THE EFFECT OF INNOVATION STRATEGIES ON FINANCIAL PERFORMANCE

An Empirical Study on Private Commercial Banks in Ethiopia

BY:

HABTAMU DEMEKE

A Thesis Submitted to the College of Business and Economics in Partial Fulfillment for Requirements the award of Master Degree in Business Administration

Addis Ababa University

Addis Ababa, Ethiopia

March, 2020

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Statement of Declaration

I, *Habtamu Demeke* declare that this thesis entitled: "The effect of innovation strategies on the financial performance of private commercial banks' in Ethiopia" and submitted in partial fulfillment of the requirements the award of Master Degree in Business Administration is outcome of my own effort & study and that all sources of materials used for the study have been duly acknowledged. I have produced it independently with only guidance and suggestion of the thesis Advisor. The study complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Name: HABTAMU DEMEKE Signature _____Date_____

Statement of Certification

This is to certify that the thesis prepared by Habtamu Demeke, entitled "The effect of innovation strategies on the financial performance of private commercial banks' in Ethiopia" and submitted in partial fulfillment of the requirements the award of Master Degree in Business Administration complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Approved by:

Advisor: Habtamu Berhanu /PhD/Signature_____ Date _____

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF BUSINESS ADMINISTRATION

Declaration

This is to certify that the thesis prepared by HABTAMU DEMEKE MENGISTU, entitled: "The effect of innovation strategies on the financial performance of private commercial banks' in Ethiopia" and submitted in partial fulfillment of the requirements the award of Master Degree in Business Administration complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

Approved by:

External examiner: _____ Signature _____ Date _____

Internal examiner: _____ Signature _____Date _____

Advisor: Habtamu Berhanu/PhD/___Signature _____ Date _____

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Table of Contents

List of Table

List of Acronyms

ACCA	Association of Chartered and Certified Accountants
ANOVA	Analysis of Variance
ATM	Automated Tailor Machine
CBE	Commercial Bank of Ethiopia
E-Banking	Electronic - Banking
ERP	Enterprises Resource Planning
ICT	Information Communication and Technology
Log	Logarithm
MI	Market innovation
NBE	National Bank of Ethiopia
NI	Net Income
NIM	Net Interest Margin
PsI	Process innovation
PtI	Product innovation
POS	Point of Sale
ROA	Return on Asset
ROE	Return on Equity
SMEs	Small and Medium Enterprises
SPSS	Statistics package for social science
TI	Technological innovation
TTF	Task Technology Fit

Abstract

To achieve growth and sustain performance it is critical for any organization to foster and encourage creativity and innovative practices internally. Innovation strategy gives a clear direction and concentrates the effort of the whole organization on a common innovation end. An innovation strategy, then, becomes a source of competitive advantage for firms that strive to achieve a high level of innovation. Therefore the need for innovation is obvious and crucial for commercial banks operating in a continuous uncertain and competitive environment. The study aimed to analyze the effect of innovation strategies on financial performance of private commercial banks in Ethiopia. The main problem was that there is an increase in the number of innovation strategies, but whether the innovations in banking industry are the main determinants of financial performance is a hard to tell. Despite the significance of innovation strategies, the effect of innovation on financial performance is still misunderstood. The study adopted a explanatory panel design and targeted all the private commercial banks in Ethiopia. The secondary data in form of annual financial reports was obtained from National Bank of Ethiopia from the year 2014 to 2019. In addition, primary data was gathered from personnel from senior managers using a semi-structured questionnaire. Data were analyzed using SPSS Statistics 25 and involved computation of frequencies, explanatory statistics and multiple regression analysis. The study findings indicated that there is a positive and significant relationship between product innovation and net income. The relationship between process innovation and net income was found to be positive and significant. The study also concluded that the relationship between market innovation and financial performance of commercial banks is negative and insignificant. Based on the study findings, the study also concluded that the relationship between technological innovation and net income is positive and insignificant. The study recommends that the commercial banks should strive to ensure introduction of product variety, adding new elements to the products and product replacement to enable the companies to be more productive, to grow faster, to invest more and also to earn more performance. The study also recommended that commercial banks also should ensure that they adapt the new technology in order to cope with the fast changing environment. Technology innovation initiates simple flow of information and fast delivery to the intended persons.

Keywords: innovation, innovation strategies, financial performance, private commercial banks.

CHAPTER ONE

1. INTRODUCTION

This chapter presents the background of the study, statement of the problem, objectives of the study, research questions, research hypothesis, significance of the study, scope of the study and methodology of the study.

1.1. Background of the Study

This study is to figure out how strategic innovation affects the financial performance of the Ethiopia's Banking Sector. Rose (1999), describes banks as any financial institutions which supply a full financial services, including the providing of credits, deposits and payment systems, employing a full reasonably financial intermediation roles in any business economy.

Lillian Kanyuga (2019) in his study indicated by citing the study made by (Lerner and Tufano, 2011) as strategic innovation is defined because the act of constructing so popularizing new products, likewise as new technologies, Processes and markets. In recent before, it absolutely was possible for banks to satisfy their customers and to satisfy their own performance targets without the necessity to develop any new products to spice up service delivery because of the actual fact that account holders and banks were few, with the low volume of transactions, and luck of competition within the industry (Lillian Kanyuga, 2019).

As today's business environment becomes very competitive and business organizations become more aggressive and dynamic in identifying competitive strategies which will ensure profitable existence. Competition even be accredited to business innovations, advancement in technology and so the changing demand of consumers (Misati et al., 2010).

Lillian Kanyuga (2019) in his study indicated by citing the study made by (Joseph and Mark 2013) as viewed that, so on achieve and sustain competitive advantage and advance organization performance, managers should examine factors affecting the implementation of competitive strategies. They noted that a company should align its strategies with structure, provide strategic leadership, establish a corporation culture and monitor the implementation of the strategies. The

above listed measures are predominantly important within the banks by considering the volatility market with in stiff competition among commercial banks (Hicks and Niehans, 2012).

1.1.1 Innovation Strategy

Fred Nickols (2016) in his study indicated by citing the study made by (Drucker, 1961) as a method is that the pattern of major objectives, purposes or goals and crucial policies or plans for achieving organizational goals. An innovation is defined as a greenhorn idea or a greenhorn or substantially improved good or service that has been commercialized or any substantially new improved process for the commercial production of products and services (Roger, 1995).

B. Lawson & D. Samson (2001) in their study indicated by citing the study made by (Pennings and Harianto, 1992) because the flexibility and capacity to innovate is progressively perceived as an important consider developing and sustaining competitive advantage. Because of the industry is complex and its important nature, acting on innovation studies have attractive and provoking environment.

Bank innovations encompass the event of recent products/services or production process that cause efficient and effective operations. Nofie (2011), described innovations within the industry because the entrancement of recent or improved products or a processes which reduces the operational cost of rendering existing banking services.

Product innovation is the introduction of a good or a service that's new or significantly enhanced and relevancy for its characteristics or intended uses, it including significant enhancements in its specification of technology, components and materials used, incorporated soft-ware and user familiarity among other functional characteristics of goods or services. (OECD, 2005).

Process innovation is characterized because the usage of another or altogether enhanced creation or conveyance strategy and incorporates critical changes it methods, gear or programming. Handle are going to be intended to reduction unit expenses of creation or conveyance, to increment/enhance item and conveyance quality (Tavassoli and Karlsson, 2015).

Marketing innovation is completed mostly to higher meet the customers' needs. Marketing innovation disclose new markets, or gives the firm's products a greenhorn position within the market with the intention to increase sales income. They're strongly related to pricing strategies,

product offers, design properties, product placements and/or promotion activities (Tavassoli&Karlsson, 2015).

Jayani Rajapathirana and Yan Hui (2018) in his study indicated by citing the study made by (Rosli&Sidek, 2013) as technological innovation is defined the adaption of recent processes, products, and services that are introduced as a results of changes in technology.

Maxim Kotsemir, Alexander Abroskin and Meissner Dirk (2013) in their study indicated by citing the study made by (Quinn, 2010) as technological innovation is also defined as a scientific concept that explains nature and rate of change in technology.

Nofie Iman (2011) in his study indicated by citing the study made by (Agboola, 2003) as the adoption of technology in financial institutions have improved customer services, facilitated the accuracy of account, and provided for home and office banking services.

1.1.2 Firm Performance

Merry Elisabeth (2019) in her study indicated by citing the study made by (Richard et al., 2009) as performance of a firm is well-defined as a measure of the degree to which a firm has attained its set goals and objectives and it's given by three components that are: firm financial performance, product market performance and shareholder return. Bien (2002) viewed that firm performance as an entity's economic condition at a given time. Firm performance employs accounting measures which are derived from calculations for instance profitability, return on equity, returns on assets and returns on investment or market based which on the other hand are derived from the aspects of financial markets where the firm trade its financial assets for instance sales and market share.

Firm performance is a multidimensional concept that contains of four components; including Customer-focused performance, financial and market performance, human resource performance, and organizational effectiveness (Alam et al. 2011).

Financial performance measures a firm's ability and capacity of utilizing its resources to generate income by using essential methods of business (Bassler et al., 2008). NI, ROE and ROA

are the most common among different measurements of financial performance of the organization (Bagorogoza and Wall, 2010).

1.1.3 Innovation strategy and Financial Performance

Research done before on innovation strategy and its effect on financial performance have typically described that there is a positive relationship among them.

Shaker Zaher (2009) in his study indicated by citing the study made by (Roberts and Amit, 2003) as the importance of strategic innovation described as a means leading to a competitive advantage and superior financial performance. As shown in many studies, strategic innovation and firm financial performance have a positive relationship (for examples Zahra and Das, 1993; Calantone et al., 1995; Han et al., 1998).

Nyaga Gitonga (2015) in his study indicated by citing the study made by (Lyons, Chatman and Joyce, 2007) as argue that the relevant aspects of technological change include innovations that reduce costs related to the collection, storage, processing and transmission of information, as well as innovations that transform the means by which customers access the bank services. They also concluded that automated teller machine (ATM), telephone banking, internet banking and e-money (payment by Electronic) as being among the most significant innovations affecting the banking distribution system then that influence the banks performance significantly.

Korir Cherotich (2013) in his study indicated by citing the study made by (Boot and Thakor, 2007) as innovation generally does seem to have positive effects in raising financial performance of innovators. Umit Hacioglu, Hasan Dinçer, Nihat Alayoglu (2016) in their study indicated by citing the study made by (Crepon et al.,1998) as used a four-equation model, to link the innovation decision of firms to their performance through the impact of innovation input on innovation output and therefore the innovation output on productivity and better performance. And they concluded that there is a positive relationship between strategic innovation and productivity (firm performance), on their study they also added that an evidence for the relationship between firm size and innovation practices.

1.1.4 An overview of Ethiopian Banking System

Wesen Legese (2019) in his study indicated by citing the study made by (Leulseged, 2005; Alemayehu, 2006) as modern banking in Ethiopia was introduced in 1905 by an agreement between the then Ethiopian Emperor Menelik II and a representative of the National bank of Egypt which was owned British. The stated agreement has led to the establishment of bank of Abyssinia and it's been established in Feb 16, 1906. Later on, within the 1930's, the bank was bought by the Ethiopian government and therefore the Bank of Ethiopia was established by a proclamation issued in August 1942. This bank was later disintegrated into two different banks forming the Commercial Bank of Ethiopia and therefore the Bank of Ethiopia.

Within the history of Ethiopian banking industry, Addis Ababa (capital of Ethiopia) Bank Share Company was the primary private Ethiopian bank that had been established by the Ethiopian citizens' initiative and with the collaboration of National and Grandly bank London which had a possession of 40 percent of the entire share holdings.

Ermias Mengesha (2016) in his study indicated by citing the study made by (Zerayehu et al., 2013) as stated company had started its operation in 1964 with a paid-up capital of two million. Before 1974, there was hard to competent in the banking environment, since the industry was totally dominated by a one government owned Bank of Ethiopia. After the termination of fragile and inefficient state-dominated banking sector that has existed in Ethiopia from 1974-1991, the present government restructured and introduced a new system of Banking and Monetary proclamation that gave more autonomy and further clarified the National Bank of Ethiopia's activities as a regulator and supervisor of the banking sector. Moreover, the reform has legalized investment within the domestic private banking sector in 1994 under proclamation no., 84/1994 that marked the start of replaced and a new era within the Ethiopian banking sector (Admasu&Asayehegn, 2014).

Ermias Mengesha (2016) in his study indicated by citing the study made by (Tesfaye, 2014) as in the Ethiopian banking industry, there exist only two forms of bank ownership: fully government owned or fully privately owned. No hybrid kind of the two types of ownership or the involvement of foreign ownership exists.

Rukiya Temam (2018) in her study indicated by citing the study made by (Gardachew, 2010) as Ethiopian banking system is very much behind in the adoption of financial innovations compared to the rest world. However, the Ethiopian financial sector cannot remain an exception in expanding the use of the system. According to Rahel (2015), cited by Rukiya Temam (2018) the benefits of technological innovations like E-banking are well known by the banks and represent a formidable force to drive implementation of E-banking system.

Rukiya Temam (2018) in her study indicated by citing the study made by (NBE, 2012) as in recent years the banking sector has shown massive growth and development. The much of the growth in the banking sector has been witnessed in branch expansion and growth in capital base. Ethiopian banks have been engaged in many innovation where ATM, Debit card, POS, Agency Banking, internet banking and mobile banking have taken root in various banks.

Alemayehu Abebe (2013) in his study indicated by citing the study made by (NBE, 2012) as delivering banking services on this networked environment are more convenient and effective than ever before. Expanding the geographical coverage of digitized and networked banking services are the mainstreams for banks to deliver Quality Service to customers.

1.2 Research Problem

Current and future challenges and opportunities facing business organizations are within the fields of sustainable development; e-Commerce; and new development.

Sophie Karanja (2009) in his study indicated by citing the study made by (Drucker, 1998) as the power of the innovation capability construct is that it's generally realizable to any or all these domains, because it relates to the organizational potential to convert new ideas into commercial and community value and it is incredibly explicit in stating that innovation is figure instead of genius; successful innovation requires hard, focused, and purposeful work. The method of innovation in banks can incorporate both incremental and radical change.

Elizabeth Mbevi (2015) in her study indicated by citing the study made by (Bessant and Caffyn, 1997) as incremental innovation produces small continual changes and is usually visible in organizations within the sort of continuous improvement.

Elizabeth Mbevi (2015) in her study indicated by citing the study made by (Raymond, 1998) as banks consider that the cumulative gains in efficiency are much greater overtime than those,

which come from occasional radical changes. However, many of those short-and medium-term gains are quickly eroded and absorbed into the industry standard and thus can't be depended upon as a prerequisite for survival and growth.

Eric Munyanza (2017) in his study indicated by citing the study made by (Mabrouk and Mamoghli, 2010) as despite the importance of economic innovation in demystifying performance in banks, the effect of innovation on financial performance, remains misunderstood for two main reasons, first, there's inadequate understanding about the drivers of innovation and secondly innovations impact on banks financial performance remains lowly untested. Generally strategic innovations has a positive effect in rising financial performance of commercial banks. But in Ethiopian commercial banks since innovations happen every now then, it's interesting to know its effect on financial performance of economic banks in Ethiopia at the present time. Therefore, there's need to establish whether innovations have contributed to the financial performance of economic banks in Ethiopia. Additionally the connection between the growing investment in technology-based bank innovations and bank financial performance in Ethiopia must be studied.

In Ethiopia, various studies have been conducted on adoption of E-banking (Abenet and Gardachew, 2010), (Ayana and Abreham, 2012), (Rahel and Sintayehu, 2015), (Kassahun, Mattewos,Abebe, Tilahun, Tekabe, Gadise and Solomon, 2016), and (Rukiya, 2018). These studies focus on E-banking or technological innovations which are ATM, POS, Debit Card and Mobile banking. However, this study widens the scope of innovation strategy by including product innovation, process innovation and market innovation as an additional independent variable to represent innovation strategies in this study. In addition, this study used net interest margin of banks as a dependent variable instead of ROA and it included firm age and size as a moderating variable, since it is an important internal factor affecting both the innovation capacity and financial performance of the firm. This Study therefore is aimed at filling this knowledge gap by answering the question; what is the effect of innovation strategies on financial performance of private commercial banks?

1.3 Hypotheses

Based on literature review and the objective of the study, the expected relationship between independent variables and dependent variable is stated and the hypothesis is framed as follows:

I. Product innovation has positive and significant effect on Banks financial performance.
II. Process innovation has positive and significant effect on Banks financial performance.
III. Market innovation has positive and significant effect on Banks financial performance.
IV. Technological innovation has positive and significant effect on Banks financial performance.
V. Bank size has positive and significant effect on Banks financial performance.
VI. Bank age has positive and significant effect on Banks financial performance.

1.4 Objective of the study

The general objective of this study is to investigate the effects of innovation strategies on financial performance of private commercial bank focusing on its effect on net income, i.e. interest income minus interest expense of the banks.

1.4.1. Specific Objectives

The specific objectives of this study are:

a) To analyze the effect of product innovation on Banks financial performance.
b) To investigate the effect of process innovation on Banks financial performance.
c) To examine the effect of market innovation on Banks financial performance.
d) To establish the effect of technological innovation on Banks financial performance.
e) To investigate the moderating effect of bank age on Banks financial performance.
f) To examine the moderating effect of bank size on Banks financial performance.

1.5 Scope of the study

Scope of the research is proscribed (to);

 In terms of target population, the study focused on private commercial banks in Ethiopia by excluding state owned bank (CBE) thanks to the actual fact that company size has effect on financial performance and therefore the figures of this giant company may affect the content of the info thanks to the intense values effect (outliers effect).

 In terms of your time wise, it focused only considered recent period data from the year 2014 to 2019 in considerations of youngness of most commercial banks and current development of innovative banking products within the country.

 In terms of variables use for analysis for this research, the study focused on innovation strategies that improve financial performance in commercial banks in Ethiopia. The study specifically prohibited the results of product innovation strategy, process innovation strategy, market innovation strategy and technological innovation strategy on a firm's financial performance. Additionally it included age (year of service) and company size (total asset) as a moderate variable.

1.6 Significance of the Study

This study would influence be beneficial and important for the banking sector in Ethiopia, and other similar stakeholders/institutions as highlighted below.

The Management of business banks: This research would offer the bank management and financial organizations with more insight on the impact and also the importance of the use of innovation strategy for the performance of banks. It might show intelligent ways to penetrate new markets effectively with new products and innovative strategies.

Industry: The findings of the present study can further use by decision makers in industries within the field of innovation strategy and organization performance.

The industry and its regulators can use the research findings to style policies to encourage strategic innovation but at the identical time inculcate a good regulatory environment.

Government: Government policy makers would find the findings of this study useful while devising new policies that may help to form an enabling environment, thus, ensuring supportive strategic innovation in products, processes, markets and technology within the government.

Academics: This study would offer additional knowledge on the concept of innovation strategy and provides more empirical findings on its effect on organizational performance. And it might provide more valuable material to scholars, students and future researchers. Additionally, the study could also use as a basis for further research and academically within the field of strategic innovation.

1.7 Limitations of the study

Some of the respondents were hesitant in filling the questionnaires expecting that the data looked for would be utilized against them or their organizations. In any case, the specialist took care of the restriction by guaranteeing the respondents that the data being gathered will be utilized for scholastic reason just and that it would be treated with most extreme secrecy.

Further, the respondents had busy working schedules in their insurance firms which derailed the process of data collection. The researcher tackled the limitations by emphasizing to the respondents that the data was needed urgently in order to meet the academic deadlines. Lastly, the accuracy of the data collected was mainly dependent on what was provided by the respondents from the Insurance firms. The researcher handled the limitation from answering the respondents' queries on the questions that the respondents did not understand.

1.8 Organization of the paper

This study composed of five main chapters. The first chapter consists of the introduction parts. The second chapter consists of review of the theoretical and empirical related literatures. The third chapter describes the methodology of the study. The fourth chapter consists of all the results and discussions involved by using explanatory and regression model analysis. Finally, in the fifth chapter summary, conclusions and recommendations in the study area were discussed.

1.9 Definition of Key Terms

It is to define the central ideas or concepts of the research study.

Innovation: - The process of translating an idea or invention into a good or service that creates value or for which customers will pay. To be called an innovation, an idea must be replicable at an economical cost and must satisfy a specific need (Business Dictionary).

Product Innovation:-The development and market introduction of a new, redesigned or substantially improved good or service. Examples of product innovation by a business might include a new product's invention; technical specification and quality improvements made to a product; or the inclusion of new components, materials or desirable functions into an existing product (Business Dictionary).

Process Innovation: - Systematic approach to closing of process or system performance gaps through streamlining and cycle time reduction, and identification and elimination of causes of below specifications quality, process variation, and non-value-adding activities (Business Dictionary).

Market Innovation: - A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing. Marketing innovations are aimed at better addressing customer needs, opening up new markets, or newly positioning a firm’s product on the market, with the objective of increasing the firm’s sales (OECD, 2005).

Technological Innovation: - Technological innovation is the process where an organization (or a group of people working outside a structured organization) embarks in a journey where the importance of technology as a source of innovation has been identified as a critical success factor for increased market competitiveness. The wording "technological innovation" is preferred to "technology innovation". "Technology innovation" gives a sense of working on technology for the sake of technology. "Technological innovation" better reflects the business consideration of improving business value by working on technological aspects of the product or services (JESTOR, 2018).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter considers the opinions of various researchers, academics, and students and establishes the focal concepts of this research, through a radical study of previous research bearing on and attendant the topic matter. The literature review while specializing in the end result of previous studies associated with the extant research, also focuses on the sub-variables of product, process, market and technology innovations. The related theories were linked to the idea of the study, an empirical review was undertaken, and also the gaps within the literature were specifically acknowledged.

2.2 Theoretical Review

The literature on innovation is extensive, covering a good range of topics, with increasing attention paid to neglected types of innovation (e.g. organizational innovation) and locations of innovation (e.g. service industries). Innovation studies have traditionally been dominated by industrial economists and geographers but there appears to be a trend towards cross-disciplinarily, since understanding the processes and outcomes of innovation requires analysis from many angles.

Alexander Mwangi (2013) in his study indicated by citing the study made by (Nugroho and Miles, 2009) as the study of innovation is still weighted toward the market sectors of the economy, with less attention to innovation publicly services (despite a blizzard of research into e-government and e-health) and voluntary organizations and communities are rarely used as a sources and for the users of innovation.

Satya Sekhar (2018) in his study indicated by citing the study made by (Tufano, 2003) as provides a superb survey of the literature on financial innovation. The quality explanation for financial innovation is that it helps correct some quite market inefficiency or imperfection. For example, if markets are imperfect, financial innovation be able to improve prospects for risk allocating. At the time of agency conflicts a new kinds of security able to develop the alignment of interests. There are other important motivation that are important for financial innovation to

lower taxes or to avoid the impact of regulations. Since both issuers and buyers must like an innovation for it to be successfully introduced, the normal view of monetary innovation has been that it's desirable.

2.2.1 Diffusion of Innovation Theory

Erin Hampton (2016) in his study indicated by citing the study made by (Rogers, 1995) as diffusion is that the process by which an innovation is communicated through certain channels over a period of your time among the members of a structure. An innovation is a perfect practice or object that's seemed to be new by a personal or other unit of acceptance.

Erin Hampton (2016) in his study indicated by citing the study made by (Dillon and Morris, 1996) as factors that affect the diffusion of an innovation include: "relative advantage which means the extent of technology enhancements over currently existing tools, compatibility (the consistency of social practices and norms among its users), complexity (the simplicity of use or learning), the trial of ability (the chance of try the innovation before committing to use it), and observability (the level of technology output and its gain)." The above listed elements don't seem to be mutually exclusive therefore unable to forecast either the extent or the speed of innovation diffusion.

Erin Hampton (2016) in his study indicated by citing the study made by (Moore and Benbasat, 1991) as built on the work of Roger (1983), amongst others Tornatsky and Klein (1982) and Brancheau and Wetherbe (1990) and expanded the gathering of innovation characteristics to seven. Three amongst the seven innovation characteristics are directly copied from Rogers: the relative advantage, compatibility, and trial ability. Specifically, the concept commences to define the choice of innovation process within a company, nevertheless of describing the extent of addressing whether and the way the characteristics of an innovation relate to affect its implementation within the organizations, or regarding to the organizational type, size, or industry affect implementation. "In addition, although there's an innovation decision process defined for people and within organizations, there is no explanation of how the variables interrelate when innovations are diffused across the organizations" (Lundblad Jennifer, 2003).

2.2.2 Schumpeter's Theory of Innovation

The Schumpeter's hypothesis of innovation focuses on innovations because the impetus of economic process. The idea argues that opposition between market players instigates research on better ways of partnering for profitability promoting development of firms. Eric Munyaneza (2017) in his study indicated by citing the study made by (Schumpeter, 1934) as argued that business thinkers as works to develop new ways new profits by their innovations. Thus, gatherings of imitators pulled in by super- benefits would begin a rush of venture that might disintegrate the margin of profit for the event (Li et al., 2006).

The hypothesis declares that development has relied on the assembly of innovative or social ability, through critical thinking or learning exercises mainly inside and between firms. The development of recent products and processes is that the results of the way subordinate increase built up abilities and accomplishments, by the essential correction of developing new items or strategies and also the scan for applicable curiosity (Ali et al., 2005). By differentiate the quality understanding of this hypothesis of profits via advancement centers created in business sectors (Sundbo, 2008).

2.2.3 Constraint Induced Financial Innovation Theory

Eric Munyaneza (2017) in his study indicated by citing the study made by (Silber, 1975& 1983) as defines a constraint as something that limits or restricts progress. The most reason for financial innovation is profit maximization. However, in pursuing of profit maximization, financial institutions have a bent to face some limitations which are either external or internal. Silber also provides a framework for discussing financial innovation as means of reducing the price imposed by the regulation by government or the organization itself. However, he accepts regulation as a frequent motivation to innovate. He views a financial firm as a utility maximize which operates in an exceedingly given environment constrained by some set of internal rules, set of macroeconomic conditions in an exceedingly given regulatory environment, set of tax laws and given levels of technology and knowledge.

2.2.4 Transaction cost innovation theory

This theory focused on the link between reduction in transaction costs and technological advancement. A transaction cost could be a cost that's incurred within the exchange of an honest or service. Eric Munyaneza (2017) in his study indicated by citing the study made by (Hicks and Niehans) as concluded that the leading think about strategic financial innovation is that the reaction to advancement in technology. The requirement of advancement causes to decrease the price of transaction. Consequently, the price reductions motivate to financial innovation still as efficiency in commission delivery.

Eric Munyaneza (2017) in his study indicated by citing the study made by (Juhakam, 2003) as describes the idea of cost reduction as a driver of economic innovation. He used examples such as reduction in payments from improvements, reduction arising from new ways of delivery of services to the customers. However, regulatory restrictions and requirements also are a value and a few innovations are targeted to avoiding or reducing that cost.

Transaction costs innovation theory has relevancy for minimize a firm’s transaction costs by enabling effective coordination, management and use of data. And also it's significant for minimization of operation costs through agency, internet and mobile banking may affect growth in profitability.

2.2.5 Task Technology Fit Theory

Eric Munyaneza (2017) in his study indicated by citing the study made by (Goodhue and Thompson, 1995) because the task technology fit (TTF) theory likely to own a positive impact on the performance of people and it's usable if the skills of data and technology (ICT) match the tasks with the users perform.

They discussed further to the influences that measures the appropriateness of task-technology; quality, floatability, compatibility, simplicities of usage or exercise, suitability of production, the reliability of systems, and relationship with users. This model is efficacious within the analysis

of several situation in varied information systems, which including: electronical commercial system and jointly used as extension of various models which are associated with information systems outcomes.

2.3 Financial Performance determinants in Commercial Banks

Erin Hampton (2016) in his study indicated by citing the study made by (Al-Tamimi, 2010) because the internal and external bank performance determinants, which are stochastic variables (output determinant factor and internal variables (individual bank characteristics) both affect the performance banks. The above factors are fundamentally prejudiced by management and board decision. The external factors are sector or country wide factors and that they are beyond the control of the organization.

2.3.1 Firm Age

Loreder and Waelchili (2009), make an experimental investigation to catch the connection between age and firm execution, seeing the absence of flexibility to innovations as an instantaneous impact of aging. By parting the factors, as an example, level of specification and size, these authors reason that organizations tend to encounter major issues arises from their age that have either a negative or a positive effect. The authors' demonstrate productivity disintegration thanks to aging which brings about expanding costs and slimmer profit margins. They pursue that each one organizations recorded at the stock trade for over 15 years can't stay attentive to good outcomes appeared by younger firms.

Idris Alhaji (2012) in his study indicated by citing the study made by (Ariff, Ibrahim and Othman, 2007) as make a comparative report about factors identified with governance reporting of firms in Malaysia. In spite of the outcomes demonstrating a solid connection between level of governance and firm size, firm age is decidedly related with governance.

2.3.2 Firm Size

Firm size is that the speed and extent of growth that's ideal for a selected business and it's indicated by the management group or the number of assets a firm possesses compared to others within the same industry (Kigen, 2014). Larger firms are said to be ready to produce goods more cheaply compared to small firms. This is often because the previous have achieved more learning, greater cumulative experience and that they are ready to spread their fixed costs over a greater amount of production.

Alice Gatete(2015) in his study indicated by citing the study made by (Omondi and Muturi, 2013) as suggest that firms should expand during a controlled way with the aim of achieving an optimum size so on enjoy economies of scale which might ultimately

According to Reinhard (1983), size of the firm is positively associated with a firm's ability to supply technologically complicated products which successively results in concentration. Such firms have few competitors and are therefore, more profitable. Thus, larger firms have access to the foremost profitable market segments.

2.3.3 Product Innovation Strategy

Product innovation is defined as: the development of new products, changes in design of established products, or use of new materials or components in the manufacture of established products. Numerous examples of product innovation include introducing new products, enhanced quality and improving its overall performance. Product innovation, alongside cost-cutting innovation and process innovation, are three different classifications of innovation which aim to develop a company's production methods. Thus product innovation can be divided into two categories of innovation: radical innovation which aims at developing a new product, and incremental innovation which aims at improving existing products.

Coleen Cannon (2016) in his study indicated by citing the study made by (Tavassoli & Karlsson, 2015) as product innovation strategies involve the presentation of a good or an administration

that's new the market or has been altogether enhanced in connection to its attributes or employments. These incorporate critical enhancements in mechanical determinations, segments and materials, joined, or easy use among different capacities. The major cause for the change of product innovation strategies are advance in technologies, rapid change of customer's teste and preferences or favorites of the customers, shortening of product cycles and excessive rivalry.

Coleen Cannon (2016) in his study indicated by citing the study made by (Storey and Easingwood, 1998) as product innovation delivers the foremost clear means for creating incomes. Within the longitudinal study of Artz, Norman, Hatfield and Cardinal (2010) of the impact of R&D, patents, and merchandise innovation on firm performance they found that product innovation had a big impact on firm performance by increasing their return on the investment.

Product and Process innovations are the foremost commonly studied sorts of innovation. Lilly, L. & Juma, D. (2014) in their study indicated by citing the study made by (Capon, 1990; Chandler & Hanks, 1994, Subramanian &Nilakanta, 1996) as concluded that a positive association between innovations and organization performance is present with varying degrees or levels, but some studies also indicate a negative link or no connection in the slightest degree. Product innovation may be a core organization process that makes superior customer values and supports the general organizational performance (Dougherty, 1992).

Coleen Cannon (2016) in his study indicated by citing the study made by (Myers and Marquis, 2007) as proposed that product innovation may be made by brainstorming for brand new ideas. Product innovation is one in all the foremost important components of competitive advantage to the organization (Camison& Lopez, 2010). With innovation, the standard of products may be improved upon, which ends up to the betterment of the performance of a company and ultimately to its competitive advantage (Garvin, 2007).

Adhiambo Antonnet (2013) in his study indicated by citing the study made by (Vein, Berger and Mester, 2003) as found that the merchandise mix may play an important role in provision of a competitive advantage and improvement of the performance of banks.

Nwankpa Chibueze (2017) in his study indicated by citing the study made by (Gabriel and Valentin, 2007) as concluded that there's a positive contribution to the profits of small and larger

banks coming from an optimal product mix. They further added that the difference in performance of the biggest banks and also the smallest banks comes from the effect of an offsetting technical change. In general, while the question about source of product innovation is that the subject of an ongoing debate, researchers agree on the purpose that firms need strategic target innovations to spice up their product organizations performance.

2.3.4 Process Innovation Strategy

Process innovation is the application or introduction of a new technology or method for doing something that helps an organization remain competitive and meet customer demands. Process innovation is a new or significantly improved way of doing things in a business that typically increases production levels and decreases costs. Process innovation might come in the form of new processes or techniques, new equipment, or software.

Coleen Cannon (2016) in his study indicated by citing the study made by (Cumming, 1998) as process innovation grips quality function deployment and business process reengineering. Efficient supplier who worked on productivity expects to develop products which might offer the identical performance at a lower cost.

Coleen Cannon (2016) in his study indicated by citing the study made by (Johne and Storey, 1998) as process innovation is vital in both the provision of the most product furthermore as within the support a part of any offer. Both components of a suggestion require quality standards to be met and maintained. Within the case of services, their different nature depend upon personal interactions to achieve outcomes, the management of process innovation may be a predominantly challenging activity.

2.3.5 Market Innovation Strategy

Marketing innovation is referred to as ―innovation in marketing‖ or ―new marketing techniques‖ in the context of strategic organizational behavior and patterns (Robinson and Pearce 1988). In this research, the authors grouped firms by strategic orientation and found that firms focusing on either (a) product innovation, which in their model includes marketing innovation, or

(b) brand identification outperformed those firms focusing on either (a) efficiency or (b) top quality service-high price strategies.

Marketing innovation is ―the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion, or pricing,‖ according to OECD (Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data 2007).

Marketing innovation is defined as ―the development of new marketing tools and methods.‖ specifically, two forms of marketing innovation are referenced: (a) the ability to acquire consumer information effectively, and (b) the ability to reduce consumer transaction costs are discussed (Chen 2006). The author focuses on how the incentives and effects of marketing innovation are distinct from that of product and process innovation.

According to John (2009), market innovation deals with the market mix and market selection so as to fulfill a customer's buying preference. Marketing innovation is that the capacity to re-conceive the prevailing industry model in ways in which create new value for purchasers, undermine competitors, and produce new wealth for all stakeholders, per the organizational knowledge literature (Hanvanach, Droge&Calatone 2003).

Symon Nyalugwe (2016) in his study indicated by citing the study made by (Garcia &Calantone, 2002, Hurley & Hult, 1998 and Moreira and Silva, 2012) as marketing innovation is described as that significant change in innovation that stems from the revelation of something new. The logic of promoting innovation give emphasis to sales growth by shifting consumer demand from elastic to more inelastic market segments through the delivery of higher value to the consumers. Defined marketing innovation as an advancement which is that the capacity of a firm to inventive or create new product resulting in their marketing sustainability.

Coleen Cannon (2016) in his study indicated by citing the study made by (Kotler, 2011) as market innovation is concentrated with enhancing the combination of target markets and educate on how the chosen markets are best served. Its aim is to spot potential markets and new ways to serve target markets.

2.3.6 Technological Innovation Strategy

The success of most firms majorly depends on efficient operational processes which result from more investments in technologies that enhance firm internal efficiencies (Munyoroku, 2014). Thus, technological innovation strategies adopted by firms should help to spot and explore new revenue opportunities and improve customer satisfaction through reliable delivery. Technological innovation strategies involve the adoption of systems like ERP systems that provide capabilities that support and enhance processes related to producing. The systems should also help improve firm activities by automating routine tasks like order management (Valacich& Schneider, 2012).

Odhiambo (2008) evaluated innovation strategies adopted by Standard Chartered Bank and located that Standard Chartered Bank a bit like most banks in Kenya adopted Technological Innovation Strategies to assist within the advent of globalization and to boost their methods for working together keeping in mind the tip goal to attract and sustain existing clients. The techniques were received since they consider all parts of the business operations extending from client mind, mechanical progression to raised items within the market. Wason and Bichanga (2014) assessed the advancement methodologies embraced by little and medium venture of Nairobi Region due to worldwide rivalry and established that SMEs in Nairobi County use technological innovation as a technique in global entrepreneurship to a moderate extent. The study also established that the SMEs in Nairobi use technology management as a technique in global entrepreneurship.

2.4 Bank Performance Indicators

Sylvain R. Ntuite (2015) in his study indicated by citing the study made by (Murthy and Sree, 2003; Alexandru et al., 2008) as profit is that the decisive goal of economic banks. Bank strategies and activities are designed and performed to appreciate this grand objective. Though, this doesn't mean that commercial banks haven't any other goals and objectives. Commercial banks could even have additional social and economic goals. However, the aim of this study is associated to the first objective of profitability. There are kind of ratios which accustomed measure the profitability of economic banks. Among those the majors includes Return on Asset, Return on Equity and Net Interest Margin.

2.4.1 Return on Asset (ROA)

Sylvain R. Ntuite (2015) in his study indicated by citing the study made by (Khrawish, 2011) as ROA is that the major ratio that shows banks profitability. It's a ratio of income to total asset and it measures the flexibility of generating income by utilizing asset at their disposal of assets. In other words, it shows the efficiently of the corporate of generating income on its resources. It also further shows the efficiency of the management in generating income using all resources of the corporate.

2.4.2 Net Interest Margin (NIM)

Sylvain R. Ntuite (2015) in his study indicated by citing the study made by (Gul et al., 2011) as net Interest Margin measures the difference between the interest income generated by banks and also the amount of interest paid bent on their lenders. It's typically stated as a percentage of the financial organization earns on loans in an exceedingly specific period of time and other assets minus the interest paid on borrowed funds divided by the typical amount of the assets on which it earned income in this period of time. The online Interest Margin variable is defined because the net interest income divided by total earnings assets.

Sylvain R. Ntuite (2015) in his study indicated by citing the study made by (Khrawish, 2011) as the difference between interest income on loans and deposit and/or borrowing interest expense is referred to as net interest margin. It reflects the value of bank intermediation services and also

the efficiency of the bank. Banks have a better net interest margin have a better profit and that they are more stable. Therefore, it's one among the key measures of bank profitability. However, a better net interest margin indicates a riskier lending practices related with a better provisions for loss of loans.

2.4.3 Net Income (NI)

In business and accounting, net income (also total comprehensive income, net earnings, net profit, bottom line, sales profit, or credit sales) is an entity's income minus cost of goods sold, expenses, depreciation and amortization, interest, and taxes for an accounting period. It is computed as the residual of all revenues and gains over all expenses and losses for the period and has also been defined as the net increase in shareholders' equity that results from a company's operations. It is different from gross income, which only deducts the cost of goods sold from revenue (Stickney et al, 2009).

The total revenue in an accounting period minus all expenses during the same period. If income taxes and interest are not deducted, it is called operating profit (or loss, as the case may be). Also called earnings, net earnings, or net profit. Net income expressed as a percentage of revenue. Also called net margin or net profit margin. Formula: Net income x 100 ÷ Total revenue (Business Dictionary)

2.5 Empirical Review

The empirical review will discuss the studies within the recent past both internationally and locally on innovation strategies and financial performance.

2.5.1 International Evidence

Ogunsakin Sanya (2019) in his study indicated by citing the study made by (Zewdie, 2013) as studied on the effect of monetary innovation on the financial performance of business banks in Kenya. The population of his study consisted of all 43 commercial banks in Kenya. The study used both primary and secondary data. Primary data i.e. questionnaire was collected from majority of 32 banks and secondary data was collected using publication, annual budget reports of business banks.

Multiple regression models with SPSS-20 were used and explanatory statistics like means, variance and multivariate analysis were applied to research the information. The particular effect of monetary innovation on financial performance was measured by regressing NI, ROA and ROE against 12 financial innovations. The core findings of the study were financial innovations like number of ATM cards, number of credit cards issued to customers, number of debit cards issued to customers, number of minor or children account, number of special time deposit account, number of youth oriented accounts, number of shoppers registered for e- banking, number of shoppers registered for mobile banking and number of agency banking had imposed ROA of the bank studied. The study recommends that however, financial innovation is yet to signify significant positive effect on the performance of banks, there's need for future investigations beyond financial measures employed within the study as technology continues to penetrate market.

Makur Malak (2013) in his study indicated by citing the study made by (Patrick, 2011) as studied the link between the adoption of monetary innovation and also the profit levels of business banks in Kenya; he studied 44 registered commercial banks by the financial institution of Kenya within the period 2005 to 2010. He used simple regression as innovation a dependent variable and profitability an independent variable by using both primary and secondary data of

different questionnaire and review of financial data. Finally revealed that there's a major relationship between the adoption of assorted financial innovations and also the profit levels of the commercial banks in Kenya.

Waidi Akingbade (2013) in his study indicated by citing the study made by (Corolyne, 2012) as assessing the consequences of monetary innovation on financial performance commercial banks in Kenya at 30th June 2012. She studied all 43 registered commercial banks for a period of 4 years. She used secondary data from published central banks' annual reports and also the variable was financial innovations unique to commercial banks though variable quantity was combined financial performance of all commercial banks. She decided that financial innovation positively contributes to profitability within the banking sector specifically that of business banks.

Waidi Akingbade (2013) in his study indicated by citing the study made by (Duade et al, 2011) as investigative the link between financial innovation and commercial banks performance in Nigeria by using15 major banks within the Country as a population. Two null hypotheses supported two different sets of questionnaires were distributed to choose banks employees and customers were framed to check whether there's no significant relationship between technology innovation and banks performance; and between technological innovation and Nigerian banks employee's performance. He was used Pearson coefficient of correlation to look at the hypotheses. Conclusions revealed that technological innovation influenced banks employee's performance, customer's satisfaction and improvement in banks profitability.

Waidi Akingbade (2013) in his study indicated by citing the study made by (Githikwa, 2009) as dole out a search on the link between financial innovation and profitability of business banks in Kenya. The findings had shown that banks implementation financial innovation to create an effect on their profit performance. And that they require financial innovation to cut back costs of operations, reduce cost per transaction and to satisfy their customer needs.

Korir Cherotich, William Sang and Charles Mutung'u (2015) in her study indicated by citing the study made by (Mwangi, 2013) as study on innovations and financial performance within the financial industry in Kenya. And the finding was shown that bank innovations had statistically significant influence on income, return on assets, profitability and customer deposits of business

banks in Kenya. Further the researcher concluded that bank innovations positively affects the financial performance of business banks in Kenya.

2.5.2 Local Evidence

In the context of Ethiopia there are many researchers studied within the area of e-banking. However, some researches were studied to look at the effect of e-banking on financial performance.

Tilahun (2016) examined a study on the effect E-banking on financial performance of business banks in Ethiopia. The study covers a period of three years from 2013 to 2015 and it includes 10 commercial banks operated in Ethiopia. And also the study uses three variables which are; Number of ATM, Number of POS and Number of Debit cardholders as variable quantity to represent e- banking while profit before tax and ROA are used as variable to live profitability. The study concluded that electronic banking had statistically significant impact on ROA and profitability of business banks of Ethiopia.

Solomon (2016) conducted a study entitled the role of Electronic banking on financial performance of business banks in Ethiopia. This study also covers a period of three years from 2013 to 2015 and it includes 10 commercial banks in Ethiopia. The study uses value or price of transaction of ATM, value or price of transaction of POS, debit card, number of machine terminals, number of points of sale terminal and market share of banks as independent variables and ROA as variable while market share could also be a control variable. The finding shown that increased number of ATM and POS and market share had a positive role on the financial performance of business banks while the quantity of revolving credit had negative role on the financial performance of business banks. Furthermore the value or price of transaction of ATM and POS became insignificant to financial performance of commercial banks in Ethiopia.

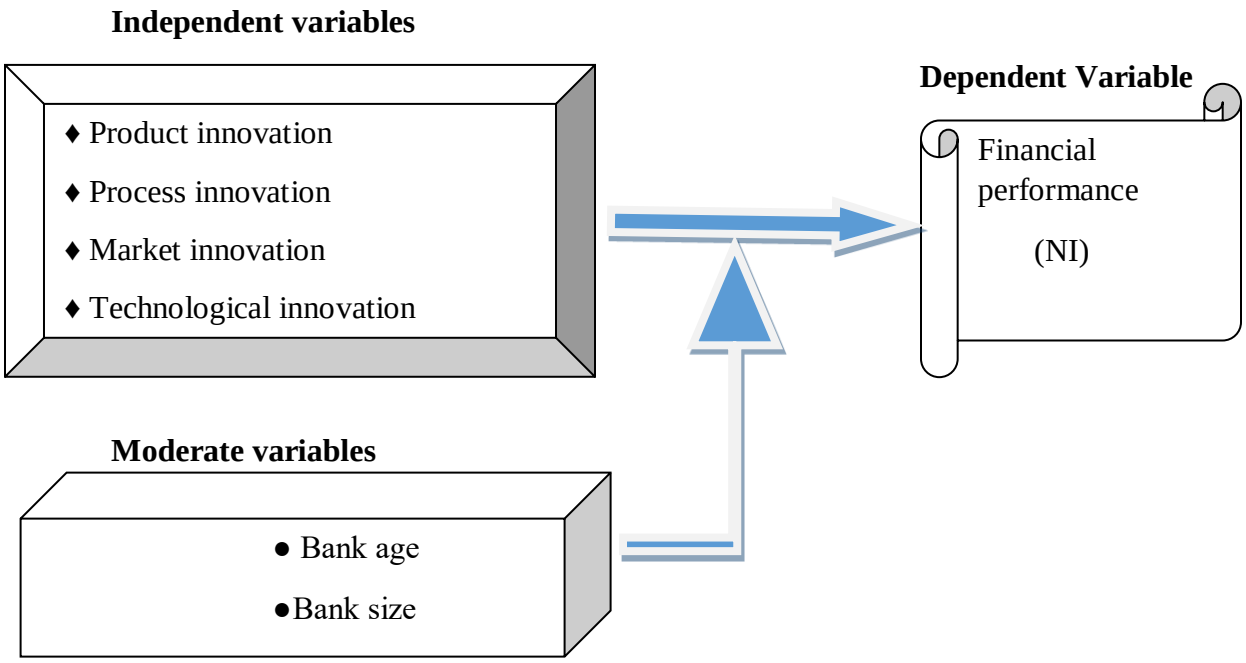
Rukiya (2018) conducted a pursuit entitled the effect of economic innovation on financial performance of business banks in Ethiopia. The study covers a period of three years from 2015 to 2017 and it includes 9 commercial banks in Ethiopia. The research takes Number of ATM, Number of POS, Number of Debit cardholders, mobile banking and new saving accounts as an variable quantity to represent e- banking while profit before tax and ROA are used as variable to

measure profitability. Finally, the study concluded that financial innovation has positive effect on financial performance of business banks in Ethiopia.

2.6 Conceptual Framework

Namayi Peter (2018) in his study indicated by citing the study made by (Mugenda and Mugenda, 2008) as a conceptual framework may be a succinct portrayal joined by a graphical or visual presentation of the important ideas of the investigation and also the hypothesized relationship and linkage among them. The conceptual framework introduced here demonstrate the association between innovation strategies (i.e. product innovation, process innovation, market innovation and technological innovation) because the autonomous factors and financial performance of personal commercial banks in Ethiopia being the variable. Each of the independent variables (product innovation, process innovation, market innovation and technological innovation) relates well with financial performance looking on how commercial banks utilized them in their operations.

Figure 2.1: Conceptual Framework



Source: Researcher compilation from different literature

2.7 Summary of Literature Review

Pascalia Kiptoo (2019) in his study indicated by citing the study made by (Walker, 2004: Damanpour and Subramanian &Nilakanta, 1996) as innovations have positive impact on performance indicators. They need agreed on the transformational effects of innovations on bank performance and operational efficiency. However other scholars (Capon, 1990 and Chandler & Hanks, 1994) revealed that innovations have negative effects on performance indicators. These mixed results and alternative views from different countries and writers are mainly as a results of lack of comprehensive analysis of multiple innovations and performance indicators. There's concentration of innovation-performance studied on profitability and mostly in developed and emerging economies leaving a paucity of innovation performance literature for Africa and Ethiopia specifically. This literature gap is going to be addressed by this comprehensive study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the approaches that will undertake in conducting the study. This chapter specifically explained the research design, the population of interest, the information collection method, and the techniques of study, analytical model and also the tests of significance.

3.2 Research Design

This study was used an explanatory research design. Explanatory research design may be a systematic, empirical inquiry into which the researcher doesn't have direct control of independent variables because they're reflecting the state of happenings (Mugenda and Mugenda 2003). Explanatory research is advantageous because it helps describe the characteristics of the variables being studied and might incorporate multiple variables for analysis, unlike other methods that need only 1 variable (Cooper & Schindler, 2003). This design is useful in presenting facts about the character and standing of the case because it exist at the time of study. The explanatory research design is acceptable for the study since it enables collection of data with minimum manipulation of variables.

There are three styles of research approach namely qualitative, quantitative and mixed approach. while, each approach has its own objective and application time, within the selection process one should take into consideration the character of research problem or issues being addressed, the researchers personal experience and also the audience for whom the report presented. Therefore, during this study the mixed research approach was used, since, both qualitative and quantitative nature of the information was included.

3.3 Population

A population is that the elements from which a sample is typically selected (Thompson, 2008). The target population for this study was the private commercial Banks in Ethiopia. At the time of the researcher gathered the info there was a complete of 16 private commercial banks operating in Ethiopia.

3.4 Sample size and sampling Technique

The researcher applied purposive sampling technique, since purposive sampling could be a sampling technique during which the researcher selects the sample supported the knowledge about the study.

The study was used one senior manager, who is responsible and has knowledge for the study area also as who spent over six years at the corporate, since the questionnaire included six years period from 2014 to 2019, as a respondent for the first data for every bank and making a complete of 64 respondents from 16 private commercial banks.

The study period was covered six-year period from 2014 to 2019. Hence it'll use a complete of 96 (6*16) period secondary data as a sample.

3.5 Data Collection Method

Once the research design including sampling plan formalized the approaching phase is collect data. Within the study, both primary and secondary data was wont to meet the stated objectives.

3.5.1 Primary Data Collection

Questionnaire method is preferred for primary data because it's efficient, cheap and straightforward to be administered. The research questionnaire was wont to collect data on, product innovation, process innovation, marketing innovation and technological innovation. The

first data was gathered through a semi-structured questionnaire. The questionnaire has contained a close-ended questions and which has various sections. The respondents for this study were senior bank managers from each of business banks making a complete of 64 respondents.

The questionnaire was developed supported the previous literature reviews and was distributed to the chosen samples. A closed ended was developed supported a Likert scale starting from very great extent to no extent where 1 represents no extent and 5 represents very great extent.

3.5.2 Secondary Data Collection

Secondary data was collected from the published annual reports of the listed private commercial Banks. The study was covered a six year period from 2014 to 2019 supported the provision and accessibility of knowledge.

The researcher believes that the amount of 6 years date were sufficient to trace the financial performance commercial banks for the balanced panel data, because the number of years increased, the late established banks wouldn't be included within the study.

3.6 Data Analysis

The study was used a multivariate analysis technique in analyzing the effect of Product innovation, Process innovation, Market innovation, Technological innovation and other selected control variables on the financial performance of personal commercial Banks operating in Ethiopia. the info obtain from both primary and secondary data sources was analyzed using analyzing software like, Statistical Package for Social Sciences (SPSS) version 25 and Microsoft Excel version 2010. The results obtained from the model were presented in tables to help in interpretation. The inferential statistics was attract order to work out the character and significance of relationship between the changes within the response variable and changes within the predictor variables. earnings (NI) was used as proxy for the firm’s financial performance and it's the variable whereas independent variables comprised of Product innovation, Process innovation, Market innovation, Technological innovation, Age of the Bank, and Size of the Bank.

3.6.1 Analytical Model

The regression model that was utilized in this study comprised of 5 independent variables and one variable. Financial performance is that the variable using earnings and therefore the independent variables are: Product innovation, Process innovation, Market innovation and Technological innovation, Age of the Bank and Size of the Bank.

It was as follows:

Financial Performance = (Innovation strategies)

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \varepsilon$

Source: From different literatures and developed by the researcher

Where;

Y = Financial Performance which is that the variable measured by Log (NI)

Independent variables are,

X3 = Product innovation strategy

X4= Process innovation strategy

X5= Market innovation strategy

X6= Technological innovation strategy

$\beta 0$ - is that the constant of the model

$\beta 1$- $\beta 5$ = Are the regression coefficients

ε = Stochastic error term estimate

While the moderating variables are,

X1= Age (Number of years since incorporation)

X2= Size measured by the log (Total Asset)

The values of X3 to X6 was calculated from the mean score response on each Likert scaled data for every year from 2014 to 2019. The mean score was obtained for the respective variable. These values were utilized for multivariate analysis. The worth of Y (Financial Performance) is a median for the six-year period.

3.6.2 Test of Significance

The test of significance helps us to make your mind up whether we will reject the null hypothesis, (Mugenda & Mugenda 2003). The test of significance was performed at 95% level of confidence using Analysis of Variance (ANOVA) and therefore the F- test was wont to determine the importance of the regression. The coefficient of determination, R2, was wont to determine what proportion variation in variable is explained by independent variables.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis, presentation and interpretation of data collected from the semi-administered questionnaires. The collected questionnaires were checked for consistency before being coded and entered into SPSS (version 25).

Explanatory statistics like frequency distribution and percentages were accustomed to analyze general information. Means and standard deviations were used to analyze innovation strategies.

Regression analysis was used to explain the relationship between independent variables (product innovation, market innovation, technological innovation, age and size of the banks) and the dependent variable, financial performance (Net income) of private commercial banks in Ethiopia. The findings are presented in form of tables.

4.2 Response Rate

A total of 64 semi-structured questionnaires were administered to 16 licensed and registered private commercial banks operating in Ethiopia. The study managed to receive a total of 31 duly filled questionnaires which constituted a response rate of 100%. Because of questionnaires are fully responded this is sufficient to enable the researcher to draw adequate conclusions.

Table 4.1: Response Rate

Response Rate	**Frequency**	**Percentage**
Filled	31	100
Not Filled	0	0
Total	**31**	**100**

Source: Research Data (2020)

4.3 Data Presentation

4.3.1 Data Validity

In order to ensure that respondents interpreted the research questions the same way, the study pre-tested ten questionnaires. The pre-testing was used to check for correct wording and eliminate any ambiguous questions and misinterpretations. This ensured that the data collected was valid and of high quality.

4.3.2 Data Reliability

In order to establish the reliability of the Likert scale used in the research instrument, reliability analysis was conducted using Cronbach's Alpha with minimum requirement being a co-efficient $\alpha \geq 0.7$. The reliability analysis results are as appeared in table.

Table 4.2: Reliability Analysis

Variable	**Cronbach's Alpha**	**N of Items**
Product innovation	0.960	6
Process innovation	0.963	6
Market innovation	0.940	6
Technological innovation	0.967	6
Overall	**0.985**	**24**

Source: Research Data (2020)

The test established a Cronbach's Alpha co-efficient of 0.985. This implied that the Likert scale used in research instrument had a very high level of internal consistency. This research

instrument was therefore reliable enough to be used to test the extent to which innovation strategies adopted by private commercial banks in Ethiopia affects financial performance.

4.4 General Information

Eight demographic variables are included in this study. They are: gender, age, educational qualification and Length of service and there department. The results in the below tables represent distribution of sample individuals according to demographic variables.

Table 4.3: Distribution of the Respondents Gender

	Frequency	**Percent %**	**Valid Percent %**	**Cumulative Percent %**
Male	16	25	25	25
Female	48	75	75	100
Total	64	100	100	

Source: Field Survey, 2020

From Table 4.3, demographic and personal data of the respondents as shown by gender revealed that 48 (75%) of respondents were male, while 12 (25%) were female. This shows that male respondents participated more within the study than female respondents. This signifies that there are more males in private commercial banks in Ethiopia than female.

Table 4.4: Distribution of the Respondents Age

	Frequency	**Percent %**	**Valid Percent %**	**Cumulative Percent %**
31-40	20	31.25	31.25	31.25
41-50	32	50	50	81.25
Above 50	12	18.75	18.75	100
Total	64	100	100	

Source: Field Survey, 2020

From Table 4.4, demographic data for the respondents age shows that 20 (31.25%) of the respondents were in the age group of 31- 40 years, 32 (50%) were in the age group of 41-50 years, while 12 (18.75%) were above the ages of 50 years. This shows that the respondent's age that participated more in the survey falls between 41-50 years.

Table 4.5: Distribution of the Respondents Educational Status

	Frequency	**Percent %**	**Valid Percent %**	**Cumulative Percent %**
Degree	12	18.75	18.75	18.75
Masters	44	68.75	68.75	87.5
Others	2	12.5	12.5	100
Total	64	100	100	

Source: Field Survey, 202

From Table 4.5, demographic and personal data of the respondents for educational qualification of respondents shows that 12 (18.75%) of respondents had the Bachelor's degree, 44 (68.75%) were Master degree holders, 2 (12.5%) of respondents are other holders. Therefore, it could be inferred that majority of the respondents that participated in this research are Master degree holders.

Table 4.6: Distribution of the Respondents Length of Service

	Frequency	**Percent %**	**Valid Percent %**	**Cumulative Percent %**
6-10	16	25	25	25
11-20	36	56.25	56.25	81.25
Above 20	12	18.75	18.75	100
Total	64	100	100	

Source: Field Survey, 2020

From Table 4.6, demographic data of respondents by length of service shows that 16 (25%) of the respondents were between the group of 6- 10 years, 36 (56.25%) were between the group of 11- 20 years, while 12 (18.75%) were served above 20 years.

Table 4.7: Distribution of the Respondents Department

	Frequency	**Percent %**	**Valid Percent %**	**Cumulative Percent %**
E-Banking	16	25	25	25
Marketing	20	31.25	31.25	56.25
Operation	8	12.5	12.5	68.75
others	20	31.25	31.25	100
Total	64	100	100	

Source: Field Survey, 2020

From Table 4.7, demographic data of respondents by department shows that 16 (25%) of the respondents were in E-Banking department, 20 (31.25%) were in marketing department, 28 (12.5%) were in operation department, while 20 (31.25%) were in risk and management department.

4.5 Innovation Strategies

The respondents were requested to rate the extent to which their insurance firms have implemented various innovation strategies. The rating was done on a Likert scale 1-5 where: 1 = No Extent; 2 = Little Extent; 3 = Moderate Extent; 4 = Great Extent; 5 =Very Great Extent. The results are as discussed.

4.5.1 Product Innovation Strategies

The respondents were requested to rate the extent to which their bank have executed product innovation strategies during the past six years from 2014 to 2019. The methods recorded were deciphered as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-3.49 = Moderate Extent; 3.5-4.59 = Great Extent; 4.5-5.0 =Very Great Extent. The results are as shown in Table.

Table 4.8: Product Innovation Strategies

Product innovation strategies	**Mean**	**Std. Deviation**
Introduction of product variety	3.22	0.547
Add new elements to the products	3.18	0.523
Re-design product line up	3.07	0.464
Product replacement	3.10	0.470
Product improvement in the products offered	3.15	0.502
Increase the value of the products	3.09	0.437
Aggregate Mean	**3.14**	**0.491**

Source: Research Findings (2020).

An aggregate mean of (M=3.14, SD= 0.491) was recorded indicating that private commercial banks in Ethiopia have implemented Product Innovation Strategies to a moderate extent. The most rated statement was that private commercial banks in Ethiopia have implemented the Introduction of product variety with a mean of (M= 3.22, SD= 0.547) followed by the Product replacement and response to changes with a mean of (M= 3.18, SD= 0.523) and then Add new

elements to the products with a mean of (M= 3.15, SD= 0.502). The least (M= 3.07, SD= 0.464) rated product innovation strategy was re-design product line up and was implemented within the average range which is a moderate extent. And the respondents' opinions were diverse as indicated by the recorded standard deviations.

4.5.2 Process Innovation Strategies

The respondents were requested to rate the extent to which their bank have executed process innovation strategies during the past six years from 2014 to 2019. The methods recorded were deciphered as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-3.49 = Moderate Extent; 3.5-4.59 = Great Extent; 4.5-5.0 =Very Great Extent. The results are as shown in Table.

Table 4.9: Process Innovation Strategies

Process innovation strategies	**Mean**	**Std. Deviation**
Reduction of costs	3.02	0.502
Reduction in waiting time	3.08	0.427
Reduction in interruptions	2.98	0.502
Increase speed of implementation	3.04	0.541
Business process re-engineering	2.97	0.512
Conformance to regulations	3.02	0.458
Aggregate Mean	**3.02**	**0.490**

Source: Research Findings (2020).

An aggregate mean of (M=3.02, SD= 0.490) was recorded indicating that private commercial banks in Ethiopia have implemented Process Innovation Strategies to a moderate extent. The least (M= 2.97, SD= 0.512) rated process innovation strategy was Business process re-engineering followed by the Reduction in interruptions with a mean of (M= 2.98, SD= 0.502) and were implemented within the average range which is a moderate extent. And the respondents' opinions were diverse as indicated by the recorded standard deviations.

4.5.3 Marketing Innovation Strategies

The study also sought to know the extent to which the private commercial banks in Ethiopia have implemented marketing innovation strategies during the past six years from 2014 to 2019. To analyze the data the researcher was used means and standard deviations of the responses. The means recorded were interpreted as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-3.49 = Moderate Extent; 3.5-4.59 = Great extent; 4.5-5.0 =Very Great extent. The results are as shown in the table.

Table 4.10: Market Innovation Strategies

Market innovation strategies	**Mean**	**Std. Deviation**
Creation of new market	3.07	0.487
Customer satisfaction and retention	2.94	0.539
Environmental analysis and response to changes	3.00	0.481
Introducing innovative promotion activities	3.08	0.496
New sales channels or placement	3.18	0.435
New delivery channels	3.04	0.541
Aggregate Mean	**3.05**	**0.497**

Source: Research Findings (2020).

The study established that private commercial banks in Ethiopia have implemented Marketing Innovation Strategies to a moderate extent as indicated by an aggregate mean of (M= 3.05, SD= 0.497). The most rated statement was that private commercial banks in Ethiopia have implemented New sales channels or placement with a mean of (M= 3.18, SD= 0.435). The least rated was Customer satisfaction and retention with a mean of (M= 2.94, SD= 0.539) indicating that the statements were rated to a little extent. The variation in respondents' opinion was evidenced by the standard deviations recorded.

4.5.4 Technological Innovation Strategies

The study also sought to know the extent to which the private commercial banks in Ethiopia have implemented technological innovation strategies during the past six years from 2014 to 2019. The mean scores recorded were interpreted as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-3.49 = Moderate Extent; 3.5-4.59 = Great extent; 4.5-5.0 =Very Great extent. The results are as shown in table:

Table 4.11: Technological Innovation Strategies

Technological innovation strategies	**Mean**	**Std. Deviation**
New technology development	2.76	0.661
Mobile banking technologies	2.81	0.654
Internet banking transactions	2.78	0.636
Electronic funds transfer	2.78	0.636
Point of Sale	2.99	0.589
ATM withdrawals	3.03	0.606
Aggregate Mean	**2.86**	**0.630**

Source: Research Findings (2020).

The study established that private commercial banks in Ethiopia have implemented Technological Innovation Strategies to a Moderate Extent as evidenced by an aggregate mean of (M= 2.86, SD= 0.630). The most rated statement was that private commercial banks in Ethiopia have implemented ATM withdrawals with a mean of (M= 3.03, SD= 0.606). The least rated was New technology development with a mean of (M= 2.76, SD= 0.661), followed by the Internet banking transactions with a mean of (M= 2.78, SD= 0.636) and Electronic funds transfer with a mean of (M= 2.78, SD= 0.636). And the respondents' opinions were diverse as indicated by the recorded standard deviations.

4.6. Testing Assumptions of Classical Linear Regression Model (CLRM)

In this study the diagnostic tests are carried out to ensure that the data fits the basic assumptions of classical linear regression model. Consequently, the results for the model assumptions test are presented as follows:

4.6.1. Test for average value of the error term is zero (E(ut) =0) assumption

According to Brooks (2014), if a constant term is included in the regression equation, this assumption will never be violated. Thus, since the regression model used in this study included a constant term, this assumption is not violating.

4.6.2. Test for Heteroscedasticity {E (ui2) = σi2}

The classical assumption required for the OLS estimator to be an effective state that, the variance of error term has to be constant and the same for all observers. This is referred to as a homoscedastic error term. If the assumption is violated and the variance is different for various observation we refer to this as heteroscedasticity, then the standard errors could be wrong and any interpretations made could be distorted. In general, the OLS standard errors will be very large for the intercept when the errors are heteroscedastic. In order to test heteroscedasticity Breusch-Pagan test for was applied.

Table 4.12 Heteroscedasticity Test: Breusch-Pagan test summary

Heteroscedasticity Test: Breusch-Pagan

Chi-Square	Df	Sig.
2.739	1	0.098

Source: SPSS Version 25 output

As shown in table 4.12, Breusch-Pagan test gave a conclusion that there was no evidence for the presence of heteroscedasticity, since the p-values of 9.8%, is in excess of 5 percent level of significant. This implies that there is no significant evidence for the presence of heteroscedasticity at 5%, in this research model.

4.6.3. Test for Autocorrelation {cov (ui, u j) = 0 for i ≠ j)}

It is expected that the error terms are uncorrelated with one another. If the errors don't seem to be uncorrelated (correlated) with each other, it might be stated that they're "auto correlated" or that they are "serially correlated". The results of ignoring autocorrelation when it's present are kind of like those of ignoring heteroscedasticity. The coefficient estimates derived by using OLS are still unbiased, but they are inefficient, meaning that the standard errors are biased. Furthermore, the R square is probably going to be inflated (Brooks C., 2014). To check the presence of autocorrelation in this study, the researcher used the popular Durbin-Watson test.

Table 4.13 Autocorrelation Test: Durbin-Watson test summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.983	0.967	0.965	0.09109	2.287

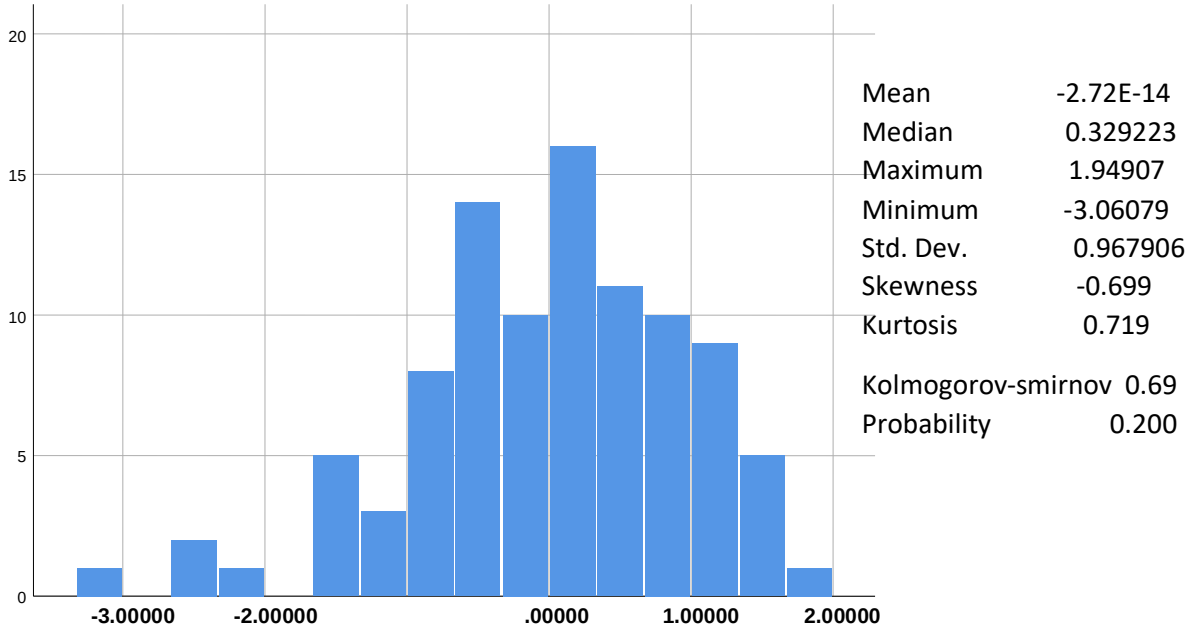
Source: SPSS Version 25 output

As shown in table 4.13, the statistical value of Durbin-Watson stat tells us whether our model suffer serial correlation problem or not. If the results of Durbin-Watson stat is close to 2, it implies no serial correlation in the model, If it is close to 0 ; positive correlation in the model, If it is close to 0 ; positive correlation in the model and If it is close to 4 ; Negative correlation in the model. In this model we found 2.287, which indicate no serial correlation in the model.

4.6.4. Normality test (errors are normally distributed {ut~N (0, σ2)}

According to Brooks (2014), if the residuals are normally distributed, the histogram should be bell-shaped, and also a normal distribution will thus have a coefficient of excess kurtosis of zero. One of the most commonly applied tests for normality is the Kolmogorov-Smirnov test. If the p-value given at the bottom of the normality test screen is greater than 5 percent the data is normally distributed.

Figure 4.1 Normality test



Source: SPSS Version 25 output

Figure 4.1 Indicated that distribution of the panel observation is symmetric about its mean.

As shown with in the above figure 4.1 the Kolmogorov-Smirnov statistic encompasses a P-value of 0.200 which means that it's greater than 0.05.Which indicates that there was no evidence for the presence of an abnormality with in the data. It can conclude that there's no problem of normality. Furthermore, it shows that the interpretations made about the population parameters from the sample parameters tend to be valid.

4.6.5. Test for Multi-collinearity

There are two classes of multicollinearity: perfect multicollinearity and near multicollinearity. Perfect multicollinearity occurs when there's an actual relationship between two or more variables. It shows the regression model has difficulty in explaining which independent variables are affecting the dependent variable. If multicollinearity problem is too serious in a model, either additional important variable should be added or unimportant independent variable should be

dropped. Hair (2006) concluded that correlation coefficient below 0.9 won't cause serious multicollinearity problem.

According to Cooper & Schindler (2009) and Masher (2007) as cited on Mulualem (2015), they suggested that a correlation coefficient below 0.8 between explanatory variables should not be considered as sign of multicollinearity. The correlation matrix between independent variables was used in this study to test the existence of multicollinearity problem.

Table 4.14: Result of Multicollinearity

	Age	Log(TA)	PtI	PsI	MI	TI
Age	1					
Log(TA)	0.828	1				
PtI	0.491	0.682	1			
PsI	0.231	0.432	0.688	1		
MI	0.263	0.462	0.684	0.728	1	
TI	0.278	0.482	0.725	0.715	0.785	1

Source: SPSS Version 25 output

Table 4.14 shows that all the correlation coefficient values are less than 0.9; suggesting that there is no problem of multicollinearity. In this result, the highest correlation coefficient is 0.828 and this is between the control variables, bank age and bank size (log-total asset). But among the independent variables the highest correlation coefficient is 0.785 between market innovation and technological innovation. Thus, it can be concluded that almost all independent variables correlation coefficient is less than 0.8, have low correlation power which implies no multi-collinearity problem in the model.

Table 4.15 Variance inflation factor (VIF)

	Collinearity Statistics	
Model	Tolerance	VIF
Age	0.288	3.467
Log(total asset)	0.209	4.783
Product innovation	0.291	3.441
Process innovation	0.378	2.644
Market innovation	0.318	3.140
Technological innovation	0.300	3.334

Source: SPSS Version 25 output

As it is indicated in table 4.15 the result shows that there is no strong correlation between the explanatory variables. Since none of the explanatory variable has a VIF greater than 5 and it implies no multi- collinearity problem in the model.

4.7 Regression Analysis

Regression analysis was used to explain the relationship between innovation strategies and the performance of private commercial banks in Ethiopia. In addition the regression analysis was used to analyze the relationship between control variables, age and size of the bank, and the performance of private commercial banks in Ethiopia. The results obtained are as discussed.

4.7.1 Model Summary

Table 4.16: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.983[a]	0.967	0.965	0.09109

a. Predictors: (Constant), Technological innovation, Age, Product innovation, Log(total asset), Process innovation, Market innovation

Source: SPSS Version 25 output

The coefficient of determination (R Square) is employed to check the goodness-of-fit of the model. That is, R Square measures the proportion or percentage of the whole variation within the dependent variable explained by the independent variable. The value of R Square lie between 0 and 1, if the value of R Square equals 1 there's a perfect fit whereas it equals 0 shows that there's no relationship between dependent and independent variables. The five independent variables that were studied, explain 96.7% of the financial performance as represented by the R^2. This therefore means that other factors affecting financial performance not studied in this research add up to 3.3 %.

4.7.2 Analysis of Variance

Analysis of Variance (ANOVA) was done to verify the goodness of fit of the regression model. The below regression model shows a significance level of 0.0%, which indicates that the model had goodness of fit and was perfect for defining how bank age, bank size, product innovation, market innovation and technological innovation affects financial performance of private commercial banks in Ethiopia. This is because the regression model had a significance value (p-value) of less than 5% and an F value (437.186) is greater than the F-Critical Value (2.20).

Table 4.17: Analysis of Variance (ANOVA)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.766	6	3.628	437.186	.000[b]
	Residual	0.739	89	0.008		
	Total	22.505	95			

a. Dependent Variable: Log (Net income)

b. Predictors: (Constant), Technological innovation, Age, Product innovation, Log(total asset), Process innovation, Market innovation

F-Critical Value = 2.20

Source: SPSS Version 25 output

4.7.3 Regression Coefficients

The regression coefficients revealed that at 95% confidence level, age of the bank, size of the bank, product innovation, market innovation and technological innovation had a combined positive effect on the financial performance of private commercial banks in Ethiopia.

Table 4.18: Regression Coefficients

Coefficients [a]

Model		Unstandardized Coefficient		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-1.545	0.427		-3.615	0.000
	Age	0.005	0.003	0.065	1.730	0.087
	Log (total asset)	0.972	0.050	0.852	19.396	0.000
	Product innovation	0.115	0.040	0.106	2.900	0.005
	Process innovation	0.042	0.035	0.039	1.200	0.233
	Market innovation	-0.059	0.038	-0.053	-1.527	0.130
	Technological innovation	0.013	0.030	0.016	0.418	0.677

a. Dependent Variable: Log (Net income)

T-Critical Value = 1.966

Source: SPSS Version 25 output

Multiple regression analysis was conducted as to determine the effect of innovation strategies on the financial performance of private commercial banks in Ethiopia. As per the SPSS generated table above, the equation ($Y = \beta0 + \beta1X1 + \beta2X2 + \beta3X3 + \beta4X4 + \beta5X5 + \varepsilon$) becomes:

$Y = -1.545 + 0.005X1 + 0.972X2 + 0.115X3 + 0.042X4 - 0.059X5 + 0.013\ X6 + \varepsilon$

Where:

Y – Financial Performance (Dependent variable)

X1- X6 – The independent variables

X1- Age of the bank

X2- Size of the bank

X3- Product innovation strategies

X4- Process innovation strategies

X5- Marketing innovation strategies

X6- Technological innovation strategies

According to the regression equation established, taking all factors into account (age of the bank, size of the bank, product innovation, market innovation and technological innovation) constant at zero, performance rating would be -1.545. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in age of the bank will lead to a 0.005 increase in financial performance, a unit increase in size of the bank will lead to a 0.972 increase in financial performance, a unit increase in product innovation will lead to a 0.115 increase in financial performance, a unit increase in process innovation will lead to a 0.042 increase in financial performance, a unit increase in technological innovation will lead to a 0.013 increase in financial performance and a unit increase in market innovation will lead to a 0.059 decrease in financial performance. This could be possible in the short run because market performance does not contribute directly and immediately to profitability. Market performance was identified as more of a cost in the short run because it involves trying to understand and interpret the factors in the operating environment and how the same impacts on the bank's performance. The full

benefits of market performance would more often than not be realized in the long-term as compared to the other three independent variables studied.

The study infers that size of the bank contribute most to the financial performance followed by product and process innovation.

4.8. Hypotheses Testing

A. Product Innovation Strategy

H1: Product innovation has a positive and significant effect on financial performance banks Private commercial banks in Ethiopia.

Table 4.18 the regression result shows that coefficient of product innovation has positive and statistically significant effect on financial performance of private commercial bank since its P-value is 0.005 and coefficient is 0.115.This means that holding other independent variables constant, when product innovation increased by one unit, as the result net income will increases by 0.115 on average, the effect is statistically significant at 5%significant level. Accordingly, the result failed to reject the working hypotheses that product innovation has positive and statistically significant effect on financial performance of private commercial banks in Ethiopia for the period of 2014 to 2019. This result is consistent with the findings of Zahra and Das, (1993), cited by Adhiambo Antonnet (2013) that concluded that both product and process innovations contributes to performance of an organization. It revealed that process efficiency reduces cost whereas investment idea as a product, increases revenue thus the profit amount would be impacted on both ways. The findings also coincide with Higgins (1995), who established that product innovation provides the most obvious means for generating revenues, provides the means for safeguarding and improving quality and also for saving costs. It agrees with the opinions of Markham and Lee (2013), who state that research shows that a higher percentage of profits and revenue mostly comes from newer products and those higher performing firms are very proficient at product development.

B. Process Innovation Strategy

H2: Process innovation has a positive and significant effect on financial performance banks Private commercial banks in Ethiopia.

The regression result table 4.18 shows process innovation is positive and statistically insignificant effect on financial performance of private commercial banks in Ethiopia since its P-value is 0.233 and coefficient is (0.042). This means that holding other independent variables constant, when process innovation increased by one unit, as the result the net income will increase by 0.042 on average, the relationship is statistically insignificant at 5% significant level. Accordingly, the result supported the working hypothesis that process innovation has positive and statistically significant effect on financial performance of private commercial banks in Ethiopia for the period of 2014 to 2019, meaning that process innovation has statistically significant effect on financial performance of private commercial banks in Ethiopia. This finding is in agreed with research by Sandvik and Sandvik (2003), in their study the Impact of market orientation on product innovativeness and business performance found out that market innovation has a positive effect on the growth of sales of an organization. It also agreed with the findings of Fagerberg (2004), who stated that process innovations can be intended to increase quality, decrease unit costs of production or delivery and finally to deliver new or significantly improved products.

C. Market Innovation Strategy

H3: Market innovation has a positive and significant effect on financial performance banks Private commercial banks in Ethiopia.

According to Table 4.18 the regression result shows market innovation is negative and statistically insignificant impact on net income of private commercial banks in Ethiopia since its P-value is 0.130 and coefficient is (-0.059). This means that holding other independent variables constant, when market innovation increased by one unit, net income will decreases by 0.059 on average, the relationship is statistically insignificant at 5% significant level.

Accordingly, the result did not support the working hypothesis that market innovation has positive and statistically significant effect on financial performance of private commercial banks in Ethiopia for the period of 2014 to 2019. This result is against the finding of Kimberly and

Evanisko, (1981), who stated that market innovation strategies is Critically important if the aim of the organization is to develop the profitability of a business up to the total capacity.

D. Technological Innovation Strategy

H4: Technological innovation has a positive and significant effect on financial performance banks Private commercial banks in Ethiopia.

According to Table 4.14the regression result shows technological innovation is positively and statistically insignificant impact on net income of private commercial banks in Ethiopia since its P-value is 0.677 and coefficient is (0.013). This means that holding other independent variables constant, when technological innovation increased by one unit, the net income will increases by 0.013 on average, and the relationship is statistically insignificant at 5% significant level. Accordingly, the result did not supported the working hypothesis that net income has positive and statistically significant effect on financial performance of private commercial banks in Ethiopia for the period of 2014 to 2019, Meaning that technological innovation has positive but not statistically significant effect on net income of private commercial banks in Ethiopia. The result is consistent with Lastly, Corsi and Akhunov (2000), with the findings of the study by stating that the benefits of technologies include higher profits since new technologies increase work efficiency, which in turn, increases productivity. Zawislak et al. (2012), further agrees with the findings of the study by stating that that learning leads a firm to innovate, which affect its performance and profitability greatly. The findings also concurred with Miller(1989), who indicated that firms demands for technological innovations creates a competitive advantage and enhances profitability of firms.

It supported the working hypothesis that age of the bank has positive and statistically significant effect on financial performance of private commercial banks in Ethiopia for the period of 2014 to 2019, meaning that age of the bank has positive and statistically significant effect on net income of private commercial banks in Ethiopia.

Table 4.19: Summary of actual and expected signs of explanatory variables on the dependent variables

Explanatory variables	**Expected impact on net income**	**Actual impacts**
Bank age	Positive and significant	Positive and insignificant
Bank size	Positive and significant	Positive and significant
Product innovation	Positive and significant	Positive and significant
Process innovation	Positive and significant	Positive and insignificant
Market innovation	Positive and significant	Negative and insignificant
Technological innovation	Positive and significant	Positive and insignificant

Note: significance level is in statistically

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Introduction

This chapter presents the summary of the findings of this study, conclusions arrived at or derived from the data, as well as limitations observed or experienced during the study. The chapter also provides recommendations and suggestions for further research aimed at improvement of organization performance in presence of innovation strategies.

5.2. Summary of the study

The study used two ways of data analysis; namely explanatory analysis and inferential analysis. The explanatory analysis helps the study to explain the relevant aspects of the phenomena into consideration and supply detailed information about each relevant variable. For the inferential analysis, the study used the panel data regression analysis. The study primary examined the financial performance of private commercial banks in Ethiopia by considering variables like product innovation, process innovation, market innovation and technological innovation. Their mean and standard deviation values were determined.

Explanatory statistics involved the generation of means and standard deviation for the all the four distinguished variables, that are, product innovation, process innovation, market innovation and technological innovation. From the findings product innovation had the highest mean score at 3.14 and a standard deviation of 0.491, implying that Ethiopian private commercial banks implemented an overall moderate extent of product innovation with in the period 2014 to 2019.

Second up at a mean of 3.05and a standard deviation of 0.497 was market innovation, implying that Ethiopian private commercial banks implemented an overall moderate extent of market innovation. Process innovation attained a mean score of 3.02 and a standard deviation of 0.487, implying a moderate extent of process innovation was achieved by private commercial banks of Ethiopia with in the period 2014 to 2019. Technological innovation on the other hand had a

mean score of 2.86 and a standard deviation of 0.636 even if it was implemented an overall moderate extent, it is the least implemented among innovation strategies by private commercial banks in Ethiopia with in the period 2014 to 2019.

The study further measured the degree of association between strategic innovation and financial performance among the private commercial banks in Ethiopia. The researcher used product innovation, process innovation, market innovation and technological innovation as variables for strategic innovation and net income for financial performance. Regression coefficient results indicate a positive relationship between net income and the explanatory variables which are product innovation, process innovation and technological innovation. And financial innovation negatively associated with market innovation with in the period of 2014 to 2019.

5.3. Conclusion of the study

The study specifically analyzes the effect of innovation strategies on financial performance of Ethiopian private commercial banks based on the following conclusions.

- The study concludes that product innovations such as introduction of product variety, adding new elements to the products and product replacement contributed to the firm's profitability. Product innovation has a positive and statistically significant effect on financial performance of private commercial bank in Ethiopian.
- The study concludes that process innovation strategies such reduction in waiting time, increase the speed of implementation of services and conformance to regulations contributed to the bank's profitability. To prioritize innovative actions raised banks effectiveness by improving the processes. This is particularly so when it is combined with product innovation. Process innovation alone, without the introduction of new products, runs the risk of being associated with lower growth performance, alternative measures, such as productivity, productivity growth, or profitability, capture the beneficial influence of process innovation more rapidly. Process innovation exposed positive and statistically significant effect on financial performance of private commercial bank in Ethiopian.
- Market innovations such as creation of new market, customer satisfaction, new sales channels or placement and environmental analysis and response to changes that greatly

affected their performance. The study concluded that market innovation strategies provide a clear direction and focuses the effort of the entire organization on a common innovation goal and thus organizations tend to make full of utilization to impact on their profitability.

- The study concludes that technological innovations such as ATMs, point of sale new, electronic funds transfer, internet banking and mobile banking and technology development enhance profitability of the bank. Banks chooses to set up an online portal in more specialized services which require more personalized interactions. Technological innovation has positive but not statistically significant effect on net income of private commercial banks in Ethiopia.

5.4 Recommendations of the study

- From the findings and conclusions in this chapter, the study recommended that innovation strategies are critically important if the aim of the company is to develop the profitability of a business to the full.
- The study recommended that banks must take immediate steps to enhance innovation by critically assessing current innovation capabilities and performance, should create an enable environment that may enhance innovations within the bank in order that full benefits of innovation strategies is also realized.
- The study also recommends that the commercial banks should also strive to confirm introduction of product variety, adding new elements to the products and product replacement to enable the business to be more productive, to grow faster, to invest more, to earn more performance and also to take a position.
- The study further recommends that commercial banks should ensure reduction in interruptions, reduction of costs, Increase speed of implementation, improved innovation process and business process re-engineering are used to influence performance of the firms under study. This will help the faucet into customers' needs so well that new products generate their own source of marketing momentum.

- The study also recommends that the firms also should ensure that they adapt the new technology in order to cope with the fast changing technology. Technology innovation encourages simple flow of information and/or data and fast delivery to the intended persons. To implementation effective technology innovation strategies, there must be reliable and consistent infrastructure, sufficient and adequate financial resources. Failure to collect, analyze and act upon innovative information in an organized manner can lead to deterioration of the firm's profitability and ultimately the failure of the firm itself.

5.5 Suggestions for further studies

The objectives of this study were to analyze the innovation strategies adopted by private commercial banks in Ethiopia and the effects of innovation strategies on financial performance of private commercial banks. The study carried out a census of all the 16 private commercial banks operating in Ethiopia as at June 2019. The study recommended that a similar study should be carried out in other industry sector. Since the performance of Ethiopian banking sector is not purely and wholly derived from bank innovations because there are other drivers of financial performance in the sector like; regulations, human resource, quality of management and corporate governance. Therefore, the researcher also recommended that future studies conducted on these areas to expand the level of knowledge.

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APPENDIXS

Appendix I: QUESTIONNAIRE FOR RESPONDENTS

PART I: GENERAL INFORMATION

Please tick the most appropriate information about yourself

1. Name of the bank? (Optional)

   …….

2. Gender:

   Male [ ] Female [ ]

3. Age:

   20 - 30 years [ ] 31 – 40 years [ ]

   41-50years [ ] Above 50[ ]

4. Highest level of Education:

   Diploma [ ] Bachelor's degree [ ]

   Masters [ ] Others [ ]

5. Years of service at the bank:

   0-5 years [ ] 6-10 years [ ]

   10-20 years [ ] Over 20 years [ ]

6. Which is your department?

   Operations [ ] E-Banking [ ]

   Risk management [ ] Finance [ ]

   Marketing [ ]

   Others please specify _____

PART II: INNOVATION STRATEGIES

Please write the appropriate scale which has a value 1-5 on the box of each year for the below questions A-D. And each scale value is as follows:

1= No extent; 2= A little extent; 3= Moderate; 4 = Great extent; 5= Very great extent

A: PRODUCT INNOVATION STRATEGIES

To what extent does your bank make use of the following product innovations in its operations during the last six years?

		2014	2015	2016	2017	2018	2019
1	Introduction of product variety						
2	Add new elements to the products						
3	Re-design product line up						
4	Product replacement						
5	Product improvement in the products offered						
6	Increase the value of the products						

B: PROCESSINNOVATION STRATEGIES

To what extent does your bank make use of the following process innovations in its operations during the last six years?

		2014	2015	2016	2017	2018	2019
7	Reduction of costs						
8	Reduction in waiting time						
9	Reduction in interruptions						
10	Increase speed of implementation						
11	Business process re-engineering						
12	Conformance to regulations						

C: MARKETINNOVATION STRATEGIES

To what extent does your bank make use of the following market innovations in its operations during the last six years?

		2014	2015	2016	2017	2018	2019
13	Creation of new market						
14	Customer satisfaction and retention						
15	Environmental analysis and response to changes						
16	Introducing innovative promotion activities						
17	New sales channels or placement						
18	New delivery channels						

D: TECHNOLOGICAL INNOVATION STRATEGIES

To what extent does your bank make use of the following technological innovations in its operations during the last six years?

		2014	2015	2016	2017	2018	2019
19	ATM withdrawals						
20	Mobile banking technologies						
21	Internet banking transactions						
22	Electronic Funds Transfer						
23	Point of Sale						
24	New technology development						

Appendix II: Banks Log (Total Asset) and Log (NIM) from 2014 to 2019

		Log(Total Asset)					
No.	**Bank**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
1	Abay Bank	9.50	9.66	9.79	9.94	10.09	10.18
2	Addis international Bank	9.10	9.23	9.39	9.53	9.62	9.74
3	Awash Bank	10.34	10.40	10.49	10.62	10.74	10.87
4	Bank of Abyssinia	10.05	10.14	10.23	10.40	10.50	10.59
5	Berhan international Bank	9.45	9.62	9.86	10.02	10.15	10.28
6	Bunna international Bank	9.48	9.65	9.83	9.99	10.11	10.16
7	Cooperative Bank of Oromia	9.87	10.06	10.03	10.25	10.48	10.62
8	Dashen Bank	10.34	10.39	10.46	10.54	10.66	10.75
9	Debub Global Bank	8.94	9.06	9.11	9.32	9.51	9.74
10	Enat Bank	9.15	9.34	9.51	9.69	9.81	9.96
11	Lion international Bank	9.56	9.77	9.91	10.04	10.16	10.23
12	Nib international Bank	10.03	10.12	10.20	10.32	10.43	10.53
13	Oromia international Bank	9.79	9.98	10.05	10.21	10.38	10.50
14	United Bank	10.07	10.16	10.24	10.34	10.45	10.55
15	Wegagen Bank	10.06	10.14	10.21	10.32	10.44	10.47
16	Zemen Bank	9.59	9.69	9.87	9.99	10.10	10.17

		Log(NIM)					
No.	**Bank**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
1	Abay Bank	8.00	8.25	8.43	8.53	8.71	8.80
2	Addis international Bank	7.54	7.73	7.94	8.05	8.19	8.30
3	Awash Bank	8.79	8.92	9.06	9.22	9.43	9.59
4	Bank of Abyssinia	8.62	8.68	8.81	9.00	9.22	9.30
5	Berhan international Bank	8.03	8.14	8.51	8.66	8.84	8.97
6	Bunna international Bank	8.10	8.34	8.50	8.58	8.81	8.93
7	Cooperative Bank of Oromia	8.51	8.75	8.77	8.91	9.09	9.25
8	Dashen Bank	8.75	8.87	8.89	8.89	9.06	9.38
9	Debub Global Bank	7.40	7.43	7.77	7.82	8.12	8.25
10	Enat Bank	7.41	7.80	7.90	7.99	8.25	8.41
11	Lion international Bank	8.13	8.34	8.55	8.73	8.87	8.84
12	Nib international Bank	8.67	8.77	8.87	8.99	9.08	9.22
13	Oromia international Bank	8.35	8.56	8.72	8.76	9.04	9.19
14	United Bank	8.64	8.75	8.85	8.96	9.09	9.22
15	Wegagen Bank	8.63	8.75	8.83	8.94	9.13	9.17
16	Zemen Bank	7.96	8.10	8.21	8.26	8.43	8.68

Source: NBE, Annual report for 2014 to 2019

Appendix III: Age of Banks

No.	Bank	Established Year	Age
1	Abay Bank	2010	10
2	Addis international Bank	2011	9
3	Awash Bank	1994	26
4	Bank of Abyssinia	1996	24
5	Berhan international Bank	2010	10
6	Bunna international Bank	2009	11
7	Cooperative Bank of Oromia	2015	15
8	Dashen Bank	2003	17
9	Debub Global Bank	2012	8
10	Enat Bank	2013	7
11	Lion international Bank	2006	14
12	Nib international Bank	1999	21
13	Oromia international Bank	2008	12
14	United Bank	1998	22
15	Wegagen Bank	1997	23
16	Zemen Bank	2009	11

Source: NBE, 2018/2019 Annual report