



RESEARCH ARTICLE

# A Systematic Review on the Impact of Financial Innovation on Bank Profitability: Evidence from Commercial Banks in Ethiopia

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## ABSTRACT

This systematic literature review analyzes the effect of financial innovations on bank profitability in Ethiopia, highlighting research gaps, evaluating existing studies, and offering guidance for future research. It examines 25 scholarly articles published between 2013 and 2023, selected using open-access resources like Google Scholar, JSTOR, and Emerald, due to limited studies and access to established databases. Employing the PRISMA framework, the review applied specific inclusion and exclusion criteria to identify relevant studies. Descriptive analysis and citation analysis were used to evaluate various parameters and identify influential works. The findings reveal notable inconsistencies in the variables examined across studies, with contradictions both within and compared to earlier research. Most studies considered only a narrow set of variables and had limited citation impact. Furthermore, theoretical frameworks often misaligned with findings, and results were inadequately supported. The review calls for comprehensive research into financial innovations and their effect on bank profitability, urging stakeholders to address inconsistencies, explore critical variables, and adopt robust theoretical frameworks. Future studies should strive to provide clearer, more conclusive insights into this critical area.

**Keywords:** Financial innovation, Ethiopia, profitability, banks, Systematic

## Introduction

The modern world is changing quickly and profoundly, and innovation is becoming more and more significant in every area of the international economy. Businesses can implement new and improved methods, increase their competitiveness, and efficiently adapt to shifting market needs thanks to innovation. One industry where this trend is especially noticeable is the financial sector, where financial institutions consistently implement cutting-edge goods, services, technologies, and procedures to adjust to the shifting market conditions and satisfy shifting client demands (Reshid, 2020).

The financial system in every economy is made up of the financial markets, where investors join directly through ownership of securities, and the bank-based system, where provision and monitoring of investment funds are made through the banks. Banks act as intermediaries by collecting savings from customers and then lending the money to firms or individuals who are looking to invest (Temam, 2018). A commercial bank must innovate by designing, developing, and implementing new procedures, products, and technologies to remain competitive. These innovations include services such as online banking, mobile banking, agency banking, electronic fund transfers, ATMs, debit cards, and other similar offerings (DeYoung, Lang W., & Nolle D., 2007).

The contemporary financial system is characterized by a rapid pace of innovation, both in scale and value. While numerous studies have recently explored this topic, most have focused either on the global financial crisis or on specific types of financial innovations. Additionally, these studies often lack a unified definition of financial innovation and a consistent framework for categorizing its various forms (B. Joanna, 2011).

Financial innovation has been both lauded and criticized for its dual role as a driver of societal progress and a contributor to economic fragility (Josh Lerner & Peter Tufano, 2011). While it is often associated with benefits such as enhanced profitability, improved management efficiency, business growth, and other positive outcomes, financial innovation also comes with drawbacks. These include heightened risks to the banking sector, increased occurrences of fraud, the introduction of moral hazards, higher operating costs, and disruptions caused by technological failures, leading to inconvenience and revenue losses (Wairagu Githakwa, 2011). Therefore, it is essential to examine the growth of various innovations, particularly financial innovations, and their impact on a country's financial system.

Financial innovation can be defined as the development and dissemination of new financial instruments, financial technologies, institutions, and markets in the financial system in order to overcome the system's deficiencies (Frame & White, 2004; Josh Lerner & Peter Tufano, 2011).

In the same way, Iman also defines financial sector innovation as the introduction of a newer or better product and procedure that lowers the cost of generating already-existing financial services or transactions (Iman, 2011). Financial innovation, broadly stated, is the process of creating and then making popular new financial instruments, financial technologies, institutions, and markets (Satya Sekhar, 2018).

According to Lazo & Woldeesenbet, and Gorton & Metrick, the growth of modern financial innovation can be attributed to various factors, including lower bankruptcy costs, tax benefits, a decrease in moral hazard, lower regulatory costs, increased transparency, and customization (Lazo & Woldeesenbet, 2006; Gorton & Metrick, 2010). The use and advancement of financial innovation in Ethiopian commercial banks are driven by a number of factors. These driving forces, according to Girma (2016), are the need to enhance performance, the need to enhance the relationship with customers, the rapidly changing needs and preferences of customers, the need to enhance organizational performance, the desire to cover a large geographic area, the desire to enhance organizational reputation, and the desire to lower transaction costs (Girma, 2016).

In the same manner, Kinfu also argues that the use and development of e-banking technology are also driven by increased competition among banks to grow or retain their customer base. From the perspective of the banks, implementing e-banking services provides advantages such as luring high-value clients, improving brand recognition, expanding customer reach, increasing organizational efficiency, and reducing workload, among others (Kinfu, 2016).

Despite the importance of financial innovation in demystifying bank profitability, the influence of innovation on financial performance is still poorly understood for the following primary reasons: First, there is a lack of understanding of the drivers of innovation, and second, innovations impact on banks financial performance has not yet been extensively examined (Mabrouk & Mamoghli, 2010).

Previous studies research on the effect of financial innovation on performance has yielded empirically mixed results and conflicting findings. While some studies found a positive effect, some found a negative one, while other researchers came to conflicting results (Catherine & Herick, 2016; MALHOTRA & SINGH, 2009; Lazo & Woldeesenbet, 2006; Lerner, 2006; Chimwemwe & Moses, 2018; Worku, 2016).

From prior empirical literature, it is clear that there is no strong evidence about how financial innovation affects bank performance. A new investigation on the topic is required in light of the conflicting findings and conclusions.

Generally, it reveals that there is a conflicting evidence regarding whether financial innovation is beneficial or detrimental to the financial industry (Beck, Tao, Chen, & M., 2016). Regardless of the conflict, in Ethiopia no work to date has examined the relationship between financial innovation and the growth and stability of banks from a comprehensive perspective.

Without an effective financial system, which is described as the set of markets, institutions, instruments, and laws used to determine interest rates, trade financial securities, and produce and deliver financial services globally, the modern economy would not be possible (Polański, Pietrzak, & Woźniak, 2008; Rose & Marquis, 2009). The financial system is recognized as one of the most fundamental innovations of contemporary society and is defined as an integral component of the financial activity and, consequently, as a key component of the social system (Polański, Pietrzak, & Woźniak, 2008). But unlike the developed nation's financial system which is the different collections that make the effective financial system, the Ethiopian financial system is bank based system.

Therefore, the primary goal of this literature review is to explore and evaluate studies that investigate the effect of financial innovations on the profitability of Ethiopian banks. Additionally, the review identifies research gaps, assesses the depth and quality of existing studies in the field, and offers guidance for future research. To achieve this objective, the review addresses the following questions: How do financial innovations influence the profitability of Ethiopian commercial banks? What is the scope and quality of the existing literature in this area?

## 2. Methodology

This systematic review of empirical studies examines the impact of financial innovation on bank profitability in Ethiopia. Google Scholar was the primary database used, being a widely accessible academic search engine that encompasses a broad spectrum of scholarly publications relevant to the Ethiopian banking sector. The studies reviewed in this study are from 2013 to 2023. These studies were selected to include the evolution of empirical studies on the effect of financial innovation on bank profitability after the introduction of electronic banking payment systems in Ethiopia in 2001 (Worku, 2010; Ashenafi, 2019; Aschenek, 2020).

We used a systematic literature review (SLR) methodology to identify, screen, assess and synthesize the existing empirical evidence. The review was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to improve the transparency, consistency, and reproducibility of the review process. PRISMA was appropriate as it provides a systematic approach to reporting how studies were identified, screened, assessed for eligibility and finally included in the review. The researcher can also clearly report the number of records identified, duplicates removed, studies excluded, and studies retained for final analysis. This reduces the possibility of selecting studies arbitrarily and enhances the dependability of the synthesis of evidence.

Thus, the review was conducted following the main PRISMA stages: identification, screening, eligibility assessment, and inclusion. Studies were selected based on a pre-established inclusion and exclusion criteria, including relevance to financial innovation and bank profitability in Ethiopia, publication within the specified time frame, and availability of sufficient scholarly information for analysis. Thereafter, the last eligible studies were analyzed to identify the dimensions of financial innovation investigated, the methodological approaches used, the measures of bank profitability and the relationships between financial innovation and bank profitability reported.

A systematic review is a method used to compile, evaluate, and communicate the findings and significance of a large body of research. Its goal is to offer a comprehensive summary of the existing literature related to a specific research question. The systematic review approach is structured to minimize the risk of bias, which can arise in other types of review methods (Bimrose J. Brown J. and Barnes S.A., 2005).

In the same manner, Okoli asserts that a systematic review allows us to chart the landscape of how financial innovation affects the profitability of commercial banks in Ethiopia, while also identifying gaps from a broader viewpoint by methodically summarizing and synthesizing insights from previous research (Okoli, 2015). It is also described as a particular approach for identifying relevant studies, selecting and assessing contributions, analyzing and synthesizing information, and presenting evidence in a way that enables clear and trustworthy conclusions about the topic being examined (Denyer & Tranfield, 2009).

Tranfield, Denyer, & Smart state that the reviewer defines the appropriate research sequences for the study. The seeking strategy is reported in sufficient detail to ensure the research to be replicated (Tranfield, Denyer, & Smart, 2003). The research result should consist of a complete list of papers used in the review, with only those studies meeting the inclusion criteria outlined in the review protocol being included. The review process involves the following key steps:

The first step is to assess the strengths and weaknesses of each database (Database evaluation). However, challenges arise as databases like Scopus and Web of Science are not freely accessible. Additionally, other databases such as PubMed, DOAJ, EBSCO, IEEE Computer Society, ISI Web of Knowledge, and ACM Digital Library do not contain relevant research articles on the subject. The lack of well-established databases for business and economics presents a major hurdle for conducting a thorough systematic review.

The second step involves reviewing published articles on the concept of financial innovations within the relevant databases (Article exploration).

The third step is to categorize the obtained articles using logical codes (Article categorization). These categories help in forming a framework for understanding the subject matter.

The fourth step is to present the major findings using the logical codes, based on the observations generated from the framework (Presentation of findings).

The final and most crucial step is to identify gaps in existing research, providing avenues for future studies (Identification of Research gaps).

The inclusion criteria (IC) defined for this review focus on the effects of financial innovations on the profitability of commercial banks, specifically within the context of commercial banks in Ethiopia. The documents reviewed are required to be in English. Given the lack of well-established, freely accessible databases, the search for relevant studies was conducted using open access search engines and databases such as Google Scholar, JSTOR, Emerald, Google, and Semantic Scholar. For the systematic review, only publicly available, published results from peer-reviewed journals, books, conferences, workshops, or theses are considered as part of the peer-reviewed results.

In addition, various keywords were employed to locate studies primarily focused on the impact of financial innovations on the profitability of banks in Ethiopia. Using terms such as financial innovations, e-banking, Ethiopia, the effect of financial innovations, and financial technologies, a total of 37 studies on this topic were identified. Of these, 22 studies were located through database searches, while the remaining 15 were found through other records from different sources. After removing duplicates, the final count of records was 37.

After conducting a search for studies on the impact of financial innovation in Ethiopia, 27 studies were found to examine its effect on the profitability of commercial banks in the country. The other 10 studies were excluded as they fell outside the scope of the review. Consequently, 10 studies were removed during the screening process because they were not relevant to the topic and focused on different cases or issues.

The evaluation primarily focuses on the impact of financial innovation on the profitability of commercial banks in Ethiopia. A total of 27 studies conducted on commercial banks in Ethiopia were selected based on an eligibility quality assessment. However, two of these 27 full-text studies were excluded from the review as they did not meet the eligibility criteria.

A final sample of 25 research papers was selected from the search engines based on the established inclusion and exclusion criteria for classification and analysis (see Figure 2.1).

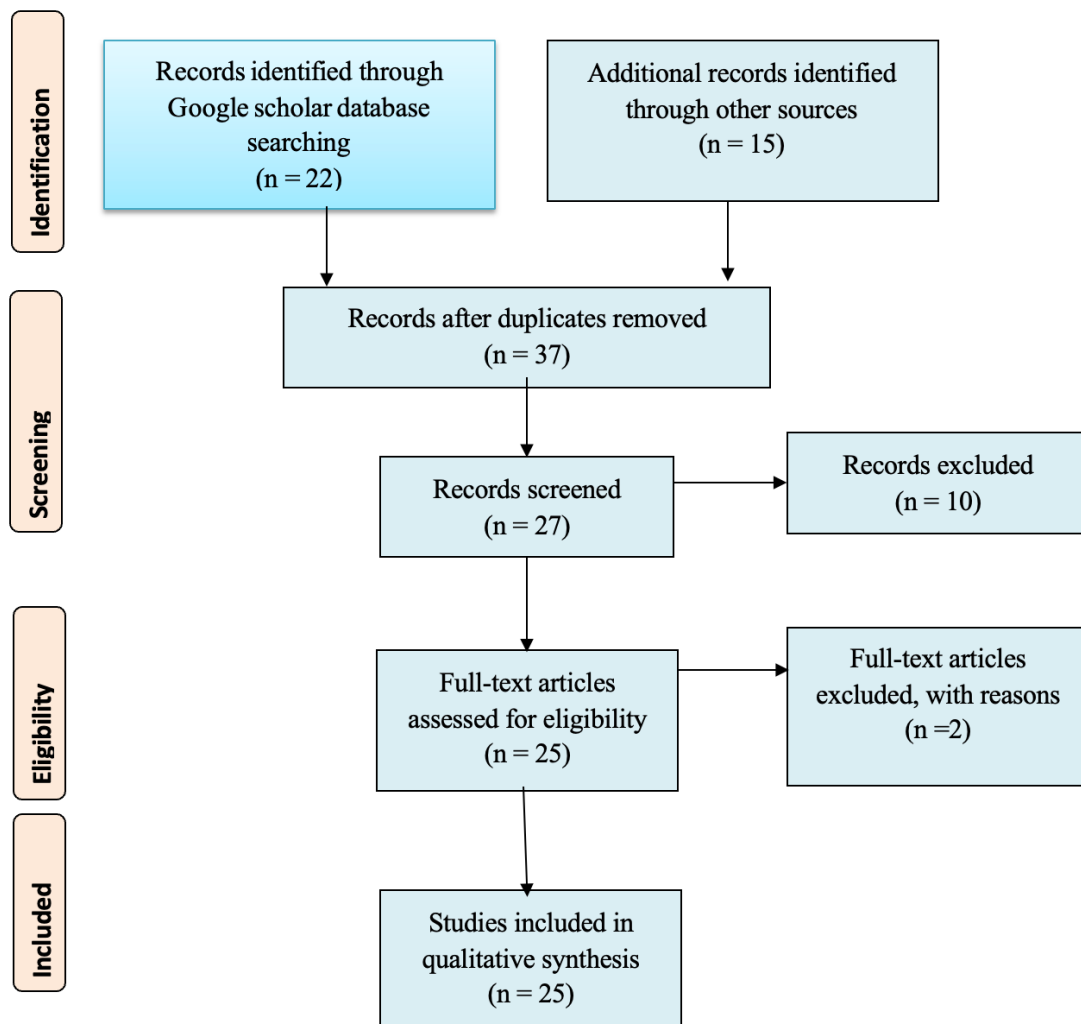


Figure: 2. 1: The article selection process for the Systematic literature review using PIRSMa framework

### Classification of the Studies

Classification plays a crucial role in systematization, as it helps identify the key characteristics of the papers being reviewed. The studies that met the criteria for inclusion in this systematic review were examined in terms of their research outlets. After the selection process, the review categorized the relevant studies using various parameters to gain a clearer understanding of the research conducted on the impact of financial innovations on bank profitability.

To evaluate and integrate the findings from the existing research, all selected articles were carefully organized, and a systematic review of the existing literature was conducted based on the following parameters:

1. Theories related to the studies:

Schumpeter Theory, Constraint-induced financial Innovation Theory, Transaction Cost Innovation Theory, Location Innovation Theory, Task Technology Fit (TTF) Theory, Innovation Diffusion Theory, Financial Intermediation Theory, Regulation Innovation Theory, Theory of Planned Behavior, Christensen's Theory of Disruptive Information and Strategy Jobs-To-Be-Done Theory.

2. Methodology: Quantitative Research, Qualitative Research, and Mixed research.

3. Variables of interest:

Number of ATM Terminals, Number of Mobile Banking users, Number of Agent Banking, Number of Debit cardholders /users, Number of internet banking users, Number of point of sale terminal (POS), Number of New Saving Account, Hard ware investment, Software investment, IT service investment, Information and Telecommunication Technology (ICT), Electronic fund transfer, Credit card, Agency banking, Product innovation, Process innovation, Market innovation, Technological innovation.

4. Citation: a. Cited      b. Not cited

5. Databases used: Google scholar, Google, and others

6. Types of the paper: Published articles, and MSc thesis (Unpublished)

### 3. Result and Interpretation

This section presents and discusses the key findings from the systematic review. A total of 25 papers were analyzed to identify knowledge gaps regarding the impact of financial innovations on the profitability of commercial banks in Ethiopia. The Google Scholar search engine was primarily used to locate studies examining this relationship. A descriptive analysis was conducted, and the literature was categorized based on various criteria for clearer presentation. The analysis focuses primarily on studies conducted in Ethiopia that explore the effect of financial innovations on bank profitability.

#### Descriptive Analysis

A descriptive analysis of twenty-five studies was conducted in order to determine the basic ongoing trend of publication on the effect of financial innovations on the profitability of Ethiopian banks. To answer the research question, the review analyzed the publication trend in terms of total publication by year, theories employed, variables of interest, the types of papers, the databases used, the methodology used, and citations.

### Year Wise Publication

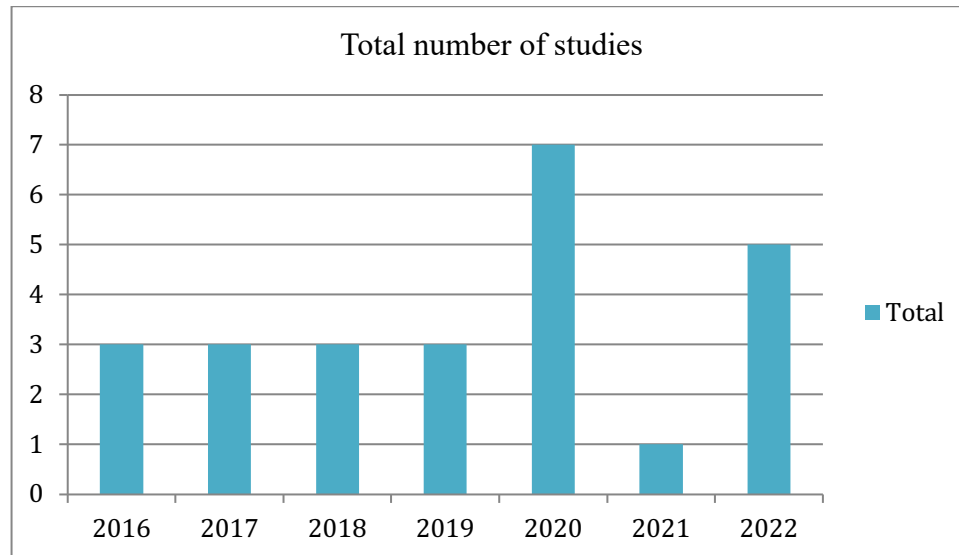


Figure-1 Studies frequency

The year-wise publication provides the trend of literature on the effect of financial innovation on bank profitability based on the publication frequency in terms of the year.

Figure 1 depicts that the year-wise distribution frequencies of the studies of the effect of financial innovation on the profitability of banks in Ethiopia are uniform from the years 2016 to 2019. The highest number of studies was conducted in 2020 and 2022. Before the year 2016, there were no studies conducted in Ethiopia on the effect of financial innovation on Ethiopian banks profitability that were published and freely accessible.

### Types of the paper

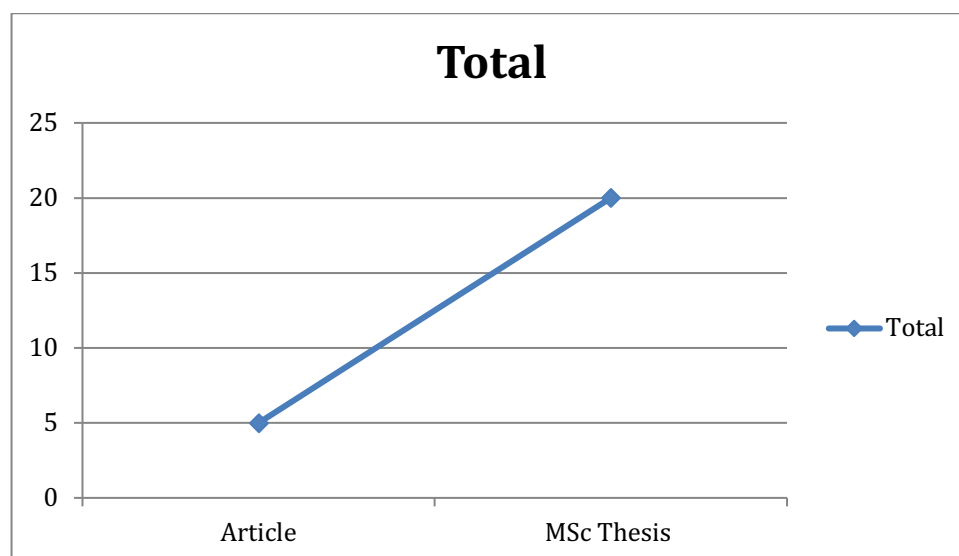


Figure 2 types of the studies

As shown in Figure 2, the studies included in the review were 80% MSc theses (20 studies) and 20% (5 studies) published journal articles. This divergence between published and unpublished research suggests that a significant share of the empirical evidence available on the link between financial innovation and bank profitability in Ethiopia comes from postgraduate research and not from peer-reviewed journal publications. The relatively low proportion of published articles also indicates that whilst the subject has attracted significant interest among postgraduate researchers, the results have been less widely disseminated via peer reviewed academic journals.

### Methodology

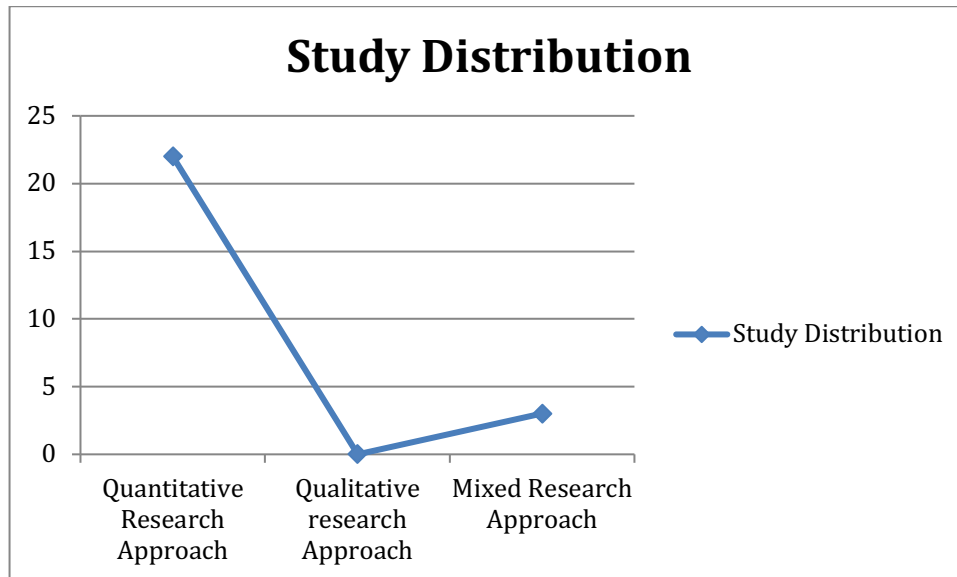


Figure 3: Methodology employed

In general, figure 3 reveals the study distribution of the methodology: a mixed research approach was highly employed next to a quantitative research approach, whereas no study solely employed a qualitative research approach to study the effect of financial innovation on bank profitability.

### Databases

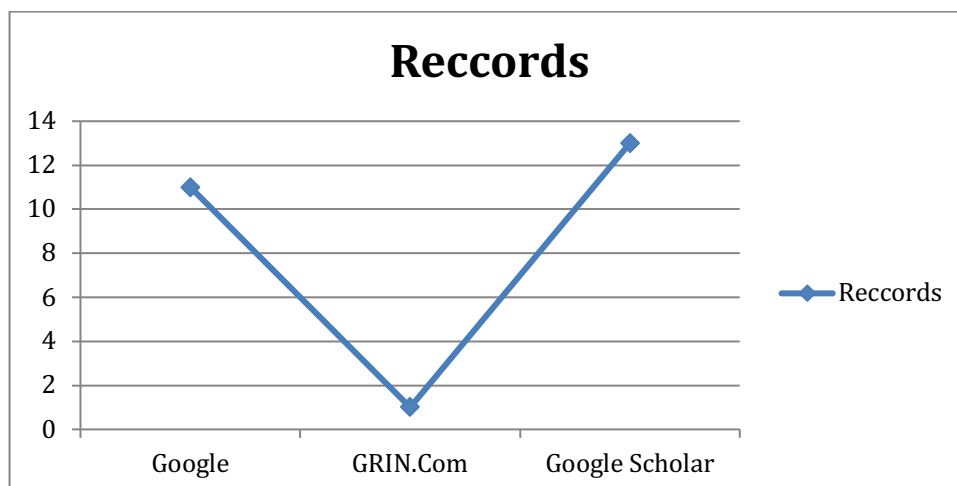


Figure 4 Sources of the data

Concerning the sources of data, figure 4 shows that the majority of the data was obtained from the Google Scholar search engines and Google.

## Theories used/ backed

### Number of studies that uses theory or not

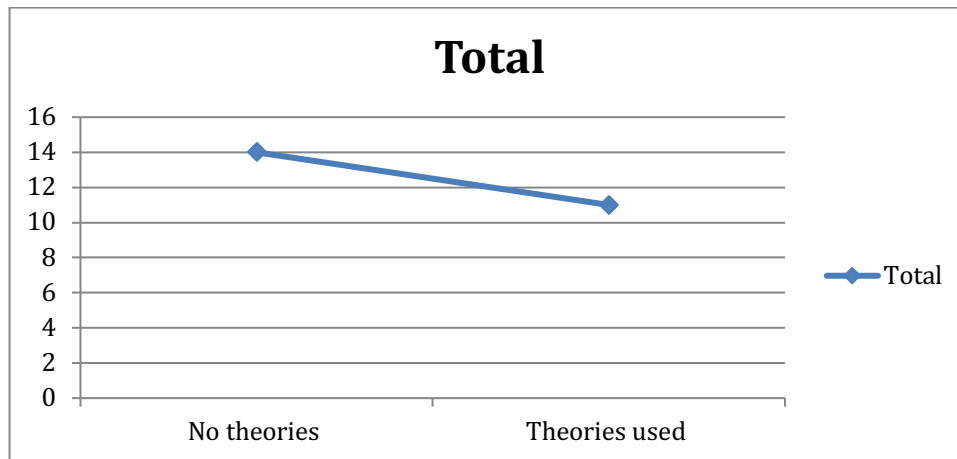


Figure 5 Usage of theories

From all studies employed, 11 studies used the subject-related theories, whereas the remaining 14 studies didn't use the theories related to financial innovation, which may help the paper analyze and forward sound conclusions and recommendations.

### List of the theories employed

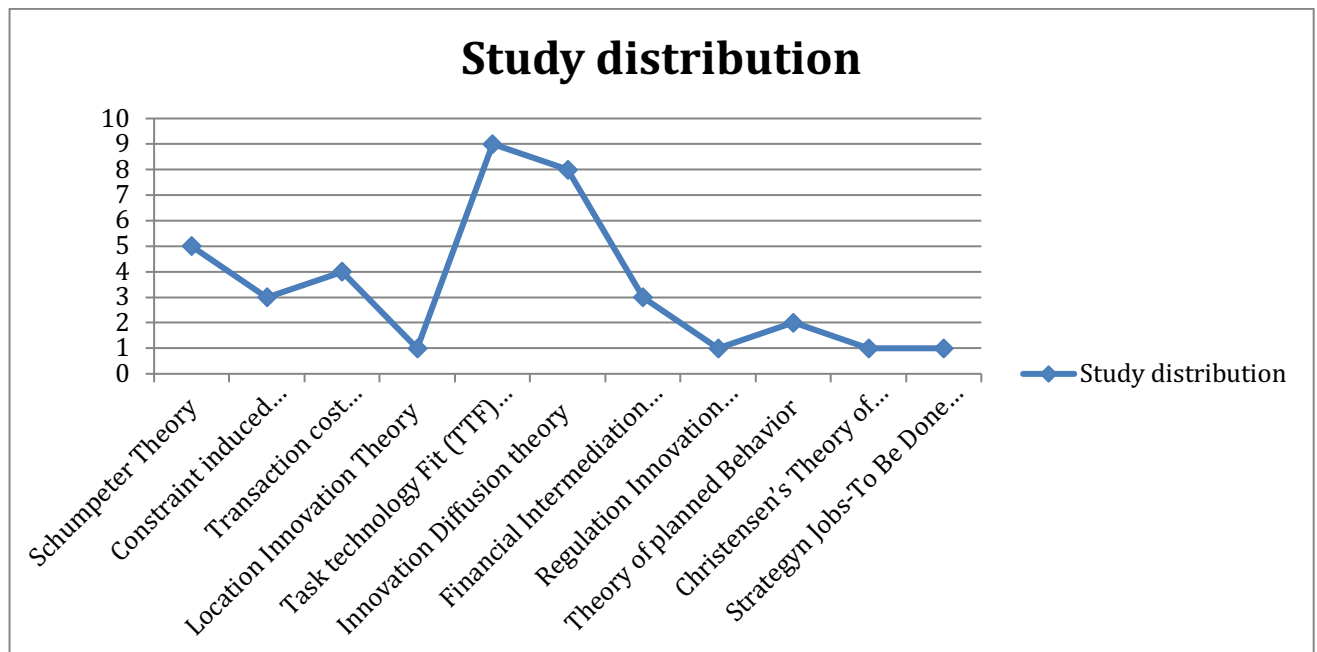


Figure 6: Frequency of theories backed in the study

The objective of this review is to show the effect of financial innovation on bank profitability and describing the applicability of financial innovation theories in the present banking environment and identify the most accepted theory as per the studies under review.

Figure 6 depicts that from all 11 theories stated in the paper under review, task technology fit (TTF) theory, and innovation diffusion theory were relatively used in the paper. It indicates that there is a marked predominance for task technology Fit (TTF) theory (9 paper), and Innovation Diffusion theory (8 papers), which deals with the concept of financial innovation, followed by Schumpeter Theory (5 studies), and Transaction cost Innovation Theory (4 studies). The rest of the theories were used in few studies.

Citation Analysis

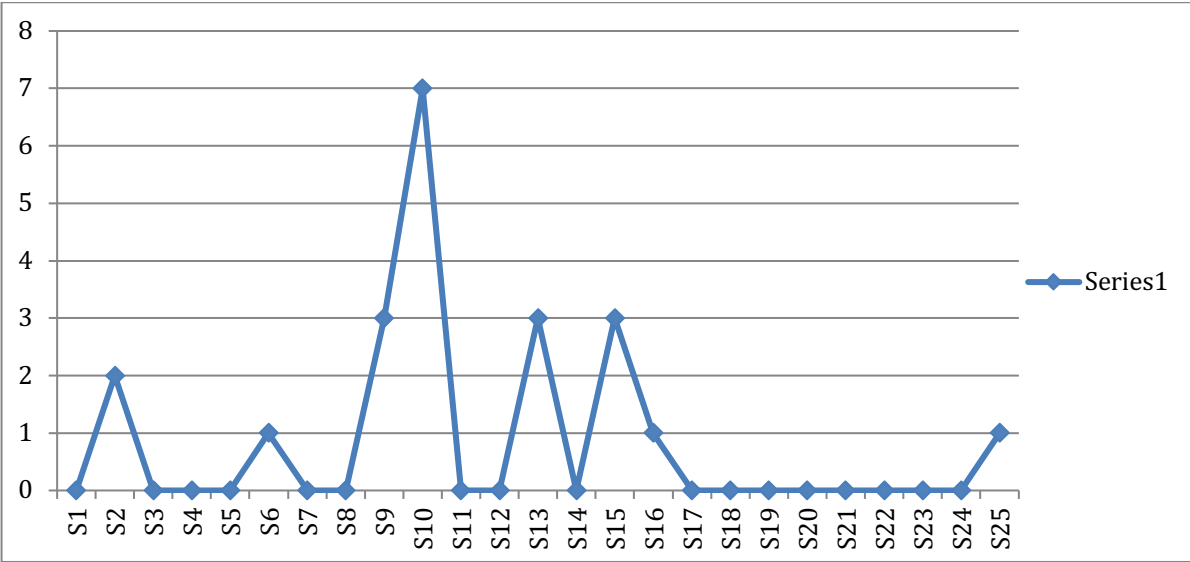


Figure 7: Citation Analysis

Figure 7 shows that, of the 25 studies reviewed, only 8 studies had received citations, while the remaining 17 studies had not been cited. Study 10 was comparatively the most frequently mentioned study. This result suggests that scholarly attention and distribution of studies on financial innovation and bank profitability in Ethiopia have been scarce. The large percentage of uncited studies also points to the need for more research, publication, and accessibility in order to create a more robust and cohesive body of evidence.

Variables of interests

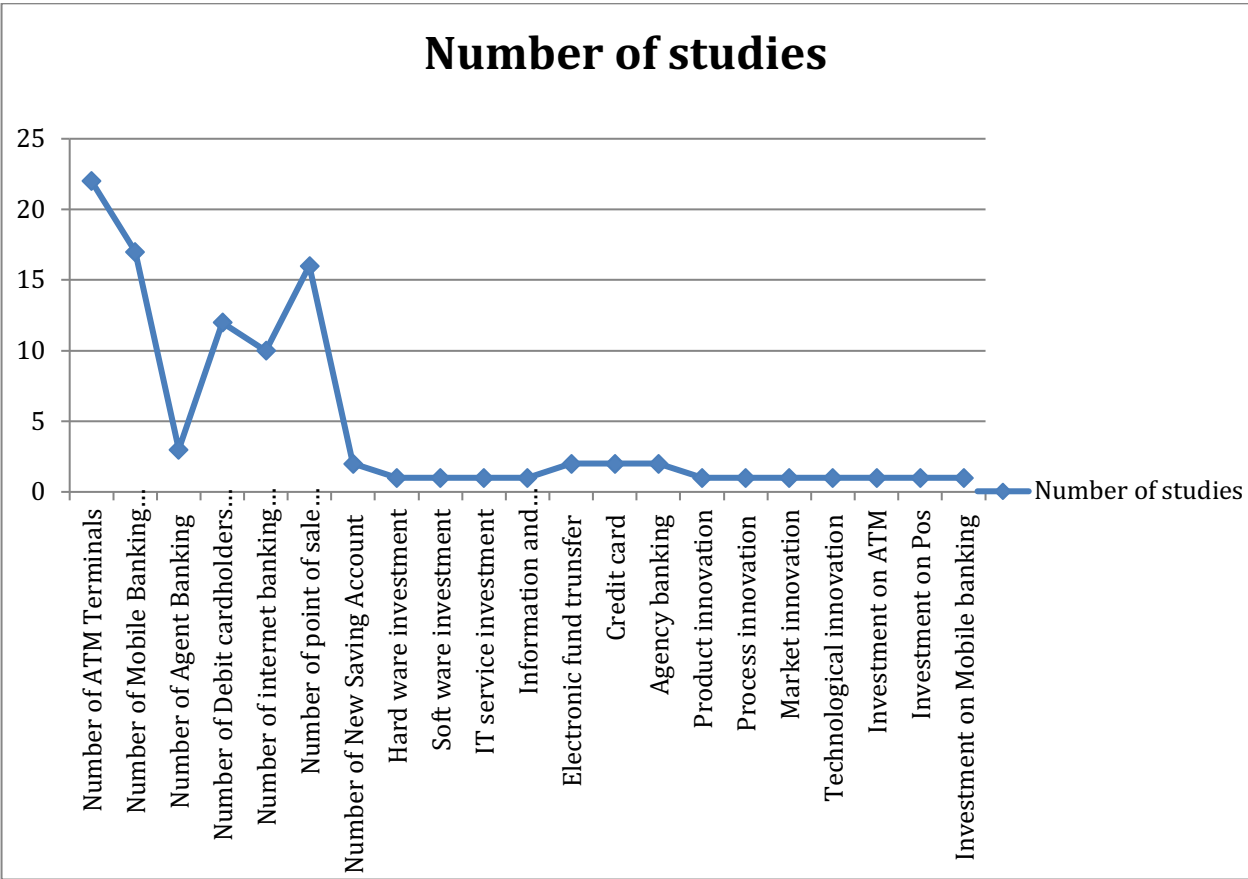


Figure 8: variable of interest

In Figure 8, it is observed that different variables were used in the studies in relation to the topic. The figure reveals that the first variables of interest highly explored were the number of ATM users, number of mobile banking users, number of debit cardholders or users, number of internet banking users, and number of point of sale terminals (POS), which were used in the majority of the study under review. On the other hand, the other variables were the variables of interest investigated and used in one or two studies from the sampled paper under review.

#### 4. Discussions

The modern financial system is distinguished by a rapid rate of innovation, both in terms of quantity and value. As a result, it is critical to assess their effect on the financial institutions profitability. Many studies on this topic have recently been published; however, they have primarily focused on the global financial crisis perspective or on a single type of financial innovation (B. Joanna, 2011).

The modern economy cannot exist without an efficient financial system, which is defined as a collection of markets, institutions, instruments, and regulations that enable financial securities to be traded, interest rates to be determined, and financial services to be produced and delivered globally (Polański, Pietrzak, & Woźniak, 2008; Rose & Marquis, 2009). The financial system is regarded as one of contemporary society's most important creations, and it is described as an integrated aspect of the economic system, and thus a key part of the social system (Polański, Pietrzak, & Woźniak, 2008).

Companies have recently placed a greater emphasis on innovation. This is due to the fact that differentiation will provide them with a competitive advantage. Companies who develop innovative products or services have an advantage, and this advantage is growing in the face of competition (Akkaya, 2018). Innovation gives companies the chance to adapt to the environment they are in. More importantly, it enables them to recognize and control change in the external environment, which is critical for the operator's long-term competitiveness. Innovation can achieve firm's short term outputs such as increased financial performance and market share, creation of new markets, reduction of production costs.

Therefore, this paper is tries to explore the studies conducted in Ethiopia on effect of financial innovation on banks profitability and analyzes the literature review to systematize the current state of knowledge on the financial innovations of the banking industry. The paper examines existing research on the subject of financial innovations and their effect on bank profitability in Ethiopia.

#### Citation analysis

Along with the aforementioned analysis, a citation analysis of the sample of articles is performed to identify influential authors and their papers in financial innovation and bank profitability research. A citation shows the relationship between the cited item and the citing document. Citation analysis is a method for gathering pertinent studies; it aids in locating the most significant studies pertinent to the task at hand, and serves as a standard measurement because high citation scores are related with article quality (Kumar, Colombage, & Rao, 2017).

First, the total number of citations for each paper was obtained from Google Scholar and ranked. Second, in order to determine the number of citations for an article, the citation analysis was used, and the descriptive analysis shows the total number of citation scores, i.e., the total citation score per study. Figure 7 depicts the total number of citations for each of the 25 sampled papers.

According to the citation analysis (Figure7), Abebe, was the most referenced author in the effect of financial innovation on Ethiopian bank profitability from 2013 to date (Abebe, 2016).

According to the findings of this research, only 8 of the 25 studies were cited, while the rest 17 were not. This indicates how little research has been done in Ethiopia on the effect of financial innovations on bank profitability. The year wise distribution of the research reveals that, with the exception of 2020 and 2022, which have the biggest number of studies, the frequency of studies on the influence of financial innovations on bank profitability remains steady from 2016 to 2019. Between 2013 and 2015, there were no published studies on the effect of financial innovation on bank profitability in Ethiopia. Even within the overall number of studies reviewed, 80% were MSc theses (unpublished) and the remaining 20% were published articles, revealing how much research relating to the issue was conducted in Ethiopia. Similarly, Ding and Cronon believe that the citation depicts the relationship between the cited and citing articles. Citation analysis determines the prominence and influence of an article in the scientific community by counting the number of times it is referenced in other works (Ding & Cronin, 2011). As a result, we may infer that, despite the fact that financial innovation in Ethiopia began in 2001, the effort has been very weak and unsatisfactory.

Only eight of the studies under consideration were cited, (Temam, 2018; Altaseb, 2020; Yasin, 2018; Abebe, 2016; OMER, 2020; Damtew, 2016; BEZA, 2017; Worku S. , 2016) while the remaining seventeen were not. The analysis suggests that the publishing pattern indicates that the area is under-researched and the quality of the studies is poor.

### **Variables of Interest**

Ongoing improvements and changes in the current form of existing financial products produce efficiency in the financial system; thus, constant change or innovations in financial institutions are crucial and have recently grown (Berman, Cano-Kollmann, & Mudambi, 2022).

As a result, the link between financial innovations and economic growth has attracted the interest of scholars and policymakers throughout the years, particularly during the 2007 financial crisis, given the ambiguity around its negative impact on the economy (Li & Xu, 2021).

When the financial system continues to develop, the economy benefits because it makes it easier to accumulate wealth and encourages saving while also providing a variety of options in the form of new and improved financial products that are more useful and less expensive ( Lusardi, 2019).

Financial innovation is a continuous and quick process that comprises the development of new financial goods, services, and processes in response to changing market demands and the enhancement of current ones. The financial system is continually changing and transforming as a result of this innovation to accommodate new products and technology. Financial innovation is critical because it opens up new avenues for accessing financial services and managing risk (Chien, Pantamee, Hussain, Chupradit, Atif Nawaz, & Mohsin, 2021; Djoumessi, 2009; Donner & Tellez, 2008).

Financial institutions, particularly private commercial banks, play an important role in the growth of the financial system through developing various financial goods and services. In the long run, these innovative products and services contribute to faster economic growth by enhancing numerous economic activities and facilitating financial inclusion, money transfer, and remittances (Edquist, 2019).

These expanded economic activities offer more opportunities, which contribute to higher economic growth. Financial innovations in the economy evolve in conjunction with the financial system. As a result, the financial system improves in efficiency, allowing financial firms to offer better products and services.

In Ethiopia, few studies have been conducted on the topic of financial innovations and bank profitability ( Worku S. , 2016; Abebe, 2016; Berhan, 2018; Mezgebu, 2017). Many of these studies

embrace more or less focuses on similar variables of interest and the results are contradicting with each other. For example the number of ATM terminals, the number of mobile banking users, the number of debit cardholders, number of internet banking users, and number of point of sale are the more explored variable of interest in the study under review. The review result reveals that these variables have a positive association with bank profitability, but there are also some studies where these variables indicating a negative relationship and no relationship at all (Fentaw & Thakkar, 2022; Temam, 2018; Reshid, 2020; Altaseb, 2020; Aschenek, 2020; Ashenafi, 2019; Damtew, 2016; Girma, 2016; Kinf, 2016; Yasin, 2018).

It can be seen from the descriptive analysis of the variable of interests that a number of variables were employed as explanatory variables in the research pertaining to the subject the effect of financial innovation on bank profitability in Ethiopia.

The study shows that the number of ATM users which was employed in almost all studies, is the first variable of interest that has been thoroughly investigated. The second variable of interest thoroughly explored in the effect of financial innovation on bank profitability were includes the number of Mobile banking users, the number of debt card holders, number of internet banking users, and number of point of sale. In contrast, the other variables were rarely explored.

### Theories backed

Several theories have been designed by different scholars to explain financial innovation. In determining the performance and profitability of the bank service employing high technology devices and machines there are different significant financial theories (Damtew, 2016).

The main purpose of this review was to indicate the effect of financial innovation on bank profitability of Ethiopian commercial banks, describe how financial innovation theories apply in the current business environment, and identify the most widely accepted theory according to the studies under review.

Schumpeter theory, constraint-induced financial innovation theory, transaction cost innovation theory, location innovation theory, task technology fit (TTF) theory, innovation diffusion theory, financial intermediation theory, regulation innovation theory, theory of planned behaviour, Christensen's theory of disruptive information, and strategy jobs-to-be-done theory were the theories used in the studies under evaluation, as indicated by the descriptive analysis (figure 6).

As a result, the descriptive analysis indicates that relatively there is a marked predominance for task technology fit (TTF) theory (9 studies), innovation diffusion theory (8 studies), and Schumpeter theory (5 studies).

The findings from the studies suggest that, with the exception of one, none of the studies identified a theory that is more applicable to the Ethiopian banking sector, nor did they establish a clear connection between financial innovation theories and their research. In contrast, Fentaw & Thakkar argue that the theories they examined confirm that financial innovation positively impacts the profitability of commercial banks. Their findings align with the concepts of Schumpeter's innovation theory, transaction cost innovation theory, constraint-induced financial innovation theory, and task-technology fit theory, all of which support the view that financial innovation positively influences the profitability of commercial banks (Fentaw & Thakkar, 2022).

While the review seeks to enhance understanding of financial innovation and bank profitability by examining the variables influencing profitability and identifying relevant financial innovation theories for commercial banks in Ethiopia, it makes limited progress in advancing empirical literature on financial innovation, particularly in terms of determining the significance of country-specific factors.

The findings of the research, along with the theoretical foundations, were inconsistent, unclear, and contradictory.

## 5. Conclusion

This study presents a systematic literature review on the impact of financial innovation on bank profitability in Ethiopia. The aim is to explore how financial innovation affects profitability, critically assess existing studies, identify research gaps, and offer directions for future research. A review of relevant academic publications from 2013 to 2023 was conducted to understand the focus on financial innovation's effect on bank profitability. The descriptive analysis, based on factors such as year-wise distribution, citation analysis, key variables, and underlying theories, provided valuable insights into the major contributions to the topic under investigation.

According to the citation analysis, only eight out of the twenty-five studies reviewed have been cited, while the remaining seventeen have not been referenced. This suggests that research on the impact of financial innovations on bank profitability in Ethiopia is limited, and the publishing trend reveals that the field is under-explored with low-quality studies. The result also suggests that scholarly attention and distribution of studies on financial innovation and bank profitability in Ethiopia have been scarce. The large percentage of uncited studies also points to the need for more research, publication, and accessibility in order to create a more robust and cohesive body of evidence. Many of the studies share similar variables of interest, but their findings are inconsistent. Additionally, when it comes to the theories used, the data shows that, except for one study, none of the research identified appropriate theories for the Ethiopian banking sector or linked financial innovation theories to their analysis.

## 6. Future Suggestions

Due to the limited and conflicting studies on the impact of financial innovation on bank profitability in Ethiopia, the existing research lacks solid foundations for drawing policy conclusions or guiding academics and researchers. Therefore, it is recommended that further investigations on this topic be conducted to provide more reliable insights. The Ethiopian banking literature has yet to give adequate focus to financial innovation and its relationship with bank profitability. There remains confusion regarding how financial innovation influences profitability and which factors contribute to its success. Consequently, it is advised that the relevant authorities undertake a thorough study to identify the key factors affecting financial innovation and bank profitability.

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