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**COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE**

**THE EFFECT OF PRODUCT INNOVATION STRATEGY ON SALES
PERFORMANCE: THE CASE OF ETHIO TELECOM**

**A THESIS SUBMITTED TO THE DEPARTMENT IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS OF MASTER OF ART IN
MARKETING MANAGEMENT**

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STATEMENT OF DECLARATION

I, the undersigned, thus declare that this thesis, "The Effects of Product Innovation Strategy on Sales Performance (the Case of ethiotelecom)," is my own original work. I conducted the current work on my own with the advice and assistance of the research advisor, SALEAMLAK MOLLA (PH.D.). Any other contributors or sources used in the study have been properly recognized. Furthermore, this research has not been submitted for the award of a degree at this or any other university.

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This is to certify that Zenebe Ayele has completed his thesis entitled "The Effects of Product Innovation Strategy on Sales Performance (the Case of ethiotelecom)," is his original work and is submitted for examination with my approval as a thesis.

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ABBREVIATION AND ACRONYMS

| | |
|-----------|--|
| ACFTA | African Continental Free Trade Agreement |
| ANOVA | Analysis of Variance |
| ATM | Automatic Teller Machine |
| DOI | Diffusion of Innovation Theory |
| ET | Ethitelecom |
| Fin techs | Financial Technology |
| IBM | International business machines |
| ICT | Information Communication Technology |
| ID | Identification card |
| PF | Product feature |
| PM | Product Mix (portfolio) |
| PSD | Product Style & design |
| PQ | Product quality |
| R&D | Research and Development |
| SPSS | Statistical package for social sciences |
| TTM | Time to market |

ABSTRACT

As the corporate climate gets more competitive, businesses are becoming more aggressive and dynamic in identifying competitive tactics. By focusing on ethiotelecom, this study intended to determine the impact of product innovation strategy on sales performance. The general objective of the study was to examine effects of innovation strategy on sales performance of Ethio Telecom. While the specific objective of the study was to assess the effect of product quality on sales performance, to investigate the effect of product feature on sales performance, to analyze the effect of product design on sales performance, to determine the effect of product mix on sales performance & to assess the time taken to release a single new product or services. The target population of the study were Marketing Division, sales Division & Finance revenue assurance at ethiotelecom head quarter. Sampling technique stratified random sampling was adopted and 134 samples were drawn out of 200. For data analysis I used to IBM SPSS 20 software & to put bibliography & citation I also used Zotero. Data was analyzed using descriptive and inferential statistics. The Cronbach's alpha test was used to assess the instrument's dependability. Multiple linear regression and a correlation model were used to investigate relationships and the impact of product innovation strategy on sales performance. The study findings show that product quality, product style and design, and product mix (portfolio) have a significant and beneficial influence on Ethiopia Telecom's sales success. The study recommends that ethiotelecom shall continue to provide innovated products & services adhering to the globe digital & technological changes.

Key Words: Product Innovation strategy, Product strategy & Sales Performance

1. CHAPTER ONE

1.1. INTRODUCTION

Chapter one of this proposal introduces the underlying problems which lay the ground for the thesis by explaining the background and the research gaps. Following the research questions and objectives generated from the research gaps, the chapter presents definition of key terms, scope of the study, and significance of the study. The chapter closes with provision on organization of the thesis.

1.2. Background of the Study

The arguments of Schumpeter (1934) the relationship between product innovation and organization performance is taking consideration in the academic world; while (Rosen bush et al., 2011) argued that uninterrupted product innovation activity is the primary foundation for prolonged firm success.

Companies that do not want to innovate are exposing their firm at risk (Kotler, 2000). The capability of a firm to create innovations for short life cycles and degree of competition to create innovations are essential in permitting firm to retain competitive advantage and enhance performance (Artz et al., 2010).

A company's innovation strategy can be defined as a plan of actions and development aimed at encouraging, mobilizing, motivating, and achieving technological or service breakthroughs by investing financial and human resources in research and development (Piotr F. Borowski 2021).

An organization essential measuring factor for its achievement and sustainable continuity is its sales performance (Groza et al., 2016). Company sales performance is considerably linked to its marketing strategies which include product innovation (Gituma, 2017; Ndumia et al., 2020; Ng'ang'a, 2018).

Most scholars' emphasis on the performance and product innovation relationship to assess and test the hypothesis that higher innovativeness leads to increased firm performance. Numerous empirical studies have been done to examine the relationship between product innovation strategy and sales performance.

As Geroski et al. (1993) discovered, product innovations that are accomplished by organizations have a constructive effect on their profit. The study also found that the impact of innovations on firm's profit where innovative organization in general are more profitable than non-innovative firms. In the United States pharmaceutical industry, Roberts (1999) study on product innovativeness on sustainable profitability of firms found that high product innovation tendency has sustainable profitability.

Therrien et al. (2011) showed research on innovation on firm performance in service industry which pointed that to gain sale from innovations and firms need to come to the market early to launch new products with higher levels of innovation. One of the key reasons companies fail to achieve their sales target is poor marketing mix strategies they implemented (Ejike, 2020). In order to achieve and maintain high sales performance, organizations must formulate and implement better marketing strategies (Ndumia et al., 2020).

Rycroft and Kash (1999) argued that product innovation needs a means of co-evaluation between cultural viewpoints and technology and fundamental innovations are new technologies or new products that meet perhaps yet unknown, and incremental innovations increase what already exists. Mabrouk and Mamoghli (2010) said that even though the importance of innovation in interpreting the performance in telecommunication organizations, the effect of innovation on firm performance is still mistaken for two major reasons. Firstly, innovations' impact on telecommunications' industry performance continues lowly unproven and secondly, there is insufficient knowledge about drivers of innovation.

Some scholars analyzed the effect of marketing strategy on sales performance by examining the composite effects of marketing-mix elements (Ejike, 2020; Gituma, 2017; Ndumia et al., 2020; Ng'ang'a, 2018). Others have studied the relationship of a single product strategy and sales performance (Worku, 2017). However, the existing research do not explore the effect of product strategy by considering more than one product.

Ethio Telecom is a company whose yearly revenue reaches up to ETB 56.5 billion in 2020/21 fiscal year. The trend shows that the enterprise is growing year in year. However, the effect and the contribution of new product innovation strategy of the company on its sales growth and performance is not yet studied.

The study, therefore, will try to investigate and analyze the effect and the contribution of new product innovation strategy on sales performance of the company.

1.3. Background of the Organization

In Ethiopia, telecom service was introduced by Emperor Menelik II in 1894 G.C. The first long line telephone service was installed from Addis Ababa to Harar. It is the oldest public telecom operator in Africa (Worku Bogale 2005). Its objective was to interconnect the inter-urban network & expanded in all other directions from the capital, Addis Ababa. Many urban centers in the country were connected by landlines to enable long-distance communications with the support of mediator operators acting as verbal human repeaters ([www. Ethiotelecom.et](http://www.Ethiotelecom.et)).

After the end of Italy invasion, in which telecommunication services damaged, Ethiopia re-formed the telephone, telegraph & postal services in 1941. In 1952, by proclamation No. 131/52 the Imperial Board of Telecommunications (IBTE) was formed, and later it was renamed as Ethiopian Telecommunications Authority in 1981.

The need to expand the services more to the urban and countryside areas and regulate tariff and handle customers' complaint, the government instituted a distinct regulatory body, the Ethiopian Telecommunication Agency (ETA) by Proclamation 49/1996, and by regulation 10/1996 the authority was reorganized as Ethiopian Telecommunications Corporation (ETC) (Worku Bogale 2005). In 2005 small market such as resale & terminal equipment maintenance and installation services to private sector has been started by proclamation 281/2002 (MA Zeleke – 2012). With technological advancement, infrastructure growth, the raise of varied product and service types and lines demand the government to reorganize and rebrand again as Ethio Telecom in Nov 2010 G.C. (Reg. No. 197/2010).

Generally, the historical government owned entity has passed different challenges and successes, rebranding and reorganization since its establishment.

Currently, Ethio Telecom provides more than 60 different types of products and services to its customers and has also entered in the fintech banking services, i.e., telebirr. The products and services that the company mainly provides include mobile voice service, internet service, mobile value-added services & web hosting and domain name services. On average, the company releases 19 new products and services in each year.

After the announcement and launch of telecom sector liberalization and privatization (partial privatization of Ethio Telecom is delayed for undisclosed period as per the government decision, ([Reuters](#) March 18, 2022), the state-owned style of Ethio Telecom will be phased out and its solely telecom operator historic has ended as new additional operator has joined the market, i.e., Safaricom, which is expected to start service provision in this year, in 2022 GC.

As a result, Ethio Telecom is releasing and revamping different new services (recently announced to launch 5G services in Addis Ababa, ([Anadolu Agency](#) May,10 2022)

in order to compete with the new international company (another 3rd operator will also be expected to come 2023, ([Capital Newspaper](#) Mar 28, 2022). It is expected to develop new product innovation strategy and sustain its performance as the newcomers will automatically share the market. It is also expected to involve various activities with customers and receive feedback from them through survey questions, face to face and telephone interview, by visiting major and potential customer by sales and marketing team, collecting comments from public wing events. Besides that, the company is aggressively promoting its new products, services and packages through different social media like Facebook, Twitter, Telegram, LinkedIn, & Instagram where these are also inputs to bring and develop new products.

Despite all the efforts, the future is challenging and more is expected to develop new product innovation strategies and globally the economy is going digital that further obliges the enterprise to sustainably design suitable and quality new products and services and release timely before competitors go beyond as the country has an ample market about 110 million population (which may necessitate to develop different product innovation with different customer group or niche or market locations).

Therefore, the research paper will try to investigate and analyze how Ethio Telecom's new product innovation vis-à-vis the dimension as quality, time to market, design, product portfolio, product features have contributed on the growth sales.

Furthermore, the study will test that study made by different scholars that company's having product innovation strategies contribute to high sales performances is valid and applies to Ethio Telecom, as there are no such studies made on the company as far the researcher's knowledge.

1.4. Statement of the Problem

In previous research in several industries around the world, the link between innovation and performance has been thoroughly documented (Njeri, 2017). According to Schmuck and Benke (2020), innovation is the implementation of unique new ideas by developing a new product or product feature; it can also refer to the development of a new business model or manufacturing technique (Schmuck and Benke, 2020). (Schmuck and Benke, 2020) examined about innovation strategy the case of Alibaba in the six continents (North and South America, Europe, Asia, Africa and Australia) as international review. Alibaba's new e-commerce trade platform for manufacturing industries helps enterprises to adapt and rethink their business strategy, save money, and improve business communications (communication was limited to B2B before the platform innovation). Companies may simply communicate with and access end users when the platform was launched (B2B, B2C, C2C). As a result, Alibaba has reduced costs, increased efficiency, and improved quality to become one of the top ten digital market (e-commerce) service providers (the highest valued online business competing with Google, Amazon, eBay, PayPal, etc) (Schmuck and Benke,2020).

As a result, it is suggested that more research be undertaken to learn more about their perspectives on the relationship between Google's product innovation strategies and their effects on sales success, customer retention, and satisfaction (Schmuck and Benke, 2020) .

Corning Company had rocketed to 70% of annual sales and profits from a loss of \$500 million to a profit of \$2 billion after taxes because of a renewed innovation strategy (three strategic business grow strategy via product-line extensions, exploit market adjacencies, and create completely new product) (Robert G. Cooper and Scott J. Edgett, 2010).

Furthermore, even in difficult times, innovation strategy is a critical instrument for product creation and continuing success. A complete product innovation strategy should include, among other things, clearly stated objectives and strategic areas of focus, as well as a well-defined position in the overall company aim. According to research conducted by Robert G. Cooper and Scott J. Edgett (2010), clearly defined product innovation objectives, purpose of product innovation, how long product innovation effects last, commitments, and resource allocations result in performance improvement twice as much as poorly defined product innovation strategies. If your company doesn't have a product innovation plan that

incorporates these important components, it's likely damaging its success. However, poorly designed product innovation lowers performance,

Without clear strategic policies, the search for specific new product concepts or opportunities is unfocused. The project portfolio for new products is likely to take in many unconnected projects over time, in a variety of markets, technology, and product kinds. The outcome of such a disorganized attempt is predictable: an unsuccessful new product launch (Cooper and Edgett, 2010).

Cherop and Caroline Soi in 2016 using the case of Safaricom Limited, Airtel Limited, and Telkom Kenya Limited in Nairobi investigated the effects of innovation strategies on the performance of telecommunication enterprises in Kenya. The goal of the study was to see if product innovation, technology innovation, market innovation, and process innovation had an impact on the performance of Kenyan telecommunications companies.

The study's target group included 276 managers from three different telecoms industries. The last conclusion was that product innovation is an important aspect of their organizational goals, with 93% of respondents agreeing and 6% strongly agreeing that it is an important part of their organizational goals, mission, and strategy.

As Alice Njeri studied in 2017 three specific objectives were set to test and determine the impact of product innovation strategy on performance, the impact of process innovation strategy on performance, and the impact of market innovation strategy on performance in Safaricom Kenya Limited. The result of the study confirmed that product innovation strategy has a positive and significant impact on performance and went on to say that of all the innovation strategies examined, product innovation strategy had the most impact on Safaricom Kenya Limited's performance.

Accordingly, many studies have found that innovation has a favorable impact on financial and operational aspects of business performance, with considerable differences in the outcomes depending on the type of innovation used, as well as the size of the company and the economy (Borowski, 2021). Borowski spoke about the relevance of innovative tactics and presented the findings of a study on the role of each employee group (management and staff group) in adopting innovations, based on the size of the company but not described the effect of sales performance.

Zevor studied about sugar industry in Kenya about each competitor's product quality, features, and mix, as well as customer service, price policy, distribution scope, sales force strategy, and advertising and sales promotion programs (Zevor, n.d.2020). According to the study, firms who understand the necessity of interventional coordination and successfully communicating a new product development across departments will have more successful new products (Cooper, 1999). Though marketing mix strategy influences sales performance, multiple product innovation strategy have an effect on sales (Cheruiyot et al., 2019; Diribu, 2019; Ng'ang'a, 2018) and profitability (Girmachew, 2019)

Ethio Telecom is a company whose yearly revenue from multiple products reaches up to Birr 56.5 billion (Fanabc.Com [News Jul 14, 2021](#)). However, the annual increase in sales performance has not been studied and analyzed such growth is the result of new product and services innovations. Furthermore, a new products and services are launched as expected with the required quality, features and styles will be assessed and analyzed. Besides, how frequent and deep variety of products are launched in a specified period.

Finally, currently new international telecom operator, which has worldwide experience, advanced tech and expertise, and financially strong, is ready to operate in the local market. Is Ethio Telecom's new product and service innovation strategies enable to compete effectively and increase sales performance progressively? Hence, the research paper analyzed its readiness and investigate the relationship of product innovation strategy and sales performance within the specified time (2017 and 2021).

1.5. Research Questions

Based on the proposed study gap outlined above, the proposed study addressed the following specific questions, but limited to:

- i. To what extent does product quality affect sales performance?
- ii. What is the effect of product feature on sales performance?
- iii. To what extent does product design affect sales performance?
- iv. What is the effect of product mix on sales performance?
- v. How long Ethio Telecom takes to release one new product (on average)?

1.6. Research Objectives

The general objective of the study examined effects of innovation strategy on sales performance of Ethio Telecom. To achieve the general objective stated above, the specific objectives of the research paper included:

- i. To assess the effect of product quality on sales performance.
- ii. To investigate the effect of product feature on sales performance.
- iii. To analyze the effect of product design on sales performance.
- iv. To determine the effect of product mix on sales performance.
- v. To assess the time taken to release a single new product or services

1.7. Definition of Terms

In the proposed study, the definition of key words/phrases are provided as follows.

1.7.1 Product Innovation strategy: Launch of a good or service which is new or substantially enhanced with respect to its attributes or future use is product innovation (Bakar & Ahmad, 2010).

1.7.2 Product strategy: The bundling and packaging of different offers and many types of products and service(Nigussie, 2019).

1.7.3 Sales Performance: The quantity or number or volume of products sold or services provided by a company in a particular period of time (Shewangizaw, 2018) in a particular market.

1.8. Significance of the study

Theoretical Significance

The proposed study contributed to extant literature on relationship of marketing strategy, particularly product innovation strategy and sales performance. Students and researchers will also benefit from the findings to carry further studies on a similar topic.

Practical Significance

The findings of this study provided important insights to Ethio Telecom regarding product innovation strategies, might help marketing managers and top management of other companies on whether product innovation strategy they adopt positively affects their firm's sales performance. And might give insight to different scholars for further study.

1.9. Scope of the study

The proposed study focussed on how product innovation strategy is associated with firm level sales performance in Ethio Telecom.

The scope of study is limited to:

- The Marketing Division, finance revenue assurance & sales Division staff working at headquarter in Addis Ababa.
- Only **5 years'** new products and services released and organizational performance (sales) 2017 to 2021.

1.10 Limitation of the Study

As the result of lack of the information related to this study in telecommunication sector, the researcher found it difficult to get enough materials (research, articles and books). In addition, the study limited to quantitative and Cross-sectional analysis only which found through survey. Furthermore, the researcher also failed to cover out of Addis Ababa sample areas might consider as limitation. On the other side the study did not include the user's opinion & feedback.

1.11 Organization of the Thesis

The structure of the research study structured and outlined in **five** chapters. **Chapter one** presents the background of the study, background of the company, statement of the problem, research questions, objectives of the study, definition of terms, significance of the study, and scope of the study. **Chapter two** of the study deals with literature reviews on definition, types and effects of sales performance related theories and empirical works, and conceptual framework. In **Chapter three**, the study describes research methodology that goes through research approach, research design, population, sampling design and technique, sources and types of data, data collection instruments, data collection procedures, methods of data presentation and analysis, and data quality assurance. **Chapter four** covers data presentation, analysis, and findings of the study. The chapter summarizes the findings of the study and discusses the findings along with pertinent literature. The **closing chapter, chapter five**, of the thesis incorporates summary of the findings, conclusions, limitations of the study and the recommendations by the researcher.

Reference and data collection instrument included at the end of the study paper

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter presents the literature review of the study. The literature is presented in terms of the study variables concept product innovation strategy and firm performance.

2.2. Concept of Product Innovation

Product innovation is the successful introduction new a product to the principal that needs to be considered or the company to the marketplace (Zevor 2020). Product innovation is among the principal factor that determine the success of a firm. In line with this new product innovation and new product development are critical for enhancing the performance and market share of a firm (Njeri 2017).

2.2.1. Innovation

Innovation is a sustainable competitive advantage as (Caroline Cherop Soi 2016) explained. (Ibrahim Rashed AlTaweel and Sulieman Ibraheem Al-Hawary July 2021) described that innovation is linked to the accessibility of a set of innovative competences and the desire of individuals or organizations to interpret original theoretical concepts into practice. Innovation refers to the development of explaining an idea or creation into a goods or service that makes value or for which customers will pay (Kariuki 2014). According to Eini Inha and Sofia Bohlin (2017), who referenced Reguia (2014) and Dereli (2015), innovation is defined as an ingredient for economic organizations to grasp what customers want and to achieve customer happiness. Many successful firms today have been regarded as being driven by innovation. Product innovation is very significant to be carried out by a firm with the aim of keeping the value of product benefits for consumers (Khamaludin, 2021). According to (Abdiaziz Mohamed Abdi and Ali Yassin Sheikh Ali 2013) cited that Rogers (1998) defined innovation as the application of new ideas to the product, process or any other aspect of a firm's activities. (Alice Njeri 2013) noted innovation leads to the improvement of product quality which leads to better firm performance and progress. According to (Yana Hendayana and Sri Wiludjeng SP 2021) study, innovation is the tendency to involve in creativity and experimentation through the overview of new products or services and technology guidance through study and

development in new processes. As (Mulugeta Embiale 2015) cited that innovation has performed a key role in maintaining the growth of both the manufacturing and services sectors, state that innovation research focus mainly on the manufacturing context whilst a few studies examined innovation in the service sector.

2.2.2. Product innovation

Product innovation refers to "Producing new products or services a respond to an external consumer or a demand of the market"(Mulugeta Embiale 2015). On the other hand, (Yilkal Migbaru 2018) stated that product innovation can be described as changes in the things (products/services) which a firm is focus on defining how a system can be integrated within an organization and the necessity for interaction with the process. According to (Hendri Soekotjo 2021) discussion product innovation is the production and introduction of a goods or service either as a new or an improved version of a grownup product. (Caroline Cherop Soi 2016) also said product innovation is a significant way for firms to distinguish their products from competing or competitor's products. (Alice Njeri 2013) cited discussion that product innovation as the primer of new services/products or the bringing of significant improvements in the usual services/products. (Alice Njeri 2013) also further clarified that product innovation is the main sources of gaining competitive advantage for micro and small enterprises. (Alice Njeri 2013) cited that (Olson et al. (1995) product innovation is seen as one of the important determinants that help to the success of a firm.

2.3. Dimensions of product innovation

Abdiaziz Mohamed Abdi1 and Ali Yassin Sheikh Ali (2013) stated that dimension of innovation administrative innovation & technical innovation when they studied about innovation and business performance in telecommunication industry in sub-Saharan African context: case of Somalia but they did not explain about product innovation. (Caroline Cherop Soi 2016) cited that dimension of product innovation from perspective of customers' firm & product modification. Which emphasizes that the product is new to the customers, the product is new to the firm and the product revision; that means making product difference to the existing products of the firm.

But according to (Tilahun Dejene 2018) product or service developing requires describing the advantages that it will offer. These benefits are conveyed and produced by product

dimensions such as quality, features, styles and design & product mix (Product portfolio). A product is made up of (a) ingredients, (b) attributes, (c) benefits, (d) advantages, (e) features, (f) functionality, (g) performance, (h) business model, (I) usage experience, and (j) consumption experience. 'Product innovation' refers to innovations that manifest in products as defined(Kanagal, 2015).

2.3.1. Product Quality

According to (LU XU, BLANKSON, PRYBUTOK 2017) cited the definition of product quality that product quality differs among the perspectives one believes. Several scholars define product quality from the users' perspective in terms of the customer's overall appraisal of a product. (Tilahun Dejene 2018) noted that one of the marketer's most important positioning means is product quality. Quality has a direct effect on product or service performance; consequently, it is closely related to customer value and gratification. Numerous academics define product quality in terms of a customer's total appraisal of a product from the users' standpoint (Xu et al., 2017). The goal of the product quality function is to assist new product development initiatives in ensuring that the requisite product quality is met. The key responsibilities of this function include tasks connected to knowledge management and customer satisfaction, such as documenting lessons learned and conducting customer validation tests (Erik Eurenus & Billy Teräväinen 2020).

Product quality is related to the items in the market share as well as the factory's trustworthiness. High-quality products can secure a market share for the long term and has an impact on sales performance. On the other hand, since low-quality items have a negative impact on sales and results significant losses on the companies (Wang et al., 2018). Companies must be dedicated to providing high-quality and acceptable services in order to sustain product quality (Jasmani and Sunarsi, 2020).

H1: Product quality has not a significant effect on sales performance.

2.3.2. Product Features

A product can be presented with differing features. A stripped-down model, one without any additions, is the preliminary point. By inserting more features, the firm be able to produce higher-levels models. Features are a competitive tool for separating the firm's product from competitor's product (Tilahun Dejene 2018). A product might have a variety of characteristics. The starting point is a stripped-down model with no extras. By adding

more features, the organization can construct higher-level models. Features are a competitive tactic for distinguishing a company's product from those of its competitors. One of the most successful methods to compete is to be the first manufacturer to launch a valuable new feature (Tilahun Dejene 2018). The Portfolio Enrichment strategy includes several different things or features. For instance, Internet package, free SMS and non-internet call features, and entertainment features are among the combined offerings (video and music streaming). Because the internet package can attract more people from the internet user group, it was picked as one of the bundled products features (Mahadi and Dhewanto, 2019).

H2: Valuable product features does not increase sales performance

2.3.3. Product Style and Design

The characteristics of product style & design is other mechanism of product innovation dimension to add customer value. Design is greater concept than style. Style tells us simply the appearance of a product (Tilahun Dejene 2018). A unique product style and design is another method to offer customer value. Style is only one aspect of design. The appearance of a product is referred to as style. A stunning style may draw attention and create a pleasing look, but it does not guarantee that the product will perform well. Design, unlike style, goes beyond the surface of a thing and into its core. Prototyping and brainstorming new ideas aren't the first steps in good design. Observing customers and having a comprehensive understanding of their demands is the first step in design (Tilahun Dejene 2018).

H3: Product style design has not increase sales performance.

2.3.4. Product Mix (product portfolio)

A product mix includes all the product lines and items that a certain seller offers for sale (Tilahun Dejene 2018). The reliability of the product mix refers to how directly linked the different product lines are in end use, production requirements, distribution channels or some other way. The number of various product lines that the company carries implies product mix width. Product mix length means the total number of items that firm holds in its product line whereas Product mix depth refers to the number of versions recommended for each product in the line (Esen Gurbuz 2018). A product mix refers to all the product and service lines that a certain supplier sells (Tilahun Dejene 2018). The Portfolio Enrichment approach will introduce more new product offerings and features to the

product portfolio (Mahadi and Dhewanto, 2019). A firm must consider how to make judgments regarding the product mix that will be generated in the present and future. A company's product mix is one factor that must be examined. With a solid product mix, the business can entice customers to buy. According to (Kotler, 2013), the product mix consists of a consistent width, length, and depth (Jasmani and Sunarsi, 2020).

H4: New product & service innovation that contain appropriate product mix (alternative to customers) cannot be results increasing sales performance.

2.3.5. Time to market (TTM)

TTM referred to as the duration of time it covers from a product being created until it is accessible for sale. There are no conventional standards for how to measure TTM and the description for where the start and end of the measurement lies may differ among dissimilar industries and organizations (Erik Eurenus & Billy Teräväinen 2020). For many organizations that design and launch their own products, properly defined time plan is very critical. It encompasses the full process of bringing a new product to market. Achieving a quick time-to-market for the process is a significant driver of new product success, and product developers need to focus also on reducing time-to-market (“Erik Eurenus & Billy Teräväinen 2020). In the fast-moving and extraordinarily competitive business environment of today, being first gives you a first mover advantage. This has the benefit of you gaining good brand recognition and product loyalty before other companies get to market with similar products hence increase sales performance, lowers cost and increase market share. As time to market is slow, competitors may already dominate the market before the new product and services are released. Critically, being slower is proven to lead to lower profitability for a product.

H5: TTM is not necessary increases sales performance

2.4. Concept of sales performance

New product innovation and new product development is a substantial strategy for improving the performance and market segment of the business. Some studies proved that product innovation was the most significant in encouraging firm performance than organization extensive innovation. (Alice Njeri 2013).

2.5. Theoretical Literature Review

2.5.1. Diffusion of Innovation (DOI) Theory

Diffusion of Innovation (DOI) Theory postulates that an idea, behavior, or product gains momentum to spread through a system of people resulting in its adoption (Zevor 2020). Adoption is demonstrated when ‘a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behaviour, etc.) (Zevor 2020, 11).

Wang and Lee (Wang and Lee, cited in Zevor 2020) recommends the importance of understanding the characteristics of the target population from five established adopter categories when promoting an innovation.

1. Innovators – Innovators include very little people who are interested in new ideas, want to be the first to try the innovation, and are very willing to take risks.
2. Early Adopters – Early adopters are people who aware of the need to change and embrace change opportunities.
3. Early Majority - Early majority are people who adopt new ideas before the average person. They need to see evidence that the innovation works before they are willing to adopt it.
4. Late Majority – Late majorities encompass the skeptics who adopt an innovation after it has been tried by the majority.
5. Laggards – The laggards are bound by tradition and very conservative.

The proposed study will employ Diffusion of Innovation (DOI) Theory to explain how ethio telecom conceives an idea of a product and the methods it adopts to ensure that new product idea gains wider attention among its customers. Consequently, this theory suitable to investigate how sales volumes ethio telecom are affected by the types of innovations adopted by its customers. However, the theory does not consider the influence of an individual's resources or social support in adopting the new behavior (or innovation) (Zevor 2020). Ethio telecom is also joining the financial sector/industry/fintech/ named as telebirr.

2.5.2 Resource based view (RBV)

Resource based view (RBV) posits that a firm’s unique bundle of tangible and intangible resources such as assets, capabilities, processes and information, organizational routines

and organizational culture are critical to enhance competitive advantage that enables the firm to generate greater economic value to customers or clients better than its competitors, and to its performance (Zevor 2020). According to this theory, creating new resources, developing existing ones, and protecting core competencies enables a firm to drive its performance. However, since the resource-based view is internally focused, it fails to explain how firms develop and use resources to achieve competitive advantage.

2.6. Advantages of product innovations

Innovation is a major source of competitive advantage and economic rewards for today's businesses. Furthermore, we can list the following benefits of product innovation to both the company and the industry. Product innovation can be quantified in terms of sales and profits generated by new products/services, changes in market share, and so on. Product innovation can also improve a company's knowledge stock. Product innovation helps to reduce manufacturing costs and time, which leads to higher investment returns and production efficiency. It also helps to improve product quality and make products more competitive in both domestic and international markets. Realize customers' demands with new characteristics by developing a new product pattern with set measures and features that are not currently available, as well as maintaining client loyalty. Providing answers to production issues and new chances to utilize newly acquired resources; Product innovation is a key driver of productivity and economic progress(Reguia, 2014).

Companies who do not innovate are typically overrun by industry competitors, and the only way to maintain a competitive advantage is to take advantage of the situation and upgrade or innovate more advanced product(Zevor, 2020). Most businesses innovate their products to obtain a competitive advantage or to make them more appealing to their clients so that they may suit their changing needs while also growing market sales. Developing New Products (DNP) gives you a competitive advantage and a road to increased profits. Innovation is frequently the source of a company's economic benefits and competitive advantage (Soi - 2016). Product innovation in order to maintain its competitive advantage over other telecoms companies(Njeri, 2017).

2.7. Empirical literature review

Most businesses develop their products to gain a competitive advantage or to make their products more desirable to their customers. Many academics and researchers have questioned whether product innovation has always been beneficial (Godfred Tettey Zevor

2020). According to (Caroline Cherop Soi 2016) the conclusions of the study, there is a statistically significant association between product innovation and business performance. Process innovation, on the other hand, is a critical component of telecommunications corporations' competitive edge. The study discovered that telecommunication companies' performance improved as a result of process innovation. (Jane Nyambura Kariuki 2014) concluded that strategic innovation has encouraging effect on organization performance. The management and organization of product innovation performance and its relationship with a firm's business performance, innovation has a beneficial impact on business performance (Godfred Tettey Zevor 2020). The world is changing, new technologies develop, and trade is shifting dynamically, every company must manage their technology and products. To establish and maintain a competitive advantage today, innovation and change are required. On the way to developing a sustainable business or operation, innovation becomes the driving force for value generation and growth (Mahadi, Ardianto and Dhewanto, Wawan2017). Firms, particularly in the digital and telecommunications industries, must adapt. The internet's technology has altered the competitive landscape and the value-creation model. (Mahadi, Ardianto and Dhewanto, Wawan2017).

According to a study conducted at eight of Sweden's top ten manufacturing enterprises, fragmented innovation appears to be the most common type of innovation. This form of innovation demonstrates the lack of a company-wide innovation strategy (Roland Schmuck, Mariann Benke 2020).

The most difficult stage in the product development and introduction process for corporations, according to empirical literature reviews, was introducing the product to the market. A company's new product strategy should explicitly outline the new product program's aims or objectives, as well as the expected return-on-investment (ROI), so that new products' contribution to corporate goals is adequately acknowledged. Furthermore, properly defined venues, i.e., specific areas of strategic specialization, such as products, markets, or technology, are required to lead the firm's entire new product program. The problem now is not only establishing a clear plan, but also putting it into action, that is, translating the strategy into words that everyone understands so that day-to-day actions may be focused on and conveyed. Step innovations, on the other hand, are more radical and revolutionary advances that take a corporation to a higher, altogether different level of operation. The launch of new products on the market is the foundation of the step

innovation approach, as is a significant investment in research and development (Inha and Bohlin, n.d.)

A clear and well-communicated product innovation and technology strategy is lacking in many businesses. Such a strategy is critical, and it is strongly tied to successful product innovation. The many processes of building a product innovation strategy are outlined, from best-practice techniques to define innovation goals and objectives through the selection of strategic arenas and the development of the strategic map (Robert G. Cooper and Scott J. Edget 2019).

The continuing and extraordinary rise of information and communication technologies (ICT) assures that a company's current success status is always in jeopardy. The results of structural equation modeling across a sample of South African enterprises reveal that enterprise social media (ESM) use have a good impact on company market orientation strategies, which in turn has a beneficial impact on product innovation (Mpandare and Li, 2020).

A complete product innovation strategy should include, among other things, clearly stated objectives and strategic areas of focus, as well as a well-defined position in the overall company aim. Furthermore, the best-performing organizations' innovation strategy is more than just a list of this year's development projects; it is a far longer-term commitment. The path starts with the company's goals and objectives and ends with resource allocation decisions made with strategic buckets and strategic roadmaps to put the strategy into action. Cooper and Edgett, 2010, Cooper and Edgett showed that developing a product innovation and technology strategy for the business are simply about procedural business activities rather than being and depend on the effect of innovation strategy on sales performance.

Strategic innovation is the successful translation of ideas to innovations through a combination of creativity and execution that leads to breakthrough growth in established firms employing unproven business models. Firms need product innovations to deal with competitive challenges, shifting tastes and preferences, short product life cycles, technical advancement (or, conversely, technological obsolescence), changing demand patterns, and specialized customer requirements (Kanagal, 2015).

In their new product generation and development process, companies can choose between a technological push, or a market pull innovation strategy (Beyene et al., 2016a). The technology push innovation strategy, according to empirical evidence, aids businesses in gaining confidence and enabling them to quickly use information in their external environment (Beyene et al., 2016). Many empirical studies have been undertaken on the nature of the relationship between innovation and company productivity, while studies on firms in Sub-Saharan Africa (SSA) have vastly outnumbered studies on SSA enterprises (Karakara, n.d., p. 5). In their new product generation and development process, companies can choose between a technological push, or a market pull innovation strategy. Both the technological push and market-pull innovation strategies aspire for greater innovation performance through the development of organizational competency from a strategic management perspective (Beyene et al., 2016b). Organizations will pursue product innovation as a growth strategy if obstacles arising from product innovation are identified and mitigated (Zevor, n.d.2020). Firms need product innovations to deal with competitive challenges, shifting tastes and preferences, short product life cycles, technical advancement (or, conversely, technological obsolescence), changing demand patterns, and specialized customer requirements (Kanagal, 2015).

2.8. Conceptual framework

A conceptual framework is a rationally structured system of variable interactions that presents a systematic view of the study subject. It identifies the factors to be researched in greater detail, such as independent and dependent variables (Meskerem Eskinder 2021).

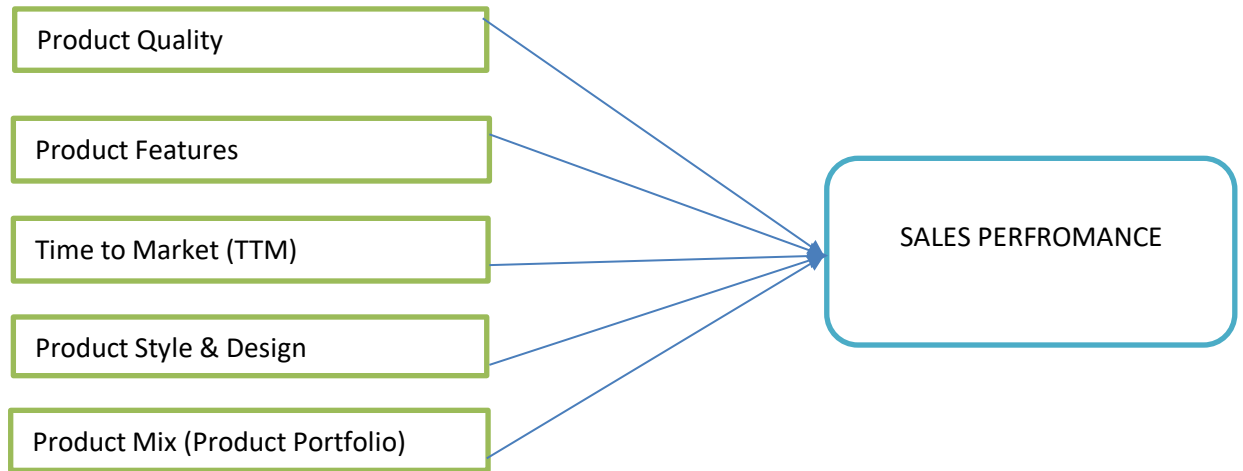
The conceptual framework identifies the critical process and is helpful in determining the study's direction (Abeselom Damtew Tadesse 2013).

This stage clarifies how to construct the study framework and formulate the hypothesis

Independent Variables

Dependent Variable

Figure 2.1. Conceptual Framework



Source: Conceptual framework on the relationship between product innovation and sales performance (Zevor 2018).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter discusses the method that used to carry out the proposed study. The chapter provides the research approach, research design, the population, the sample and sampling procedure, the research instrument, procedure for data collection and lastly the technique for data analysis.

3.2 Research Approach

The proposed study employed quantitative and qualitative data collection and analysis research approach for the study. This approach is helpful to obtain in-depth information required to answer the research questions raised (Zevor 2020). Moreover, quantitative research approach enables to test objective theories by examining the relationship among variables (Creswell and Creswell 2018).

3.3 Research Design

The proposed study used a descriptive cross-sectional survey research design as it sought to present current information about innovation strategies and their effect on firm's sales performance (Njeri 2017; Zevor 2020). Using the descriptive survey research for the proposed study enabled to collect data from a selected population to measure the relationships between the independent and dependent variables (Njeri 2017; Zevor 2020).

3.4 Population and Sample

The population for the proposed study encompassed Marketing Division, Finance & revenue assurance and Sales Division of Ethio Telecom The target population for the proposed study included staff from these divisions. These divisions are selected for the proposed study due to their high involvement in new product and service innovation, marketing, and sales.

3.4.1. Sampling frame

To draw sample for the proposed study list of target population gained from Marketing Division, Finance revenue assurance and Sales division of Ethio Telecom. Therefore, these division are served as the sampling frame for the proposed study.

3.4.2. Sampling technique

Since the target population divided into subgroups (departments), the proposed study applied stratified proportional random sampling technique to select representative sample from the target population. Stratified proportional random sampling technique is chosen because it provides an opportunity for each of staff from the three departments to be equally selected (Kothari and Garg, 2019; Njeri, 2017) and being inclusive of activities to innovate new product and service from design, customer survey to sales.

3.4.3. Sample size

To determined sample size Solvin's formula used (Solvin, cited in Girmachew, 2019) by assuming a 95 percent confidence level and P (the estimated proportion of an attribute that is present in the population) = 0.05 are assumed as follows:

$$n = N / 1 + N (e)^2$$
$$n=200/1+ 200(0.05)^2$$
$$\mathbf{n=134}$$

Where, n = Sample Size, N = Total Population Size; e = The Level of Acceptable Error with a confidence level of 95%, which is 0.05.

3.5. Data Sources and Types

The research utilized both primary and secondary data. Primary data on product innovation and sales performance collected from staff of Ethio Telecom in marketing, finance and sales divisions through questionnaires and analysis of responses. The secondary data collected from sales reports, articles, peer reviewed journals and financial statements issued during the period.

3.6. Method, Instrument and Procedures of Data Collection

3.6.1. Method of Data Collection

The proposed study used structured questionnaire for data collection. Structured questionnaire selected because it is suitable for self-administration, cost effectiveness of questionnaires, less time consuming and helps to get primary data (Zevor 2020; Creswell and Creswell 2018; Njeri 2017).

3.6.2. Instrument of Data Collection

The proposed study used a structured questionnaire which have 26 items presented in three categories: demographic information of respondents (6 items), product innovation strategy (15 items), and firm sales performance (5 items). The items on demographic information of respondents are adopted from Njeri (2017b) and Zevor (2020) items on product innovation strategy and firm sales performance are adopted from Njeri (2017b).

The items on product innovation strategy were multidimensional that measure the extent of prevalence of product innovation in Ethio Telecom. The items measured by 5-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. While sales performance measured with objective or subjective indicators, the proposed study subjective measures of sales performance (Njeri, 2017b). The items on sales performance were multidimensional that measure the extent to which it affected sales performance in Ethio Telecom. It measured by 5-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

3.6.3. Procedures of Data Collection

The questionnaire pilot tested before the actual data collection to ensure the validity and reliability by taking 10% of the sample size (Njeri, 2017). The questionnaire administered by respondents. Selected respondents approached and explained about the purpose of the study. Those who were willing to participate would be given questionnaire. Completed questionnaires collected for analysis.

3.7 Method of Data Analysis and Presentation

To provide answers to the research questions, descriptive, bivariate and regression analysis (Njeri, 2017b; Zevor, 2020) of the data conducted by using IBM SPSS 20. Presentation of quantitative data would be done by bar graphs, pie charts and frequency tables.

3.8. Validity and Reliability of Research Instruments

3.8.1. Validity

In order to ensure validity of instrument, the proposed study used established constructs (Njeri, 2017). Additionally, the study conducted pilot test (Njeri, 2017).

3.8.2. Reliability

To ensure reliability of the study, the proposed study used Cronbach alpha value of (>0.70) (Zevor, 2020).

3.8.3. Reliability Test

The dependability of the instruments was established by measuring their internal consistency with a reliability coefficient calculated using Cronbach's alpha (Zevor, 2020). The reliability measure helps to determine the extent to which the items in the questionnaire are related to each other, and to obtain an overall index of the repeatability or internal consistency of the scale as a whole; thus, the internal consistency of the scale item which is included in the questioner is measured using Cronbach's alpha coefficient. Cronbach's alpha is a metric for evaluating reliability on a scale that typically spans between 0 and 1. The better the internal consistency of the scale items, the closer Cronbach's alpha coefficient is to 1.00.

Table 3.1: Reliability Scale acceptable range

| Alpha Value | Reliability Scale |
|-------------------------|-------------------|
| $\alpha \geq 0.9$ | Excellent |
| $0.9 > \alpha \geq 0.8$ | Good |
| $0.8 > \alpha \geq 0.7$ | Acceptable |
| $0.7 > \alpha \geq 0.6$ | Questionable |
| $0.6 > \alpha \geq 0.5$ | Poor |
| $0.5 > \alpha$ | Unacceptable |

(Source: Computed from own survey data, 2022)

The dependability of the independent and dependent variables is shown in the table below based on the aforesaid measurement.

Table 3.2: Reliability test result

| Variables | No. of items | Cronbach's Alpha |
|----------------------------|--------------|------------------|
| Product Quality | 3 | 0.846 |
| Product Matrix (Portfolio) | 3 | 0.751 |
| Product style & design | 3 | 0.75 |
| Time to market | 3 | 0.65 |
| Product feature | 3 | 0.544 |
| Sales performance | 5 | 0.742 |
| Overall | 20 | 0.774 |

(Computed from own survey data, 2022)

The result of Cronbach's Alpha is acceptable at ($\alpha > 0.70$) (Zevor, 2020). according to the collected data result from independent variable (product quality, product mix & product style & design), dependent variable (sales performance) and overall variables are fulfilled Cronbach's Alpha requirement. Whereas time to market & product features are not fit for Cronbach's Alpha requirements of reliability. Therefore, it needs more additional assessment. Currently I focus on the reliable variable.

3.8.3. Multi-Collinearity Test

A linear relationship between two explanatory variables is referred to as multi-collinearity. Multi-collinearity happens when the multiple linear regression analysis includes various factors that are significantly linked not only with the dependent variable but also with each other, according to Shrestha (2020). The presence of multi-collinearity in regress analysis indicates that one variable in the model is employing redundant information, resulting in unstable regression coefficient estimate (Marcoulides & Raykov, 2006). Among the several multi-collinearity test methods, the researcher used the value of tolerance and the Variance Inflation Factor (VIF) method. To avoid multi-collinearity, the tolerance must be more than 0.1 and the VIF must be less than 10. As a result, in table 4.11, the value of Tolerance is larger than 0.1 (tolerance > 0.1) and VIF is less than 10.

Table 3.3: Inferential Statistics Collinearity

| Coefficients ^{a*} | | | |
|----------------------------------|-------------------------|-------------------------|-------|
| Model | | Collinearity Statistics | |
| | Variables | Tolerance | VIF |
| 1 | Product quality | 0.834 | 1.199 |
| | Product mix (portfolio) | 0.795 | 1.258 |
| | Product style & design | 0.855 | 1.169 |
| a* Dependent Variable: SP | | | |

Source: Computed from own survey data, 2022

For all variables, the value of Tolerance is more than 0.1 (tolerance > 0.1) and the value of VIF is less than 10 (VIF10). Therefore, we can say that there is no issue with multicollinearity among the explanatory variables.

3.8.4. Normality Test

According to Shukla (2015), it is important to determine whether the data are normally distributed before conducting any parametric tests. The researcher used the Skewness and Kurtosis methods for normalcy testing because they are dependable for big data sets, especially those with more than 300, (Shukla, 2015). A distribution's "peakedness" is measured by kurtosis and its asymmetry by skewness. For sample sizes greater than 300,

either an absolute skewness value of less than 2 or an absolute kurtosis value of less than 7 must be present to determine normalcy (Kim, 2013).

Table 3.4: Normality Test

| Items | Skewness | | Kurtosis | | |
|-----------------------------------|----------|------------|------------|------------|------------|
| | N | Statistics | Std. Error | Statistics | Std. Error |
| Product quality | 134 | -0.725 | 0.209 | 0.185 | 0.416 |
| Product style & design | 134 | -0.091 | 0.209 | -0.785 | 0.416 |
| Product mix (portfolio) | 134 | -0.562 | 0.209 | 0.286 | 0.416 |

Source: Computed from own survey data, 2022

According to table 4.12 above, the absolute values of the Skewness and Kurtosis are both less than 2 and less than 7, respectively. As a result, we can conclude that the data are normal.

3.9. Ethical Considerations

In conducting the proposed study, ethical issues were given proper due consideration before, during and after the research process. Before data collection process, the researcher provided a brief description of the nature of the study; obtained appropriate prior consent of the respondents; discussed about the purpose of the study and how data used; and developed composite profiles to guarantee the privacy and anonymity of respondents. During data analysis, the researcher promoted integrity. During report writing, the researcher documented multiple and/or contrary findings (if any); reported honesty [of data, findings, and conclusions]; and gave credit for ownership [of data] to researcher, respondents, and adviser[s].

CHAPTER FOUR

FINDING AND DISCUSSION

4.1. Introduction

The results of the study are discussed in two parts in this chapter, using SPSS version 20: descriptive and econometric analysis. The descriptive study focused on the respondents' demographic profile and other general information, whereas the econometric analysis focused on different statistical testing of the data. The data's dependability and validity were also investigated.

4.2. Response rate

The study's initial sample size was 200, and it was given to Ethio telecom employees working in marketing, sales, and finance. From the distribution, 134 questionnaires with a response rate of 100% can be collected.

4.3. Result of Descriptive Analysis

4.3.1. Demographic Characteristics of Respondents

Respondent demographic information is supplied in tables and figures and includes age, gender, education level, job experience, and staff department. This data was useful for the study because it gave insight into the ethiotelecom staff's perception of the impact of product innovation on performance.

Table 4.1: Sex of Respondents

| Characteristics | Category | Frequency | Percent | Cumulative Percent |
|-----------------|----------|-----------|---------|--------------------|
| Sex | Male | 72 | 53.7% | 53.7% |
| | Female | 62 | 46.3% | 100% |
| | Total | 134 | 100% | |

(Source: Computed from own survey data, 2022)

As table 1 shown in the above, 72 (53.7%) of those who responded the questionnaire were males, whereas 62 (46.3%) were girls.

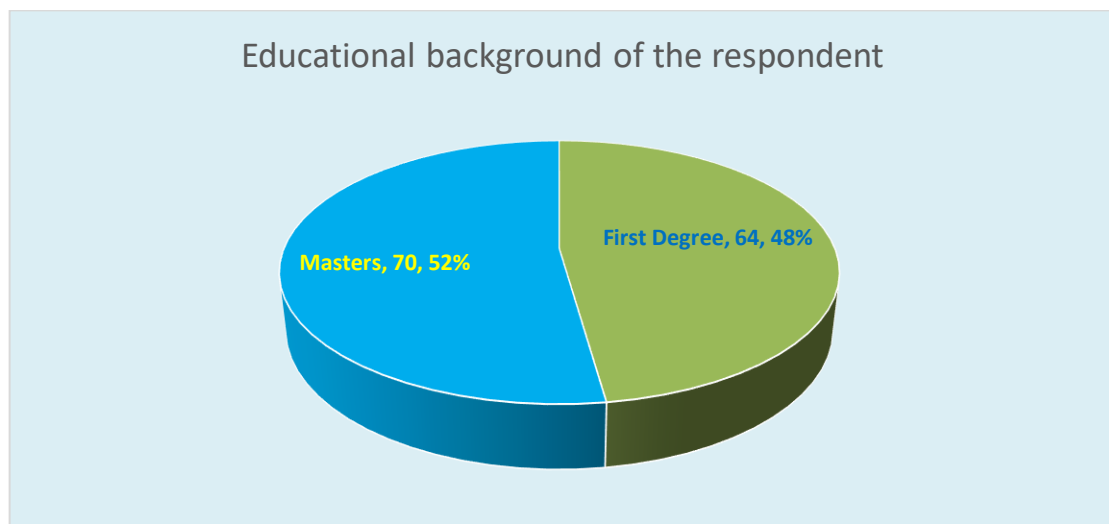
Table 4.2: Ages of Respondents

| Characteristics | Category | Frequency | Percent | Cumulative Percent |
|-----------------|----------|-----------|---------|--------------------|
| Age | 25-34 | 51 | 38.1% | 38.1% |
| | 35-44 | 73 | 54.5% | 92.5% |
| | 45-54 | 9 | 6.7% | 99.3% |
| | above 55 | 1 | 0.7% | 100% |
| | Total | 134 | 100% | |

(Source: Computed from own survey data, 2022)

The respondents' age distribution as the above table indicated 54.5% were between the ages of 35 and 44, 38.1% were between the ages of 25 and 34, 6.7% were between 45 & 54 and 0.7% were above 55.

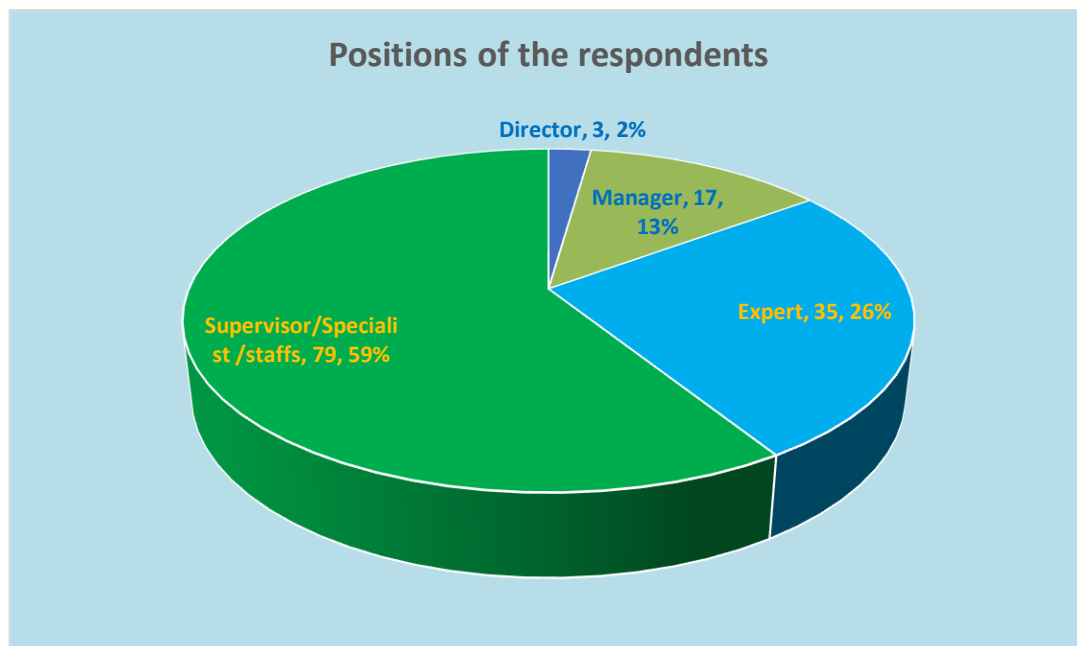
Graph 4.1: Educational background of the respondent



(Source: Computed from own survey data, 2022)

Among the total respondents, 52% of them were master's degree holders whereas the rest of the other (48%) were first degree holders.

Graph 4.2: Positions of the respondents



(Source: Computed from own survey data, 2022)

The positions of the respondents were shown in the above 3-D pie chart graph. 59% of the respondents were supervisors/Specialists/staffs, 26% of them were experts & whereas the rest of the other (16.2%) were directors & managers.

Table 4.3: Experience & their divisions of Respondents

| Characteristics | Category | Frequency | Percent | Cumulative Percent |
|--|-----------------------------|-----------|---------|--------------------|
| Experience | 0-3 Yrs | 18 | 13.4% | 13.4% |
| | 4_6 Yrs | 10 | 7.5% | 20.9% |
| | 7_9 Yrs | 34 | 25.4% | 46.3% |
| | Above 10 Yrs | 72 | 53.7% | 100% |
| | Total | 134 | 100% | |
| In which division is your business engagement? | Marketing | 54 | 40.3% | 40.3% |
| | Sales | 58 | 43.3% | 83.6% |
| | Finance & revenue assurance | 22 | 16.4% | 100% |
| | Total | 134 | 100% | |

Source: Computed from own survey data, 2022

53.7% of the respondents' experience in telecom were above 10, 25.4% of them experienced from 7 to 9 years whereas 20.29% of them were from 0 to 6 years' experience. The respondents' working division are marketing, sales & finance. As the above table shown, 43.3% of the respondents were from sales division, 40.3% of them were from marketing & the others (16.4%) were from finance.

4.3.3. Descriptive analysis of the variables & Employee perception on product innovation dimensions

To determine the extent to which the variables affect sales performance, separate questions were developed from various review literatures for each variable. The issue was evaluated using a 5-point Likert scale, with 1 being strongly disagree, 2 being disagree, 3 neutral, 4 agreeing, and 5 strongly agreeing.

Five independent product innovation variables are used to examine the effect of product innovation strategy on Ethion telecom's sales performance. The following are the descriptive analysis results for each independent variable item:

4.3.3.1. Descriptive analysis of the independent variables

4.3.3.1.1. Product quality

As we can see from the below table product quality questions, averagely 42.3% & 51.23% of respondents replied that agree & strongly agree respectively. Which implies that product quality is affects sales performance. Most respondents about product quality questionnaires fall within agreed range. Item 'Product Innovation quality plays an important role in ethiotelecom's growth.', has the maximum mean score of 4.46 with 0.679 standard deviations. Respondents have also an agreement with items 'Product innovation quality is an essential part of ethiotelecom's goals' & 'Product innovation quality increases the growth rate of annual sales revenue' with mean value of 4.43 (SD: 0.665) & 4.42(SD: 0.629) respectively. This indicates that product quality has the great role of company growth, essential part of company objectives & an increased growth rate of annual sales revenue.

Table 4.3: Descriptive statistics of product quality

| Items | Number | Mean | Std. Deviation |
|---|--------|------|----------------|
| Product innovation quality is an essential part of ethiotelecom’s goals | 134 | 4.42 | 0.629 |
| Product Innovation quality plays an important role in ethiotelecom’s growth | 134 | 4.46 | 0.679 |
| Product innovation quality increases the growth rate of annual sales revenue | 134 | 4.43 | 0.665 |
| Valid N (listwise) | 134 | | |

(Computed from own survey data, 2022)

4.3.3.1.2. Product style & design statements

Product style & design item questions an average of 73 (54.2%) respondents replied that agree & an average of 56 (41.8%) responded strongly agree. Most respondents replied about product style & design questionnaires fall under agreed range. Item ‘ethiotelecom develops newness products leading to improved ease of customers use.’ has the maximum mean score of 4.4 with 0.672 standard deviations. Respondents have also an agreement with items ‘ethiotelecom increases quality in components of current products’ & ‘ethiotelecom decreases costs in components of current products’ scored each mean value of 4.36 (SD: 0.54). The results showed that product style & design increased the quality of components, decreased costs for component of current products & develop newness products.

Table 4.4: Descriptive statistics of product style & design

| Items | Number | Mean | Std. Deviation |
|--|--------|------|----------------|
| ethiotelecom increases quality in components of current products | 134 | 4.36 | 0.54 |
| ethiotelecom decreases costs in components of current products | 134 | 4.36 | 0.54 |
| ethiotelecom develops newness products leading to improved ease of customers use. | 134 | 4.4 | 0.672 |
| Valid N (listwise) | 134 | | |

(Computed from own survey data, 2022)

4.3.3.1.3. Product matrix (product portfolio)

As per the respondents answer statistics below Table 4:8 shown, the majority response range fallen under an agreed range that is 72(53.7%), 56(41.8%) & 73(54.5%) and 46(34.3%), 32(23.9%) & 35(26.1%) agree & strongly agree respectively from top to down

items column. An item ‘ethiotelecom develops new products with different type of level for its clients.’ has the maximum mean score value of 4.19 with standard deviation of 0.748. While the remaining item ‘ethiotelecom develops new products with different type of level for its clients.’ & ‘Ethio telecom offers innovative bundled services or products in partnership with its customers.’ contained mean value of 3.82 (SD:0.883) and 3.99(SD:0.858). Which indicates that most of the respondents agreed that ethiotelecom develops different type of new product with different price plan & supplies bundled services or products with its partners.

Table 4.5: Descriptive statistics of product mix

| Items | Number | Mean | Std. Deviation |
|---|--------|------|----------------|
| ethiotelecom develops new products with different type of level for its clients. | 134 | 4.19 | 0.748 |
| ethiotelecom provides innovated products with different price plan to improve customer satisfaction. | 134 | 3.82 | 0.883 |
| Ethio telecom offers innovative bundled services or products in partnership with its customers. | 134 | 3.99 | 0.858 |
| Valid N (listwise) | 134 | | |

(Computed from own survey data, 2022)

4.3.3.2. Descriptive analysis of the dependent variables

4.3.3.2.1. Sales performance

As the below Table 4.9 shows, the descriptive statistics of sales performance statement responses, similarly that range of independent variables. Most respondents replied that averagely 70 (52.6%) & 42(31.2%) of them agreed & strongly agreed respectively. Almost all items have closely similar descriptive statistics mean of value; except item ‘Product innovation can increase in return on assets’ when we observe from top to down column of the table, each of the questionnaire mean & standard deviation is (4.22 (SD:0.722), 4.01(SD:0.771), 3.88 (SD:0.736), 4.23(SD: 0.659) and 4.28 (SD: 0.621).

Table 4.6: Descriptive statistics of Sales performance

| Items | Number | Mean | Std. Deviation |
|---|--------|------|----------------|
| Innovated products increase the profitability of ethiotelecom. | 134 | 4.22 | 0.722 |
| Innovated products increase an increase in return on investments. | 134 | 4.01 | 0.771 |
| Product innovation can increase in return on assets | 134 | 3.88 | 0.736 |
| Product innovation has enhanced organizational performance. | 134 | 4.23 | 0.659 |
| Product innovation adopted increase ethiotelecom's total sales performance. | 134 | 4.28 | 0.621 |
| Valid N (listwise) | 134 | | |

(Computed from own survey data, 2022)

As the above descriptive statistics data analysis has shown product quality 93.5%, product style & design 96% & product mix(portfolio) 78.1% are affected sales performance. The sales performance of ethiotelecom 2021 against 2016 increased by 122%. Overall, the successive five years of annual sales performance trend indicated that close to 19% increased per each year. This substantiates the result of the thesis that product quality, product style & design & product mix (portfolio). This performance result is achieved by new product & service released during each successive year. For more information the successive years annual reports detail shown on the below table. Furthermore the annual return on asset value has been increased through year in year.

Table 4.7: Annual Sales performance

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|-----------------------|----------------|-------------------|-------------------|-------------------|-------------------|
| Sales | 56,375,473,240 | 47,397,297,081.59 | 40,216,797,931.30 | 35,582,179,644.55 | 29,954,648,299.31 |
| Annual sales increase | 8,978,176,159 | 7,180,499,150.29 | 4,634,618,286.75 | 5,627,531,345.24 | 4,547,302,834.93 |
| Annual % increasement | 19% | 18% | 13% | 19% | 18% |
| New product released | 20 | 10 | 15 | 26 | 24 |

Source Ethiotelecom annual Financial Statement report.

In addition to the above list of new products ethiotelecom has deployed advanced technology that enable versatile product and service upgrade (optimization) that customers can easily switch from 2G to 3G or 3G to 4G & vice versa.

4.4. Result of Inferential Statistics

4.4.3. Correlation Analysis

To determine the magnitude and direction of the association between innovation products and sales performance, the Pearson's correlation coefficient (r) was used. Pearson's correlation coefficient, which ranges from -1.0 to +1.0, reveals the strength and direction of the link between the two variables. A correlation coefficient between 0.1 and 0.29 indicates that the association between two items is weak or non-existent. The association is moderate if r is between 0.3 and 0.49. A correlation value greater than 0.5 implies a significant association between variables. The bivariate correlation of a two-tailed test reveals the presence of a statistically significant difference at p 0.01 probability level, assuming a 99 percent confidence interval on statistical analysis. The correlation analysis between the independent variable and dependent variables of is shown in the below table

Table 4.8: Pearson correlation coefficient

| Correlations | | SP | PQ | PM | PSD |
|---|---------------------|--------|--------|--------|-----|
| SP | Pearson Correlation | 1 | | | |
| | Sig. (2-tailed) | | | | |
| | N | 134 | | | |
| PQ | Pearson Correlation | .508** | 1 | | |
| | Sig. (2-tailed) | 0 | | | |
| | N | 134 | 134 | | |
| PM | Pearson Correlation | .504** | .377** | 1 | |
| | Sig. (2-tailed) | 0 | 0 | | |
| | N | 134 | 134 | 134 | |
| PSD | Pearson Correlation | .452** | .277** | .346** | 1 |
| | Sig. (2-tailed) | 0 | 0.001 | 0 | |
| | N | 134 | 134 | 134 | 134 |
| ** Correlation is significant at the 0.01 level (2-tailed). | | | | | |

Source: Computed from own survey data, 2022

There is a positive correlation between sales performance with product quality, product mix & product style and design with a correlation coefficient $r=0.508^{**}$, $r= 0.504^{**}$ & $r=0.452^{**}$ respectively. The relationship is stronger for product quality & product mix because r value is greater than 0.5 while product style & design is moderate hence its r value falls in 0.3 to 0.49.

4.4.3. Regression Analysis

Multiple regression analysis was used in this part to determine the influence of product innovation strategy (explanatory variables: product quality, product style and design, and product mix (portfolio)) on sales performance (dependent variable). As a result, the following is the outcome of the regression analysis:

4.4.3.1. Model summary

The model summary table below shows that the value of R is 0.679, indicating a high degree of correlation among the variables studied. The R² value 0.461 also indicates that the three explanatory variables, namely product quality, product style & design, and product mix(portfolio), can explain 44% of the overall variation in sales performance.

Table 4.9 model summary

| Model Summary | | | | |
|---|--------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .679a* | 0.461 | 0.44 | 0.37 |
| a* Predictors: (Constant), PQ, PSD, PM | | | | |

Source: Computed from own survey data, 2022

Moreover, to determine whether the model is a good fit for the data, the ANOVA table below shows that as the p-value is less than 0.05, the model is a good match for the data and strongly predicts sales performance.

Table 4.10 Analysis of variance

| ANOVA a* | | | | | | |
|---|------------|----------------|-----|-------------|--------|--------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 14.966 | 5 | 2.993 | 21.908 | .000b* |
| | Residual | 17.488 | 128 | 0.137 | | |
| | Total | 32.454 | 133 | | | |
| a* Dependent Variable: SP | | | | | | |
| b* Predictors: (Constant), PM, PSD, PQ, PF, TTM | | | | | | |

Source: Computed from own survey data, 2022

4.4.3.2. Coefficient Analysis and Hypothesis testing

Multiple regression findings for three explanatory variables identified in the conceptual framework are shown below, along with their hypothesis outcomes.

Table 4.11: Coefficients analysis of the variables

| Coefficientsa* | | | | | | |
|---------------------------|------------|-----------------------------|------------|---------------------------|-------|-------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | | | |
| 1 | (Constant) | 0.529 | 0.374 | | 1.414 | 0.16 |
| | PQ | 0.232 | 0.068 | 0.27 | 3.395 | 0.001 |
| | PSD | 0.275 | 0.072 | 0.267 | 3.801 | 0.001 |
| | PM | 0.141 | 0.06 | 0.193 | 2.345 | 0.021 |
| | PF | 0.087 | 0.063 | 0.104 | 1.369 | 0.173 |
| | TTM | 0.123 | 0.066 | 0.155 | 1.863 | 0.065 |
| a* Dependent Variable: SP | | | | | | |

Source: Computed from own survey data, 2022

According to the preceding table, the p values of the three explanatory variables are less than 0.05 & two of them are greater than 0.05, which are ignored. This means that the explanatory variables (product quality, product style and design, and product mix) have a statistically significant influence on the dependent variable (sales performance). As a result, the researcher rejects the null hypothesis for all variables and accepts the alternative hypothesis for all variables, as indicated in chapter one.

4.4.3.3. Summary of the Regression Analysis

From the above coefficient table 4.15, we can derive the following regression equations:

$$SP = 0.232PQ + 0.275PSD + 0.141PM$$

According to the above equation, the product quality (PQ), product style & design (PSD) and product matrix(portfolio) (PM) have a positive significant influence on sales performance, which means that a unit increase in PQ, PSD and PM will increase sales performance by 0.232, 0.275 and 0.141, respectively. Product quality have the greatest effect on the dependent variable with a coefficient of 0.280 (highest t test value: 4.507), followed by product mix (portfolio) with a positive 0.269 coefficient value and a 3.916 t test value. Product style & design has not the least impact on the dependent variable (sales performance), which also has a positive effect of 0.211 coefficient value & 3.645 t test value.

4.5. Chapter Summary

This chapter detailed the study's findings and results. The findings were presented in tables and charts, along with the researchers' interpretation. The chapter was divided into sections that contained the response rate, demographic information about the respondents, a descriptive analysis of the study objectives, correlation analysis, and a simple regression analysis of each of the independent factors on the dependent variable. The following chapter of the study included the research's discussion, conclusion, and suggestions.

Table 4.12: Results of the Hypothesis

| Hypothesis | Findings/ Results | Decision | Implications |
|------------|-------------------|----------|--------------|
|------------|-------------------|----------|--------------|

| | | | |
|---|--|--|---|
| H1: Product quality has not a significant effect on sales performance. | $\beta=0.280$, $P=0.001 < 0.05$ hence significant | H1: Reject; Conclude that innovated quality product has a significant effect on sales performance. | A unit increase in innovated product quality leads to 0.280 increase in sales performance. |
| H2: Valuable product features does not increase sales performance | $\beta=0.087$, $P=0.173 > 0.05$ hence insignificant | Fail to Reject H2 Conclude that product feature has no moderating effect on sales performance | The interaction of product feature leads to an increase of 0.087 in sales which is insignificant |
| H3: Product style design has not increase sales performance. | $\beta=0.275$, $P=0.001 < 0.05$ hence significant | H3: Reject; Conclude that innovated product style & design has a significant effect on sales performance. | A unit increase in innovated product style & design leads to 0.275 increase in sales performance. |
| H4: New product & service innovation that contain appropriate product mix (alternative to customers) cannot be results increasing sales performance. | $\beta=0.269$, $P=0.021 < 0.05$ hence significant | H4: Reject; Conclude that innovated product mix has a significant effect on sales performance. | A unit increase in innovated product style & design leads to 0.269 increase in sales performance. |
| H5: TTM does not necessary increases sales performance | $\beta=0.123$, $P=0.065 > 0.05$ hence insignificant | Fail to Reject H5 Conclude that time to market has no moderating effect on sales performance | The interaction of time to market leads to an increase of 0.123 in sales which is insignificant |

Source: Computed from own survey data, 2022

CHAPTER FIVE

5.1. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.2. Introduction

This is the study's final chapter. The chapter includes a summary of findings, a discussion of the study's findings, and the study's conclusion. This chapter also emphasized the work's shortcomings and suggested future research subjects.

5.3. Summary of the Findings

The study attempted to ascertain the impact of product innovation strategy on ethiotelecom head office sales performance. Product quality is an important component in determining a company's competitiveness. Product quality innovation is seen as a key to get a competitive edge. There are few empirical studies concentrating on the strategic effect of product innovation on business performance and competitive advantage. The goal of this study was to determine the impact of product innovation strategy on competitive advantage.

Data was gathered from ethiotelecom's Marketing Division, Sales Division, and Finance Revenue Assurance office. In the analysis, multiple linear regression and correlation approaches were used to determine the effect of the independent variable product quality, product feature, product style & design, product mix (portfolio), and time to market.

5.4. Conclusion

From the analysis result product quality, product style & design and product mix(portfolio) affects the dependent variable (sales performance). While product feature & time to market failed to reject the hypothesis. But a unit increase in product quality, product style & design and product mix will increase sales performance by 28%, 21.1% and 26.9%, respectively.

5.5. Recommendations

Over the previous few decades, digitalization has transformed the globe in practically every facet of existence. The increased use of mobile phones, social media, and other ICT

services has revolutionized the way people connect, communicate, learn, and work in practically every country.

African Union SMART Africa program, which attempts to accomplish socioeconomic development using ICT (Information and Communications Technology). It entails improving broadband connectivity and implementing e-government capabilities.

Electronic services for citizens, electronic IDs, unified communication, and cloud-based infrastructure via a digital government platform are among them. Members agree to promote and fund e-applications, e-education, e-health, e-tourism, e-agriculture, and e-commerce. The goal is to align regulations and frameworks, increase demand for goods and expand markets, attract large-scale investments, and create new sectors and jobs. In terms of economic development, the newly formed African Continental Free Trade Agreement (ACFTA) pledges to broaden its free-trade strategy to the digital world by pursuing data flow across borders (Friedrich-Ebert 2020).

- Therefore, ethiotelecom shall continue to provide innovated products & services adhering to the globe digital & technological changes.
- To retain a lasting competitive edge, ethiotelecom should conduct additional research on relevant aspects that may offer value pioneering.
- According to the study, ethiotelecom shall work on its product innovation strategy by include assuring continuous improvement, incorporating learning, and defining sustainable innovation through updating products and services in accordance with industry standards.
- Regardless of business size, ethiotelecom must be vigilant to innovate quality products and services. Large organizations can become less innovative by relying on a large customer base, yet this results in loss, while other companies thrive via strategic innovation and constant improvement.
- It needs to develop new product innovation strategy and sustain its performance as the newcomers will automatically share the market.
- Ethiotelecom should involve various activities with customers and receive feedback from them through survey questions, face to face and telephone interview, by visiting major and potential customer by sales and marketing team, collecting comments from public wing events to sustain its existing clients.

- Besides that, the company should aggressively promote its new products, services and packages through different social media like Facebook, Twitter, Telegram, LinkedIn, & Instagram where these are also inputs to bring and develop new products as customer demand.

5.5. Suggestions for Further studies

In this study time to market & product features variables have not significant, I recommend rechecking it for further future study. As explained earlier the study had limited to only the company staff members for sampling purpose. For future study it had better to include end user customers suggestions & feedback as well as expanding geographical coverage.

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APPENEDIX I: QUESTIONNAIRE

Introduction

I am a graduate Marketing Management student at Addis Ababa University, School of Commerce. I am undertaking a study on the topic “*The Effect of Product Innovation on Sale Performance: The Case of Ethio Telecom*” in partial fulfilment of requirement for the award of degree of Master of Art in Marketing Management. Your support and cooperation in answering the questionnaires by providing your honest and most accurate response is very important to make the study successful. Your responses will be kept strictly anonymous and confidential.

Thank You.

Zenebe Ayele

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GENERAL INSTRUCTION

- Please do not write your or your company’s name on the questionnaire.
- Please put the (√) sign in the appropriate boxes. **Zevor (2020), Njeri (2017)**

Questionnaire

Section A: Respondent’s Demographic Information

1. Please indicate your gender status Male Female
2. Please indicate your age [in years]:
 18-24 25-34 35-44 45-54 above 55
3. What is your educational level?
 Diploma 1st Degree Masters PHD

4. What is your current job position?

Director Manager Expert Supervisor/Specialist/others

5. How long have you been working in this position?

1 – 3 years 4 – 6 years 7 – 9 years 10 years and more

6. In which section of ethio telecom is your activity engagement?

Marketing Division Sales Division Finance Division

Section B: Product Innovation Strategy

7. The following statements refer to product innovation strategy in organizations.

Please indicate to what extent these statements agree regarding Ethio Telecom.

Where; 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

| S/N | A. Product quality statements | 1 | 2 | 3 | 4 | 5 |
|-----|---|---|---|---|---|---|
| 1 | Product innovation quality is an essential part of ethiotelecom's goals | | | | | |
| 2 | Product Innovation quality plays an important role in ethiotelecom's growth | | | | | |
| 3 | Product innovation quality increases the growth rate of annual sales revenue | | | | | |
| | B. Time to market statements | | | | | |
| 4 | Launching improved product and service on time saves the company from extra expenses. | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| 5 | ethiotelecom launches innovated products in short period of time. | | | | | |
| 6 | Time to market should be keep its necessary stages to launch the innovated products. | | | | | |
| | C. Product style & design statements | | | | | |
| 7 | ethiotelecom increases quality in components of current products | | | | | |
| 8 | ethiotelecom decreases costs in components of current products | | | | | |
| 9 | ethiotelecom develops newness products leading to improved ease of customers use. | | | | | |
| | D. Product feature | | | | | |
| 10 | ethiotelecom develops new products with technical specifications | | | | | |
| 11 | ethiotelecom develops new products with components totally differing from current ones. | | | | | |
| 12 | ethiotelecom designs product functionalities totally differing from the current ones | | | | | |
| | E. Product matrix (product portfolio) | | | | | |
| 13 | ethiotelecom develops new products with different type of level for its clients. | | | | | |
| 14 | ethiotelecom provides innovated products with different price plan to improve customer satisfaction. | | | | | |
| 15 | Ethio telecom offers innovative bundled services or products in partnership with its customers. | | | | | |

Section C: Firm Sales Performance

8. The following statements refer to firm performance in organizations.

Please indicate to what extent innovation strategies affect firm performance in relation to ethiotelecom.

Where; 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

| | Statements | 1 | 2 | 3 | 4 | 5 |
|---|---|----------|----------|----------|----------|----------|
| | Financial performance | | | | | |
| 1 | Innovated products increase the profitability of ethiotelecom. | | | | | |
| 2 | Innovated products increase an increase in return on investments. | | | | | |
| 3 | Product innovation can increase in return on assets | | | | | |
| 4 | Product innovation has enhanced organizational performance. | | | | | |
| 5 | Product innovation adopted increase ethiotelecom’s total sales performance. | | | | | |