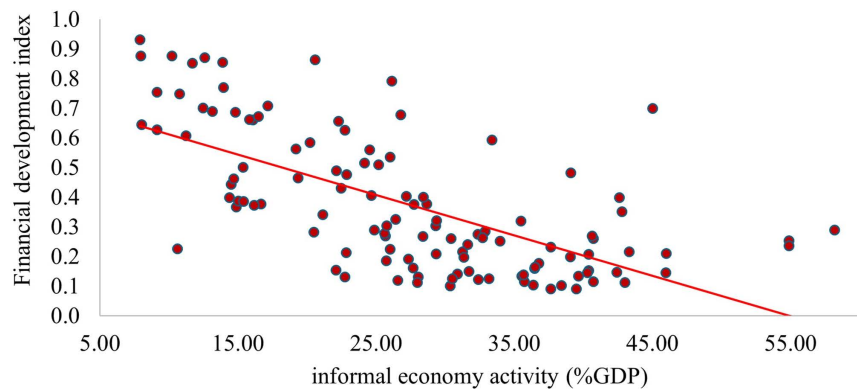
In addition, political stability is a critical prerequisite for capital market development and long-term investments. Although Sierra Leone has made significant progress since the end of the civil war in 2001 and the Ebola crisis of 2014-2015, the country remains politically fragile. Social tensions between supporters of the two main political parties continue to present risks, further exacerbated by the global economic downturn caused by the COVID-19 pandemic and the Russia-Ukraine conflict. As seen in **Figure 3**, countries with lower levels of political stability generally exhibit less developed financial sectors. This suggests that political instability in Sierra Leone may be contributing to the slow pace of financial sector development. The full sample of countries used in **Figure 3** is given in **Appendix 2**.



Source: World Governance Indicators (WGI), World Bank, and the IMF Financial Development Index database; Note: SLE represents Sierra Leone.

Figure 3. Political stability (−2.5 = weak; 2.5 = strong) and financial development, 2021.

Cross-country analysis shows that countries with smaller informal sectors tend to have more developed financial systems, as a larger portion of the population and businesses engage with formal financial institutions. **Figure 6** illustrates the relationship between informal economic activity and financial sector development in selected economies across the world. An inverse relationship emerged when the data was plotted, suggesting that large informality in an economy is associated with low financial development. Hence, the dominance of the informal economy in Sierra Leone may be limiting the growth of the formal financial sector. The full sample of countries used in **Figure 6** is given in **Appendix 5**.



Data Source: World Bank Informal Economy database and the IMF Financial Development Index database.

Figure 6. Informal economic activity (% of GDP) vs. financial sector development.

5.2. Opportunities

Despite these significant challenges, Sierra Leone has several opportunities to improve its financial sector. The advent of mobile banking and fintech solutions presents a key opportunity to expand financial services in Sierra Leone, particularly in underserved rural areas. The rapid penetration of mobile phones and internet services in the country could enable greater financial inclusion and reduce reliance on traditional banking infrastructure.

Strengthening partnerships between the public and private sectors can help address infrastructure deficits, especially in the areas of digital payments and financial literacy programs. Continued collaborations with international development partners such as the World Bank and IMF could accelerate the implementation of innovative financial solutions.

Also, expanding microfinance institutions (MFIs) could increase access to credit for small and medium-sized enterprises (SMEs), which are essential drivers of economic growth. Enhancing the regulatory environment for MFIs could help unlock this potential and spur entrepreneurship.

Although Sierra Leone's capital market remains underdeveloped, efforts to revitalize the Sierra Leone Stock Exchange could create opportunities for long-term financing, especially for infrastructure projects. The government could focus on policies that encourage domestic companies to list on the exchange, providing

them with new financing avenues.

In addition, participation in the West African Monetary Zone (WAMZ) provides an opportunity for Sierra Leone to deepen financial cooperation with other member countries. Regional integration could facilitate cross-border banking and investment flows, helping to stabilize the financial system and boost overall sector performance.

Moreover, continued reforms aimed at strengthening institutional frameworks, improving governance, and enhancing the rule of law will be critical to creating a conducive environment for financial sector growth. Reforms could also focus on improving the legal framework for creditor rights and contract enforcement to attract foreign investment.

6. Conclusion

Sierra Leone's financial system remains weak and underdeveloped, with several critical factors contributing to its slow growth. This study has identified some of the most important barriers, including political instability, weak rule of law, a challenging business environment, low financial literacy, high informal activities, and high inflation, which undermines macroeconomic stability. The country has faced significant external shocks, such as the civil war, the Ebola crisis, the COVID-19 pandemic, and the ongoing Russia-Ukraine conflict, which have compounded the financial sector's fragility.

While some efforts have been made to address these issues—such as financial literacy programs initiated by the Bank of Sierra Leone (BSL)—more comprehensive and sustained interventions are needed. It is clear that the simultaneous resolution of all challenges may not be feasible, so a prioritization approach is essential. The government, in collaboration with international partners like the World Bank, IMF, and African Development Bank, should focus on stabilizing the macroeconomic environment and strengthening institutional frameworks, particularly the rule of law and property rights.

Furthermore, financial sector reforms that have been implemented over the years must be carefully evaluated to determine their effectiveness. Measures that have not yielded the expected outcomes should be revised or replaced with new strategies. The establishment of a capital market, for instance, requires significant attention, but it can only thrive in an environment of economic stability and institutional integrity. Ultimately, a holistic approach that prioritizes stability, governance, and financial education is vital for the financial system's long-term development in Sierra Leone.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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Appendix 1

Key Variables Used in the Study.

Variable	Definition	Source
Financial development index 0 = Least developed 1 = Most developed	It is a summary of how financial institutions and financial markets are arranged in terms of depth (size and liquidity), access (the ability of individuals and firms to access financial services), and efficiency (the ability of institutions to provide financial services at low cost and with sustainable revenues, as well as the level of activity of capital markets) in a country.	Financial Development Index database, IMF
Inflation (%)	It measures the average annual percentage change in consumer prices.	IMF World Economic Outlook database, April 2022
Political stability -2.5 = weak, 2.5 = strong	It measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.	World Governance Indicators database, World Bank
The rule of law -2.5 = weak 2.5 = strong	It measures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	World Governance Indicators database, World Bank
Financial literacy	It measures the percentage of people in a country that are financially literate.	IMF Development Index database and HowMuch.net, S&P Global financial literacy survey
Informal activity (% of GDP)	An indicator that gauges the level of informal economic activity in a country. It is done by the World Bank for 196 economies across the world.	World Bank Informal Economy Database

Appendix 2

Full Sample Used in [Figure 3](#).

Country/Territory	Code	Political Stability	Financial Development Index
Sierra Leone	SLE	-0.03	0.09
Guinea	GIN	-0.88	0.10
Uganda	UGA	-0.69	0.12
Rwanda	RWA	0.12	0.12
Cameroon	CMR	-1.38	0.13
Zambia	ZMB	0.14	0.13
Ghana	GHA	0.03	0.13
Burkina Faso	BFA	-1.04	0.14
Djibouti	DJI	-0.13	0.15
Burundi	BDI	-1.60	0.16
Senegal	SEN	-0.09	0.16
Liberia	LBR	-0.19	0.17
Bangladesh	BGD	-1.03	0.19
Kenya	KEN	-1.16	0.20
Togo	TGO	-0.98	0.20
Azerbaijan	AZE	-0.70	0.20
Bhutan	BTN	1.10	0.21

Continued

Côte d'Ivoire	CIV	-0.93	0.23
Nigeria	NGA	-2.19	0.24
Botswana	BWA	0.98	0.27
Costa Rica	CRI	0.49	0.28
Georgia	GEO	-0.43	0.29
Argentina	ARG	0.02	0.34
Indonesia	IDN	-0.53	0.37
Colombia	COL	-0.81	0.38
India	IND	-0.96	0.42
Mauritius	MUS	0.87	0.47
Chile	CHL	0.43	0.50
Cyprus	CYP	0.54	0.51
Belgium	BEL	0.41	0.58
China	CHN	-0.26	0.64
Denmark	DNK	0.96	0.66
Germany	DEU	0.60	0.69
United Kingdom	GBR	0.05	0.85
Canada	CAN	0.99	0.86
Australia	AUS	0.98	0.87
United States	USA	0.48	0.88
Switzerland	CHE	1.34	0.93

Source: World Governance Indicators (WGI), World Bank, and the IMF Financial Development Index database;
Note: SLE represents Sierra Leone.

Appendix 3

Full Sample Used in **Figure 4**.

Country/Territory	Code	Rule of law	Financial Development Index
Argentina	ARG	-0.24	0.34
Austria	AUS	1.88	0.87
Azerbaijan	AZE	-0.60	0.20
Bangladesh	BGD	-0.64	0.19
Belgium	BEL	1.37	0.58
Bhutan	BTN	0.55	0.21
Botswana	BWA	0.47	0.27
Burkina Faso	BFA	-0.45	0.14
Burundi	BDI	-1.50	0.16
Cameroon	CMR	-1.08	0.13
Canada	CAN	1.77	0.86
Chile	CHL	1.12	0.50
China	CHN	-0.20	0.64
Colombia	COL	-0.41	0.38
Costa Rica	CRI	0.48	0.28
Côte d'Ivoire	CIV	-0.58	0.23
Cyprus	CYP	0.75	0.51
Denmark	DNK	1.83	0.66
Djibouti	DJI	-0.92	0.15
Georgia	GEO	0.33	0.29
Germany	DEU	1.63	0.69

Continued

Ghana	GHA	0.07	0.13
Guinea	GIN	-1.21	0.10
India	IND	0.03	0.42
Indonesia	IDN	-0.31	0.37
Kenya	KEN	-0.41	0.20
Liberia	LBR	-0.99	0.17
Mauritius	MUS	0.78	0.47
Nigeria	NGA	-0.88	0.24
Rwanda	RWA	0.12	0.12
Senegal	SEN	-0.21	0.16
Sierra Leone	SLE	-0.77	0.09
Switzerland	CHE	1.93	0.93
Togo	TGO	-0.59	0.20
Uganda	UGA	-0.29	0.12
United Kingdom	GBR	1.64	0.85
United States	USA	1.45	0.88
Zambia	ZMB	-0.34	0.13

Data Source: World Governance Indicators (WGI), World Bank, and the IMF Financial Development Index database.

Appendix 4

Full Sample Used in **Figure 5**.

Country/Territory	Financial Literacy	Financial Development Index
ALBANIA	14	0.21
ALGERIA	33	0.16
ANGOLA	15	0.15
ARGENTINA	28	0.34
ARMENIA	18	0.25
AUSTRALIA	64	0.87
AUSTRIA	53	0.63
AZERBAIJAN	36	0.20
BAHRAIN	40	0.44
BANGLADESH	19	0.19
BELARUS	38	0.18
BELGIUM	55	0.58
BELIZE	33	0.21
BENIN	37	0.15
BHUTAN	54	0.21
BOLIVIA	24	0.25
BOSNIA AND HERZEGOVINA	27	0.27
BOTSWANA	52	0.27
BRAZIL	35	0.59
BULGARIA	35	0.38
BURKINA FASO	33	0.14
BURUNDI	24	0.16
CAMEROON	38	0.13
CANADA	68	0.86
CHAD	26	0.10
CHILE	41	0.50

Continued

CHINA	28	0.64
COLOMBIA	32	0.38
CONGO, REP.	31	0.10
COSTA RICA	35	0.28
CÔTE D'IVOIRE	35	0.23
CROATIA	44	0.40
CYPRUS	35	0.51
CZECH REPUBLIC	58	0.38
DENMARK	71	0.66
DOMINICAN REPUBLIC	35	0.23
ECUADOR	30	0.19
EGYPT, ARAB REP.	27	0.30
EL SALVADOR	21	0.26
ESTONIA	54	0.33
ETHIOPIA	32	0.13
FINLAND	63	0.66
FRANCE	52	0.77
GABON	35	0.15
GEORGIA	30	0.29
GERMANY	66	0.69
GHANA	32	0.13
GREECE	45	0.54
GUINEA	30	0.10
HAITI	18	0.13
HONDURAS	23	0.22
HUNGARY	54	0.43
INDONESIA	32	0.37
IRAN	20	0.37
IRELAND	55	0.69
ISRAEL	68	0.56
ITALY	37	0.79
JAMAICA	33	0.27
JAPAN	43	0.88
JORDAN	24	0.39
KAZAKHSTAN	40	0.32
KENYA	38	0.20
KUWAIT	44	0.40
KYRGYZ REPUBLIC	19	0.13
LATVIA	48	0.28
LEBANON	44	0.32
LUXEMBOURG	53	0.75
MADAGASCAR	38	0.12
MALAWI	35	0.09
MALAYSIA	36	0.68
MALI	33	0.15
MALTA	44	0.56
MAURITANIA	33	0.13
MAURITIUS	39	0.47
MEXICO	32	0.40

Continued

MOLDOVA	27	0.35
MONGOLIA	41	0.39
MYANMAR	52	0.15
NAMIBIA	27	0.41
NEPAL	18	0.22
NETHERLANDS	66	0.70
NEW ZEALAND	61	0.61
NICARAGUA	20	0.15
NIGER	31	0.14
NIGERIA	26	0.24
NORWAY	71	0.67
PAKISTAN	26	0.24
PERU	28	0.40
PHILIPPINES	25	0.39
POLAND	42	0.48
PORTUGAL	26	0.66
ROMANIA	22	0.30
RUSSIAN FED.	38	0.48
RWANDA	26	0.12
SAUDI ARABIA	31	0.46
SENEGAL	40	0.16
SERBIA	38	0.26
SIERRA LEONE	21	0.09
SINGAPORE	59	0.75
SLOVAK REPUBLIC	48	0.32
SLOVENIA	44	0.38
SOUTH AFRICA	42	0.63
SPAIN	49	0.86
SRI LANKA	35	0.28
SUDAN	21	0.11
SWEDEN	71	0.71
SWITZERLAND	57	0.93
TAJIKISTAN	17	0.11
TANZANIA	40	0.12
THAILAND	27	0.70
TOGO	38	0.20
TUNISIA	45	0.26
TÜRKIYE	24	0.52
TURKMENISTAN	41	0.12
UGANDA	34	0.12
UKRAINE	40	0.21
UNITED ARAB EMIRATES	38	0.49
UNITED KINGDOM	67	0.85
UNITED STATES	57	0.88
URUGUAY	45	0.27
UZBEKISTAN	21	0.26
VENEZUELA, RB	25	0.23
VIETNAM	24	0.29
YEMEN, REP.	13	0.13

Continued

ZAMBIA	40	0.13
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Data source: IMF Development Index database, HowMuch.net, and S&P Global financial literacy survey.

<https://howmuch.net/articles/financial-literacy-around-the-world>

Appendix 5

Full Sample Used in **Figure 6**.

Country/Territory	Code	Informal Economy	Financial Development Index
Albania	ALB	29.34	0.21
Algeria	DZA	27.67	0.16
Angola	AGO	40.39	0.15
Argentina	ARG	21.15	0.34
Armenia	ARM	33.97	0.25
Australia	AUS	12.58	0.87
Austria	AUT	9.15	0.63
Azerbaijan	AZE	39.05	0.20
Bahrain	BHR	14.50	0.44
Bangladesh	BGD	25.73	0.19
Belarus	BLR	36.77	0.18
Belgium	BEL	20.22	0.58
Belize	BLZ	40.40	0.21
Benin	BEN	42.42	0.15
Bhutan	BTN	22.83	0.21
Bolivia	BOL	54.87	0.25
Botswana	BWA	25.67	0.27
Brazil	BRA	33.38	0.59
Bulgaria	BGR	27.76	0.38
Burkina Faso	BFA	30.89	0.14
Burundi	BDI	36.47	0.16
Cameroon	CMR	28.05	0.13
Canada	CAN	13.89	0.86
Chad	TCD	36.39	0.10
Chile	CHL	15.38	0.50
China	CHN	8.02	0.64
Colombia	COL	28.66	0.38
Congo, Rep.	COG	38.41	0.10
Costa Rica	CRI	20.50	0.28
Cote d'Ivoire	CIV	37.66	0.23
Croatia	HRV	28.42	0.40
Cyprus	CYP	25.16	0.51
Czech Republic	CZE	16.66	0.38
Denmark	DNK	16.09	0.66
Ecuador	ECU	27.33	0.19
Egypt, Arab Rep.	EGY	29.33	0.30
El Salvador	SLV	40.71	0.26
Estonia	EST	26.43	0.33
Ethiopia	ETH	22.75	0.13
Finland	FIN	15.83	0.66
France	FRA	13.96	0.77

Continued

Gabon	GAB	45.98	0.15
Georgia	GEO	58.19	0.29
Germany	DEU	14.82	0.69
Ghana	GHA	35.55	0.13
Greece	GRC	26.00	0.54
Guinea	GIN	30.35	0.10
Honduras	HND	43.31	0.22
Hungary	HUN	22.46	0.43
Indonesia	IDN	14.88	0.37
Iran, Islamic Rep.	IRN	16.18	0.37
Ireland	IRL	13.16	0.69
Israel	ISR	19.20	0.56
Italy	ITA	26.13	0.79
Jamaica	JAM	32.36	0.27
Japan	JPN	10.21	0.88
Jordan	JOR	15.03	0.39
Kazakhstan	KAZ	35.47	0.32
Kuwait	KWT	14.39	0.40
Kyrgyz Republic	KGZ	33.18	0.13
Latvia	LVA	25.61	0.28
Lebanon	LBN	29.37	0.32
Luxembourg	LUX	9.14	0.75
Madagascar	MDG	35.74	0.12
Malawi	MWI	39.51	0.09
Malaysia	MYS	26.79	0.68
Mali	MLI	31.71	0.15
Malta	MLT	24.53	0.56
Mauritania	MRT	30.52	0.13
Mauritius	MUS	19.34	0.47
Mexico	MEX	27.20	0.40
Moldova	MDA	42.78	0.35
Mongolia	MNG	15.41	0.39
Myanmar	MMR	22.09	0.15
Namibia	NAM	24.66	0.41
Nepal	NPL	31.25	0.22
Netherlands	NLD	12.48	0.70
New Zealand	NZL	11.22	0.61
Nicaragua	NIC	40.28	0.15
Niger	NER	35.66	0.14
Nigeria	NGA	54.88	0.24
Norway	NOR	16.48	0.67
Pakistan	PAK	31.63	0.24
Peru	PER	42.61	0.40
Poland	POL	22.87	0.48
Portugal	PRT	22.29	0.66
Romania	ROU	25.76	0.30
Russian Federation	RUS	39.09	0.48
Rwanda	RWA	26.57	0.12
Saudi Arabia	SAU	14.69	0.46

Continued

Senegal	SEN	36.50	0.16
Sierra Leone	SLE	37.64	0.09
Singapore	SGP	10.77	0.75
South Africa	ZAF	22.75	0.63
Spain	ESP	20.58	0.86
Sri Lanka	LKA	32.88	0.28
Sudan	SDN	27.98	0.11
Sweden	SWE	17.15	0.71
Switzerland	CHE	7.91	0.93
Tajikistan	TJK	43.00	0.11
Tanzania	TZA	40.74	0.12
Thailand	THA	45.03	0.70
Togo	TGO	31.34	0.20
Tunisia	TUN	32.71	0.26
Türkiye	TUR	24.17	0.52
Uganda	UGA	32.39	0.12
Ukraine	UKR	46.01	0.21
United Kingdom	GBR	11.69	0.85
United States	USA	7.95	0.88
Uruguay	URY	40.64	0.27
Venezuela, RB	VEN	30.43	0.26
Viet Nam	VNM	10.62	0.23
Yemen, Rep.	YEM	24.87	0.29
Zambia	ZMB	39.64	0.13

Data Source: World Bank Informal Economy database and the IMF Financial Development Index database.