



Financial sector development and industrialization: lessons and prospects for Ethiopia

Hang Yu & Jiaqi Zhao

To cite this article: Hang Yu & Jiaqi Zhao (23 Apr 2024): Financial sector development and industrialization: lessons and prospects for Ethiopia, China Economic Journal, DOI: [10.1080/17538963.2024.2345537](https://doi.org/10.1080/17538963.2024.2345537)

To link to this article: <https://doi.org/10.1080/17538963.2024.2345537>



Published online: 23 Apr 2024.



Submit your article to this journal [↗](#)



Article views: 17



View related articles [↗](#)



View Crossmark data [↗](#)



Financial sector development and industrialization: lessons and prospects for Ethiopia

Hang Yu and Jiaqi Zhao

National School of Development, Peking University, Beijing, China

ABSTRACT

A functional and efficient financial sector is essential for the industrial advancement of a nation. In the context of Ethiopia's rapidly growing economy, this study examines the limitations imposed by its underdeveloped financial sector on the country's economic advancement and explores viable policy interventions. Characterized by state-owned bank dominance, a scarcity of non-bank financial institutions, and deficient infrastructure, Ethiopia's financial system perpetuates widespread financial exclusion. This exclusion hinders industrial transformation, stifles local business growth, and narrows financing avenues for foreign entities. Insights from China's shift toward market-oriented financial reforms and Kenya's fintech innovations suggest a path for Ethiopia involving clear, gradual reforms. Strategic steps could include diversifying financial institutions, improving financial infrastructure, advancing mobile payment solutions, and adopting more versatile financing methods to address the financial challenges of industrialization.

KEYWORDS

Financial system; industrialization; financial exclusion; Fintech

JEL CLASSIFICATION

F36; F43; O14; O16

1. Introduction

The financial system is critical in mobilizing funds, mitigating risks, and processing market information in a modern economy (Levine 2005). A well-functioning financial sector allocates and integrates factors such as land, raw materials, labor, scientific technology, and data. Development theories indicate that finance facilitates economic growth and structural transmission by promoting capital accumulation (Diamond and Dybvig 1983), enhancing the efficiency of fund allocation (Diamond 1984; Greenwood and Jovanovic 1990), and driving innovation and technological progress (King and Levine 1993). Cross-country experiences demonstrate the impact of financial development in developing countries on achieving material capital accumulation, enhancing total factor productivity, and realizing long-term sustainable economic growth (Beck, Levine, and Loayza 2000). Therefore, a modern financial system is a prerequisite for industrialization and economic takeoff. As illustrated in Figure 1, a strong positive correlation exists between financial development and the share of manufacturing in the overall economy. Economically successful nations that have achieved industrialization are typically accompanied by well-developed financial systems.

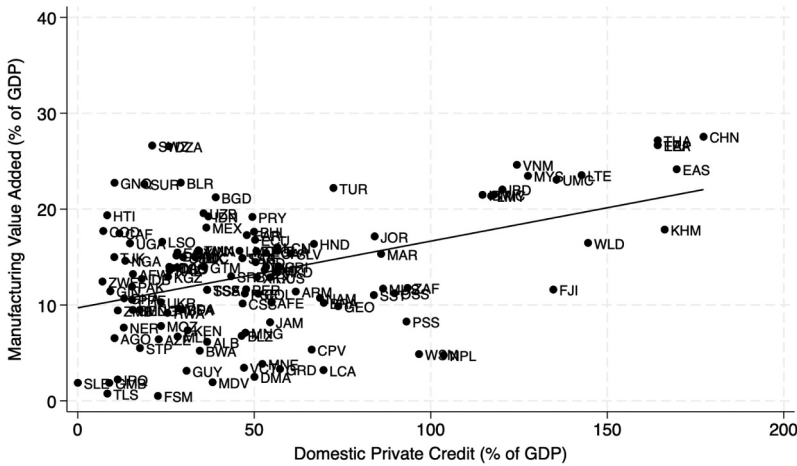
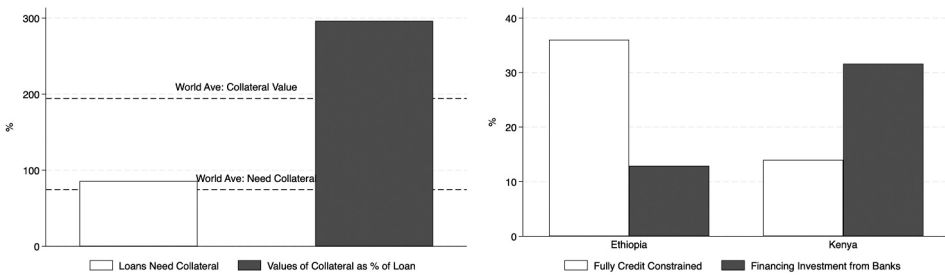


Figure 1. Financial sector and industrialization in developing countries. Note: Data sourced from the World Bank. The scatter plot displays data from 2021, including countries and regions defined as middle-income economies or below by the World Bank.



a. Collateral Requirements

b. The Ease of Getting Loans

Figure 2. The difficulties of enterprise loans. Note: The data comes from World Bank Enterprise Surveys, with data for Ethiopia in 2015 and Kenya in 2018.

However, developing a well-functioning financial system takes time and effort. In the early stages of industrialization, developing countries are often constrained by their backward financial systems. As shown in Figure 1, many countries stagnate with insufficient financial systems and weak industrial departments.

Several socioeconomic features of developing countries reinforce the consequences of a weak financial system. The first is the low urbanization rate. A large share of the population of developing countries resides in vast rural areas. Given the backwardness of financial infrastructure, geographical segregation may lead to widespread financial exclusion, restricting residents’ access to formal financial services. This subjects residents and businesses to severe credit constraints, thus hindering investment (Leyshon and Thrift 1995; Yaron, McDonald, and Piprek 1996).

Most emerging economies rely on foreign direct investment (FDI), yet their financial systems need to be improved for economic opening. The lack of well-functioning

financial systems is a crucial barrier to foreign investment, restraining foreign funds from introducing technology, fostering the rise of local enterprises, and accelerating economic growth (Alfaro et al. 2004, 2010). Financial constraints also affect foreign enterprises directly. Insufficient local loans and high interest rates further impede the willingness of foreign companies to invest.

This article focuses on the development of Ethiopia's financial system. We aim to conduct an in-depth analysis of its challenges and offer thoughts for overcoming them through cross-national comparative analysis. We want to draw more general lessons for other developing countries seeking fast industrialization and leveraging foreign investment to achieve economic takeoff.

In what follows, we first summarize the key features of Ethiopia's current financial system. These features include the dominance of state-owned banks, the underdevelopment of non-banking entities, and backward financial infrastructure construction. These characteristics lead to financial exclusion, wherein a large portion of the population cannot use financial resources to facilitate their development as they lack access to savings, loans, and convenience payment systems. Further analysis indicates that financial exclusion hinders industrialization transformation and local enterprise development and restricts foreign enterprise financing.

We then investigate the experience of developing financial sectors in China and Kenya. China's experience is relevant because, like Ethiopia, China had a financial system dominated by state-owned banks and faced strict financial regulations. Over 40 years of market reform, China's financial sector has successfully maintained the balance between efficiency and risk by gradually relaxing regulations through phased and pilot-proven reforms. Kenya resembles Ethiopia nowadays in terms of income level, while it has achieved a much higher degree of inclusive financial development through digital technologies.

Lastly, we prospect Ethiopia's future financial development. Potential strategies include initiating a gradual reform path, enriching financial entities, investing in financial infrastructure, promoting mobile money services, and enhancing flexibility in financing methods.

2. Financial constraints in Ethiopia

Ethiopia spans 1.1 million square kilometers in East Africa, boasting a population of 123 million as of 2022. It is Africa's second most populous country after Nigeria and a pivotal local power in the Horn of Africa. Since the early 21st century, the Ethiopian government has sought to follow the East Asia development model, adhering to an industrialization strategy guided by the Developmental State paradigm. A rapid economic takeoff followed. Between 2004 and 2018, Ethiopia achieved an average annual GDP growth rate of 10.4%, ranking first globally and attracting numerous enterprises to invest in the country. Despite these remarkable growth figures, Ethiopia's manufacturing sector remains nascent. As of 2022, manufacturing value-added accounted for only 4% of GDP, lower than the 11% in sub-Saharan Africa.

A common obstacle during the early stages of industrialization is the short supply of credit, which impedes savings mobilization and economic transformation. The inadequate credit supply is often attributed to low per capita income and underdeveloped credit intermediaries. Therefore, establishing a comprehensive financial system becomes essential.

2.1. Characteristics of Ethiopia's financial system

2.1.1. Dominance of state-owned banks in the financial sector

Ethiopia's financial system remains relatively shallow, with state-owned banks dominating the landscape. According to a recent report from the World Bank, the total assets of local financial institutions were approximately 62.9% of GDP in 2018, less than six-tenths of its neighbor Kenya. Bank assets accounted for 94% of these assets. The Commercial Bank of Ethiopia (CBE) and the Development Bank of Ethiopia (DBE) are the two major state-owned banks in the banking system, with the former holding an absolute dominant position.

Although private banks have gradually grown recently, the state-owned banks still control the financial system. According to the U.S. Department of State's Investment Climate Statements, Ethiopia had about 30 banks in 2023, with 28 being relatively small-scale private banks. In emerging markets, foreign capital may fill in the gap in financial resources when domestic capital is insufficient. Ethiopia, however, does not allow foreign entry into its financial sector. Since July 2007, foreign banks have only been able to establish liaison offices in Addis Ababa to conduct business after obtaining permission. The government has been considering liberalizing bank entry recently, but the implementation of relevant plans still needs to be made more explicit.

One of the reasons for the slow development of private banks is the liquidity issue and term regulations. Between 2011 and 2019, to cover the government's fiscal deficit, the Ethiopian government enacted the so-called '27% rule'. For every loan disbursed by private banks, they must purchase five-year bonds issued by the central bank, with the proportion being 27% of the loan amount. The interest rates on these bonds are typically around 5%, lower than deposit rates of about 7%. Since this provision favors long-term loans, the government further implemented term constraints, requiring private banks to allocate over 40% of loans to short-term loans (less than one year). This requirement effectively imposes heavy deposit reserve requirements on private banks, limiting their expansion capabilities and restricting their ability to provide loans, leading to increased costs of corporate loans. Although the government abolished the '27% rule' after 2019, the influence of this regulation has not been entirely resolved, as the country has encountered the pandemic and domestic conflicts immediately after.

2.1.2. Underdeveloped credit infrastructure

The incompleteness of the credit infrastructure further exacerbates financial constraints. Information asymmetry is a typical market failure in financial systems, manifested as ex-ante adverse selection and ex-post moral hazard. Default risk is one of the primary risks in the loan business due to information asymmetry (Crawford, Pavanini, and Schivardi 2018). The credit infrastructure, including collateral registry, secured transactions framework, and credit reporting system, can reduce information asymmetry between borrowers and lenders, thus increasing banks' willingness to lend. For example, credit ratings can alleviate adverse selection problems by identifying the quality of the applicant, transaction monitoring systems can timely detect default risks, and collateral systems can increase borrower's default costs and reduce the lender's losses once the default occurs.

According to the World Bank (2019), Ethiopia's credit reporting system is still inadequate. The direct consequence of the credit reporting system is that banks must pick qualified borrowers through strict approval processes and set high collateral requirements to reduce credit risk. Firstly, banks will impose strict restrictions on enterprise credit records and individual backgrounds of enterprise owners, and companies without loan records often get rejected. This excludes many individuals and firms from the approval process (Alemu 2016). Secondly, banks still impose strict collateral requirements even if the loan application is approved. As suggested by Figure 2A, in 2015, 85.8% of enterprise loans required collateral, with an average collateral ratio of 296.2%, far exceeding the global average of 74.6% and 194.1%, respectively.

The dominance of state-owned banks in the financial system and insufficient credit infrastructure make it difficult for the credit market to clear. Credit rationing is prevalent in Ethiopia, with the current banking system heavily biased toward state-owned and large enterprises. Large enterprises have richer loan records and can provide sufficient collateral than small and medium-sized enterprises. As a result, banks favor state-owned enterprises, which are typically large enterprises with substantial government support.

According to Alemu (2016), over 70% of local funds in Ethiopia flow to the government and state-owned enterprises. Therefore, financing channels for Ethiopian private enterprises in formal financial institutions are relatively limited. Figure 2B shows that only 12.9% of Ethiopian enterprises use bank loans to raise funds, with 36% constrained by credit. This proportion is lower than that of neighboring Kenya and significantly below the average for Sub-Saharan Africa. Our interviews in Addis Ababa and Hawassa industrial parks in 2023 confirmed this phenomenon: many enterprises indicated difficulty in obtaining loans from banks, and even if successful, the loan interest rates were as high as 10–18%.

2.1.3. Weak non-bank financial entities

With the banking system dominating the entire financial sector, Ethiopia's incomplete non-banking sector presents various issues. Firstly, since this country's financial market has not been established, direct financing channels such as bonds and stocks are still unavailable. Secondly, the insurance industry is still in its early stages, with residents needing more means to manage risks. As shown in Table 1, the assets of insurance and pension institutions only account for 0.8% of GDP, far below the banking sector. Thirdly, Ethiopia's mobile money development lags behind other African countries. For instance,

Table 1. The structure of Ethiopia's financial system.

	Ethiopia		Kenya	
	Assets (% of GDP)	# Institutions	Assets (% of GDP)	# Institutions
Banks	59.0	18	58.3	46
– Government Controlled	38.5	2	2.7	4
– Private	20.6	16	55.6	42
MFI	3.1	38	5.7	11
Insurance	0.6	17	7.5	52
Pension Funds	0.2	3	14.0	n.a.
Subtotal	62.9		85.5	
Capital Market Licensees	0	0	32.5	n.a.
Total	62.9		118.0	

Source: World Bank (2019).

neighboring Kenya began promoting mobile money a decade ago, while Ethiopia only introduced mobile money services in 2021 by the local telecom giant Ethio Telecom. According to the World Bank's Global Findex, the usage rate of mobile money in the region was almost zero before 2017, reaching only 4.6% by 2022, with the primary users being individuals with a high school education or above. In contrast, Sub-Saharan Africa's usage rate reached 18% in 2017 and exceeded 30% by 2021.

Microfinance Institutions (MFIs) have garnered considerable attention among various non-bank institutions. MFIs usually serve groups not covered by banks, such as rural residents, individuals, and micro-enterprises. They provide inclusive financial services. Unlike banking institutions, MFIs do not rely on collateral and financial information but instead leverage local social networks to address default risks through informal mechanisms like peer guarantee and reputational pressure (Morduch 1999).

Microfinance in Ethiopia began to develop in the 1990s, initially appearing in its capital and northern regions and gradually expanding nationwide (Berhanu Lakew and Azadi 2020). As of 2018, Ethiopia had 38 microfinance institutions, the majority supported by local governments, with a few operated by non-governmental organizations (NGOs) or commercial entities. The total number of loan clients exceeded 5 million, surpassing the 2.5 million loan clients of banks (World Bank 2019). Empirical studies based on Ethiopian data indicate that microfinance has a significant role in poverty alleviation and promoting consumption, with its sustainable impact (Berhane and Gardebroek 2011). Despite the flourishing development of the microfinance industry; its scale remains relatively limited. As shown in Table 1, the total assets of microfinance institutions account for only about 5% of banks' total assets.

2.1.4. Insufficient financial infrastructure

The lagged development of infrastructure is a significant factor contributing to the limited growth of the financial system. The penetration of traditional financial institutions is limited. Figure 3 illustrates the trend in Ethiopia's density of bank branches and ATMs. Although there has been some progress in the financial infrastructure of Ethiopia

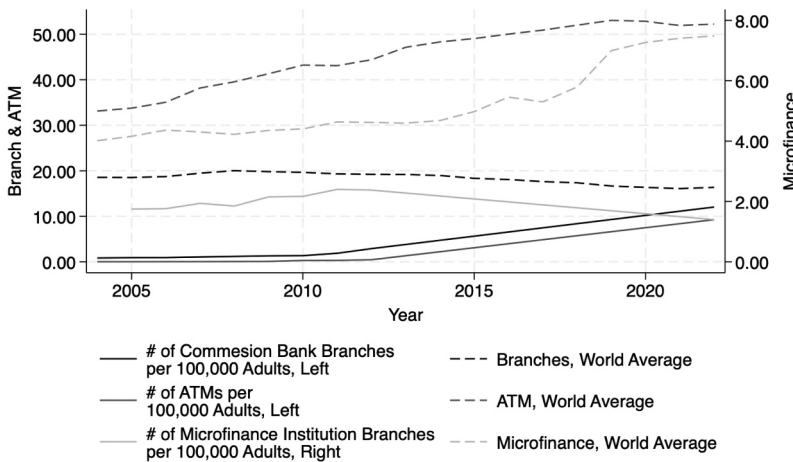


Figure 3. The development of financial infrastructure in Ethiopia. Source: IMF Financial Access Survey.

from 2005 to the present day, with approximately ten bank branches and ATMs per 100,000 people, it still lags far below the world average.

Non-bank institutions have not effectively filled the gaps left by banking services. As mentioned earlier, microfinance institutions represent only 5% of the scale of banks. Figure 3 also indicates a relatively low density of microfinance institutions, with less than two institutions per 100,000 people in 2022, which is only about a quarter of the world average and even lower than a decade ago. Micro-level surveys also reflect similar patterns. A study conducted in 2017 showed that the average distances to the nearest bank branch and microfinance institution were 23 kilometers and 20 kilometers, respectively, while the distance to ATMs was even higher at 43 kilometers (Desalegn and Yemataw 2017). Although mobile money has gained prominence in recent years and has the potential to alleviate financial exclusion, it has yet to be widely adopted in Ethiopia.

2.1.5. Reliance on informal finance

Accompanying the shallow penetration of banking systems and immature non-banking financial markets is the high dependence of residents on informal finance. As shown in Figure 4, in 2022, only 22.6% and 4.6% of Ethiopians used formal financial institutions for savings and borrowing, respectively, while 30.1% and 36% relied on informal organizations (such as savings clubs) or family and friends for savings and borrowing. The reliance on informal finance is more pronounced in credit.¹

These indigenous informal financial organizations have the advantages of broad coverage and high acceptance. However, their capacity to mobilize funds is relatively limited compared to the financing needs for modern economic industrialization. For one thing, these mutual aid organizations are distributed throughout the country and heavily rely on community organizations with no interconnection. Therefore, their effect on capital allocation is limited to small-scale within their communities. Additionally, due to

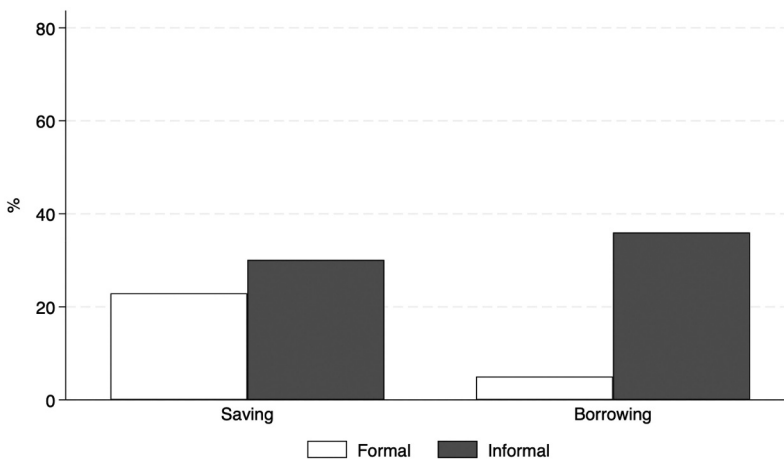


Figure 4. High dependence of Ethiopians on informal finance. Note: Data from the World Bank Global Findex, with the data year being 2022.

Ethiopia's low income level, the amounts saved through rotating contributions are limited, only meeting small-scale funding needs.

Moreover, informal financial organizations' fundraising, management, and allocation processes rely on local customs and community self-governance, making it difficult to replicate the experience of a single organization. More importantly, informal financial organizations cannot support non-local residents and businesses or adapt to the large-scale population mobility and business entry processes required for industrialization. Therefore, a significant gap exists between the scale of funds mobilized, coverage area, and financing terms between these informal arrangements and formal financial institutions.

2.2. Financial exclusion in Ethiopia

The above analysis elucidates the current state of the Ethiopian financial system. Overall, the inadequacy of formal financial services is accompanied by a high dependence of residents on informal financial organizations. Furthermore, while state-owned banks dominate the financial system, the influence of other financial institutions remains limited. The interplay of these two characteristics has resulted in financial exclusion in this country: a large portion of the population is unable to access basic services such as savings, loans, and payments from financial institutions, thus hindering their ability to utilize financial resources for consumption and investment (Leyshon and Thrift 1995). Local financial exclusion appears primarily as inadequate overall scale and structural imbalances across groups.

The financial system's reach in Ethiopia is notably limited, as a substantial number of citizens have yet to engage with formal financial services. Figure 5 compares the differences in financial penetration rates between Ethiopia, Sub-Saharan Africa, and the global average, encompassing formal financial institutions and mobile money platforms. While

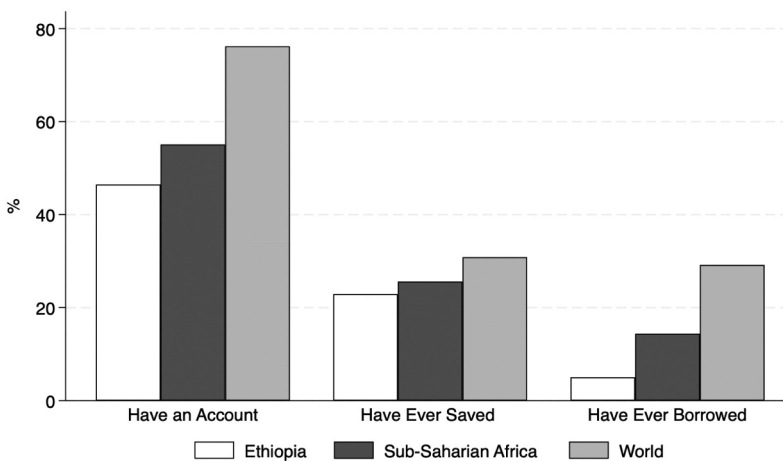


Figure 5. Financial service penetration rate (Ethiopia VS other regions). Note: Data sourced from the World Bank Global Findex. Data for Ethiopia is from 2022, while data for Sub-Saharan Africa and the global average is from 2021.

Ethiopia's formal savings usage rate has just exceeded 20%, nearing the African average, it remains slightly below the global average. However, Ethiopia's average account ownership and credit usage rates are lower than both. As of 2022, half of Ethiopia's residents still do not have bank accounts, and 95% have not utilized bank loans, indicating severe financial exclusion, particularly in credit access.

With respect to financial access distribution, there is a marked disparity, which aggravates the challenge of financial exclusion. Geographically, although Ethiopia's urbanization rate has just surpassed 20%, a large portion of the population still resides in rural areas, while most bank branches and ATMs are concentrated in urban areas. For instance, the capital, Addis Ababa, which accounted for approximately 3% of the national population in 2017, boasted one-third of the country's bank branches and half of its ATMs (World Bank 2019). Additionally, according to World Bank estimates, the average account ownership rate for the top 60% of wealth rankers stands at 43%, while for the bottom 40% of the population, this number is merely 22%. On average, women, individuals with lower levels of education, the unemployed, and the impoverished are more susceptible to encountering issues of financial exclusion.

The financial system in Ethiopia presents significant challenges of financial exclusion. Based on the discussion above, three primary factors can summarize this phenomenon.

Initially, the issue lies in the lack of diversity among financial entities. While banks dominate the financial landscape, their services to micro-enterprises and rural individuals are scant, impeding access to high-risk financing. Concurrently, non-banking financial institutions have fallen short in filling these service gaps, resulting in the absence of robust financial markets, limited insurance markets, and underdeveloped microfinance institutions and mobile money platforms.

Furthermore, government regulations tend to intensify financial frictions. Policies addressing fiscal and inflationary pressures in developing countries like Ethiopia inadvertently contribute to market instability. Frequent alterations in regulatory frameworks, such as imposing limits on lending rates and restricting loans to private banks, heighten uncertainty in financial markets, impacting credit allocation and disseminating financial services.

Lastly, the issue of underdeveloped financial infrastructure cannot be overlooked. Bank coverage is restricted, with ATMs and bank branches predominantly concentrated in urban centers, neglecting rural and remote areas. Furthermore, deficiencies in the credit information system, including inadequate credit archives, transaction monitoring, and collateral registration, create information asymmetry and credit challenges for banks, hindering residents and businesses from accessing formal financial services.

2.3. How do financial constraints impede industrialization

2.3.1. The stagnation of local business

Ethiopia currently grapples with financial constraints that impede its industrialization process, prominently reflected in the stagnation of local businesses. The vitality of local enterprises is discernible through entrepreneurial activities.

The World Bank evaluates entrepreneurial activity using New Business Density, which gauges the number of newly established enterprises per 1,000 people aged 15 to 64. As depicted in [Figure 6](#), Ethiopia's New Business Density was merely 0.51 in 2018, indicating

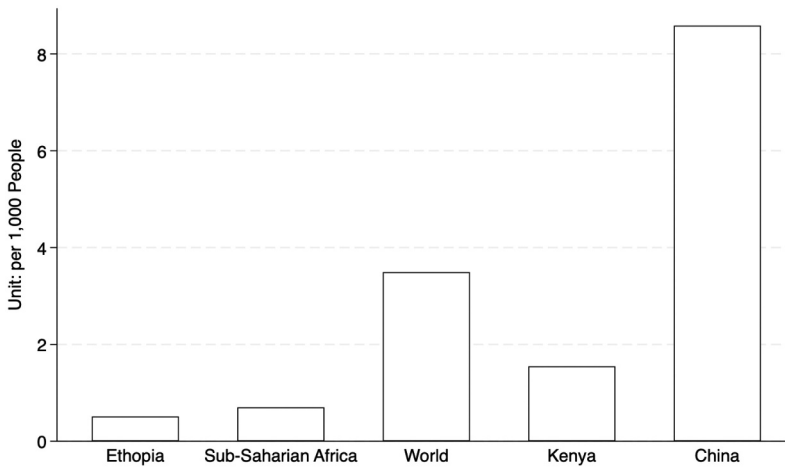


Figure 6. New business density (Ethiopia vs other regions). Note: Data sourced from the World Bank. New Business Density is defined as the number of new enterprises established annually divided by the population aged 15–64 in the respective country. The global average uses 2020 data, while other countries and regions use 2018 data.

that, on average, only one new enterprise emerged for every 2000 people. This figure significantly lags behind the global average and falls below Sub-Saharan Africa. Interviews conducted by our research team further corroborate this reality. For instance, only eight were domestic among the initial 100 enterprises in Eastern Industrial Park, Ethiopia’s inaugural industrial park established in 2008. This underscores the relative frailty of local enterprises in the industrialization process.

Micro-enterprises confront acute financial constraints, exerting considerable pressure on local employment. According to data from the International Labour Organization, enterprises with 2 to 49 employees account for 37% of global employment, with Sub-Saharan Africa contributing 41% (Kok and Berrios 2019). In Ethiopia, over 90% of manufacturing and service jobs originate from micro-enterprises with fewer than ten employees (IFC 2013). However, the proliferation of local manufacturing and service enterprises is curtailed due to financial constraints. This hampers the labor transition from the agricultural sector to manufacturing and services, decelerating urbanization. According to World Bank data, in 2021, non-agricultural employment in Ethiopia constituted only 38% of total employment, with an urbanization rate of merely 23%.

Financial constraints also curtail the spillover effects of foreign investment on the local economy. Development economics literature underscores how foreign-owned enterprises can catalyze the emergence of local enterprises through technology transfer and knowledge diffusion. This constitutes a pivotal foreign direct investment (FDI) conduit to foster economic growth (Borensztein, De Gregorio, and Lee 1998; Shen 1999). Financial development is a critical prerequisite for this spillover channel (Alfaro et al. 2004). The technological advancement of local enterprises, the establishment of new enterprises in the same industry, and the ascension of upstream and downstream local enterprises all need the backing of financial services. While local entrepreneurs may acquire technological and managerial expertise from multinational entities, the

procurement of financial support for innovation and entrepreneurial ventures continues to present a considerable challenge.

2.3.2. Financial constraints on foreign enterprises

During the early phases of industrialization, foreign investment emerges as a pivotal factor for economic advancement. It not only vitalizes investments but also fosters export activities, amplifies employment opportunities domestically, and catalyzes the dissemination and adoption of technology, ultimately propelling the growth of local enterprises and overall economic progress (Paul and Feliciano-Cestero 2021; Shen and Geng 2001). For instance, after the reforms and opening up, China experienced a surge in foreign direct investment, bolstering its capital accumulation, spurring industrial modernization, and facilitating rapid economic expansion (Liu 2019; Shen 1999).

Nonetheless, in Ethiopia, foreign enterprises encounter more stringent financial constraints than their domestic counterparts, thus inhibiting further investment by foreign entities. On one front, owing to cross-border property rights complications, assets held by foreign enterprises within Ethiopia cannot be leveraged as collateral for loans from their home country's financial institutions. Moreover, local tax, operational, and transactional data is not shared with the foreign parent-country financial institutions, impeding their ability to conduct credit evaluations.

If the challenges surrounding cross-border collateral rights persist and cross-border credit assessments remain problematic, local financial institutions should serve as an alternative financing source for foreign enterprises. However, within the current financial sector of Ethiopia, banking institutions struggle to fulfill the financing needs of domestic enterprises, let alone extend support to larger-scale foreign-owned enterprises. Conversely, although informal finance plays a significant role in Ethiopia's financial system, foreign enterprises often encounter difficulties leveraging the social capital upon which informal finance relies, mainly due to cultural barriers.

Foreign-owned enterprises resort to alternative financing avenues when faced with domestic and foreign financing obstacles. For instance, during our visit to the Eastern Industrial Park, we observed a practice of mutual lending among Sino-Ethiopian enterprises, with lending rates typically hovering around 10%. However, these alternative approaches fall short of meeting the standard financing requirements of foreign-owned enterprises, thereby perpetuating financing challenges as a significant constraint on foreign investment. As per a previous survey conducted by our research team in 2019, several Sino-Ethiopian private enterprises have cited credit and financing as the primary impediment in their pursuit of Belt and Road investments (Wang et al. 2021).

In conclusion, Ethiopia finds itself at a critical juncture in overcoming the initial financial barriers of industrialization. Financial constraints in Ethiopia manifest as financial exclusion, characterized by issues such as the predominance of established financial entities and inadequate financial infrastructure, which hinder numerous residents and enterprises from accessing formal financial services. Insufficient financial support stifles local enterprise innovation and entrepreneurship and diminishes the attraction of foreign capital investment. Financial exclusion represents a prevalent challenge in the nascent stages of development across various countries, with many advanced nations devising distinctive strategies to address it, thereby offering valuable insights into Ethiopia's financial constraints.

3. Financial support during the transition stage: lessons from China and Kenya

3.1. China: Balancing efficiency and risk during the transition from state-owned banks to a market-oriented financial system

China's journey in financial reform offers valuable lessons for Ethiopia. Despite differences in economic and financial scale, both nations share common traits in their financial sectors: a prevalence of large state-owned banks, stringent financial regulations, and significant credit constraints faced by small and medium-sized enterprises. Since embarking on reform and opening-up policies, China has maintained a financial framework dominated by state-owned banks but has implemented a series of reforms to accommodate diverse financing needs associated with market evolution. China's experience underscores the presence of various forms of financial support for economic advancement, adept at addressing the interface between finance and the real economy while upholding state control over the financial sector.

3.1.1. Characteristics and evolution of China's financial system

A defining aspect of China's financial system is the dominance of state-owned banks. Alternative financial entities only start to emerge following the initiation of reform and opening-up policies. Bank loans constitute a substantial 62% share of the social financing stock, while non-bank equity and debt financing collectively contribute 38% (Figure 7(a)). Large state-owned banks and joint-stock commercial banks exert considerable influence within the banking sector, alongside the significant presence of local city commercial banks and rural financial institutions (Figure 7(b)).

Looking back at the initial phases of economic liberalization, we find striking parallels between the financial landscapes of China and Ethiopia, notably the dominant role of the state and the hurdles that private sectors face in securing funding. Yet, with the progression of market-oriented reforms, the emergence of diverse market players and the adoption of digital technology have effectively eased the financial bottlenecks that once hampered the broader economy. China's financial model has achieved a nuanced balance between efficiency and stability, shaping itself into the sophisticated system we see today.

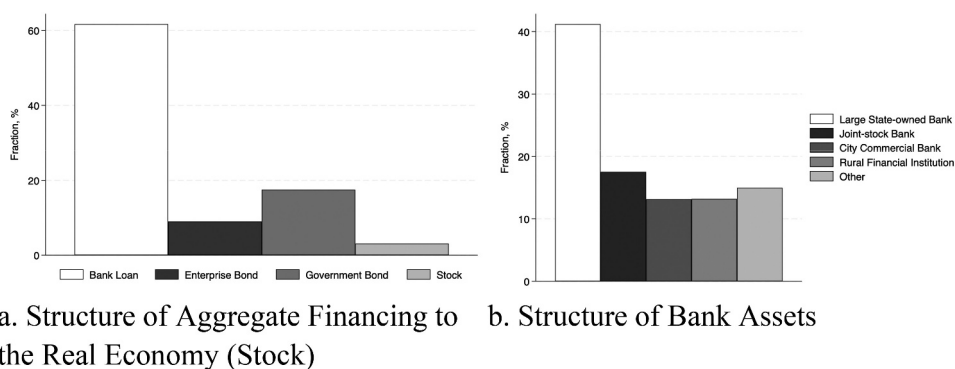


Figure 7. The structure of China's financial system. Note: Data sourced from the People's Bank of China and the China Banking and Insurance Regulatory Commission, data as of the end of 2022.

China's four decades of fiscal evolution provide valuable lessons in two critical areas: firstly, how to transition from a state-centric financial structure, overcoming financial exclusion to foster inclusivity and drive industrial growth; and secondly, how to navigate the inherent risks that come with the continuous transformation of the financial environment.

3.1.1.1. 1980s-1990s: market reforms in progress. During the initial phases of reform and opening up, China's financial system operated under a highly centralized planning model (Huang and Wang 2022). The People's Bank of China is this framework's central and commercial bank, overseeing 93% of the nation's financial assets. The remaining portion consisted of rural credit cooperatives. The entire financial structure was geared toward fulfilling the strategic objectives of planned economic development, with minimal demand for financial intermediaries from the economy. However, as reform and opening up advanced, the planned economy gradually dissolved, requiring a transformation of the financial system to meet the economy's growing demand for financial intermediaries.

Amidst overhauling the financial sector, the primary focus in the 1980s and 1990s shifted toward reconstructing a market-oriented financial system (International Finance Forum 2018; Zhou 2015). On one hand, the banking sector underwent substantial changes. The four major state-owned banks were reinstated in the 1980s and commenced expanding their commercial banking operations. Simultaneously, nationwide joint-stock commercial banks emerged as influential entities in the banking industry. On the other hand, non-bank financial institutions experienced rapid growth. In the insurance sector, the reinstatement of China People's Insurance Company and the four major banks in 1979 was followed by the swift proliferation of numerous insurance companies nationwide. In the financial market realm, after initial experiments, the formal establishment of the Shanghai Stock Exchange and Shenzhen Stock Exchange took place in the 1990s, accompanied by the gradual establishment and enhancement of various financial markets.

3.1.1.2. Post-21st century: addressing financial risks. Since the turn of the century, the private sector has taken the lead in driving economic growth, with small and medium enterprises (SMEs) becoming the backbone of the real economy. This shift has intensified the friction between the dynamic market and the traditionally state-centric financial system, calling for pressing reforms toward market-oriented finance. However, as reforms deepen, they intersect with technological progress and changing global conditions, introducing new complexities. On one front, financial reforms are treading into more precarious areas by deregulating and opening the financial market, escalating risk exposure. On the other hand, the rise of digital finance, which operates mainly outside conventional regulation, is reshaping the financial sector, adding layers of complexity. Additionally, the system faces pressures from international turmoil, evidenced by the Asian and global financial crises. These factors exacerbate the trade-off between efficiency and risk management in the financial system.

China's financial system has undergone reforms from three aspects during this period.

First, there was a gradual relaxation of financial regulation. In the early stages of reform and opening-up, the financial system operated under a dual-track system. With numerous state-owned enterprises lacking self-sufficiency, subsidies through the state-

owned banking system were essential to lower the cost of capital. As private enterprises gained dominance in the economy and state-owned enterprise reforms progressed, conditions emerged for relaxing financial regulations. China gradually eased restrictions on access to financial services, diversified financial entities, and bolstered competition in the financial industry. These measures encompassed opening up financial services, fostering the growth of small and medium-sized banks, and encouraging establishing banks by private capital post-2014. Simultaneously, price controls in the financial system gradually loosened as part of interest rate liberalization reform. By the late 1990s, market-determined interest rates began to prevail in the money market and bond market, with loan interest rates gradually liberalized after 1998 and deposit interest rate liberalization commencing after 2002.

Next, digital finance has experienced rapid growth (Huang and Huang 2018). Digital finance in China initially emerged through financial services offered by internet companies. The emergence of Alipay in 2004 marked a significant milestone, while the introduction of Yu'ebao in 2013 signaled the swift development of digital finance in China. After over a decade of evolution, China's digital finance has embraced various new business models, such as mobile money, digital credit (including online lending, big tech credit, and bank digital transformation), digital insurance, digital wealth management, and digital currency. These endeavors have profoundly impacted the provision of financial services to the real economy and addressed the demand for such services. The rapid progress of digital finance has been facilitated by China's technological prowess and a relatively lenient regulatory environment. It has integrated internet companies into the financial sphere and offered technological solutions to mitigate information asymmetry, thereby addressing the inadequate supply of banking financial services.

Meanwhile, the government has been modernizing the financial regulatory framework. In the early 1980s, the People's Bank of China oversaw all financial institutions and enterprises nationwide. However, the burgeoning number of financial players and the variety in business operations soon outstripped the old regulatory measures. In response, China gradually instituted a regulatory framework comprising one central bank and three commissions: the China Securities Regulatory Commission was founded in 1992, and in 1998, oversight of securities regulation shifted from the People's Bank of China to the China Securities Regulatory Commission; the China Insurance Regulatory Commission was established in 1998 to supervise the insurance market; and the China Banking Regulatory Commission was established in 2003 to regulate commercial banks and other savings-based financial institutions. To address external shocks and risks stemming from regulatory gaps, the State Council established the Financial Stability and Development Committee in 2015 to enhance policy coordination. This demonstrates that the regulatory framework and financial marketization reform have progressed hand in hand, serving as crucial pillars for balancing efficiency and risk.

3.1.2. Summary of experience

Over the last forty years, China's financial system has transformed, evolving from its nascent beginnings to a structured network and shifting from state-owned dominance to a market-driven approach. The Chinese financial system has successfully maintained a balance between efficiency and risk. Financial reform epitomizes China's experience in reform and opening up, which can be summarized into three key lessons.

First, Reforms must unfold progressively, not abruptly. Deliberate and gradual steps have marked China's approach to reform. While the state pursued market-oriented reforms, it retained the dominant position of state-owned banks and maintained a high degree of state intervention in the financial system. As financial entities diversified, private enterprises developed, and state-owned enterprises reformed, various price and quantity controls gradually relaxed, and financial sector openness became a priority. Originating from the broader reform and opening-up initiative, these financial marketization efforts have straddled the line between market orientation and the realities of state control – a critical balance for ensuring reform goes hand in hand with stability in the financial system. Ethiopia's financial system reform can similarly follow this approach: encourage and develop various financial entities while maintaining policy intervention, relax regulations, and open up the financial sector once the real sector stabilizes and regulatory experience matures.

Second, pilots are crucial stepping stones to broader implementation. China's cautious approach often tests reforms in a controlled, regional manner before scaling up. Policymakers often face uncertainty, as reforms may not solve existing problems or may even bring new challenges. Financial system reform entails a trade-off between efficiency and risk. Introducing new financial entities, developing capital markets, or even opening up the financial sector can fill gaps in the financial system, but the reforms themselves may lead to financial turbulence. With such uncertainty, China extensively uses piloting as a compromise strategy: implementing policies in certain regions first, evaluating their performance, and gradually expanding them nationwide. The pilot experiments are also widespread in the financial field. For example, when introducing private banks, China started with five banks, including WeBank, and then gradually guided private capital into the banking sector. Similarly, while Ethiopia pursues financial marketization, it can adopt a pilot-expansion model, such as initially developing mobile money in certain regions.

Regulatory agility is key during transitions. As financial systems evolve, regulators need to remain flexible, adapting policies to the shifting landscape. While financial system reform is fundamental, flexible, adaptive measures can mitigate short-term friction. These adaptive measures can come from within the existing financial system. For example, foreign enterprises' financing difficulties due to collateral property rights also exist in China. China introduced a series of supportive policies, such as prioritizing the issuance of foreign capital credit funds through the state-owned banking system, conducting foreign exchange mortgage loan business,² granting special permission for Hong Kong, Macao, Taiwan, and overseas Chinese enterprises to mortgage and guarantee their assets and equity to borrow from foreign financial institutions³; and encouraging Sino-foreign joint ventures to borrow typically domestically and overseas.⁴ Flexible adaptation can also come from the informal sector, such as informal lending and relationship lending (Tsai 2002), allowing financial resources to flow from state-owned enterprises to relatively weaker private enterprises (Lu and Yao 2004). These adaptive measures survive in a lenient institutional environment and become important credit sources for private enterprises during the transition period. Actively adapting to the financing needs of real enterprises and maintaining a tolerant attitude toward informal financing can help Ethiopia address financial friction during the transition period.

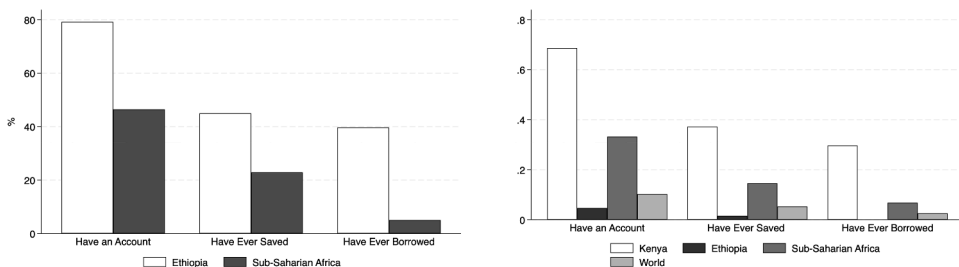
China’s decades-long reform process provides guidelines and strategies for financial marketization, while recent developments in some developing countries’ financial sectors have also garnered attention. With technological advancements, the internet and digital technologies inject new vitality into the financial sectors of developing countries, with Kenya being a representative example.

3.2. Kenya: the potential of financial technology in developing countries

3.2.1. The status of Kenya’s financial system

Kenya stands out among developing countries for its adept utilization of financial technology to address financial exclusion. Constrained by limited branches and service capacity, traditional banking institutions struggle to reach smaller, dispersed population segments. Particularly in the early stages of a nation’s development, micro and small-scale enterprises dominate the economic landscape, often spread across rural areas, making them vulnerable to exclusion from formal financial services. In recent years, Kenya has embraced financial technology, leveraging mobile terminals and online platforms, thus emerging as a beacon of hope in tackling financial exclusion. Adopting platform-based operations and mobile terminals has substantially lowered the marginal costs of financial services and eased geographical constraints on access to financial services.

As a neighboring country to Ethiopia, Kenya shares a developmental trajectory that closely resembles it: in 2022, the per capita GDP stood at approximately 2100 US dollars, roughly twice that of Ethiopia’s. However, Kenya boasts a significantly higher penetration rate of financial services than Ethiopia. Figure 8(a) depicts Kenya’s financial account ownership rate is near 80%, with penetration rates for deposits and loans exceeding 40%. This heightened penetration of financial services correlates with a more vibrant real economy. Figure 6 shows Kenya’s entrepreneurship density is approximately three times that of Ethiopia, surpassing the average level in sub-Saharan Africa. Kenya’s notable strides in financial inclusion can be attributed mainly to the widespread adoption of mobile money driven by financial technology. Figure 8(b) contrasts the mobile money penetration rates between Kenya and other regions, highlighting Kenya’s superior



a. Financial Service Penetration Rate

b. Mobile Money Penetration Rate

Figure 8. Financial service penetration rates (Kenya vs Ethiopia). Note: Data sourced from the World Bank Global Findex. Data for Ethiopia is from 2022, while Kenya and other regions are from 2021.

performance. Moreover, most of the account, deposit, and loan penetration rates depicted in [Figure 8\(a\)](#) stem from mobile money institutions.

Kenya's primary mobile money platform is called M-Pesa (Pesa means 'wallet' in the local language), founded by the largest local network operator, Safaricom, in 2007. Leveraging the mobile platform, M-Pesa provides users with basic deposit and transfer services. Users can also freely convert M-Pesa balances to cash at convenience stores, gas stations, electronics shops, and other retailers (Suri 2017). Although M-Pesa itself does not offer credit functions, a slew of mobile money derivative products associated with M-Pesa have emerged, such as M-Shwari, a bank account with deposit and lending functions launched by the Commercial Bank of Africa (Suri, Bharadwaj, and Jack 2021). Due to the scarcity of formal financial means, M-Pesa quickly gained widespread popularity in Kenya, accumulating 14 million customers in just four years, covering 70% of Kenya's population. According to an IMF report, in 2016, the scale of mobile money transfers in Kenya reached about 47% of GDP, with person-to-person transactions accounting for 25% of GDP (IMF 2018).

Existing research indicates that mobile money has brought significant welfare improvements in Kenya by providing inclusive financial services. Firstly, they lower the costs of transfer transactions, promoting risk-sharing behavior among households (Jack and Suri 2014). Secondly, they offer reliable and convenient savings, increasing consumption, reducing poverty, and facilitating labor movement to non-agricultural sectors (Suri and Jack 2016). Thirdly, mobile money-derived loan products alleviate credit financial exclusion, enhancing residents' risk resilience (Suri, Bharadwaj, and Jack 2021). Fourthly, they alleviate micro and small enterprises' liquidity and credit constraints, encouraging investment in fixed assets (Islam, Muzi, and Rodriguez Meza 2018).

3.2.2. Summary of experience

In the realm of financial inclusion, Kenya's success story with mobile money offers valuable insights into Ethiopia's ongoing efforts to bridge the gap in financial accessibility. Overcoming geographical and infrastructural barriers, Kenya has pioneered in elevating financial inclusivity during its early development stages through innovative mobile money solutions. This experience sheds light on the potential pathways for Ethiopia to emulate and advance its financial inclusion strategies.

To start with, creating an enabling regulatory environment has been fundamental to the uptake of mobile money. Cross-national analyzes indicate a strong positive correlation between inclusive regulatory environments and the speed of mobile money adoption (Gutierrez and Singh 2013). The Kenyan government maintains an open attitude toward new financial entities, allowing private non-bank institutions to engage in financial services and permitting M-Pesa to compete directly with banking sectors (Suri and Jack 2016). Consequently, mobile money avoided a crisis for the banking industry and became a beneficial supplement, with both entities advancing hand in hand (IMF 2018). For Ethiopia, since financial sector penetration is shallow and banking activities are primarily concentrated in urban areas, mobile money could complement the banking sector without excessive concern about its impact on existing financial institutions.

Moreover, encouraging the widespread use of mobile technology also plays a pivotal role. The prevalence of mobile devices directly determines the potential customer base

for mobile money, and the expected benefits users gain from using mobile money. In areas with scarce mobile devices, a large portion of the population has no access to mobile phones, thus excluding them from mobile money. Furthermore, if the user base for mobile money is limited, its transfers and risk diversification functions will be weaker. The widespread adoption of mobile devices has accompanied Kenya's development of mobile money. For instance, according to World Bank statistics, Kenya had 60 mobile cellular subscriptions per 100 people in 2010, which increased to 122 in 2022, suggesting the gradual expansion of mobile networks. Looking at Ethiopia's situation, in 2022, this number reached 56, roughly equivalent to the level in Kenya when mobile money took off. This indicates that Ethiopia satisfies the conditions for developing mobile money.

Lastly, facilitating the growth of platform-based enterprises is crucial for mobile money expansion. The penetration of mobile money is constrained by the channels provided by its providers, namely how much they can attract households to use mobile money and how developed their offline agent networks are. Thus, providers with platform characteristics are essential factors for the success of mobile money. Kenya's mobile money relies on Safaricom, the dominant telecommunications network enterprise. On the one hand, leveraging Safaricom's user base, M-Pesa could rapidly establish a mobile money platform and attract Safaricom's users to join. On the other hand, Safaricom has numerous offline telecom outlets, electronics stores, and other distribution channels, which can be utilized to develop distribution channels into agents. Currently, mobile money in Ethiopia is mainly operated by the local telecommunications giant Ethio Telecom, which is a beneficial attempt to leverage platform enterprises. Building upon this, efforts can be made to expand platform channels and influence to cover more user groups.

China and Kenya offer policy experiences from the perspectives of transformation strategy and technology solutions, which are not contradictory but complementary. Kenya's development of mobile money also aligns with China's principles of inclusiveness, openness, and flexibility in transformation. Considering the development experiences of both countries, Ethiopia's financial sector still holds enormous growth potential.

4. Conclusion and future outlook

The financial system is a prerequisite for industrialization and attracting foreign investment in developing countries. Ethiopia's financial system is still in its early stages of development, characterized by a single dominant financial entity and insufficient formalization, leading to severe financial exclusion. This situation not only hampers the rise of local enterprises but also constrains the financing and development of foreign enterprises. Financial constraints are a common challenge developing countries face, and China and Kenya offer different perspectives and valuable experiences. Considering the specific conditions and existing developmental experiences, Ethiopia's future financial development holds several potential breakthrough points.

Clarity of priorities, gradual progression, and flexibility are critical principles in policymaking. In the initial stages of financial reform, countries often face many undeveloped areas, making the sequence of reforms particularly critical. Complete deregulation may trigger widespread financial risks when the financial system is fragile. Reforms should be carried out gradually according to the country's actual conditions. In gradual

reform, flexible strategies can mitigate friction between the financial and real sectors, easing the pains of reform. Taking China's financial reform as an example, reforms initially targeted existing state-owned banks, then focused on enriching market entities, and finally entered the stage of opening up to the outside world and gradually relaxing price controls after the financial system matured and the private economy flourished. This progressive reform improved efficiency and helped China navigate the 1998 financial crisis smoothly.

Drawing from cross-country experiences, future development measures in the financial sector in Ethiopia could include the following aspects.

- (1) Diversifying financial entities and encouraging the development of non-bank institutions. State-owned banks dominate Ethiopia's financial system, while other non-bank financial institutions are still in the early stages of development. This financial structure creates a significant barrier to financing the real economy, especially micro, small, and medium-sized enterprises. Financial reforms must move toward marketization, beginning with enriching market-oriented financial entities. This includes insurance institutions that play a risk management function, microfinance institutions serving small businesses and individuals, and financial markets providing risk transactions.
- (2) Strengthening financial infrastructure to increase the penetration rate of formal financial sectors. Another area for improvement in Ethiopia's financial system is the low coverage of formal finance, resulting in financial exclusion, where many residents cannot access financial services. The development of financial infrastructure is crucial for addressing the problem of financial exclusion. This includes complex infrastructure, such as bank branches, branches of microfinance institutions, and ATMs, as well as soft infrastructure, such as credit information systems, mortgage registration, and transaction monitoring. The former helps to expand the coverage of financial services, while the latter helps to reduce information asymmetry and decrease the cost of using financial services.
- (3) Developing mobile money services while balancing risk control and efficiency. Kenya's experience demonstrates that mobile money can effectively complement traditional financial institutions and expand the financial accessibility of many residents. Ethiopia's mobile device penetration rate is gradually approaching the level when mobile money was promoted in Kenya, and it also has a nationwide communication platform, laying the foundation for the development of mobile money. Ethiopia has already made beneficial attempts in this regard, such as launching mobile money services by the telecommunications giant Ethio Telecom in 2021, with rapid development expected in the future. The development of mobile money requires an inclusive regulatory environment, but authorities also need to establish timely regulatory frameworks for digital financial service providers. In addition, financial literacy is a key prerequisite for residents to effectively utilize financial technology and mitigate risks associated with financial technology fraud (Panos and Wilson, 2020). Increasing local education investment and popularizing basic financial knowledge are effective strategies for developing mobile money services.

- (4) Enhancing the flexibility of financing methods. Financial system transformation is not achieved overnight, and flexible policy tools can alleviate short-term financing problems during the transformation process. More substantial financing constraints of foreign enterprises due to sovereign collateral issues and the inability to utilize informal financing hinder their willingness to invest. Referring to the encouragement of foreign investment policy during China's reform and opening-up period, the financing forms of foreign enterprises can be more flexible. Joint ventures between domestic and foreign enterprises are a feasible means of promoting technology spillovers from foreign enterprises. Additionally, providing exceptional financing support to foreign enterprises through policy tools or allowing foreign enterprises to use domestic assets as collateral for foreign banks are feasible, flexible approaches.

Financial constraints pose a global challenge, and the issue of financial exclusion in Ethiopia is neither unique nor trivial in its impact on industrialization. Yet, as Gerschenkron (1962) argued, developing nations have the distinct advantage of learning from the advanced economies' development trajectories. The diverse financial practices around the globe offer a trove of solutions to alleviate financial constraints. With a commitment to market-oriented reforms and by assimilating the experiences of various nations, Ethiopia's financial system has considerable potential to evolve and significantly bolster the country's industrialization efforts.

Notes

1. The most notable informal financial organizations in the local context fall into two categories. One is known as Iddir (also written as Idir). Iddir is an informal insurance system typically formed and managed around kinship, residency, occupation, or ethnic groups. Members regularly contribute and can withdraw lump sums for great events such as weddings, funerals, or illnesses. The other is called Iqqub (also written as Iqub). Ikub operates similarly to Iddir, organizing around communities, with members required to contribute amounts regularly. However, withdrawal standards differ; members do not have to experience great events but instead take turns withdrawing lump sums through methods such as drawing lots or rotation. Therefore, Ikub is closer to informal savings and borrowing arrangements. See Aredo (1993) and Aredo (2004).
2. See <http://tfs.mofcom.gov.cn/article/ba/bl/201101/20110107352171.shtml>
3. See <http://www.mofcom.gov.cn/aarticle/b/f/200207/20020700031072.html>
4. See https://www.gov.cn/gongbao/content/2019/content_5468826.htm

Acknowledgments

This study is funded by the National Natural Science Foundation of China under Project ID 72303009, the Graduate School of Peking University, and the National School of Development at Peking University. We are grateful for the insightful feedback provided by Min Wang, Chengfang Liu, Yongmei Zhou, Xiao Ma, Huayu Xu, Jinjie Wang, and all participants of the 2023 Peking University Summer Research Group to Ethiopia. The fieldwork conducted in Ethiopia was made possible through the exemplary organizational efforts of Jing Lu and Cheng Chang and the assistance of Ethiopian alumni from Peking University's Institute of South-South Cooperation and Development.

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

- Alemu, G. 2016. "Financial inclusion, regulation and inclusive growth in Ethiopia." *Achieving Financial Stability and Growth in Africa*, edited by S. Griffith-Jones and R. Gottschalk, 137–157. London: Routledge.
- Alfaro, L., A. Chanda, S. Kalemli-Ozcan, and S. Sayek. 2004. "FDI and Economic Growth: The Role of Local Financial Markets." *Journal of International Economics* 64 (1): 89–112.
- Alfaro, L., A. Chanda, S. Kalemli-Ozcan, and S. Sayek. 2010. "Does Foreign Direct Investment Promote Growth? Exploring the Role of Financial Markets on Linkages." *Journal of Development Economics* 91 (2): 242–256.
- Aredo, D. 1993. "The Iddir: A Study of an Indigenous Informal Financial Institution in Ethiopia." *Savings and Development* 17 (1): 77–90.
- Aredo, D. 2004. "Rotating Savings and Credit Associations: Characterization with Particular Reference to the Ethiopian Iqqub." *Savings and Development* 28 (2): 179–200.
- Beck, T., R. Levine, and N. Loayza. 2000. "Finance and the Sources of Growth." *Journal of Financial Economics* 58 (1–2): 261–300.
- Berhane, G., and C. Gardebroeck. 2011. "Does Microfinance Reduce Rural Poverty? Evidence Based on Household Panel Data from Northern Ethiopia." *American Journal of Agricultural Economics* 93 (1): 43–55.
- Berhanu Lakew, T., and H. Azadi. 2020. "Financial Inclusion in Ethiopia: Is it on the Right Track?" *International Journal of Financial Studies* 8 (2): 28.
- Borensztein, E., J. De Gregorio, and J. W. Lee. 1998. "How Does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics* 45 (1): 115–135.
- Crawford, G. S., N. Pavanini, and F. Schivardi. 2018. "Asymmetric Information and Imperfect Competition in Lending Markets." *The American Economic Review* 108 (7): 1659–1701.
- Desalegn, G., and G. Yemataw. 2017. "Financial inclusion in Ethiopia: Using LSMS (Ethiopia socioeconomic survey) data." *Ethiopian Journal of Economics* 26 (2): 31–58.
- Diamond, D. W. 1984. "Financial intermediation and delegated monitoring." *The Review of Economic Studies* 51 (3): 393–414.
- Diamond, D. W., and P. H. Dybvig. 1983. "Bank runs, deposit insurance, and liquidity." *Journal of Political Economy* 91 (3): 401–419.
- Gerschenkron, A. 1962. *Economic Backwardness in Historical Perspective*. Cambridge, MA: Harvard University Press.
- Greenwood, J., and B. Jovanovic. 1990. "Financial Development, Growth, and the Distribution of Income." *Journal of Political Economy* 98 (5, Part 1): 1076–1107.
- Gutierrez, E., and S. Singh. 2013. "What Regulatory Frameworks Are More Conducive to Mobile Banking? Empirical Evidence from Findex Data." *World Bank Policy Research Working Paper*, (6652).
- Huang, Y. P., and Z. Huang. 2018. "China's Development of Digital Finance: Present and Future." *Economic Quarterly* 17 (4): 1489–1502.
- Huang, Y. P., and X. Wang. 2022. *Understanding China's Finance*. Beijing: People's Daily Publishing House. In Chinese.
- IFC. 2013. *Assessing Private Sector Contributions to Job Creation and Poverty Reduction*. Washington, D.C: International Finance Corporation.
- IMF. 2018. *Kenya Selected Issues*, IMF Country Report No. 18/296.
- International Financial Forum. 2018. *China's Financial Reform and Opening Up: A Forty-Year Review and Outlook*. Guangzhou: International Financial Forum.

- Islam, A., S. Muzi, and J. L. Rodriguez Meza. 2018. "Does Mobile Money Use Increase firms' Investment? Evidence from Enterprise Surveys in Kenya, Uganda, and Tanzania." *Small Business Economics* 51 (3): 687–708. <https://doi.org/10.1007/s11187-017-9951-x>.
- Jack, W., and T. Suri. 2014. "Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution." *The American Economic Review* 104 (1): 183–223.
- King, R. G., and R. Levine. 1993. "Finance and Growth: Schumpeter Might Be Right." *Quarterly Journal of Economics* 108 (3): 717–737.
- Kok, J. D., and M. Berríos. 2019. *Small Matters: Global Evidence on the Contribution to Employment by the Self-Employed, Micro-Enterprises and SMEs*. Geneva: International Labour Organization (ILO).
- Levine, R. 2005. "Finance and Growth: Theory and Evidence." In *Handbook of Economic Growth*, edited by P. Aghion and S. N. Durlauf, Vol. 1, 865–934. Amsterdam: Elsevier.
- Leyshon, A., and N. Thrift. 1995. "Geographies of Financial Exclusion: Financial Abandonment in Britain and the United States." *Transactions of the Institute of British Geographers* 20 (3): 312–341. <https://doi.org/10.2307/622654>.
- Liu, J. 2019. "70 Years of China's Utilization of Foreign Investment: Process, Effects, and Major Experiences." *Management World* 35 (11): 19–37.
- Lu, F., and Y. Yao. 2004. "Rule of Law, Financial Development, and Economic Growth Under Financial Repression." *Chinese Social Sciences* (1): 42–55+206.
- Morduch, J. 1999. "The Microfinance Promise." *Journal of Economic Literature* 37 (4): 1569–1614.
- Panos, G. A., and J. O. Wilson. 2020. "Financial Literacy and Responsible Finance in the FinTech Era: Capabilities and Challenges." *European Journal of Finance* 26 (4–5): 297–301.
- Paul, J., and M. M. Feliciano-Cestero. 2021. "Five Decades of Research on Foreign Direct Investment by MNEs: An Overview and Research Agenda." *Journal of Business Research* 124 (1): 800–812. <https://doi.org/10.1016/j.jbusres.2020.04.017>.
- Shen, K. R. 1999. "Foreign Direct Investment and China's Economic Growth." *Management World* 15 (5): 22–34.
- Shen, K. R., and Q. Geng. 2001. "Foreign Direct Investment, Technology Spillover, and Endogenous Economic Growth: Empirical Analysis Based on Chinese Data." *Chinese Social Sciences* (5): 82–93+206.
- Suri, T. 2017. "Mobile money." *Annual Review of Economics* 9:497–520. <https://doi.org/10.1146/annurev-economics-063016-103638>.
- Suri, T., P. Bharadwaj, and W. Jack. 2021. "Fintech and Household Resilience to Shocks: Evidence from Digital Loans in Kenya." *Journal of Development Economics* 153:102697. <https://doi.org/10.1016/j.jdevec.2021.102697>.
- Suri, T., and W. Jack. 2016. "The Long-Run Poverty and Gender Impacts of Mobile Money." *Science* 354 (6317): 1288–1292.
- Tsai, K. S. 2002. *Back-Alley Banking: Private Entrepreneurs in China*. Ithaca: Cornell University Press.
- Wang, M., C. Y. Li, X. F. Lin, and D. D. Zhang. 2021. "Opportunities and Challenges of Chinese Enterprises' Investment in Ethiopia: An Analysis from the Perspective of Political and Economic Development." *China-Africa Research Review* (9): 45–73+2.
- World Bank. 2019. *Ethiopia Financial Sector Development: The Path to an Efficient Stable and Inclusive Financial Sector*. Washington, DC: World Bank Group.
- Yaron, J., B. McDonald, and G. Pipek. 1996. *Rural Finance: Issues, Design, and Best Practices*. Washington, D.C: World Bank Group.
- Zhou, X. 2015. "Financial Reform and Development and Its Intrinsic Logic." *China Finance* (19): 11–17.