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Research Article

The Effect of Financial Innovation on Financial performance of Commercial Banks in Ethiopia: A Systematic Review (2015-2024)

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Abstract
The systematic review aims to systematically review the effect of financial innovation on the financial performance of commercial banks in Ethiopia from 2015 to 2024. Utilizing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, the review meticulously identifies, screens, and selects relevant studies to provide a comprehensive synthesis of existing literature. The study revealed that financial innovation (ATM, mobile banking, internet banking and debit cards) are frequently explained and significantly influencing the financial performance of commercial banks in Ethiopia. The findings reveal a growing but uneven interest in financial innovation research, with a predominance of empirical studies and limited theoretical frameworks. The review highlights significant knowledge gaps and suggests directions for future research to enhance understanding and application of financial innovations in the Ethiopian banking sector.

Keywords: Financial Innovation, E- Banking, Banks, Ethiopia, Systematic Review

1. Introduction
Advancements in Information and Communication Technology (ICT) have fundamentally transformed the global banking industry by introducing new markets, products, services, and efficient delivery channels [1]. Financial Innovations such as online electronic banking, mobile banking, and internet banking have significantly enhanced customer convenience and accessibility of financial services [2]. In Ethiopia, the banking sector is rapidly evolving with the adoption of financial innovations. Banks are transitioning from outdated legacy systems to advanced core banking systems which enable them to provide efficient and global competitiveness. Innovations like ATMs, POS systems, mobile banking, CBE Birr, internet banking, and agency banking have enhanced service delivery and operational efficiency [3]. Additionally, the National Bank of Ethiopia's mandated the implementation of core banking systems aims to streamline the national payment system and improve inter-institutional payments.

In today's dynamic and competitive environment, financial innovation is pivotal to the performance and operations of banks [4]. However, the role and impact of financial innovation remains a subject of debate among practitioners and academics [5]. Several theories have been developed to explain financial innovations and their implications, including contemporary banking theory, bank-focused theory, bank-led theory, innovations theory, agency theory, non- bank led theory, task-technology fit (TTF) theory, constraint-induced financial innovation theory and strategy's jobs-to be-done theory [6-9]. Financial innovation theories offer banks crucial insights into managing and leveraging innovation. Contemporary banking theory underscores the importance of commercial banks and ICT in capital allocation and economic development [10]. Bank-focused theory views ATMs as a strategic extension of branch banking, enhancing control, branding, and cost efficiency [11]. Transactions cost innovative theory highlights reducing transaction costs as key to financial innovation [12]. Innovation diffusion theory explores how firms adopt innovations for competitive advantage [10].

Schumpeter's theory of innovation emphasizes the role of entrepreneurs in creating profit opportunities through innovation [12]. Constraint-induced financial innovation theory links profit maximization with innovation, while Location innovation theory sees innovation as vital for market integration [1,7]. Task-technology fit (TTF) theory suggests that IT positively impacts performance when well-aligned with tasks [13]. These theories collectively provide a framework for understanding the diverse impacts of innovation in banking. In recent years, the financial landscape of Ethiopia has been notably shaped by the adoption of financial innovations or electronic banking. The impact of these innovations on the performance of commercial banks has been the subject of various studies, which have produced inconsistent results. For example, research by (Samuel, 2015;

Beza, 2017; Temam,2018; Abebe,2019; Jote ,2023; Adugna et al.,2021; Abdo,2021; Fentaw & Thakkar,2022; & Alamirew & Kassaye,2024) has found positive and significant effects of mobile banking, internet banking, and ATMs on bank performance [7,14-19]. Conversely, studies by Yasin (2018) & Temam (2018) reported negative and insignificant impacts of ATMs and POS systems[7,20]. For agency banking and POS, Adugna et al. (2021) and Fentaw & Thakkar (2022) highlighted positive impacts, while Damtew (2016), Darge (2022), and Alamirew & Kassaye (2024) reported negative effects [9,17-19,21]. Lastly, Goshu & Fekete (2022) &Alamirew & Kassaye (2024) observed positive effects of debt cards, while Darge (2022) reported a negative impact, and Temam (2018) and Beza (2017) indicated insignificant effects [7,9,15,19,22].

This inconsistency in findings highlights a critical gap in the literature regarding the true effects of financial innovations on the financial performance of Ethiopian banks. Addressing this gap could lead to more effective strategies that enhance the profitability and overall performance of commercial banks in Ethiopia. Despite its significance, there is a notable gap in the literature concerning financial innovation of commercial banks in Ethiopia. The scarcity of accessible databases and scientific papers poses challenges for conducting comprehensive literature reviews. Therefore, the primary purpose of this systematic literature review is to analyze and summarize the effect of financial innovation on financial performance and identify the gaps in existing knowledge and the level of existing research in the field and to provide guidance for future research. The rest of this review proceeds as follows: The next section presents the methodology section which is followed by findings and discussions. Finally, the conclusion and suggestions for future research based are provided.

2. Methodology

To address the research gap concerning financial innovation in commercial banks, a systematic review of scholarly studies recently published between 2015 and 2024 was undertaken. This review utilized the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to ensure a thorough, unbiased analysis. The systematic literature review aimed to provide a comprehensive summary of relevant literature by meticulously identifying, screening, and selecting studies, thus offering a clear and reliable synthesis of existing research while minimizing bias (Hughes et al., 2005). According to Denyer & Tranfield (2009), literature reviews support theoretical advancement by identifying well-researched areas and highlighting domains requiring further investigation. This review involved a methodical approach: locating existing studies, selecting and evaluating contributions, analyzing and synthesizing information, and describing evidence to draw clear and reliable conclusions about the effect of financial innovations on financial performance of Ethiopian commercial banks.

Only studies meeting all the inclusion criteria specified in the review protocol are incorporated. To ensure the relevance and quality of the studies included in this systematic review, the following set of inclusion criteria was established. These criteria help to ensure that the selected studies are both relevant to the research question and academic quality. The following 6(six) criteria are outlined in the table below (see table 2.1).

Inclusion Criteria	**Description**
Inclusion Criteria ***1***	*The systematic review focuses on the effect of financial innovation on the financial performance of commercial banks* published between 2010 and 2024
Inclusion Criteria ***2***	*The location of the review delaminated to commercial banks in Ethiopia.*
Inclusion Criteria ***3***	*The document is written in English.*
Inclusion Criteria ***4***	*Since there is an absence of a well-established database, the studies are searched from any open access open search engines and databases such as Google Scholar, JSTOR, Emerald and others.*
Inclusion Criteria ***5***	*For the systematic review, the publicly available and published in peer-reviewed journals or theses are used as part of the peer reviewed results.*
Inclusion Criteria ***6***	*Keywords were used, such as "financial innovation," "E-banking," "financial performance," & "Ethiopia".*

Source: Authors' review

Table 2.1: Study Selection Criteria for Financial Innovation & Financial Performance

Based on the key words, 64 studies on financial innovation in Ethiopian financial institutions were identified. Of these, 31 were found through database searches, while an additional 33 were discovered through other records from various sources. After removing duplicates, the total number of unique records remained at 29 papers. Upon further screening, only 31 studies were found to be specifically focused on the effect of financial innovation on the financial performance of commercial banks in Ethiopia. The remaining 33 studies, which covered other organizations such as microfinance institutions (MFIs) and insurance companies and focused on other themes, were excluded due to their irrelevance to the review's focus. These studies were identified through sources like as Google Scholar, JSTOR, Emerald, and others.

After applying the eligibility criteria, 2 studies from the 31 initially selected was excluded as it did not meet the review's standards. The researcher studied 29 reviewed English articles from various databases that met selection criteria. Finally, the final sample of 29 research papers from the search engines was derived based on the inclusion and exclusion criteria to conduct the analysis (see Figure 2.1).

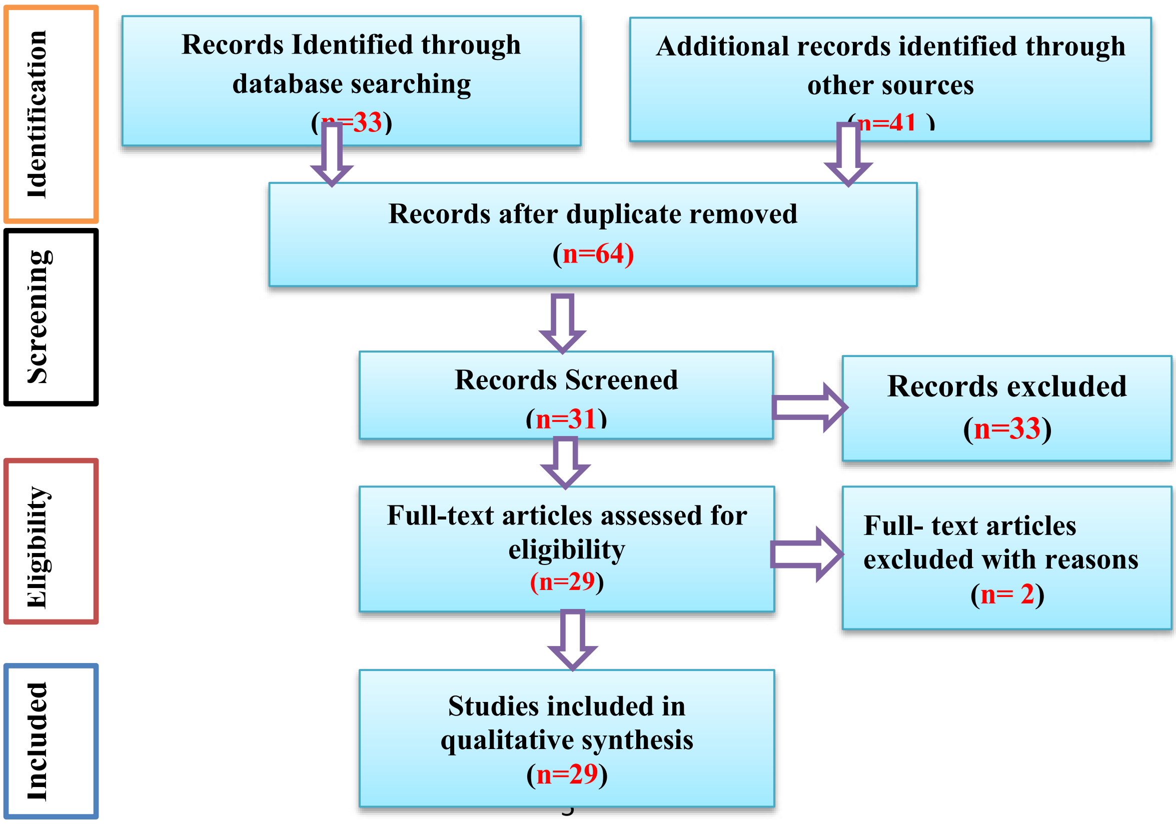


Figure 2.1: The Article Selection Process for The Systematic Review Using PIRSMA Framework

To effectively assess and synthesize the information from the selected research studies, the articles were systematically organized and classified. A detailed analysis of the literature was conducted based on the following six research questions.

No	Develop research questions
1	What is the time distribution of financial innovation research articles?
2	What kinds of FI articles were published?(Empirical vs. Conceptual)?
3	What kinds of theories were applied in these articles?
4	What are mythology distributions of the study?
5	What variables were investigated in research?
6	Does the article(s) cited?

Source: Authors' review

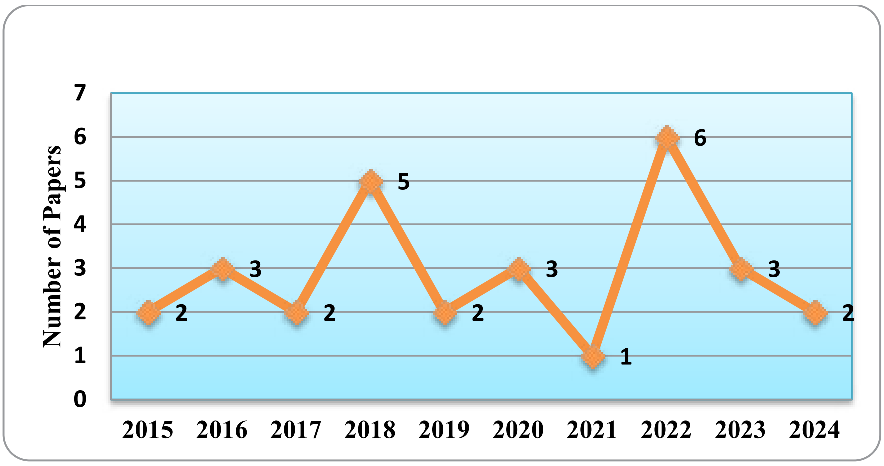
Table 2.2: Research Questions

3. Findings and Discussions

This section presents findings and discussions of the systematic review. The analysis was conducted on a sampled of 29 papers with the aim of identifying knowledge gaps on the effect of FI on the financial performance of commercial banks in Ethiopia (2015-2024). To carry out this systematic review, the studies focusing on financial innovations were identified mainly using the Google Scholar search engine, the descriptive analysis was made, and the literature was classified based on different parameters to facilitate the presentation. To answer the research questions, the review has analyzed and discussed the publication trend, article type, theory of the study, study variables, methodology and lastly citations of articles.

3.1 Time Distribution of Articles

This section provides the trend of literature on the effect of financial innovation on the financial performance of commercial banks in Ethiopia over the years from 2015 to 2024.



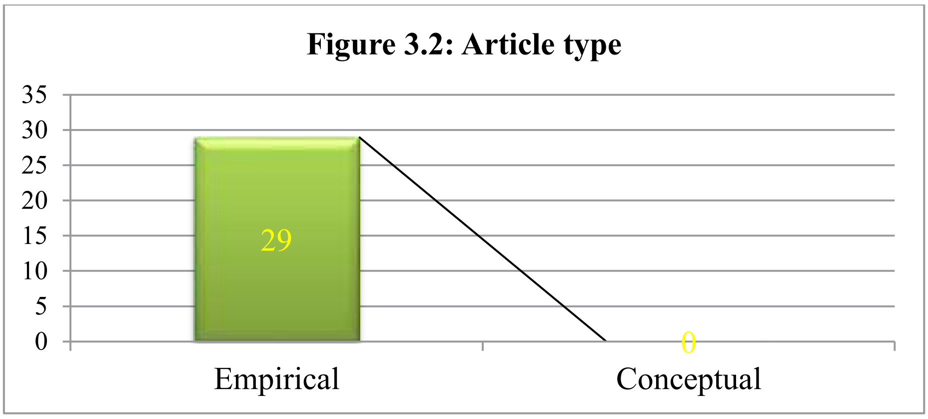
Source: Authors' review

Figure 3.1: Time Distribution of Articles

Referring to the year distribution of the studies, findings shows that an uneven growth trend. As shown in the figure 3.1, initially modest with just two papers in 2015, interest increased, peaking at three articles in 2016. The number of publications fluctuated, with notable peaks in 2018 and 2022 (five and six articles, respectively), indicating rising recognition of FI. However, 2021 saw the least activity, with only one article published. The years 2020 and 2023 each had three studies, while 2017, 2019, and 2024 each had two. Therefore, we suggests that the field shows growing but variable interest, suggesting potential for further research expansion and the trend of the publications and the quality of the studies are not convincing and promising.

3.2 Article Type

Figure 3.2 revealed that all 29 articles reviewed are empirical studies, with no conceptual papers included. This indicates that the research on financial innovations in Ethiopian banks has been grounded entirely in empirical data, without any contributions from conceptual frameworks. This indicates a strong focus on data-driven research that examines real-world applications and outcomes of financial innovations within the Ethiopian commercial banks context. There is no single conceptual article. To enhance the understanding of financial innovation in Ethiopia, it is advisable to encourage mixed-methods research that combines empirical data with conceptual frameworks, providing a more comprehensive view of the challenges and opportunities in this field of study.

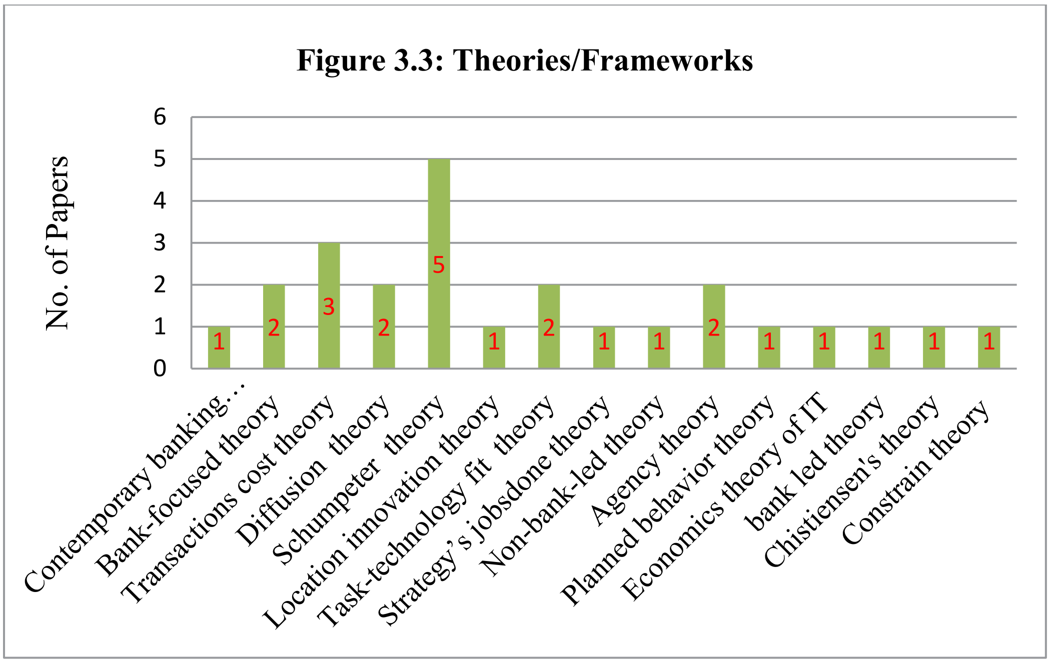


Source: Authors' review

Figure 3.2: Article Type

3.3 Theory of the Study

This section examines the application of financial innovation theories in the bank environment. As shown in figure 5.3, out of the 29 reviewed articles, 15 different financial innovation theories were utilized. Only 7 articles (2.14%) of articles incorporated any theories, but 22 papers (75.86%) were not incorporated any theories.



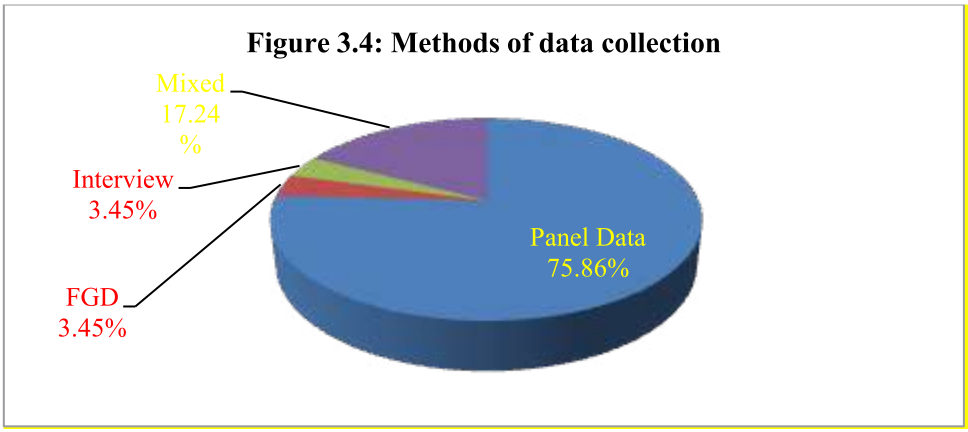
Source: Authors' review

Figure 3.3 shows that the most commonly applied theories are Schumpeter's Theory, presented in 5 articles, which highlights the role of innovations in creating and increasing profit (Damtew, 2016; Temam, 2018; Muze, 2019; Alemayehu, 2020; Darge, 2022) and Transaction Cost theory, used in 3 articles, which focuses on reducing transaction costs as a key driver of financial innovation (Temam, 2018; Muze, 2019; Alemayehu, 2020) [7-9,21,23]. The review recommends that future research should incorporate a broader range of theoretical frameworks to deepen the analysis and explore underutilized theories to better understand financial innovation dynamics in Ethiopian banks.

3.4 Methodology

3.4.1 Methods of Data Collection

Across the 29 articles reviewed, four data collection methods were employed: panel data, mixed, interviews and focus group discussions (FGD), as illustrated in Figure 3.4.



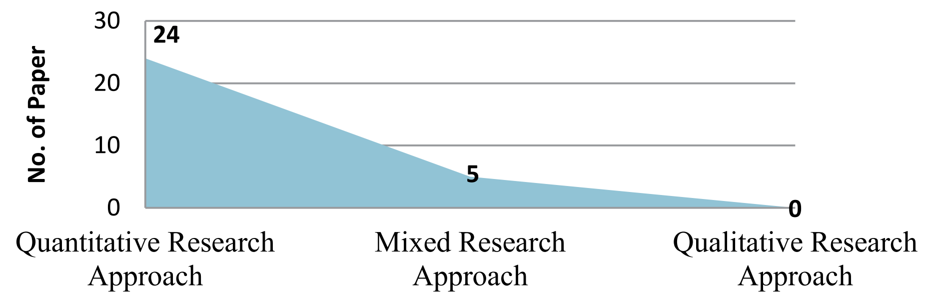
Source: Authors' review

The finding shows that panel data was the most frequently used method, appearing in 22 papers, which represents 75.86% of the total. Mixed were used in 5 articles, accounting for 17.24%. Interviews were employed in just 1 article making up 3.45% and focus group discussions were also used in 1 article, representing 3.45% [24,25]. Given the predominance of single-method studies, primarily relying on secondary data (document analysis), there is a notable opportunity for future research to incorporate a combination of methods. Using multiple data collection approaches could provide a more comprehensive perspective and improve the accuracy and depth of findings in financial innovation research.

3.4.2 Research Approaches

Figure 3.5 revealed the distribution of research approaches used in studying the effect of financial innovations on the financial performance of commercial banks in Ethiopia. Quantitative approaches were employed in 24 papers and mixed research approaches were employed in 5 papers. Notably, no study exclusively used a qualitative approach.

Figure 3.5: Research Approaches



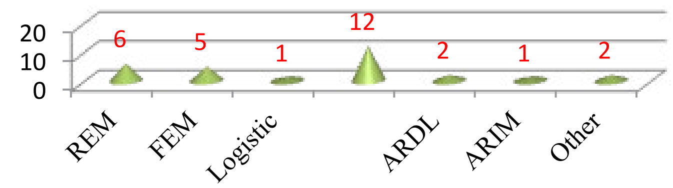
Source: Authors' review

Figure 3.5 illustrates the distribution of research approaches used in the studies reviewed. It shows that quantitative research methods were the most prevalent, with 24 articles employing these approaches. Mixed research approaches, which combine both quantitative and qualitative methods, were used in 5 articles. Notably, no study relied solely on a qualitative research approach. This predominance of quantitative methods underscores a strong emphasis on statistical analysis and measurable impacts of financial innovations (FI) on financial performance in banks. Among the studies using mixed methods: Tadesse (2018), Hailu (2020), Aba-Bulgu (2022), Jote (2023), and Muleta & Feyera (2024) the integration of both quantitative and qualitative data was aimed at achieving a more nuanced understanding of FI effects [6,16,24-26]. The review concludes that incorporating both research approaches could provide a richer and more comprehensive perspective on financial innovations.

3.4.3 Model Specification

As illustrated in Figure 5.6, twelve studies used multiple regression models, six studies applied the Random Effects Model (REM), and five studies employed Fixed Effects Model (FEM). Additionally, one study each employed the Logistic Regression Model and the ARIMA Model, while two studies utilized the ARDL Model and two studies used other models.

Figure 3.6: Model specification



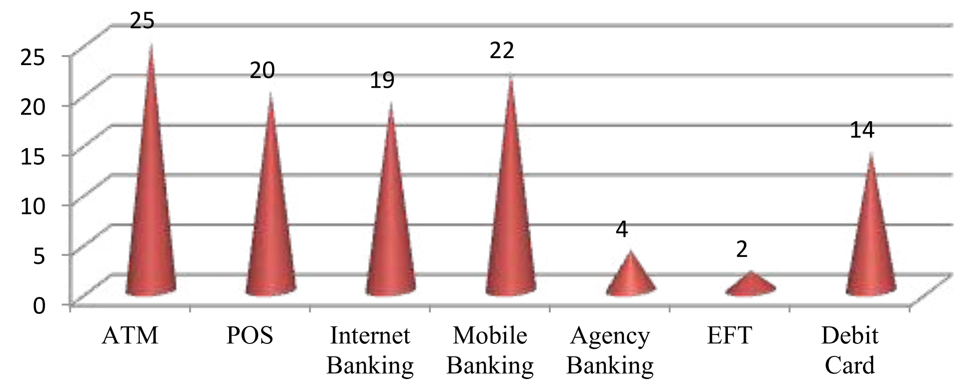
Source: Authors' review

The findings indicate a diverse array of methodologies used to assess how financial innovations impact the performance of commercial banks in Ethiopia. Twelve studies employed multiple regression models to analyze the simultaneous effects of innovations such as ATMs, POS systems, mobile banking, and internet banking on financial performance. Among these, six studies applied the Random Effects Model (REM) to account for variability across different entities, while five used the Fixed Effects Model (FEM) to focus on within-entity variations. Additionally, one study utilized Logistic Regression to examine categorical outcomes associated with financial innovations [25]. The ARIMA Model, used by Desalegn & Tangl (2022), facilitated time-series forecasting based on historical data, and two studies employed the ARDL Model to explore both short-term and long-term dynamics [22,27,28]. These varied approaches suggest that the choice of model and the specific context of each study may influence the findings, underscoring the complexity of measuring the impact of financial innovations and leading to inconsistent results.

3.5 Study Variables

Figure 3.7 illustrates the focus of studies on various financial innovation variables. ATMs are the most extensively studied, featured in 25 articles, followed closely by mobile banking, which appears in 22 studies. Debit cards, internet banking, and POS systems are also prominent, with 14, 19 and 20 studies respectively. In contrast, Electronic Funds Transfer (EFT) and agency banking are less frequently examined with 2 and 4 fewer studies respectively.

Figure 3.7: Variables of the study



Source: Authors' review

The following table shows the summary of the studies conducted in Ethiopia on the effect of financial innovation on the financial performance of commercial banks along with the explanatory variables.

Variables	Author(s)	Result
ATM	Nurga(2015);Beza(2017);Jote(2018);Abebe(2019);Muze(2019);Hailu(2020); Alemayehu(2020);Omer(2020);Desalegn&Tangl(2022);Kumuri&Deygneto(2022); Aba-Bulgu(2022); Muleta & Feyera(2024) and Alemirew & Kassaye(2024)	**+ve**
	Temam(2018); Desalegn & Ferkas(2022); Fentaw & Thakkar(2022)	**-ve**
MB	Nurga(2015); Beza(2017); Temam(2018); Abdo(2018); Jote(2018); Muze(2019); Omer(2020); Adugna(2021); Fentaw & Thakkar(2022); Desalegn & Tangl(2022); Aba-Bulgu(2022); Muleta & Feyera(2024) and Alemirew & Kassaye(2024)	**+ve**
POS	Beza(2019); Hailu(2019); Abebe(2019); Desalegn & Tangl(2022); Fentaw & Thakkar(2022); Kumuri & Deygneto(2022) and Muleta & Feyera(2024)	**+ve**
	Damtew(2016); Muze(2019); Adugna(2021) and Alemirew & Kassaye(2024)	**-ve**
IB	Nurga(2015); Abdo(2018);Yasin(2018); Abebe(2019); Omer(2020); Darge(2022); Fentaw & Thakkar(2022); Aba-Bulgu(2022);Kumuri & Deygneto(2022); Desalegn & Tangl(2022); Muleta & Feyera(2024) and Alemirew & Kassaye(2024)	**+ve**
DC	Alemayehu(2020); Omer(2020); Desalegn & Tangl(2022); Kumuri & Deygneto(2022) and Alemirew & Kassaye(2024);	**+ve**
	Darge(2022)	**-ve**
AB	Jote(2018); Tadesse(2018) ;Kumuri & Deygneto(2022); Fentaw & Thakkar(2022) and Aba- Bulgu(2022)	**+ve**
EFT	Kumuri & Deygneto(2022)	**+ve**

Source: Empirical review

Table 3.1: A Summary of Explanatory Variables on Financial Performance

Different studies, such as (Nurga,2015; Beza,2017; Jote,2018; Abebe,2019; Muze,2019; Hailu,2020 Alemayehu,2020; Omer,2020; Desalegn&Tangl,2022; Kumuri&Deygneto,2022; Aba-Bulgu,2022; Muleta & Feyera, 2024 & Alemirew & Kassaye,2024) found significant and positive impact of ATM users on the financial performance of commercial banks in Ethiopia [5,8,15,19,23-27,29]. This suggests that increased ATM usage correlates with improved financial outcomes for banks. However, studies by Temam(2018); Desalegn & Ferkas(2022) & Fentaw & Thakkar(2022) revealed negative effect of ATM users on performance of banks in Ethiopia [7,18,22]. Nevertheless, some studies, notably (Abebe, 2016 &Darge, 2022) have demonstrated that there is no relationship between ATM and the performance of commercial banks in Ethiopia [9]. Their findings go against the bank-focused theory, innovation diffusion theory and the previous studies of financial innovation.

Mobile banking has been shown to have a positive relationship with the financial performance of commercial banks, as evidenced by a multitude of studies, including those conducted by Nurga (2015), Beza (2017), Temam (2018), Abdo (2018), and Jote (2018) [7,15,30]. These consistent positive findings underscore the growing significance of mobile banking as a tool for enhancing financial performance in the banking sector. Further support for this trend is provided by subsequent research from authors such as Muze (2019), Omer (2020), Adugna (2021), Fentaw & Thakkar (2022), Desalegn & Tangl (2022), Aba-Bulgu (2022), Muleta & Feyera (2024), and Alemirew & Kassaye (2024), all of which highlight the beneficial impact of mobile banking on banks' profitability and operational efficiency [8,17-19,24,25,27,29]. However, it is important to note that not all studies align with this positive outlook. Research by Darge (2022) and Alemirew & Kassaye (2024) identified a negative effect of mobile banking on financial performance, while Hailu (2020) and Damtew (2016) reported no significant effect at all [9,19,21,26]. These contrasting results challenge the assumptions of Schumpeter's theory of innovation and the Constraint-induced financial innovation theory, both of which posit a direct link between profit maximization and the adoption of innovative financial practices.

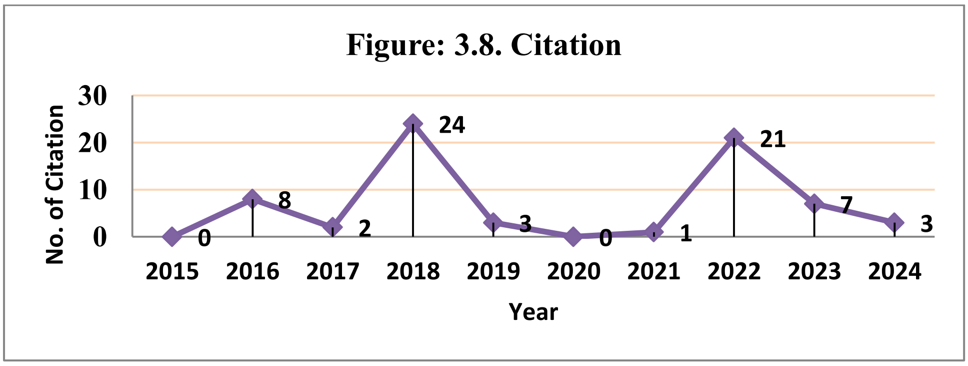
The third factor extensively examined in relation to the effect of financial innovation on the financial performance of banks in Ethiopia is the point of sale (POS) system. Similar to mobile banking, the adoption of POS technology has been linked to positive financial outcomes for banks. Research conducted by Beza (2019), Hailu (2019), Abebe (2019), Desalegn & Tangl (2022), Fentaw & Thakkar (2022), Kumuri & Deygneto (2022), and Muleta & Feyera (2024) supports this assertion, indicating that the implementation of POS systems can enhance financial results by improving transaction efficiency and customer satisfaction [5,18,25,27]. However, contrasting findings have emerged from studies by Damtew (2016), Muze (2019), Adugna et al. (2021), and Alemirew & Kassaye (2024), which identified a negative effect of POS systems on the financial performance of banks in Ethiopia [8,17,19,21]. These results challenge the Task-Technology Fit (TTF) theory, which posits that the alignment of technology with task requirements should lead to improved performance outcomes.

The analysis of internet banking users reveals a predominantly positive impact on the financial performance of banks in Ethiopia, supported by a range of studies including those by Nurga (2015), Abdo (2018), Yasin (2018), Abebe (2019), Omer (2020), Darge (2022), Fentaw & Thakkar (2022), Aba-Bulgu (2022), Kumuri & Deygneto (2022), Desalegn & Tangl (2022), Muleta & Feyera (2024), and Alemirew & Kassaye (2024) [5,9,18-20,24,25,27,29,30]. However, it is important to note that Damtew (2016) found no significant effect of internet banking on financial performance, indicating that the outcomes may vary based on specific circumstances or implementation practices [21]. Similarly, the findings regarding debit card usage are largely positive, with authors such as Alemayehu (2020) , Omer (2020), Desalegn & Tangl (2022), Kumuri & Deygneto (2022), and Alemirew & Kassaye (2024) suggesting that this financial innovation enhances the financial performance of banks [5,19,23,27,29]. Conversely, Darge (2022) reported a negative impact of debit card usage on financial performance, highlighting the complexity and variability of results in this area [9].

In addition, electronic funds transfer (EFT) and agency banking have been less frequently investigated but show promising results. Studies by Jote (2018), Tadesse (2018), Kumuri & Deygneto (2022), Fentaw & Thakkar (2022), and Aba-Bulgu (2022) indicate a positive impact of these variables on financial performance [5,6,18,24]. This suggests that while EFT and agency banking may not be as widely studied as other financial innovations, they hold potential for contributing positively to the financial outcomes of banks in Ethiopia. Overall, the mixed results across different studies underscore the need for further research to better understand the conditions and factors that influence the effectiveness of these financial innovations in enhancing the performance of banks.

4. Citations Analysis

Figure 3.8 shows citation patterns among the reviewed studies. From all the studies under review, the fourth study (2018) and the eighth study (2022) were the most highly cited paper. The figure also depicts that second study(2016), third study (2017), fifth study (2019), seventh study (2021), ninth study(2023) and tenth study (2024) are also cited, whereas the others (first study (2015) and sixth study (2020) are not cited.



Source: Authors' review

Citation analysis is a method used to identify significant studies by examining the number of times they are cited, which serves as an indicator of their quality. Higher citation counts correlate with greater study quality. From the studies under review, the most cited articles were (Abebe(2016),Yasin (2018), Desalegn & Tangl (2022) & Desalegn & Maria(2022) respectively and the remaining six studies were not cited [20,27,28,31]. the most cited papers were second study(2016), fourth study (2018), eighth study(2022) and ninth study(2023), indicating a strong interest in innovative practices in Ethiopian banking. However, more studies were received very few or no citations (e.g. 2015 and 2020 studies), suggesting they may not have effectively addressed relevant financial innovations. Notably, 62% of the studies were MSc theses, while 38% were published articles, highlighting the research landscape in Ethiopia. Therefore, from this, we can conclude that while there is interest in financial innovation, the efforts in this area remain limited, underdeveloped and poor.

5. Conclusions

This study presents a systematic literature review examining the impact of financial innovations implemented by commercial banks in Ethiopia on their financial performance. The review aims to critically assess the existing research, identify gaps, and provide guidance for future studies. It encompasses academic publications from 2015 to 2024, offering insights into how financial innovations have been explored in this context. The review employs a descriptive analysis to evaluate contributions based on factors such as publication year, study type, citation metrics, key variables, and supported theories. This systematic approach provides a comprehensive understanding of the field, highlighting significant findings and areas requiring further investigation. The review utilized the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which ensured a thorough and unbiased analysis of the existing literature. By systematically identifying, screening, and selecting studies published between 2015 and 2024, the methodology provided a comprehensive overview of the current state of research in the field.

Among the variables examined, ATMs emerged as the most frequently investigated, featured in 25 studies according to the descriptive analysis. Most of these studies identified a positive relationship between ATM usage and financial performance of banks in Ethiopia. This finding aligns with Contemporary Banking Theory, which emphasizes the role of commercial banks and information and communication technology (ICT) in optimizing capital allocation and profit maximization. It also corresponds with Bank-Focused Theory, which highlights how innovations like ATMs can enhance control, branding, and operational efficiency. Mobile banking and internet banking were the next variables frequently investigated in the study area. The review concludes that banking innovations, particularly mobile banking and internet banking, have a positive and significant effect on the financial performance of commercial banks in Ethiopia. These banking innovations are associated with enhanced customer convenience, increased accessibility to financial services, and improved operational efficiency, which collectively contribute to better financial outcomes for banks.

However, some research, notably, has shown that there is negative and no relationship between financial innovations and financial performance of Ethiopian commercial banks. Their findings contradict the innovations theory (Contemporary banking theory, Bank-focused theory, Schumpeter's theory, Constraint-induced financial innovation theory and location innovation theory). The review predominantly focused on empirical studies, which allowed for a quantitative assessment of the impact of financial innovations on bank performance. However, the lack of conceptual papers indicates a gap in theoretical exploration. The most cited articles demonstrate a strong interest in innovative practices; however, many studies received few or no citations and study predominantly consists of empirical studies, with no conceptual papers identified, indicating a lack of theoretical exploration in the field.

Out of the 29 articles reviewed, a limited number incorporated theoretical frameworks, with only 7 articles (approximately 24%) utilizing any theories. This indicates a notable gap in the theoretical exploration of financial innovations, suggesting that much of the existing research is primarily empirical and lacks a robust theoretical foundation. In the systematic review of financial innovations and their impact on the financial performance of commercial banks in Ethiopia, three primary models were employed: Multiple Regression Model, Random Effects Model (REM), and Fixed Effects Model (FEM). In the banking literature, the topic of financial innovations in banks remains largely underexplored. The findings(2015-2024) are inconsistent and unclear, with insufficient research addressing the benefits and challenges of implementing financial innovations across Ethiopia's financial -sector [32-40].

Future Suggestions

Given the limited number of studies on the effect of financial innovations on the financial performance of commercial banks in Ethiopia, and the inconclusive results for policy implications, it is recommended that academicians and researchers to further study the reviewed title to provide genuine recommendations. The banking literature remains sparse on the topic of financial innovations in banks, and there is currently insufficient clarity on how banks determine and implement these innovations and their effects on performance. Therefore, it is recommended that relevant authorities and stakeholders undertake comprehensive studies to identify and analyze key elements of financial innovations and their impact.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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