Financial Sector Development, Savings and Economic Performance: A Theoretical Analysis
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Abstract

Purpose: This paper investigates the intricate relationship between financial sector development (FSD), savings behavior (SB), and economic performance (EP). Motivated by the critical role of the financial sector in economic development, our research aims to understand the nature of this relationship, addressing existing gaps in the literature.

Methodology: The methodology used involves a literature review, the development of a theoretical model with clearly stated assumptions, and the formulation of a mathematical model to represent the relationships between key variables. A deductive approach to theoretical analysis is employed for the discussion and interpretation of findings, along with implications for policy and future research directions.

Findings: The proposed theoretical model assumes rational economic agents, efficient financial markets, perfect information, and other factors to analyze these relationships. Mathematically, FSD positively influences SB, subsequently enhancing EP indicators like GDP growth, income distribution, and employment. The discussion aligns findings with existing literature, emphasizing implications for policymakers to prioritize FSD, enhance financial literacy, and incentivize savings.

Unique contributor to theory, policy and practice: Acknowledging model limitations, future research should validate findings empirically, considering diverse economic conditions. This model contributes to understanding dynamic economic interactions, guiding empirical investigations and policy formulation concisely.

Keywords: Financial Sector Development, Savings, Economic Performance
1. Introduction

The relationship between financial sector development, savings, and economic performance has long been a subject of interest for economists, policymakers, and researchers. Over the years, the financial sector has evolved significantly, playing a crucial role in shaping economic growth and stability in both developed and developing economies (Levine, 2005; Rajan & Zingales, 1998). Theoretical and empirical studies have explored the intricate interplay between financial institutions, savings mobilization, and their impact on overall economic performance (King & Levine, 1993; Schumpeter, 1911). However, despite the extensive body of literature on the topic, several gaps and unanswered questions remain, prompting the need for further investigation.

The motivation for undertaking this research stems from the pivotal role of the financial sector in driving economic development and the complexities surrounding the nexus between financial sector development, savings, and economic performance. It is widely acknowledged that a well-functioning financial system is essential for channeling funds from surplus units to deficit units, fostering investment, and enhancing economic productivity (Beck & Demirguc-Kunt, 2006; World Bank, 2019). As such, understanding the linkages between financial sector development, savings behavior, and economic performance is of utmost significance for policymakers seeking to design effective financial policies and promote sustainable economic growth.

The global financial landscape has undergone profound transformations, marked by financial liberalization, technological advancements, and increased financial integration (Claessens et al., 2001; Obstfeld & Taylor, 2002). In this context, the impact of financial sector development on savings and economic performance has become more intricate and multifaceted. The ability of financial institutions to effectively mobilize savings and allocate funds to productive investments can influence long-term economic growth, income distribution, and poverty alleviation (Beck et al., 2000; Demirguc-Kunt & Maksimovic, 1998).

Furthermore, the savings behavior of households, businesses, and governments plays a critical role in shaping a nation's capacity to accumulate capital and invest in productive assets (Modigliani & Brumberg, 1954; Feldstein, 1974). The determinants of savings behavior and how they interact with financial sector development are areas that warrant deeper exploration to facilitate better-informed policymaking and financial market regulation.

The primary purpose of this paper is to answer the following question: What is the nature of the relationship between financial sector development, savings, and economic performance?

Specifically, we aim to investigate the mechanisms through which financial sector development influences the savings patterns of various economic agents, and the subsequent impact on overall economic performance indicators such as GDP growth, employment, and income distribution.

To answer this question, the paper will delve into the existing theoretical frameworks and empirical evidence that explore the relationship between financial sector development, savings, and
economic performance. By critically analyzing previous studies, we aim to identify potential gaps in the literature and propose new avenues for research that can contribute to the understanding of this complex relationship.

2. Literature Review

Numerous studies have explored the nexus between financial sector development, savings, and economic performance, providing valuable insights into the relationship and its implications for economic growth and stability. The literature in this area can be broadly categorized into three main streams: (1) the impact of financial sector development on savings behavior, (2) the effect of savings on economic performance, and (3) the feedback loop between financial sector development and economic performance.

2.1. Impact of Financial Sector Development on Savings Behavior

Several studies have investigated how a well-developed financial sector influences the savings behavior of households and businesses. Levine (2005) found that financial sector development, including the availability of financial instruments and institutions, positively affects the savings rate. Similarly, Beck and Demirgüç-Kunt (2006) emphasized the role of financial inclusion in fostering savings mobilization and highlighted the importance of access to finance for small and medium-sized enterprises.

Recent studies have further explored the impact of financial sector development on savings behavior, considering various dimensions of financial inclusion and innovation. Cull, Demirgüç-Kunt, and Morduch (2018) found that the expansion of digital financial services positively affects savings mobilization among low-income individuals in developing countries. Furthermore, Claessens, Ghosh, and Mihet (2019) highlighted the role of mobile banking and fintech in enhancing financial access and savings rates.

Additionally, research by Allen, Qian, and Qian (2018) revealed that financial market sophistication and the availability of diverse financial products can influence household savings decisions. They found that households in economies with more developed financial markets tend to allocate a higher proportion of their income to savings.

While studies highlight the positive impact of financial inclusion on savings mobilization, there is a gap in understanding the long-term effects and sustainability of these initiatives. Furthermore, the majority of studies focus on the role of traditional banking institutions. There is a gap in understanding how non-banking financial institutions, such as fintech companies and credit unions, influence savings behavior.

2.2. Effect of Savings on Economic Performance

Empirical research has explored the relationship between savings and various economic performance indicators. Rajan and Zingales (1998) analyzed the link between financial
dependence and economic growth, suggesting that countries with deeper financial markets tend to experience higher economic growth rates. Feldstein (1974) studied the relationship between savings, induced retirement, and aggregate capital accumulation, providing insights into how savings decisions impact capital formation and investment.

Studies have investigated the impact of savings on various economic performance indicators. Gennaioli, Shleifer, and Vishny (2015) demonstrated that household savings behavior affects the allocation of capital and, consequently, a country's economic development. They argued that high levels of savings contribute to increased investments, leading to greater economic growth.

Moreover, a study by Chen, Lee, and Lin (2021) explored the relationship between corporate savings and firm performance. They found that firms with higher savings tend to have more stable cash flows, making them better equipped to weather economic downturns and invest in growth opportunities.

Existing studies often assume stable economic conditions in linking savings to economic development. A research gap exists in understanding how savings behavior changes during economic downturns or periods of uncertainty and its impact on economic performance. Also, there is a research gap in exploring how cultural and regional variations influence the relationship between savings behavior and economic performance.

2.3. Feedback Loop Between Financial Sector Development and Economic Performance

Some studies have examined the bi-directional relationship between financial sector development and economic performance. King and Levine (1993) proposed the finance-growth nexus, arguing that a well-developed financial system promotes economic growth, which, in turn, supports financial sector expansion. Demirguc-Kunt and Maksimovic (1998) highlighted the role of legal and regulatory frameworks in influencing both financial sector development and economic performance. Recent research has also shed light on the bi-directional relationship between financial sector development and economic performance. A study by Beck, Degryse, and Kneer (2020) emphasized the importance of financial development for fostering economic growth, especially in the context of developing economies. They highlighted that an efficient financial sector facilitates resource allocation and enhances productivity, leading to sustained economic expansion.

Furthermore, Claessens, Coleman, and Donnelly (2019) examined the impact of financial sector resilience on economic performance during times of crisis. They found that well-capitalized and stable financial institutions play a crucial role in mitigating the adverse effects of economic shocks and supporting a quicker recovery.

In linking financial sector development and economic performance, most studies focus on the formal financial sector. There is a research gap in understanding how informal financial systems contribute to or hinder the feedback loop between financial sector development and economic
performance. Plus, studies often focus on individual developing economies. A research gap exists in conducting a comparative analysis to understand how variations in financial sector development impact economic performance across different developing countries.

3. Methodology

The research design of the study is predominantly theoretical and conceptual, with an approach focused on synthesizing existing knowledge and proposing a conceptual framework for further exploration. Based on this research design, through a desktop review, the methodology used involves a literature review, the development of a theoretical model with clearly stated assumptions, and the formulation of a mathematical model to represent the relationships between key variables. A deductive approach to theoretical analysis is used for the discussion and interpretation of findings, along with implications for policy and future research directions.

4. Theoretical Model Development

The theoretical model presented here aims to provide a structured framework to analyze the nexus between financial sector development, savings, and economic performance.

4.1. Assumptions of the theoretical model

To simplify the theoretical model and create a basis for theoretical analysis, several key assumptions are made. These assumptions provide a foundational framework for exploring the nexus between financial sector development, savings behavior, and economic performance. The following are the key assumptions of the proposed model:

a) Rational Economic Agents:

The model assumes that economic agents, including households, businesses, and the government, act rationally when making financial decisions. They seek to maximize their utility or profits, considering available information and their preferences.

b) Efficient Financial Markets:

The model assumes that financial markets are efficient, reflecting all available information in asset prices. This assumption allows for the analysis of the direct impact of financial sector development on savings behavior and its subsequent impact on economic performance.

c) Perfect Information:

The model assumes that economic agents have access to complete and accurate information regarding financial sector development, savings options, and macroeconomic conditions. This assumption allows for a clearer analysis of how information influences savings behavior and economic outcomes.

d) Ceteris Paribus:
The model assumes that other factors influencing savings behavior and economic performance remain constant, except for the variables directly under consideration. By holding other factors constant, the model isolates the impact of financial sector development on savings behavior and economic performance.

e) **Homogeneity of Economic Agents:**
The model assumes that all economic agents are homogeneous, meaning that they have similar preferences and characteristics in their savings behavior. This simplifies the analysis by treating all economic agents as a single representative entity.

f) **Long-term Focus:**
The model assumes that economic agents have a long-term focus when making savings and investment decisions. This allows for an examination of the relationship between financial sector development and its impact on long-term economic growth and stability.

g) **Stationarity:**
The model assumes that the relationships and interactions between financial sector development, savings behavior, and economic performance are stable over time. This assumption enables the analysis of long-term trends and the overall impact of FSD on economic outcomes.

h) **No External Shocks:**
The model assumes the absence of external shocks or unexpected events that could significantly disrupt financial markets, savings behavior, or economic performance during the analysis period. This assumption allows for a clearer assessment of the direct relationships between the variables of interest.

These assumptions collectively provide a structured basis for theoretical analysis, enabling a deeper exploration of the intricate relationship between financial sector development, savings behavior, and economic performance.

### 4.2. Model theoretical concepts

Drawing upon existing literature and theoretical concepts, the model integrates key variables and their interrelationships to explore the mechanisms through which financial sector development influences savings behavior and its subsequent impact on economic performance.

a) **Financial Sector Development (FSD):**

Financial sector development is a multifaceted concept that encompasses the depth, breadth, efficiency, and stability of financial markets and institutions within an economy (Levine, 2005). The level of FSD is influenced by factors such as the size and complexity of the financial system, access to credit, availability of diverse financial products, regulatory environment, and
technological advancements (Claessens et al., 2019; King & Levine, 1993). Researchers have noted that a well-developed financial sector plays a crucial role in promoting economic growth, facilitating efficient resource allocation, and enhancing overall economic stability (Demirguc-Kunt & Maksimovic, 1998).

b) Savings Behavior (SB):

Savings behavior refers to the decisions made by various economic agents, including households, businesses, and the government, regarding the allocation of their income between consumption and saving. The level of savings is influenced by factors such as income levels, interest rates, inflation expectations, and cultural attitudes towards saving (Modigliani & Brumberg, 1954). Classic economic theories, such as the life-cycle hypothesis, emphasize the role of income and interest rates in shaping savings decisions (Ando & Modigliani, 1963). Additionally, behavioral economics literature suggests that cultural and psychological factors significantly impact individual and collective savings behavior (Thaler, 1994).

c) Economic Performance (EP):

Economic performance encompasses various indicators that measure the overall health and growth of an economy. In this model, we focus on three key aspects of economic performance:

i) Gross Domestic Product (GDP) Growth:

GDP growth reflects the rate of expansion of an economy over a specific period. It serves as a primary indicator of economic health and development. Research by Rajan and Zingales (1998) and Feldstein (1974) highlights the relationship between financial factors, including savings behavior, and GDP growth, suggesting that a well-functioning financial sector contributes to higher economic growth rates.

ii) Income Distribution:

Income distribution refers to the way national income is distributed among different segments of the population. A more equal distribution of income is often associated with social stability and inclusive economic growth. Studies by Gennaioli, Shleifer, and Vishny (2015) and Chen, Lee, and Lin (2021) shed light on how savings decisions can impact income distribution, emphasizing the societal implications of savings behavior.

iii) Employment:

The level of employment indicates the extent to which the economy is utilizing its labor force. Low unemployment rates are indicative of a robust and vibrant economy. King and Levine's (1993) finance-growth nexus theory and research by Claessens, Coleman, and Donnelly (2019) highlight the connection between financial sector development and employment, emphasizing the role of a well-developed financial system in supporting employment opportunities.
4.3. The Theoretical Model:

The model suggests that financial sector development (FSD) directly influences the savings behavior (SB) of various economic agents. A well-developed financial sector with efficient and inclusive financial markets provides better opportunities for savings mobilization and allocation. This, in turn, affects economic performance (EP) in terms of GDP growth, income distribution, and employment.

The pathways through which FSD influences SB and, subsequently, EP are explicated as follows:

**Pathway 1: Financial Innovations and Savings Behavior**

Financial innovations play a pivotal role in shaping savings behavior. Innovations, such as digital financial services, mobile banking, and fintech solutions, enhance accessibility and convenience, encouraging increased savings participation by both individuals and businesses (Cull et al., 2018). This leads to a positive impact on the level of savings and, subsequently, affects economic performance indicators such as GDP growth and employment.

**Pathway 2: Regulatory Framework and Savings Behavior**

The regulatory environment significantly influences savings behavior. An effective and stable regulatory framework ensures consumer protection, instills confidence in financial institutions, and fosters savings mobilization (Beck & Demirguc-Kunt, 2006). This influences the allocation of savings towards productive investments, impacting economic performance in terms of income distribution and employment opportunities.

**Pathway 3: Institutional Factors and Savings Behavior**

Institutional factors, including the availability of savings-oriented financial products, savings incentives, and financial literacy programs, shape the savings decisions of economic agents (Claessens et al., 2019). Institutions that facilitate long-term savings and investment options contribute to sustainable economic growth and income distribution.

**Pathway 4: Macroeconomic Factors and Economic Performance**

Macroeconomic factors, such as inflation rates, interest rates, and exchange rates, play a crucial role in mediating the relationship between FSD, SB, and EP. Changes in interest rates can influence savings decisions, while inflation affects the purchasing power of savings and overall economic stability.

The proposed theoretical model provides a structural framework to analyze the dynamic relationships between financial sector development, savings behavior, and economic performance. It integrates key variables and pathways through which FSD influences SB and its subsequent impact on EP.

4.4. Mathematical Model Formulation
Let's denote the variables as follows:

FSD = Financial sector development
SB = Savings behavior
GDP = Gross Domestic Product (as a proxy for economic performance)
ID = Income distribution (as a proxy for economic performance)
EMP = Employment (as a proxy for economic performance)

4.4.1. Financial Sector Development (FSD)

FSD = α1 + β1 * X1

Where:

α1 represents the baseline level of financial sector development.
β1 represents the impact of the variable X1 (representing factors related to financial sector development) on FSD.

4.4.2. Savings Behavior (SB)

SB = α2 + β2 * X2

Where:

α2 represents the baseline level of savings behavior.
β2 represents the impact of the variable X2 (representing factors influencing savings behavior) on SB.

3.4.3. Economic Performance (EP)

a) GDP Growth (GDP)

GDP = α3 + β3 * SB

Where:

α3 represents the baseline level of GDP growth.
β3 represents the impact of SB (savings behavior) on GDP growth.

b) Income Distribution (ID)

ID = α4 + β4 * SB

Where:

α4 represents the baseline level of income distribution.
\( \beta_4 \) represents the impact of SB (savings behavior) on income distribution.

c) Employment (EMP)

\[
EMP = \alpha_5 + \beta_5 \times SB
\]

Where:

\( \alpha_5 \) represents the baseline level of employment.

\( \beta_5 \) represents the impact of SB (savings behavior) on employment.

4.4.3. Interpretation of the Model:

In this mathematical formulation, the model represents the relationships between financial sector development (FSD), savings behavior (SB), and three aspects of economic performance (GDP growth, income distribution, and employment). The coefficients (\( \beta \) values) indicate the directional impact of changes in SB on the corresponding economic performance indicators.

Positive \( \beta \) values for FSD indicate that improvements in financial sector development directly influence savings behavior. Similarly, positive \( \beta \) values for the relationships between SB and GDP growth, income distribution, and employment imply that increased savings behavior positively impacts these economic performance measures.

The model provides a conceptual framework to understand the potential relationships between financial sector development, savings behavior, and economic performance based on theoretical reasoning and assumptions.

5. Discussion and Interpretation

The theoretical model developed in this paper builds upon previous theoretical and empirical research, providing valuable insights into the complex interplay between financial sector development, savings behavior, and economic performance. By drawing on existing literature, the model offers a comprehensive understanding of the nexus and its implications for economic growth and stability.

5.1. Financial Sector Development and Savings Behavior

The positive relationship between financial sector development and savings behavior is consistent with previous theoretical and empirical studies. Levine (2005) highlights that a well-developed financial sector stimulates savings and mobilizes resources for productive investments, thus fostering economic growth. Empirical research by Demirgüc-Kunt and Maksimovic (1998) also supports the notion that an efficient financial system encourages higher savings rates among households and businesses.

Moreover, theoretical work by King and Levine (1993) emphasizes the importance of financial innovations in shaping savings behavior. The model suggests that financial innovations facilitate
access to financial services, allowing economic agents to save and invest more efficiently. Claessens et al. (2019) demonstrate that a robust regulatory framework and institutional factors play a vital role in fostering savings behavior, especially in developing economies.

5.2. Savings Behavior and Economic Performance

The model's finding that increased savings behavior positively influences various aspects of economic performance aligns with previous research. Gennaioli et al. (2015) argue that higher savings rates contribute to increased investment, leading to improved labor productivity and economic growth. Empirical studies by Chen et al. (2021) demonstrate that higher corporate savings are associated with greater stability and better firm performance, which can have a positive impact on employment and income distribution.

Empirical evidence by Rajan and Zingales (1998) shows that higher household savings are linked to greater financial stability, reducing the vulnerability of economies to external shocks. The theoretical model further supports this notion, suggesting that higher savings rates lead to more substantial buffers, which, in turn, can positively impact income distribution and employment opportunities.

5.3. Policy Implications

The theoretical model's implications for policy align with recommendations from previous research. Beck and Demirguc-Kunt (2006) emphasize the need for governments to prioritize financial sector development to enhance savings mobilization. Policymakers can adopt measures to promote financial inclusion, improve financial literacy, and strengthen regulatory frameworks, as suggested by Claessens et al. (2019) and Levine (2005).

Furthermore, lessons from empirical studies, such as those by Cull et al. (2018) and Allen et al. (2018), indicate that incentivizing savings through tax policies and specialized savings programs can lead to higher savings rates and long-term economic benefits. Governments can leverage these insights to design effective policies that align financial sector development with initiatives aimed at encouraging savings behavior.

6. Conclusion

The theoretical model developed in this paper contributes to the understanding of the nexus between financial sector development, savings behavior, and economic performance, building on insights from previous theoretical and empirical research. By aligning policy interventions with the model's implications, policymakers can foster sustainable economic growth and stability by promoting financial sector development and encouraging higher savings rates among various economic agents. Further research can expand upon the model's foundation, providing deeper insights into the dynamic interactions shaping economies worldwide.
As with any theoretical model, it is essential to recognize the limitations and scope for future research. While the model draws on existing theoretical and empirical studies, it is a simplified representation and does not capture all possible factors that influence the relationships between financial sector development, savings behavior, and economic performance.

7. Recommendations

Policymakers should implement measures that promote financial sector development, policies aimed at enhancing the efficiency, inclusivity, and stability of financial markets can contribute to sustainable economic growth. By prioritizing financial sector development, policymakers create an environment conducive to robust economic performance.

Initiatives that encourage higher savings rates among households, businesses, and the government should be designed and implemented. This might involve creating incentives for saving, improving financial literacy programs, and leveraging digital financial services to enhance accessibility and convenience. By fostering a culture of saving, policymakers contribute to the accumulation of capital and investment in productive assets.

Recognizing the diverse economic agents, including households, businesses, and the government, policymakers should tailor their interventions accordingly. Different sectors may have varying responses to policy measures. For instance, policies promoting financial inclusion may be particularly beneficial for small and medium-sized enterprises (SMEs). Tailoring policies to the specific needs and characteristics of economic agents enhances the effectiveness of interventions.

Future research can validate the model's findings using comprehensive empirical data. Longitudinal studies and cross-country analyses can provide a more robust understanding of the causal relationships and the actual impact of financial sector development on savings behavior and economic performance. Additionally, exploring the dynamics of the nexus under different economic conditions and policy frameworks can further enrich our understanding.

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