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THE IMPACT OF PROMOTIONAL MIX ELEMENTS ON THE PERFORMANCE OF AN ORGANIZATION; THE CASE OF PHARMACEUTICAL COMPANIES IN ADDIS ABABA, ETHIOPIA

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THE IMPACT OF PROMOTIONAL MIX ELEMENTS ON THE PERFORMANCE OF AN ORGANIZATION; THE CASE OF PHARMACEUTICAL COMPANIES IN ADDIS ABABA, ETHIOPIA.

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Dedication

I dedicate this thesis work to the whole members of my family.

Declaration

This is to certify that this MBA thesis entitled “the impact of promotional mix elements on the performance of an organization; the case of pharmaceutical companies in Addis Ababa Ethiopia.’’; submitted to the Department of management, Addis Ababa University, for the award of the degree of Master of Business Administration (MBA) is my original work. This work paper has not been offered and presented for the award of any other degree, diploma, fellowship or other similar titles, of any other University to the best of my knowledge.

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ABBREVIATIONS

MOH	Ministry of Health
FMHACA	Food, Medicine and Healthcare Administration and Control Authority of Ethiopia
WHO	World Health Organization
DTC	Direct to consumer

Abstract

This study analyzes the impact of promotional mix elements on the performance of pharmaceutical firms in Addis Ababa, Ethiopia. Utilizing a mixed-methods approach, data were collected through structured questionnaires from a sample of 376 respondents, primarily owners and managers of pharmaceutical businesses. The research employs descriptive statistics to outline the demographic characteristics of the sample, revealing a male-dominated population with a significant proportion of well-educated individuals. Econometric analysis, specifically multiple linear regression, demonstrates that personal selling, advertising, and direct marketing positively affect organizational performance, while public relations exhibit a significant negative impact. Cronbach's alpha measurements confirm the reliability of the constructs used in the study, with values ranging from 0.731 to 0.945, indicating strong internal consistency across promotional strategies. The findings underscore the importance of refining promotional efforts to enhance business performance in Ethiopia's competitive pharmaceutical market. Recommendations include improving personal selling techniques, optimizing advertising strategies, and reassessing public relations initiatives to better align with organizational goals.

Key terms; pharmaceuticals, business performance, promotional mix elements

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

According to Coughlan et al. (2013), marketing is the process of transferring goods from producer to consumer through business channels. The marketing process has both mental and physical components. The mental perspective asserts that buyers must comprehend what sellers have to offer, and sellers must understand what consumers want, while the physical perspective stresses that goods must be physically delivered to the desired locations by the desired time (Harrington, 2014).

The need for marketing grows out of the division of labor, particularly as it is manifested in specialized and large-scale production and in the localization of industry. Hence, business entities ranging from micro to large-scale practices marketing (Hajli, 2014). Access to profitable markets is a key factor that determines the long-term success of all businesses (Miller, and Rasmussen, 2010). Business organizations perceive marketing through concrete practices that often relate to promotion, selling, and customer relationships and they professed a combination of several philosophies to succeed (Abha, 2018).

Business organizations put greater emphasis on marketing success, and pharmaceutical business entities are no exception to this reality. Pharmaceutical marketing is an important business and continues to grow at an increasing rate. Worldwide, the marketing spending of the pharmaceutical sector has grown by virtually 70% in the past two decades. The global market for pharmaceuticals reaches $900 billion and is projected to exceed $1.1 trillion in 2025. Currently, the sector's marketing annually circulates $30 billion dollars (WHO, 2021).

The pharmaceutical market in Ethiopia has grown by 15% in 2020 and reached $1 billion. The market has been steadily growing locally at an average of 25% per year. Provided a population of virtually 120 million, Ethiopia is experiencing increased demand for health services; the demand is projected to grow exponentially and the market's monetary circulation is projected to reach 3.6 billion by 2030. Currently, Ethiopia imports 85% of its pharmaceutical product requirements; local manufacturers share just a little part of the demand (MoH, 2021).

Ethiopia's national strategy and plan for the growth of pharmaceutical production, which was established in 2015, listed 200 importers of pharmaceuticals and medical supplies. There are 22 local pharmaceutical companies, as well as medical manufacturers and suppliers, in the country. According to MOH and MOI (2015), the ownership of pharmaceutical enterprises in the nation is varied, ranging from tiny businesses that are joint ventures amongst Ethiopian entrepreneurs to investors from China, India, Jordan, Saudi Arabia, Sudan, and the United Arab Emirates.

The country's national strategy and plan for pharmaceutical manufacturing development stipulated in 2015 identified 200 importers of pharmaceutical products and medical consumables in Ethiopia. There are 22 local pharmaceutical industries and medical suppliers and manufacturers in the country. The pharmaceutical companies' ownership in the country is diverse; ranging from smaller entities that are joint ventures between Ethiopian entrepreneurs to investors from China, India, Jordan, Saudi Arabia, Sudan, and the United Arab Emirates (MOH and MOI, 2015).

The marketing trends, practices, and performances of pharmaceutical industry companies undergo changes (Nurlanova et al, 2019). Formerly, traditional marketing strategies in the pharmaceutical industry involve strong marketing of prescription drugs that the decision-makers think will make money. In traditional marketing endeavors, the pharmaceutical sector's commercial success is attributed to aggressive promotional activities. It seldom responds to the needs and expectations of patients, providers, and payers.

However, these days the marketing of the pharmaceutical sector is getting complex provided the stiff competition in the sector. This forces pharmaceutical business entities intensively focus on improving their business performance to ensure existence and/or competitiveness. Performance as a measurement business company's success rate includes sales turnover, number of customers, sales, and profitability (Pal and Nandy, 2019). Shabaninejad (2013) identified sales growth, market share, and market development as indicators of business performance. By large achievement in these performance indicators is determined by the business entity's use of marketing mix elements. Marketing mix help the business performance of a company and contributed in the development of marketing strategies necessary for success.

This paper concerned on the practice of promotional mix elements among their marketing strategies. Promotion of pharmaceutical products informative activities aimed at seducing target businesses and organizations purchase pharmaceutical products (Mohiuddin et al, 2015). Pharmaceutical business entities promotional activities include but not limited to meetings with doctors, product sample distribution, and advertising in medical science journals, sponsorship of health conferences and events (Labrie, 2011).

Promotional mix elements are categorized into five major aspects such as advertising, personal selling, sales promotion, public relation and direct marketing. The success of any product depends on the use of these promotional mix elements (Shma, 2013). Promotional plans are planned by companies according to their organisational goals. Sales growth, adoption of new products, brand equity building, positioning, competitive retaliation, or corporate image building are some examples of the goals (Hajli, 2014).

However, there is no current data demonstrating a connection between Ethiopian pharmaceutical businesses' financial performance and the promotional mixes they employ. Thus, the focus of this study was on how promotional mix techniques affect pharmaceutical businesses' performance. The survey has also pinpointed the obstacles that pharmaceutical companies' marketing initiatives must overcome.

1.2 Statement of the Problem

Regardless of a company's size, industry, type of labour, or even goals and objectives, marketing is seen as a crucial component of any successful enterprise (Islam and Khan, 2019). Any business's ultimate objective is to succeed and continue operating profitably. Furthermore, it is no secret that an organization's marketing techniques determine whether it succeeds or fails. Marketing is not static; it is constantly evolving. Therefore, the key tactical and controllable components of the marketing mix—product, price, place, and promotion—should enable marketers to adapt to shifting market conditions (Weldegebriel, 2011).

Pharma marketing seeks to improve corporate performance by the application of marketing mixes. Increases in sales turnover, client base, sales volume, and profitability are all indicators of improved performance (Pal and Nandy, 2019). Measures of performance like profitability, efficiency, new clients, and growth in online sales were found by Hristova et al. (2019). Grujic et

al. (2020) suggested three metrics to gauge performance: average growth in sales, average growth in market share, and average growth in sales volume.

On the other hand, Clark and Ambler (2001) propose two indicators for measuring the performance; sales units and sales volume. In addition, Don (2007) recommended three indicators to measure the performance; profitability, sales revenue, and cash flow. Moreover, Boldeanu, and Pugna (2014) used four indicators to measure the business performance; sales volume, sales growth, market share, and profitability. These indicators of performance in turn can be influenced by the business entity's use of marketing mixes. The effective practice of marketing mixes can drive business entities towards their objective and improve their performance in term of short term and long-term performance of the company.

Business entities involved in selling pharmaceutical products employ marketing mixes to sustain their business performance. In Ethiopia, pharmaceutical companies work in a competitive environment because of the existence of various brands of generic drugs. Presently, there are 9 pharmaceutical and medical supplies companies operating in Addis Ababa (MoH, 2021). The competitive nature of the business environment makes it mandatory for them to develop and implement marketing mixes in order to gain and maintain a reasonable share of the market.

Promotional mix is one area of marketing that pharmaceutical companies should focus on. Accordingly, promotional mixes that incorporate public relations, advertising, and personal selling have a large and positive impact on pharmaceutical businesses' returns (Kamba, 2010; Narayanan et al, 2004; Shakib, 2017). Francis & Mathenge (2015) found that the components of the promotional mix affected sales volume through advertising (65%), personal selling (66%), and public relations (63%).

There is, however, no current data on the relationship between the commercial performance of Addis Ababa's pharmaceutical enterprises and their use of promotional marketing mixtures. Previous researches were carried out in several nations with a range of social and cultural circumstances. Because it was carried out in Addis Ababa, Ethiopia, this study has thereby tried to close the contextual gap. In order to achieve this, the study looked at how the promotional mix affects the operations of global pharmaceutical firms.

As a measure of organizational performance, this study used financial performance, volume of sales, profit margin, speed of the movement (turnover) of drugs, pharmaceutical firm education and sponsorship of events, and customer retention orientations. In order to do this, the study has made an effort to address the following research questions, in relation to the impact of promotional mix elements on pharmaceutical business performances in Addis Ababa.

- ✓ How does personal selling affect performance of pharmaceutical businesses in Addis Ababa?
- ✓ How does sales promotion affects performance of pharmaceutical businesses in Addis Ababa?
- ✓ How does advertisement affects performance of pharmaceutical businesses in Addis Ababa?
- ✓ How does public relation affects performance of pharmaceutical businesses in Addis Ababa?
- ✓ How does direct marketing affect performance of pharmaceutical businesses in Addis Ababa?

1.3 Research Objectives

1.3.1 General Objective

The general objective of this study is to analyze the impact of the promotional mix practices on the business performance of pharmaceutical companies in Addis Ababa.

1.3.2 Specific Objectives

In line with the above general objective and the particular analysis of pharmaceutical companies from Addis Ababa, the study had the following specific objectives;

- ✓ To analyze the effect of personal selling in the performance of pharmaceutical businesses.
- ✓ To describe how sales promotion affects the performance of pharmaceutical businesses.
- ✓ To explain the effect of advertisement on the performance of pharmaceutical businesses.
- ✓ To analyze the impact of public relation on the performance of pharmaceutical businesses.
- ✓ To explain the effect of direct marketing on the performance of pharmaceutical businesses.

1.4 Research Hypothesis

The specific objectives were drawn from the relationship between the dependent variable and the independent variables (business performance and promotional mix strategies). To that end, the following hypotheses were stated.

H_0: There is no significant association between personal selling and performance.

H_0: There is no significant association between sales promotion and performance.

H_0: There is no significant association between advertisement and performance.

H_0: There is no significant association between public relations and performance.

H_0: There is no significant association between direct marketing and performance.

1.5 Significance of the Study

This research examined the marketing strategies practice among pharmaceutical companies. Down the line, it had unearthed constraints being faced by companies in marketing of their products or services. Upon the completion of the study, efforts were exerted to communicate the findings to the companies so that they could make use of the study. In this way, the study results helped inform the companies to understand the practices on the ground and respond to the constraints as well. The results of the study contributed to the bodies of literature and therefore served as a reference for research in the field.

1.6 Scope of the Study

Conceptually, the study covered the business performance aspect of the pharmaceutical companies, practices of promotional mix strategies, and the relationship between performance and the marketing strategies applied. Geographically, the study was delimited to Addis Ababa city. The study was limited to data available only from the pharmaceutical business, including agents, distributors, and major retail shops.

1.7 Limitation of the Study

Limitations were the anticipated potential restrictions encountered during the study. Limitations emanated from the scope of the study; they were partly the implications or effects of the scope (Zeleke B. et al., 2015). Hence, the interpretation of the study results constituted one of the limitations, specifically interpretation limitation. This was because the results conferred only to the companies located in Addis Ababa. The primary limitations of this study also included time constraints, respondents' reluctance to complete questionnaires, and financial limitations. Moreover, the lack of adequate previous research works, particularly in the study area, made it difficult for the study to find references.

1.8 Organization of the Study

This study was organized with five chapters. The first chapter dealt with the introduction, which constituted the background of the study, statement of the problem, objectives of the study, research questions, research hypotheses, significance of the study, scope, and limitations of the study. The second chapter constituted the review of related literature. The third chapter presented the methodological aspects of the study. Specifically, research design, data sources and types, target population, sample size and sampling techniques, data collection tools, and data analysis were outlined in the third chapter. The fourth chapter presented the results and interpretation, and the last chapter, chapter five, addressed the conclusion and recommendations of the study.

1.9 Definition of terms

By promotional mix element, referring to one of the critical components in marketing mix strategies that help an organization to connect with its targeted stakeholder mainly of customers (Kenton et. al., 2023). This marketing mix strategy includes the activities of personal selling, sales promotion, advertisement, public relation, and direct marketing.

- ✓ **Personal selling** refers to an element of promotional mix which involves a direct and one-to-one interaction of a salesperson with a potential customer.
- ✓ **Sales promotion** defined as a promotional mix element which focuses on stimulating immediate sales by offering consumers additional value or incentives, such as discounts, coupons, contests, or free samples.
- ✓ **Advertisement** is a promotional mix element concerned on informing, persuading and reminding consumers about products and services usually using paid and non-personal communications with the goal of addressing large audiences.
- ✓ **Public relations** is another promotional mix element focused on the development of good organizational image among the different stakeholders of the organization that includes employees, medias, business partners, and customers.
- ✓ **Direct marketing** implies to another important promotional mix element which is defined as the elimination of marketing intermediaries to address customers with the first-hand deliveries that encourage customers taking immediate specific actions such as a purchase or signing up for a newsletter.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter focuses on theoretical frameworks and analyzes empirical studies while developing a conceptual framework. It examines the theoretical aspects of the relevant literature, including theories and concepts, and provides empirical evidence from prior research conducted in Ethiopia and other countries. The chapter also includes a detailed comparison and contrast of findings from various journal articles regarding each variable in the study. Finally, it identifies the research gap based on the reviewed literature and establishes a conceptual framework that outlines the anticipated relationships between the study's variables.

2.2 Theoretical Literature Review

The marketing concept asserts that the key to achieving organizational goals lies in understanding the needs and wants of target markets and providing the desired satisfaction more effectively and efficiently than competitors. This approach emphasizes selling satisfaction rather than just the product itself. The goal of marketing is not merely to maximize profitable sales volume, but to generate profits through customer satisfaction. The consumer is the central focus, and all marketing activities revolve around this core principle. Consequently, it is crucial for entrepreneurs to identify their customers, build relationships with them, understand their needs, and deliver products and services that fulfill those requirements (Aaker, 2011).

The marketing process is essential for the business performance of any organization, whether large or small, as it addresses the fundamental aspects of the competitive marketplace. The primary role of marketing is to ensure that producers effectively and efficiently deliver goods and services to consumers. It acts as a bridge between manufacturers and consumers (Kotler, 2003). Additionally, marketing is vital for building and maintaining brand value and awareness among consumers, which contributes to the profitable growth of organizations and subsequently enhances shareholder value. Companies that prioritize their customers' needs are likely to outperform those that overlook consumer preferences (Merlo, 2011).

A framework that employs the four Ps of product, pricing, placement, and promotion is known as a marketing mix. This idea was initially introduced in 1960 by marketing professor J. McCarthy in his book Basic Marketing: A Managerial Approach. Higher sales are the ultimate goal of a marketing mix, which is achieved by the various components working together (Jerome, 1978).

The American Marketing Association (2013) defines marketing as a combination of activities, institutions, and processes that create, communicate, deliver, and exchange offerings valued by customers, clients, partners, and society at large. Aaker (2010) points out that successful marketing hinges on several key factors, including the types of products a company plans to offer, its pricing approach, distribution methods, and strategies for informing customers about these products. These components are traditionally known as the 4Ps: Product, Price, Place, and Promotion, which are crucial in shaping a firm's marketing mix. Once marketers evaluate potential demand, they must determine the level of marketing effort to deploy, which will influence expected sales outcomes (Kotler & Keller, 2012).

The main purpose of marketing is to understand and meet customers' needs and this is achieved when all components of the marketing system, that is, suppliers and distributors, are co-coordinating efforts and working in harmony (Homburg, Wieseke, & Kuehnl, 2010).). He points out those well-conceived and effective marketing activities will facilitate the achievement of typical organizational objectives such as higher sales, market share, profits and competitive advantage. Indeed, a marketing function is an important and integral part of organizational business strategy. Specifically, marketing activity in this study is based on practices associated with product, price, promotions, distribution, and finally, customer-orientation, since the customer is perceived as the focus of all marketing efforts.

Lui, Shah, & Schroeder (2011) noted that sound marketing practice is an important contributor to performance in economic reform economies. Many businesses will adopt a new attitude to marketing in transition environments, formulating strategies which demonstrate a focus on customers. Thus, for firms to be competitive in such environments, it is essential to conduct effective product, pricing, promotion and distribution activities, where customers are central to all marketing efforts and to the extent that these strategies are successfully implemented, they are expected to result in improved performance.

Businesses that possess the ability to learn rapidly about their markets and to act on that information are best positioned to achieve competitive advantage. To help an organization deal with market events and trends, internal organizational processes develop (Day, 2004). Among the organizational processes that typically develop within an organization, its strategic planning processes and the related processes it uses for analyzing market information are cited as being among the most important (Moller and Anttila, 2007).

Market oriented organization possesses the ability to generate, disseminate, and respond to information about market forces and market conditions better than their less market-oriented rivals (Jaworski and Kohli, 2003). This gives a market-oriented organization an important basis for improving performance by learning what buyers want, building the processes necessary to deliver the value they desire and adapting those value generating processes as market conditions change. To use these processes as the basis for improving performance, an organization needs to develop the capabilities to generate, disseminate, and respond to market intelligence and the processes to act on this information (Hunt and Morgan, 2005).

A consumer-centric marketing strategy can be strengthened by integrating three methodologies in addition to the four Ps: people, process, and tangible evidence. There is more to this kind of strategy than just a product-focused marketing approach, which is focused more on promotional strategies (Kenton et. al., 2023). As a founding to the base of this study, the following section focused more on the importances and attributes of promotional mix elements in the marketing strategy of a business.

2.2.1 Promotional marketing mix

The primary aim of promotion is to establish brand awareness and reputation, which encourage customers to purchase products (Luo, Roach, & Jiratchot, 2016). More broadly, promotion serves as a communication tool between organizations and consumers, showcasing what the company does and what it can provide (Samani et al., 2017). For many companies, the challenge is not whether to communicate, but rather determining what messages to convey, to whom, and how frequently (Peter, 2006).

According to Duncan (2005), promotion plays a crucial role in the market exchange process by engaging with current and potential stakeholders as well as the general public. The fundamental purpose of promotion is to inform, remind, and persuade individuals to accept, recommend, or

use a product or service. Essentially, promotion focuses on communication. Rao (1992) emphasizes that it involves managing a communication system to enhance the company's image among various societal groups, conveying information about the company, its products, activities, pricing, and policies.

Promotion involves both providing the consumer information regarding the footwear store and its product or service offering as well as influencing the consumer perceptions, attitudes, and behavior towards the store and what it has to offer. It is both an informative and persuasive communication process. To be effective, the promotional strategy must be guided by the marketing concept such as focusing on consumer needs and integrating all activities of the organization to satisfy those needs (Keegan et al, 2002).

According to Kotler & Armstrong (2004), activities that convey the product or service and its benefits to target consumers and encourage them to purchase are considered promotion mix elements. Additionally, Belch (2012), identified that there are six components that make up the promotional mix: public relations, sales promotion, internet/interactive marketing, direct marketing, advertising, and personal selling. Since these are mass communication tools that marketers can use, the current study will look at five of the parts that Belch have mentioned: advertising, personal selling, sales promotion, public relation and direct marketing.

Good salesmanship is essential for small businesses because of their limited ability to spend on advertising. Sometimes telephone book advertising is also important. Direct mail is an effective, low-cost medium available to small business. No single promotional tool can fully meet the objectives of a promotion strategy. As a result, many service organizations utilize multiple promotional tools to mitigate the drawbacks associated with each. This indicates that each tool has its own unique advantages and disadvantages, prompting service organizations to employ a combination of tools to enhance benefits and reduce limitations (Harrison, 2000).

Here promotional mix elements are the entire collection of tactics that include direct marketing, public relations, sales promotion, advertising, personal selling, and Internet/digital marketing. When applied, these techniques are meant to yield various outcomes. The components come together to provide a cohesive message that is intended to reach customers at different stages of the buying process. This is referred to by marketers as integrated marketing communications or integrated messaging (Maria, et.al., 2023).

The World Health Organization (WHO) describes pharmaceutical promotion as any information or persuasive activities conducted by manufacturers and distributors aimed at encouraging the prescription, supply, purchase, or use of medicinal drugs (Geneva, 1988). Similarly, the Food, Medicine and Health Care Administration and Control Authority of Ethiopia (FMHACA, 2013) defines pharmaceutical promotion as any form of representation—whether through sound, words, signs, images, electronic means, or others—designed to promote the prescription, sale, or dispensing of pharmaceuticals, either directly or indirectly.

The authority also outlines that pharmaceuticals encompass any substance or combination of substances utilized for diagnosing, treating, alleviating, or preventing diseases in humans. This definition includes narcotics, psychotropic substances, precursor chemicals, traditional and alternative medicines, poisons, blood and blood products, vaccines, radioactive pharmaceuticals, cosmetics, sanitary items, and medical instruments.

A communication strategy involves the design, planning, implementation, and management of integrated communication activities. In pharmaceutical marketing, communication encompasses various elements, including advertising, personal selling, public relations, sales promotion, and online communications, which together form the promotion mix. This mix serves three key functions: providing information, persuading, and reminding (Dogramatzi, 2002).

Marketing communication is a management approach aimed at ensuring that all components, such as advertising, sales promotion, public relations, and direct marketing, work cohesively rather than in isolation. It facilitates communication between buyers and sellers, helping buyers become familiar with products, with the ultimate goal of boosting sales (Vosmer, 2006).

The development of a successful promotional mix demands the careful integration of each of the following elements; situation analysis, developing objectives, designing messages, selecting channels, preparing budget, choosing mix and evaluating. In situation analysis, companies are assessing the current position of customer features, the competitive situation and the environment. While assessing the target audience, companies look at the demographics and lifestyles, life stages, usage levels, understanding and perception of services and the organization and the buying process of the targets.

In the pharmaceutical sector, multiple stakeholders participate in marketing communication,

including patients, pharmacists, and doctors. Both doctors and pharmacists can recommend products, positioning them as sellers in this context. Additionally, the government plays a crucial role by establishing regulations that govern how pharmaceutical companies can communicate. Marketing communication strategies should be developed with all parties in mind, as communication can be viewed as indirect when it involves intermediaries.

The primary communication strategies include advertising, public relations, sales promotion, and personal selling. Each of these tools offers distinct advantages and can be utilized in various ways to engage target audiences. Different tools can be employed to achieve specific objectives (Floor & van Raaij, 2006). Research by Shirazi (2007) indicates that understanding the dynamics of pharmaceutical promotion and its impact on the medical field requires insight into how its influence is derived from its implementation and perception.

Whether promotional influence is viewed as beneficial, challenging, or threatening, a critical approach is essential to avoid irrational outcomes. Recognizing that prescribing behavior is a genuine "behavior" rather than just an expression of a physician's knowledge and experience allows for ongoing influence in both directions.

2.2.2 Personal selling

One-on-one communication between a salesman, usually companies' representative, and a consumer or potential customer is known as personal selling. The goal of the contact is for the salesperson to learn about the prospect's requirements and desires and then talk about how the product or service will help meet those needs and desires. With the goal of getting the prospect to purchase the company's goods and become a customer, the salesperson tries to build a relationship with them (Maria, et.al., 2023).

Sales presentations, trade exhibitions, and incentive schemes are examples of the "personal presentation by the firm's sales force for the purpose of making sales and building customer relationships," which is another definition of personal selling. Put differently, the purpose of this tool is to introduce the business's offer to the client immediately during a conversation in order to complete the deal. Either the client or the business may initiate such communication (Antczak, & Sypniewska, 2017).

Antczak, & Sypniewska, (2017) further explained that in the perspective of marketing as a whole, personal selling plays a very important function as one promotional method. The distinctive feature of the personal selling process is its two-way communication model, which necessitates the direct transmission of marketing material and generates instant response for all marketing-mix operations. When compared to traditional sales, the scope of personal selling in marketing is somewhat broad because it encompasses not only retail sales, catering, and service but also other direct interpersonal interactions.

Personal selling is a fundamental component of integrated communications and the promotional mix. It involves direct interaction between a seller and a potential customer aimed at eliciting a response or completing a transaction. Dogramatzi, (2002) identifies four primary types of personal selling in healthcare. These are retail selling; pharmaceuticals sold through licensed retail pharmacies, field selling: sales representatives visiting potential prescribers to promote products, telemarketing; primarily used in consumer goods but also relevant for health insurance and over-the-counter pharmacy purchases and inside selling: a medical sales representative stationed within a medical centre to handle orders.

According to Sharma (2012), regular visits by knowledgeable and well-trained medical representatives with strong interpersonal skills are the most effective promotional tool for pharmaceutical companies to influence physicians' prescription behaviours. Similarly, Shamim-ul-Haq et al. (2014) found that the manner in which salespeople use various promotional techniques is more impactful than other factors influencing prescription behaviour. Data from Cegdim Company in California (2012), based on a survey of 2,455 physicians and healthcare practitioners, revealed that face-to-face product detailing remains the most influential channel, with nearly 40% of respondents reporting an increased intent to prescribe following a sales representative visit. In contrast, tele-detailing showed the least influence, with intent dropping from 35% in 2009 to 12% in 2010.

In the pharmaceutical industry, personal selling, also known as medical detailing, is a fundamental component of the promotional mix. This involves direct communication between a seller and a potential customer. Medical detailing is a recognized, regulated, and widely accepted method of pharmaceutical marketing communication present in all major national markets (Dogramatzis, 2002). Cuellar Healy (2013) highlights several key benefits of personal selling,

including its high persuasive power, the ability to tailor promotional messages, the opportunity to receive immediate feedback, and the capacity to choose the audience while conveying complex information.

In general, according to Amofah et. al., (2016), Bhasin (2017), and Antczak, & Sypniewska, (2017), personal selling performs the following functions:

1. Providing information about the product, its properties, cost of use, purchase, etc.
2. Gathering information about the demand, the needs and preferences of the customers.
3. Obtaining feedback.
4. Winning over buyers for the company (submission of tenders, taking orders, networking).
5. Convincing customers and supporting sales through help, advice, instructions, explanations, presentations and minimizing the risks associated with the purchase, etc.
6. Creating the image of the company and a positive attitude in customers.
7. Organizing logistics activities—warehousing, transportation, etc.

As a summary, it is all the personal efforts directed to the customer, which aims to encourage consumers to purchase products or try a service through personal meetings (Hejazi, 2005).

2.2.3 Advertising

Advertising is described as any type of non-personal, sponsored statement from a known supporter about a company, a product, service, or a concept (Benette, 1995). According to McCarthy (1996), the non-personal aspect of advertising is particularly crucial since it uses mass media like magazines, radios, and television, which are impersonal and lack the immediate response that personal selling does.

Advertising is the most recognized and prevalent component of promotion and serves as an effective way to reach a broad audience. It can be utilized to: generate awareness for a new product or service, outline its features, propose scenarios for its use, distinguish it from competitors' offerings, encourage consumers to make a purchase, and build or improve its brand image (Cuellar Healy, 2013).

Kotler and Keller (2006) define advertising as a non-personal method of promoting goods or services through mass media, such as radio, television, newspapers, magazines, films, and so on. It is carried out by a specific sponsor in exchange for a fee in order to influence a consumer's purchase decision. According to Amin and Bashir (2014), advertising is a key component of a

promotional plan that raises potential customers' awareness of a product and influences their choice to buy. Generally speaking, newspapers, magazines, radio, television, movies, posters, and other media are the most significant forms of advertising.

According to Lake (2017), advertising involves paid promotion and the presentation of ideas, services, and products by a particular sponsor through a mass medium. Dogramatzis (2002) describes advertising as a non-personal, paid communication from a recognized sponsor. In the context of pharmaceutical marketing, advertising enhances awareness, generates interest, facilitates evaluation, and encourages repeat usage. Creative and innovative advertising at the clinical level consistently contributes to achieving sales goals.

Siddiqi et al. (2011) demonstrated that physicians view scientific promotional tools as more effective in altering prescribing behaviours compared to other promotional strategies, a perception echoed by medical representatives. However, significant differences in perceptions of various promotional tools exist between medical representatives and doctors. The study found no notable differences between government and private doctors or between medical representatives and area sales managers. This suggests that pharmaceutical companies should prioritize scientific promotional tools for consultants while employing more general promotional strategies for physicians.

While designing advertising messages, manufacturers use emotional and moral appeal, there is also use of rational messages and humor, one danger is that a wrongly chosen promotional strategy can bring negative reaction. Advertising is another form of promotion strategy. It is a form of communication designed to persuade potential customers to choose your product or service over that of a competitor. Successful advertising involves making your products or services positively known by that section of the public most likely to purchase them. A good advert should elicit attention, interest, desire and action from the target population (Shada, 2008).

2.2.4 Sales promotion

Sales promotion is a structured and premeditated part of the overall promotional mix, designed to align with strategic promotional objectives. The primary goals of various sales promotion strategies include encouraging trials through samples, motivating physicians to increase usage, prompting customers to switch from competitors, promoting larger size purchases, urging physicians to adopt new formulations, fostering seasonal demand, enhancing the company’s

image to build loyalty, and addressing physicians' price sensitivity (Dogramatzis, 2002).

Ahmed et al. (2014) define sales promotion as short-term incentives aimed at boosting the purchase or sale of a product or service. Additionally, sales promotion encompasses both media and non-media marketing communications intended to enhance consumer and market demand while improving product availability (Lake, 2017). Since it frequently uses ads to raise awareness of the specific product, sales promotions are frequently overrun by advertising. That is why Ouwersloot and Duncan (2008), defined sales promotion as any marketing activity aimed at eliciting an immediate response from the target market by offering value incentives to the target audience or the end user.

Sales promotion is regarded as one of the most crucial strategies for getting customers to try services and buy the products they require (Amin and Bashir, 2014). The goal of a sales promotion is to persuade customers to buy specific products or services directly, which will increase marketers' revenue (Rizvi et al., 2012). Boddewyn and Leardi (1989) recognised several forms of sales promotions, including incentive programs, free offers with reduced pricing, samples and vouchers, and other promotions. However, Rahmani et al. (2012) claim that coupons, advertising goods and services, prizes, free samples, and discounts are examples of promotion methods.

2.2.5 Public relation

Public relations, as used in the context of the parts of the promotional mix, is the process of estab lishing a positive image and controlling the information flow between the company and its audie nce in order to affect public opinion and further corporate goals. It is fundamentally a function of an organization aimed at cultivating and managing its goodwill within the market. Its primary objective is to establish a favorable environment for the firm, which aids in shaping a positive perception of the organization through effective communication (Dogramatzis, 2002).

Some views public relations as encompassing both marketing and corporate aspects (Fill & Jamieson, 2001). Its main goals are to foster understanding with the audience and to influence public opinion (Todorova, 2015). Through public relations activities, the organisation can position its products and services to be highlighted.

According to Kotler (2000), even nonprofit organizations crucially use public service

announcements (PSAs), which are free space or time supplied by the media, as a public relation tool. To create a positive perception of their company's products in the eyes of the public, marketers participate in public relations campaigns. They guide these actions to entice the intended audience. Accordingly, public relations may be viewed as a collection of communication initiatives meant to establish and preserve positive relationships between a company and its audience.

An organization can enhance its public relations with various groups, including suppliers, customers, employees, government entities, distributors, and the public (Dogramatzis, 2002). Given that pharmaceutical companies cannot engage directly with consumers, they are increasingly turning to public forums and newspapers to communicate their messages, aiming to raise awareness about their products among a broader audience (Ahmed et al., 2014).

Furthermore, public relations play crucial role in long-term strategic image building, establishing credibility, and enhancing organization's profile, thereby supporting other marketing activities. It is a planned component of the broader promotional mix, designed to work synergistically with other marketing efforts. For example, a new product launch or a major advertising campaign can benefit from targeted public relations initiatives aimed at specific audiences through chosen media channels to generate interest and awareness (Brassington & Pettitt, 2000).

Public relations involve management activities aimed at shaping the attitudes and opinions of an organization's stakeholders. Therefore, public relations should be strategically planned. Unlike advertising, public relations do not require the purchase of airtime or media space, and these initiatives are not sponsored; rather, the media decides how to present these messages. This approach enhances the credibility and acceptance of the messages by the audience (Fill, 2002).

The absolute costs associated with public relations are minimal, and relative costs are also low, given that public relations carry a high degree of credibility. Most expenses arise from the time and opportunity costs related to preparing press releases and related materials (Floor & van Raaij, 2006). However, the level of control that management has over how messages are disseminated can be limited (Fill, 2002). Additionally, the image of the pharmaceutical company significantly impacts physicians' intentions to prescribe specific products (Ion, 2013).

2.2.6 Direct marketing

Direct marketing is a subset of marketing that originated with the traditional direct mail industry and is currently described as an interactive system of marketing which uses one or more advertising media to affect a measurable response and/or transaction at any location (Ingram, et al., 1987).

Sending information about a product, sale, service reminder, special offer, or other kind of communication to a person at a specific street or electronic address is known as direct mail (Berry and Wilson, 2004). It covers a broad range of marketing materials, including sales letters, posters, catalogues, postcards, and bulletins. Direct mail allows for one-on-one communication, which increases the likelihood that the intended customer will be reached, in contrast to most forms of publicity (Berry and Wilson, 2004). There is a great deal of control over the distribution of direct marketing materials, including who gets the message, when it is sent, and how many customers are targeted (Lesonsky, 1998).

Direct marketing is one of the fastest-growing sectors in the global economy, allowing organizations to communicate directly with their target customers to elicit reactions and transactions (Todorova, 2015). Kotler and Keller (2012) explain that direct marketing utilizes various channels, such as mail, telephone, fax, email, or the internet, to engage with specific customers and prospects for responses or dialogue.

Bhasin (2017) notes that while advertising aims at a mass audience, direct marketing focuses on individual prospects and customers. Recent types of direct marketing, including social media marketing, email marketing, and internet marketing, have gained significance in the promotional mix, particularly as internet usage has increased significantly over the past decade. For Stone and Jacobs (2007), direct marketing is any activity carried out by the seller to draw in a potential client with the goal of transferring all goods and services that are agreed upon with the buyer.

Direct marketing involves contacting specific customers and potential customers directly through various channels, including the phone, fax, email, postal service, and the Internet, and encouraging them to respond directly (Kotler, 2006). Measuring consumer reaction to the marketers' promotional offerings is the primary goal of direct marketing. Establishing enduring connections with customers is the other goal of direct marketing. According to Al-Bakri (2006), the final goal is the use of contemporary technology in transactions between vendors and other

sellers or their customers, such as online communication or email.

2.3 Pharmaceutical Marketing

In the pharmaceutical industry, marketing serves as the foundation for pharmaceutical companies. While they produce life-saving medications, effective marketing is also essential (Habib & Alam, 2011). Pharmaceutical marketing shares similarities with marketing in other industries but also exhibits distinct differences. Various authors have defined and explained pharmaceutical marketing in numerous ways to highlight both its commonalities and uniqueness.

To navigate the dynamic pharmaceutical market, various companies implement distinct marketing strategies (Tharaka, 2012). Tharaka (2012) notes that pharmaceutical firms utilize selected marketing communication strategies, including medical detailing, providing scientific materials, sponsoring continuing medical education programs (CME), and supporting clinical meetings to promote their products.

Globally, pharmaceutical companies engage in extensive marketing activities such as sales promotions, direct marketing, advertising, public relations, and personal selling to remain competitive and encourage customer preference for their brands, ultimately aiming to enhance business performance (Al Thabbah, 2022; Ghaith et al., 2013). The industry actively promotes its products to influence doctors' prescribing behaviours and encourage patient preference for specific brands (Al Thabbah, 2022).

Companies invest significant amounts in promotion; for instance, in Italy in 1998, spending reached $1.1 billion, while U.S. companies spent $57.5 billion in 2004. Research on promotion to doctors indicates that various forms of information originating from pharmaceutical companies, including samples and gifts, do not consistently lead to improved prescribing practices (Lexchin, 2012). Lexchin (2012) argues that excessive spending on pharmaceutical promotion should not negatively impact a company's business performance if it fails to meet its targets or objectives. Conversely, authors like Hanna (2022) contend that marketing communication can enhance business outcomes, including sales performance.

Pharmaceutical companies employ a variety of communication strategies. One study identifies thirty-four distinct marketing methods in use (Roshnid, 2013). The promotion of drugs incorporates various tools, including detailing, giveaways, sampling, continuing medical

education, community initiatives, direct-to-consumer advertising, websites, symposiums, scientific meetings, and medical journals, among others. Pharmaceutical detailing is a strategy employed by companies to inform physicians about their products, aiming to alter prescribing practices and increase market share for specific drugs (Hanna, 2022).

Unlike general marketing, pharmaceutical marketing primarily targets physicians as decision-makers (secondary customers) rather than patients (primary consumers), leading to marketing strategies that focus heavily on physicians (Biswas & Ferdousy, 2016). Ahmed et al. (2014) describe pharmaceutical marketing as a unique and engaging discipline characterized by ongoing interactions with the target audience, where much of the communication occurs on a one-to-one basis. The distinctive nature of the pharmaceutical market significantly influences the communication processes involved.

Key factors influencing pharmaceutical marketing include the specific needs being addressed, the types of medications, buyer behaviors and preferences, existing regulations, global market trends, rising competition, and the evolution of new marketing communication technologies (Pilarczyk, 2010). Pharmaceutical marketing encompasses comprehensive brand communication, integrating various promotional activities to create synergy for the brand (Lam, 2004). Masood et al. (2009) define pharmaceutical marketing as activities aimed at informing both physicians and the general public about new and existing pharmaceutical brands.

Pharmaceutical sales personnel are usually trained to educate physicians and other healthcare professionals through sales calls. Pharmaceutical detailing offers numerous benefits, such as increasing sales, improving patient outcomes, promoting clinical research, and enhancing physician knowledge (Hanna, 2022). However, companies face challenges in regulating their promotional activities, which can complicate their marketing efforts (Lexchin, 2012).

In marketing pharmaceutical products, companies leverage the product knowledge of medical representatives through methods like medico marketing, which involves advertising at scientific sessions, clinical meetings, and annual medical events (Tharaka, 2012). Pharmaceutical companies typically employ a sales workforce and medical representatives to engage directly with physicians and other healthcare providers (Tharaka, 2012; Lexchin & Mintzes, 2012).

Pharmaceutical marketing and integrated marketing communication tools are subject to laws and regulations, such as those governing advertising on TV, radio, websites, and direct-to-consumer advertising (DTCA). However, there is considerable variation in these legal frameworks across different countries (Anna-Cathrine & Peter, 2023).

Globally, the pharmaceutical industry actively promotes products to influence doctors' prescribing practices and encourage patient preference for their brands, aiming to boost sales performance (Al Thabbah, 2022). On average, pharmaceutical companies allocate 20% or more of their revenue to marketing activities (Khazzaka, 2019), with approximately 74% of these efforts targeted at doctors. Key participants in the marketing of pharmaceutical products include brand promoters, medical product distributors, salespersons, and detailing personnel (Ghaith et al., 2013).

Pharmaceutical companies generally invest significant amounts in marketing activities (Tharaka, 2012; Lexchin & Mintzes, 2012), particularly in areas such as advertising, sales promotion, direct marketing, and public relations. Advertising often appears in healthcare journals and through mainstream media. In certain countries, particularly the U.S., direct advertising to the general public is permitted (Tharaka, 2012; Lexchin & Mintzes, 2012).

Promotion of pharma product has a different outlook as against a regular consumer product. The products in pharma may take up the traditional path of promotion however the pharma life savings drugs have a typical path of promotion. It starts with physicians, reaches to pharmacies and then to end consumers with every level attracting stakeholders in a different way through the effort of the professional sales representatives (Mbugua, 2014).

Advertising, direct marketing, personal selling, public relations, sales promotion, and social media communication are just a few of the activities and instruments that can be used. The same activities and tools can be used to encourage independent health and social care providers to collaborate to provide integrated care (horizontally, vertically, structurally, and/or virtually), as well as payers to support integrated care providers as panel institutions providing health and social care services to patients (Rejikumar, Asokan, & Kumar, 2018).

The most important group for marketing initiatives is undoubtedly people. People in integrated care refers to staff members who manage, organize, and supply pharmaceutical items while

interacting with patients and stakeholders both directly and indirectly (Mohiuddin et al, 2015). Such personnel include doctors, clinical staff, laboratory and medical assistants, officers, and scientists; cardiologists; dentists; dieticians; nurses; paramedics; chemists; psychologists; radiographers; medical social workers; surgeons; therapists; and a variety of other human resources qualified to perform administrative or health and social care services (Negash and Adamu, 2017).

2.4 Pharmaceutical Marketing Practice in Ethiopia

According to a Ministry of Health report, Ethiopia's pharmaceutical business is still in its infancy stage but is expanding at a faster rate each year. Although the industry is predicted to expand, there will likely be fierce rivalry as more pharmaceutical companies enter the market in the years to come. Most pharmaceutical companies rely on the success of their sales staff to achieve their business objectives, which include vying for the largest market shares. The sales force serves as a differentiation that gives businesses more competitive advantages by personalizing each business for clients (Assefa, 2018).

Domestic competition in Ethiopia's pharmaceutical sector is intensifying, with 20 manufacturers, 45% of which are jointly owned by international and local investors. China is emerging as a significant player in this market, contributing with two joint ventures and one fully owned company (Jaco, 2022). The domestic pharmaceutical market in Ethiopia is projected to exceed US$1 billion by 2025, driven by a growing middle class and urbanization at a rate of 5.4% annually, which enhances access to healthcare due to improved infrastructure and facilities in urban areas. Currently, imports account for 65% to 75% of the market, primarily sourced from India (22%), the Netherlands (20%), and Belgium (13%). Finished pharmaceutical products constitute about 80% of all pharmaceutical imports in 2019.

Many of the world's largest pharmaceutical companies, including Pfizer, Novartis, Astra Zeneca, Glaxo Smith Kline, and Merck, have recently opened commercial subsidiary offices and set lofty corporate objectives in Ethiopia. However, the outcomes that pharmaceutical businesses received are not necessarily what they had anticipated, according to an informal conversation with this company's national sales managers (Teshale, 2018). Although there are a number of reasons for this poor performance, sales managers made it plain that their Salesforce's performance was one of the most important ones. This is particularly true for pharmaceutical companies because, in

contrast to other businesses, their marketing initiatives directly depend on the performance of their sales representatives (Negash and Adamu, 2017).

AstraZeneca is a global research-based bio-pharmaceutical company focused on discovering, developing, and commercializing prescription medicines for various therapeutic areas, including gastrointestinal, cardiovascular, neuroscience, respiratory, oncology, and infectious diseases. Founded on April 6, 1999, and headquartered in London, AstraZeneca markets products under several brands, such as Atacand, Crestor, and Nexium.

Pfizer, the world's largest pharmaceutical company based in Connecticut, USA, has a diverse portfolio covering numerous therapy areas, including immunology and oncology. Despite modest revenue growth, Pfizer had a successful year in 2017, receiving FDA approvals for ten products, with notable growth in key drugs like Ibrance and Eliquis.

Roche, the second-largest pharmaceutical company globally in 2018, employs over 93,000 people and focuses on developing innovative drugs in oncology, immunology, and neuroscience. The pharmaceutical segment saw a 12.34% growth, with top products like Herceptin and Avastin contributing significantly to total revenue.

Sanofi, a leading French pharmaceutical company, experienced 4.2% revenue growth in its pharmaceutical sector, which accounts for 85.44% of its total revenue. A quarter of this revenue comes from its top three best-selling drugs: Lantus, Lovenox, and Aubagio.

Johnson & Johnson, established over 130 years ago, ranks fourth among the top pharmaceutical companies. This year, it achieved success with its acquisition of Actelion and experienced an 8.3% increase in pharmaceutical sales, driven by drugs like Stelara and Darzalex.

Bayer is renowned for its flagship product, Aspirin. Based in Leverkusen, Germany, Bayer boasts a portfolio of over 5,000 items and emphasizes innovation, integrity, and efficiency. The company is also exploring the use of drones in crop science.

Novo Nordisk, a Danish company formed in 1989 through the merger of two firms, specializes in the manufacturing and marketing of pharmaceutical products and services. It operates production facilities in seven countries and has offices in 75 countries.

Novartis, one of Switzerland's leading pharmaceutical companies, focuses on a wide range of diseases, including oncology and neuroscience. Although it experienced modest revenue growth of 1.35% at the end of 2017, it reported strong pharmaceutical sales, particularly for successful drugs like Gleevec and Gilenya.

2.5 Concept and measures of organizational performance

Overall business performance refers to a company's ability to implement strategies that achieve organizational objectives. It is a crucial tool for evaluating how effectively management meets business goals (Stephen et al., 2017). According to Richard et al. (2009), organizational performance includes three key areas: financial performance (profitability, return on assets, and return on investment), product market performance (sales and market share), and shareholder returns (total shareholder return and economic value added).

Whether they are large or small, public or private, organizations exist primarily to accomplish certain social, political, or economic goals. Every company that is focused on making money wants to establish a beneficial and controllable channel for the target market to learn about and use their products and services. This will make space for achieving the aims and objectives of the organization (Ekanem, 2021).

Therefore, it is pertinent to state that business organizations are designed to achieve specific goals, including profitability, customer satisfaction, product awareness, market share growth, expansion, and growth, among others. As a result, organizations must implement tools to help them achieve their stated goals.

Promotion is the most well-known tactic in contemporary marketing, employed by a variety of commercial entities to captivate the consumer. Companies aim to do more appealing, influencing advertising using a variety of media since the promotional mix is a crucial strategy to increase sales. The finding in Kumar & Patra (2017) supported the idea that components of the promotional mix contribute to the improvement of brand equity and overall performance of companies.

In today's environment, organizations often undergo structural, operational, and strategic changes to enhance their performance (Cheruiyot et al., 2016). Measuring business performance is vital for determining whether a company is meeting its objectives, typically through key performance

indicators (KPIs). Data related to operations, finance, human resources, and marketing is utilized to evaluate performance. Organizations conduct assessments to gauge their overall health, identifying areas of strength as well as opportunities for improvement (Andy, 2004).

The concept of organizational performance measures how well an organisation accomplishes its goals which can be financial, operational, and/or strategic. When we come to the pharmaceutical business, organizational performance is important since it shows how well a company can create, produce, and sell high-quality pharmaceutical goods while juggling ethical issues, competitive pressures, and regulatory requirements.

There are different approaches in the measurement of organizational performance. This study relies on the use of financial performance, sales volume, profit margins, speed of movement of drugs, awareness on pharmaceutical education and customer retentions.

2.6 Empirical Literature Review

Changes in the marketing environment have presented significant challenges for both profit and non-profit organizations, impacting their survival and profitability (Mbau, 2002). Consumers have become more aware and sophisticated, exercising greater choice in their purchasing and consumption of goods and services. They now expect higher quality, better service, and some degree of customization, while demonstrating reduced brand loyalty and perceiving fewer meaningful differences among products. Companies are facing intense competition from both domestic and international brands, leading to increased promotional costs and declining profit margins (Kotler, 1999). The pharmaceutical industry is no exception to these trends.

Promotion serves as the communication bridge between sellers and buyers, utilizing various methods to convey messages about products, services, and ideas. These messages can be delivered directly by sales representatives or indirectly through advertising and sales promotions. Marketers aim to blend different promotional elements effectively to reach their target markets. Promotion strategies have various purposes and differ in scope and scale. A foundational understanding of promotion is that it functions to inform, persuade, and influence consumer purchasing decisions (Naikuni J.O, 2001).

Some research indicates a long-term positive relationship between sales and promotion, while other studies suggest either no long-term effects or that any impact is limited to the short term.

There are no known studies reporting a negative relationship between future demand and promotion. However, empirical research has faced numerous challenges, often limited by access to data at the aggregate brand category level, which hinders the detection of the relationship between current promotions and sales due to the endogeneity factor (Lambin, 1976; Schmalensee, 1978).

Florence et al. (2009) examined the connection between sales promotions, brand equity, and sales, finding that while sales promotions positively affect sales in the short term, this effect does not persist in the long run. They argued that strong promotional activities enhance brand personality, leading to temporary sales growth. Anderson and Simester (2004) investigated the frequency of retail catalog mailings, sending catalogs to 20,000 customers. Their findings indicated a short-term increase in sales, which diminished with a reduction in advertising.

Additionally, S.A. Aduloju et al. (2009) studied the impact of promotion on sales in Nigeria's insurance sector, using a sample of 100 respondents. They discovered that advertising enhances the product's image, thereby increasing sales volume. Stremersch and Rotterdam (2009) discussed the influence of regulatory regimes on product sales, finding a positive relationship between regulatory frameworks and sales growth.

Research in both marketing and medical literature has explored the impact of promotional mix elements on the overall performance of pharmaceutical companies. Since direct consumer promotion is restricted, pharmaceutical companies primarily target doctors. Ahmed et al. (2014) found that the prescription process begins with information provided to doctors by the company's sales representatives. This information is communicated through in-clinic promotional activities or out-of-clinic efforts.

Numerous authors have researched the impact of drug promotion, which employs various tools such as detailing, giveaways, sampling, continuing medical education, community activities, direct-to-consumer advertising, websites, symposiums, and scientific meetings, as well as medical journals.

A qualitative study by Spurling, (2010) indicates that many prescribes view pharmaceutical promotions as a valuable and convenient source of information. It was found that doctors who rely on such promotions are often older and more likely to be general practitioners (WHO, 2005).

Many physicians are willing to invest considerable time in promotional activities. However, several professional organizations have advocated for greater regulation of promotional practices due to concerns that such promotions may sometimes be misleading (Spurling, 2010).

Industry estimates reveal that pharmaceutical companies spent $19.1 billion on promotional activities in 2001, increasing to $21 billion in 2002 (GAO, 2002). A significant portion of this promotional expenditure is directed toward physicians, accounting for over 80% of all promotional spending in the United States, which corresponds to approximately 12% of total drug sales in 2001 (GAO, 2002).

According to Ahmed et al. (2014), if a doctor is persuaded, they will prescribe the product, leading the patient to purchase it, thus fulfilling the objectives of both the product and prescription chains. This indicates that promotional mix in pharmaceutical marketing is centered around effective communication strategies. However, there is significant debate regarding the promotion practices of pharmaceutical companies, with criticisms suggesting that it contribute to unnecessary increases in prescription rates (Balay-Karperien et al., 2007).

Empirical studies present mixed findings on the influence of pharmaceutical promotion on the volume of prescriptions written by doctors. Additionally, there is no evidence to suggest that an increase in prescriptions compromises public health (Rubin, 2004). In the study by Negash and Adamu (2017), factor analysis indicated that physicians recognize various promotional tools categorized into six factors: sales promotions, personal selling, advertising, image, educational tools, and public relations.

Companies utilize different elements of the promotional mix, and various studies have assessed the effectiveness of these strategies. Biswas and Ferdousy (2016) revealed that public relations emerged as the most effective strategy influencing physician prescriptions, while advertisements in journals or other print media garnered the least attention from physicians. Conversely, Naikuni (2001) identified personal selling and sales promotions as the most frequently used promotional mix elements by multinational pharmaceutical firms, highlighting their significance in promoting medicinal products.

A study by Walton (1980) investigated the connection between advertising and prescription patterns among physicians. In this research, 100 physicians from various specialties reviewed

354 advertisements published in medical journals. Data were collected through interviews, during which physicians were asked to identify advertisements after all product and company information had been removed. They were also asked if they had prescribed or recommended any of the drugs shown in the advertisements within the past month. The findings revealed that physicians who recognized the advertisements were more inclined to prescribe those products, with 95% of the ads correlating with positive prescribing behaviour. Notably, there was no distinction in influence between newly launched drugs and established ones.

Matalia (1994) further explored advertising's impact on prescription habits. The first trial assessed whether doctors who had not previously prescribed a specific drug would be more likely to do so after viewing advertisements. The results indicated that increased familiarity with a product heightened the likelihood of trial. The second part of the study examined whether exposure to varying levels of advertising would affect prescription rates. Physicians received journals featuring different amounts of marketing for a particular drug, and it was found that increased advertising led to a rise in prescriptions. Additionally, when advertising for certain products was halted and then resumed after four months, doctors who had seen the ads were more likely to remember the products.

Regarding personal sales, a cross-sectional exploratory survey conducted by Vancelik et al. (2006) involved 152 general practitioners (GP) from primary health centers and hospitals in Erzurum province, Eastern Turkey. The study revealed that most GP relied primarily on commercial information provided by pharmaceutical sales representatives, which was reported to significantly influence their prescribing decisions. However, since the study was based on self-reported data, the actual influence might have been underestimated.

Ingole et al. (2011) investigated medical students' attitudes toward relationships with pharmaceutical companies and their promotional activities. The results showed that 81% of the medical students believed pharmaceutical companies should be allowed to engage with them during their education. Approximately 95% considered the information provided by medical representatives to be reliable, and 75% felt that confirmation of claims was unnecessary. Furthermore, 68% of the students believed that drug promotional offers do not compromise physicians' decision-making. About 70% thought that physicians should receive gifts from medical representatives when their drugs are prescribed.

A more recent study indicated that GP heavily depend on pharmaceutical representatives for awareness and evaluation of new drugs, often conducting minimal evaluation before prescribing. Prosser et al. (2003) gathered data from 107 GP across various prescriber categories. Using a critical incident interview technique, they analyzed 600 prescribing events that were internal decisions by GP rather than proxy prescriptions for consultants. In 49% of these cases, the pharmaceutical industry was the primary source of information about new drugs, mainly through representatives, whereas professional contacts accounted for only 13% and academic literature for 17%. The GP typically reacted to available drug information than actively seeking it out.

During the evaluation phase of their decision-making, GP considered multiple influences, including professional colleagues, patient acceptability, cost, and biomedical factors, with pharmaceutical representatives being the most frequently cited influence at 39%. Alarmingly, in 37% of cases, the initial source of information—usually a representative—was the only resource consulted, without reference to academic literature.

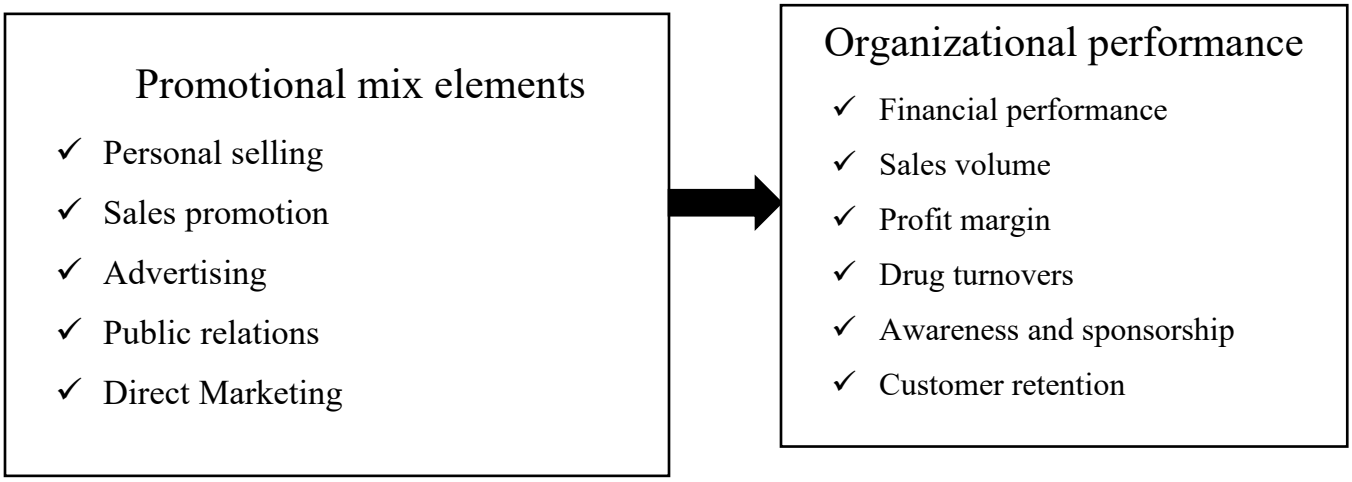
Publicity and public relations, along with advertising, are among the least utilized promotional tools. Sara et al. (2008) noted that detailing is the most extensively studied tool (32%), followed by direct-to-consumer (DTC) advertising (20%) and journal advertising (12%). The effectiveness of these promotional instruments varies across different disease categories; detailing is more effective than medical journal advertising for conditions like inflammation, heart and vascular diseases, and skin disorders, while the reverse is true for hypersensitivity cases.

Some studies have also examined the return on investment (ROI) related to pharmaceutical promotional mix elements. For instance, Neslin (2001) found that medical journal advertising yields the highest overall ROI among four marketing activities. This finding, coupled with its relatively small budget allocation, suggests that journal advertising is underutilized and may warrant greater focus from firms.

Adewale et al. (2013) found that promotions had no appreciable positive effect on corporate performance, which runs counter to the findings of the aforementioned studies. The study, which examined how promotional mix elements affected business performance in Nigeria, and discovered that marketing mixes were a strong predictor of SMEs' profitability, market share, return on investment, and growth.

2.7 Conceptual Framework

The study examines the alternation between the pharmaceutical companies' performance and their promotional efforts. The enterprises' promotional practices are grasped from the point of five fundamental promotional mix elements. It follows that enterprises' personal selling, advertising, sales promotion, direct selling and public relation elements were examined. The following diagram demonstrated how the organization business performance impacted by the various promotional mix elements.



Source: Compiled from reviewed literature

Figure 1: Conceptual framework

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The study adopted a methodological approach that utilized both descriptive and explanatory research designs. It incorporated primary and secondary data sources, as well as qualitative and quantitative data types. Probability sampling techniques were employed to ensure representativeness, while data collection was carried out using a structured questionnaire. Furthermore, the study applied both qualitative and quantitative data analysis techniques to comprehensively examine the research objectives.

3.2 Research Design and Approach

Considering the research objectives and the nature of the study, descriptive and explanatory research designs were utilized. Descriptive research focuses on outlining the characteristics of a specific individual or group (Kothari, 2004). Accordingly, this study describes the promotional practices and business performance of pharmaceutical companies. On the other hand, explanatory research aims to clarify the relationships between variables (Kumar, 2011). In this context, the study examined the impact of predictor variables (promotional mix elements) on the dependent variable (organizational performance).

A mixed-methods approach, incorporating both qualitative and quantitative research methods, was employed. The qualitative approach facilitated a deeper understanding of the study's subject by drawing insights from existing literature. Specifically, it enabled the synthesis of findings, conclusions, and established facts from prior research works and academic studies. This integration of qualitative insights with quantitative analysis enhanced the comprehensiveness of the research.

3.2.1 Data Sources and Types

The study used both primary and secondary sources of data. The primary source of data was collected from pharmaceutical businesses including importers/agents, wholesalers and retailers. On the other hand, the secondary source of data was gathered from various books, articles, and

published and unpublished researches to support the primary data. In this study, both qualitative and quantitative data were utilized.

3.2.2 Data collection tools

To collect data, questionnaires were employed as the principal tool. The questionnaire was chosen to maintain uniformity in the questions posed to all respondents. This approach also saved time and resources compared to other potential data collection methods. The questionnaire was prepared in both closed and open-ended formats.

3.2.3 Population and Sampling technique

The population consisted of all the pharmaceutical business companies in Addis Ababa, Ethiopia. These Pharmaceutical companies are involved in importation, distribution and retailing of pharmaceutical items. Although they have stopped operations because of the COVID-19 epidemic, Addis Ababa is home to nine actively operating pharmaceutical importers (FMHACA, 2021). Apart from the importers, there are pharmaceutical companies in Addis Ababa involved in the wholesale and retail of pharmaceutical products. Accordingly, the study used samples which were drawn from pharmaceutical companies engaged in retailing and distribution services.

In determining the sample size, the researcher employed a simple random sampling technique to distribute questionnaires which were specifically directed to wholesalers, distributors, and retailers. In addition to probability sampling technique, data were also collected from nine importers using non-probability sampling methods, primarily purposive and convenience sampling techniques.

3.2.4 Sample size determination

Given significantly many participants involved in the pharmaceutical business in Addis Ababa, primarily as distributors and retailers, the study adopted a sampling technique suitable for an infinite population. To determine the sample size, the Cochran (1970) formula was utilized. This technique required three parameters to determine the appropriate sample size: the estimated population proportion (p), the desired level of precision (e), and the desired level of confidence (C). The Cochran formula for sample size determination is explained as follows:

$$\boldsymbol{n = z^2 p\,(1 - p)/e^2}$$

Where:

n = required sample size

z = z-score corresponding to the desired level of confidence (e.g., for 95% confidence, z=1.96)

p = estimated population proportion (if unknown, use 0.5 for maximum variability)

e = desired level of precision (usually expressed as a decimal, e.g., 0.05 for 5% precision).

Take a 95% confidence level (z=1.96) and a desired precision of 5% (e=0.05). Based on these givens, we can calculate the sample size, and the calculated sample size n is approximately 385. This means that a sample size of 385 respondents was required for the study.

Out of the total 385 sampled questionnaires distributed to wholesalers/distributors and retailers, 367 respondents were responding the questionnaire properly, which measures a desirable (95%) response rate of conducting data robust research. Therefore, this study is conducted by taking data from a total of 376 respondents, including 9 collected from importers and 367 wholesalers and retailers.

3.3 Methods of Data Analysis

The data collected was subjected to rigorous analytical tasks, incorporating both quantitative and qualitative approaches. Firstly, the data was processed manually through both field and in-house editing. Subsequently, the data was categorized according to specific objectives, and appropriate codes were assigned. The categorized and coded data was then entered into the Statistical Package for Social Sciences (SPSS version 22) for analysis.

Subsequently, various statistical measurements were employed to conduct descriptive analyses, tests, and regression analysis. The descriptive presentations included frequency tables for categorical data, as well as measures of central tendency and dispersion for ratio and interval data. Multiple regression analysis was utilized to determine the relationships among the identified independent variable and business performance.

3.3.1 Multiple regression analysis

Promotional mixes were analyzed in relation to their impact on the companies' business performance. Consequently, performance, as measured by financial performance, sales volume, profit margin, drug turnovers, awareness and sponsorship, customer retention was used as the dependent variable from which outcomes were estimated using multiple regression models. Whereas, the promotional mixes are the independent variables.

Mathematically, the model can be written as follows in eq 3.1 and eq 3.2.

$$Yi = \alpha + \beta i \sum_{i=1}^{n} Xi + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots eq\ 3.1$$

$$Yi = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \ldots + \beta iXi + \mathcal{E} \ldots\ldots\ldots\ldots eq\ 3.2$$

Where Y is the dependent variable, which is the business performance

α is the constant/intercept value,

β_i's, represent the coefficient parameters estimated from the model outcomes,

X_i's, represent the set of explanatory factors that affect business performance of pharmaceutical companies, and

Ɛ, is the error term, which is assumed to be normally distributed

Based on the specified model in eq 3.2 above, the specific model of this study is formulated as:

$$OPERFORMANCE = \alpha + \beta 1PSE + \beta 2SPR + \beta 3ADV + \beta 4PR + \beta 5DMK + \varepsilon \ldots Eq\ 3.3$$

Where, ***organizational performance*** is the dependent variable affected by the explanatory variables estimated above and the stochastic error term, ε. Here, the organizations performance is measured by items which includes financial performance, volume of sales, profit margin, movement (turnover) of drugs, pharmaceutical firm's education and sponsorship of events, and customer retention statuses.

Personal selling (PSE): one in the promotional mix elements measured from the weighted values of activities in medical representatives, group presentations, product demonstrations, pharmacist's advice, salesperson (order taker) and support through new technologies (electronic detailing).

Sales promotion (SPR): The sales promotion activities are including premium and gifts (Branded gifts e.g. pens, calendars), sampling (Free medical samples), fair and trade shows (pharmaceutical trade fairs), entertainment (doctors' nights, distributors' dinner parties), continuity programs (continuous medical educations), bonus (cash and product discounts), and sponsorship (doctors travel expenses and trophies).

Advertisement (ADV): This implies the promotional mix practice conducted by pharmaceutical businesses using television, radio, branded posters & leaflets directories, point of purchase display (floor and wall mats), company symbols and logos and branded brochures and booklets.

Public relation (PR): This refers to conducting promotional activities by pharmaceutical firms using public relation practices such as speeches (by leading doctors e.g. physicians, surgeons), seminars for doctors, charitable donations (money or free medicine), publications in medical journals, community relations (corporate social responsibility) and company magazines.

Direct marketing (DMK): A promotional mix element involved with the use of catalogs (product and price lists, new introductions), mailings (individuals and groups of customers), telemarketing (doctors, distributors, retailers, hospitals), fax mail (doctors, distributors, retailers, hospitals), and E-mails.

3.3.2 Validity and Reliability

The question of whether an indicator (or combination of indicators) designed to assess a concept actually measures that concept is known as validity (Bhattacheerjee, 2012). Internal validity, external validity, construct validity, and statistical conclusion validity are the four different types of validity that work together to minimize the effects of numerous unrelated variables that can skew a study's results and decrease their accuracy (Marczyk et al., 2005). While there isn't a single, definitive measure of a scale's validity, this study address validity difficulties by reviewing the literature and modifying instruments from earlier studies, which importantly improved the study's validity.

The most frequently preferred measurement for internal consistency is Cronbach alpha for three, four, or five-point Likert scale items. For low to high internal consistency with a range of 0 to 1 alpha is easily interpreted. To achieve internal reliability, different authors accept different values of this test but 0.70 is the most commonly accepted value as it should be higher than or equal to reach internal reliability in business research.

3.3.3 The Cronbach's alpha reliability test results

The reliability test was conducted on several scales how promotional mixes affect pharmaceutical business performances. Using Cronbach's alpha as a measure of internal consistency, the reliability test was conducted on the reliability and inclusiveness of the items

under each promotional mix. The internal consistency measures were conducted among the six items of personal selling, seven items of sales promotion, seven items of advertisement, six items of public relations, and the five items of direct marketing.

Table 3. 1 Cronbach's alpha measure of reliability test

Categorical Variables	Number of items	Cronbach's alpha
Personal selling (PSE)	6	0.748
Sales Promotion (PSR)	7	0.801
Advertisement (ADV)	7	0.751
Public relation (PR)	6	0.945
Direct marketing (DMK)	5	0.764
Organizational performance	5	0.731

Source; Own Estimation using IBM SPSS 22

The personal selling scale, comprising 6 items, showed a reasonable level of internal consistency with a Cronbach's alpha of 0.748. Since the items in this scale are somewhat interrelated, and this can be considered as a good fit for internal consistency measures. The sales promotion, with 7 items, exhibited a relatively strong level of internal consistency with a Cronbach's alpha of 0.801. This suggests that the items are strongly interrelated or consistently measure the construct of sales promotion.

Advertisement scale, consisting of 7 items, demonstrated acceptable internal consistency with a Cronbach's alpha of 0.751. This suggests that the items in the scale are reasonably interrelated and reliably measure the construct of advertisement practice. Public relation, comprising 6 items, also showed strong and acceptable internal consistency with a Cronbach's alpha of 0.945. This indicates that the items in the scale are reasonably interrelated and reliably measure the construct of public relation.

Similarly, direct marketing and the dependent variable (organizational performance), comprising 5 items each have a Cronbach's alpha of 0.764 and 0.731, respectively show that there is no problem of internal consistency. This implies that the 5 items for direct marketing and organizational performance are important interrelated items of constructing direct marketing and organizational performance.

Higher Cronbach's alpha coefficient indicates a high level of internal consistency and reliability among the included items. The coefficient value ranges from 0 to 1, with higher values denoting stronger internal consistency. The high coefficient indicates that the items within the scale consistently measure the same or similar aspects of the constructs under investigation.

It is important to consider various factors, including the specific field of study, the nature of the construct being measured, and the intended use of the scale, when interpreting Cronbach's alpha. Generally, a value above .7 is deemed acceptable, while values above .8 or .9 indicate even higher levels of internal consistency. These values in the above table provided confidence in the reliability of the measurement instruments used in this study.

3.4 Ethical Consideration

In research, ethics refers to the suitability of a researcher's conduct concerning the rights of participants or subjects involved in the study (Saunders et al., 2009). Consequently, this study tried to adhere the fundamental research ethics principles, ensuring that respondents provide information voluntarily, are informed of the study's purpose beforehand, and that their confidentiality is maintained.

CHAPTER FOUR
RESULT AND DISCUSSION

4.1 Introduction

This chapter explains the result and discussion of the data collected from the sampled observations. To address the appropriate result and statistical inferences, this section presented the result and discussion in to three parts. The pre-estimation analysis of reliability tests, correlation and descriptive statistics conveyed the first section followed by the regression analysis. Finally, the last section presented the model fitness tests of multicollinearity, hetroskedasticity, model specification, omitted variable and normality tests.

4.2 Pre-estimation analysis

This section comprises descriptive statistics and correlation analysis of the study.

4.2.1 Descriptive statistics

The descriptive results reveal several key findings about the study. Firstly, in terms of gender, the sample consists of more males (55.3%) compared to females with 44.7%. This suggests that the study, though it was based on a probability sampling technique, has slightly male dominated sample.

Regarding age distribution of the respondents, the sample is fairly evenly distributed across different age groups. The highest representation is observed among individuals aged 31-40 (34.8%), followed by those aged 41-50 (32.7%). Individuals between the age of 51-60, consisted of the smallest samples with 10.1% followed by individuals between the age of 21-30 (22.3%). These findings suggest that the study captures a wide range of age demographics, which influence the respondents' involvement in the pharmaceutical business.

In terms of educational level, the majority of respondents hold a first degree (41.8%), followed by MSc/MBA (35.6%%) and diploma (14.9%). These results indicate a relatively well-educated sample, which could have implications for their integrity with the pharmaceutical business.

Most of the respondents who are serving at the front in the pharmaceutical businesses are owners (69.1%) followed by other participants such as co-owners and relatives (23.1%). One important concept here in the current position of the pharmaceutical business is that the role of

sales person is relatively smaller (1.9%) unlike other business. This implies the business requires professional attachment than a mere business practice.

When we are observing the years of experiences of respondents, majority of the respondents (37%) are serving for 1-3 years of duration in the same position followed by respondents serving for 4-6 years (29%) in the same position. Employees turn-over and promotion is relatively slower in the pharmaceutical business having only 17.6% of the respondents with less than one year experience.

Overall, these descriptive findings (presented in the table 4.1 below) provide insights into the demographic and pharmaceutical business-related characteristics of the sample population. This highlighted the importance of considering factors such as gender, age and educational level, current position in the business and years of experience in the same position.

Table 4. 1 Descriptive statistics

Variable Name	Option	Frequency	Percentage	Cumulative
Gender	Female	168	44.7	44.7
	Male	208	55.3	100
Age of the respondent	21-30	84	22.3	22.3
	31-40	131	34.8	57.2
	41-50	123	32.7	89.9
	51-60	38	10.1	100.0
Education level of respondents	Diploma	56	14.9	14.9
	BSC/BA	157	41.8	56.6
	MSC/MBA	134	35.6	92.3
	PhD	4	1.1	93.4
	Other	25	6.6	100.0
Current position of the respondent	Sales person	7	1.9	1.9
	Middle manager	14	3.7	5.6
	Top level manager	8	2.1	7.7
	Owner	260	69.1	76.9
	Other	87	23.1	100.0

Year of experience in the current position	<1 year	66	17.6	17.6
	1-3 years	139	37.0	54.5
	4-6 years	109	29.0	83.5
	>6 years	62	16.5	100.0

Source; Own Estimation using IBM SPSS 22

4.2.2 Correlation analysis

The correlation analysis explains the one-to-one relationship between the dependent variable which is business performance and the independent variables that includes the five promotional mix elements. The result of the correlation analysis explains the existence of linear associations between pharmaceutical business performance and its explanatory variables (See Appendix B).

The correlation results in the table under appendix-B presented the correlation coefficients between the control variables and their association with organizational performance, personal sales, sales promotions, advertisements, public relations, and direct marketing. Accordingly, the result of the correlation analysis can be interpreted as follows:

The correlation coefficient existed between Organizational Performance and Personal Sales shows that there is a strong positive relationship existed among performance and personal sales. Similarly, the correlation coefficient between sales promotion and organizational performance ($r=0.21$, $p<0.0001$), shows a strong correlation coefficient.

However, the correlation between advertisements and organizational performance ($r=-0.317$, $p < 0.001$), shows a strong but negative relationships. This suggests that higher advertisement efforts may be associated with lower organizational performance. Similarly, there exist a strong negative correlation between public relations and organizational performance having a correlation coefficient of $r=-0.229$, with probability values $p < 0.001$).

Lastly, the correlation between direct marketing and organizational performance shows a weak negative relationship with correlation coefficient of $r=-0.102$ and significant level of $p = 0.047$. Generally, the results suggest that while personal sales and sales promotions generally have positive impacts on organizational performance, there are significant negative correlations with advertisements, public relations and direct marketing. This could indicate that the current advertising, public relations and direct marketing strategies may not be effective.

In addition to this, the correlation matrix table (Appendix B), explained the relationships among sales promotions, public relations, and direct marketing show positive associations, suggesting that these areas may reinforce each other and contribute positively to overall organizational business performance of pharmaceutical firms.

4.3 Regression Analysis

A multiple linear regression analysis was used to forecast business performance based on several explanatory variables: personal selling, sales promotion, advertising, public relations, and direct marketing. The results of the regression analysis are shown in Table 4.2 below, and the findings are interpreted as follows:

Table 4. 2 Overall model fitness test

ANOVA					
Model	Sum of Squares	Df.	Mean Square	F	Sig.
Regression	51.049	5	10.210	38.301	.000
Residual	98.630	370	.267		
Total	149.678	375			

Dependent Variable: Organizational performance R-square =0.584

Predictors: (C), direct marketing, personal sale, public relation, advertisement, sales promotion

Source; Own estimation using IBM SPSS 22

The overall model fitness statistics indicate that the regression model is significant. The F-statistic of 38.301 with a probability (p-value) less than 0.000 suggests that the model's predictors, as a group, have a significant effect on predicting the outcome variable. Moreover, the R-squared value of 58.4 indicates that approximately 58% of the variance in the organizational performance is explained by the independent variables included in the model. This suggests a relatively good level of predictive power of the promotional mix elements against organizational performance.

Table 4. 3 Regression result of the study

Coefficients

Model: Dependent Variable: Business performance		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.808	.476		1.698	.090
	Personal Sale (PSE)	.373	.057	.331	6.581	.000
	Sales Promotion (SPR)	.134	.078	.089	1.706	.089
	Advertisement (ADV)	.293	.070	.195	4.201	.000
	Public relation (PR)	-.375	.069	-.259	-5.420	.000
	Direct marketing (DMK)	.343	.066	.248	5.196	.000

Source; Own estimation using IBM SPSS 22

Looking at the coefficients for the individual independent variables, namely personal selling, sales promotion, advertisement, public relation and direct marketing, it is evident that they significantly affect organizational performance.

Personal sale (PSE): The coefficient for personal sale (0.373) is statistically significant with p-value of ($p < 0.000$), indicating that an increase in personal sales activity has a positive and significant impact on organizational performance. This implies that, other things being equal, on the average, for every 1% increase in personal sales, the predicted impact on business performance of pharmaceutical firms would increase by nearly 37%. This suggests that pharmaceutical businesses performing personal sale activities such as medical representatives, group presentations, product demonstrations, pharmacist's advice, salesperson (order taker) and support through new technologies (electronic detailing), would enhance their operations.

Sales promotion (SPR): The coefficient for sales promotion (0.134) is weakly significant ($p < 0.089$). This implies that for every percentage increase in a sales promotion activity, there is a 13.4% predicted increase in business performance, ceteris paribus. This parameter shows a weak significance level which is implication is that any activity of sales promotion such as premium and gifts, sampling, fair and trade show, entertainment, continuity programs, bonus and

sponsorship would have a very small and weak contribution to their business performance.

Advertisement (ADV): As a promotional mix element with coefficient of 0.293 and p-value of $p<0.000$, advertisement has a very strong significant effect on companies' business performance. Therefore, pharmaceutical companies who are advertising their products using television, radio, branded posters & leaflets, directories, point of purchase display, company symbols and logos, and branded brochures and booklets would raise their businesses performance. In general, other things being equal, a percentage increase in advertisement practice would raise business performance by 29.3%.

Similarly, direct marketing (DMK), with a coefficient of 0.343 having p-value of $p<0.000$ is strongly significant to affect pharmaceuticals business performances positively. Therefore, any practice of direct marketing which includes product catalogs, mailing, telemarketing, fax mail, and direct e-mails would increase business performance. Here, other things being equal, for a percentage increase in advertising activities, business performance would be improved by nearly 34%.

However, public relation (PR), as a promotional mix element would have a strongly significant negative impact on companies' business performance. Here, any public relation (PR) activities of speeches by leading doctors, seminars, charitable donations, publications in medical journals, community relations (corporate social responsibility), and company magazines would not have a positive contribution to business performance. Therefore, for every 1% increase in public relation activities, companies' business performance will be declined by 37.5%, citrus paribus.

Therefore, these findings emphasize the importance of using promotional mix elements except public relations in fostering a pharmaceutical businesses performance. By understanding and practicing personal selling, sales promotion, advertisements and direct marketing, pharmaceutical businesses; either they are importers, wholesalers, or retailers, can develop strategies to enhanced business performances.

4.4 Post Estimation Tests of Residuals and Model fitness

It is important to note that the result in Table 4.3 above assumes a linear relationship between the variables and relies on certain assumptions of the linear regression model. Additionally, it is

necessary to test each post-estimation linear regression assumption, such as Heteroskedasticity, multicollinearity, normality, and model specification. These tests help to ensure the validity and reliability of the regression results.

By assessing these assumptions, researchers can evaluate whether the linear regression model is appropriate for the data and make any necessary adjustments or transformations to improve the accuracy and interpretation of the model. It is crucial to thoroughly examine these assumptions to ensure the robustness of the findings and the validity of the conclusions drawn from the regression analysis.

Therefore, after using a robust regression result to overcome heteroskedacity problem of the error term, additional post estimation tests of residual such as multicollinearity, model specification, omitted variable and normality tests were conducted. The result of these tests is explained in the following sections;

4.4.1 Tests of Multicollinearity

We can use the VIF test for multicollinearity to detect whether there is a sever correlation between the explanatory variables. VIF stands for *variance inflation factor*. As a rule of thumb, a variable whose VIF values are greater than 10 may merit further investigation. Tolerance, defined as 1/VIF, is used by many researchers to check on the degree of collinearity. A tolerance value is between 1 and 10. It means that the variable could be considered as a linear combination of other independent variables. The VIF output of this study which is presented in the table 4.4 below, explained that the model does not have the problem of multicollinearity since the VIF of each variables presented is less than 10.

Table 4. 4 Multicollinearity test

Variable	Tolerance	VIF
Personal sale (PSE)	0.704	1.421
Sales promotion (SPR)	0.648	1.543
Advertisement (ADV)	0.830	1.204
Public relation (PR)	0.779	1.284
Direct marketing (DMK)	0.782	1.279
Mean VIF	0.749	1.346

Source; Own estimation using IBM SPSS 22

4.4.2 Model specification test

The link test command performs a model specification link test for single-equation models. link test is based on the idea that if a regression is properly specified, one should not be able to find any additional independent variables that are significant except by chance. link test creates two new variables, the variable of prediction, _hat, and the variable of squared prediction, _hatsq. The model is then refit using these two variables as predictors. _hat should be significant since it is the predicted value. On the other hand, _hatsq shouldn't, because if our model is specified correctly, the squared predictions should not have much explanatory power. That is, we wouldn't expect _hatsq to be a significant predictor if our model is specified correctly. So, we will be looking at the p-value for_hatsq. Here, the researcher finds it better to use STATA14 for the link test.

```
linktest
```

Source	SS	df	MS	Number of obs	=	371
Model	85.409046	2	42.704523	F(2, 368)	=	113.65
Residual	138.273225	368	.375742459	Prob > F	=	0.0000
Total	223.682271	370	.604546678	R-squared	=	0.3818
				Adj R-squared	=	0.3785
				Root MSE	=	.61298

Loyality	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_hat	3.587479	.9159354	3.92	0.000	1.786355	5.388603
_hatsq	-.3167754	.1118294	-2.83	0.015	-.5366801	-.0968707
_cons	-5.210792	1.861286	-2.80	0.005	-8.870882	-1.550701

Source; Own estimation using STATA14

From the above link test, the test of _hatsq is not significant. This is to say that link test has failed to reject the assumption that the model is specified correctly. Therefore, it seems to us that we don't have a specification error.

4.4.3 Omitted variable test

The ovtest command performs another test of regressions' model specification. It performs a regression specification error test (RESET) for omitted variables. And for our model the ovtest command indicates that there are no omitted variables.

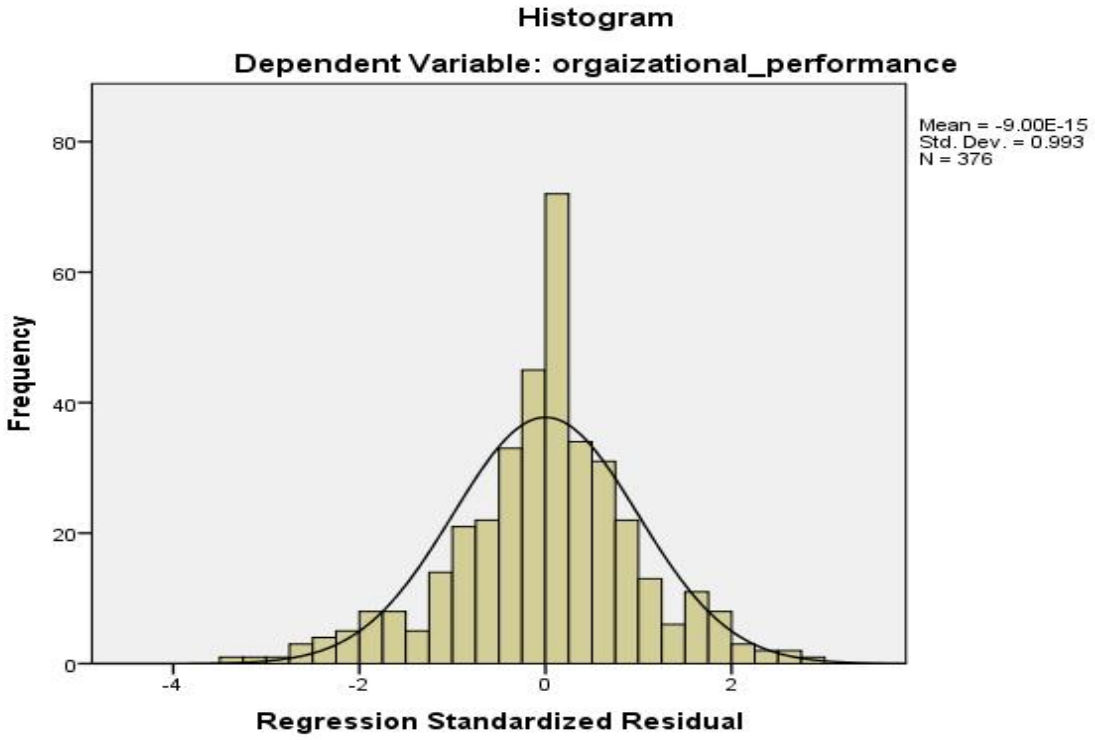
```
. ovtest
Ramsey RESET test using powers of the fitted values of business
performance
        Ho:  model has no omitted variables
                    F (3, 359) =      2.86
                     Prob > F =      0.0368
```

Source; Own estimation using STATA14

4.4.4 Normality test

The histogram of the residuals displays a symmetric distribution, indicating that the residuals follow a roughly normal distribution. This symmetry suggests that, on average, the errors in the regression model are equally likely to be positive or negative, indicating an unbiased model that does not systematically overestimate or underestimate the predicted values.

The mean of the residuals being very close to zero (specifically, -9.00E-15) suggests that, on average, the predicted values align closely with the observed values. The small value of the mean indicates that any deviations between the predicted and observed values tend to cancel each other out when averaged across all observations.



Source; Own estimation using IBMSPSS22

Figure 2 Histogram for test of normality

CHAPTER FIVE

5 CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Using a data collected from dispatched questionnaires, the study investigated the impact of promotional mix elements on the business performance of pharmaceutical companies in Addis Ababa, Ethiopia. A multiple linear regression analysis technique is used in the drawing if inferential statistics. From SPSS22 software in analyzing the data, the following conclusions are drawn from this study.

- The descriptive analysis presented the demographic characteristics of respondents. Accordingly, it shows a male-dominated sample (55.3%) with a relatively well-educated respondent pool; 41.8% hold a first degree, and 35.6% have an MSc/MBA. In terms of age distribution, it is varied with the highest representation among individuals aged between 31-40 or 34.8% of the total respondents.
- The descriptive analysis also signifies that the majority of respondents (69.1%) are owners, indicating a strong managerial presence in the sample and the years of experience reveal that majority of them (37% of the total respondents) have 1-3 years of experience in their current positions, suggesting a relatively young workforce in terms of tenure.
- The result from econometric analysis, using multiple linear regression estimates, indicates that personal selling, advertising and direct marketing have a significant strong positive impact on organizational performance.
- Looking at sales promotion, though it has a positive impact on pharmaceutical business performances, its significance level is weak compared to personal selling, advertising and direct marketing. However, public relations as a promotional mix element have significant negative impact on pharmaceutical business performance in Addis Ababa, Ethiopia.

The Cronbach's alpha measurements indicate a good internal consistency across scales of all the variables used in the study. This suggests the presence of a reliable measurement of the constructs involved.

5.2 Policy Recommendation

Based on the results from the multiple linear regression analysis, the following conclusions which aims to enhance the effectiveness of promotional strategies, thereby improving the overall business performance of pharmaceutical companies in Addis Ababa can be drawn;

- Enhance Personal Selling Strategies: Invest in training medical representatives to improve relationship-building with healthcare professionals.
- Optimize Advertising Campaigns: Focus on targeted advertising that effectively communicates product benefits to the right audiences.
- Strengthen Sales Promotions: Develop attractive promotional offers, such as discounts and samples, to encourage product trials.
- Reassess Public Relations Efforts: Shift focus to more effective communication strategies that positively influence public perception.
- Leverage Direct Marketing: Utilize personalized communication approaches (e.g., emails and telemarketing) to engage directly with healthcare providers.

Besides to the above remarks, conducting regular market research which may be involved through continuous assessment of market needs and adjustment of promotional strategies to meet evolving demands are required. In addition to this, collaborations with regulatory bodies including working with the Ministry of Health in Ethiopia to align marketing strategies with national health objectives and regulations are useful remarks in enhancing business performance.

REFERENCE

Aaker, D. A. (2010). Brand relevance: Making competitors irrelevant. John Wiley & Sons.

Aaker, D.A. (2010). Brand Relevance: Making Competitors Irrelevant. John Wiley & Sons.

Abha, W. (2018). Evaluating the Effect of Digitalization on the Sales Force of the Pharmaceutical Industry. Economics and Applied Informatics, 2, 21-29.

Ahmed, R. R. (2014). Pharmaceutical marketing mix strategy and physician's prescription behavior. The Pharma Innovation, 3(7, Part A), 8.

Al-Bakri, T. (2006), Marketing, the Foundations of Contemporary Concepts, Amman: Al-Yazouri for Scientific Publishing and Distribution.

Albrecht, M. G., Green, M., & Hoffman, L. (2023). *Principles of marketing*. OpenStax.

American marketing association. (2013). Definition of Marketing. Retrieved from https://archive.ama.org/Archive/AboutAMA/Pages/DefinitionofMarketing.aspx

Amin, H. J., & Bashir, A. M. (2014). The impact of advertising and sales promotion on initial purchase, addition and change of existing GSM networks by students in Nigeria. *International Journal of Business and Management*, *9*(10), 161.

Amofah, O., Gyamfi, I., & Tutu, C. O. (2016). The influence of service marketing mixes on customer choice of repeat purchase of restaurant in Kumasi, Ghana. *European Journal of Business and Management*, *8*(11), 102-112.

Antczak, A., & Sypniewska, B. A. (2017). Personal selling in the service sector as one marketing promotional tool. *Cross-cultural Personal Selling: Agents' Competences in International Personal Selling of Services*, 35-56.

Assefa, E. (2018). Assessment of Marketing Challenges and Opportunities the Case of Selected Pharmaceutical Manufacturing Companies in Ethiopia.

Belch, G. E and Belch, M. A. (2012), Advertising and Promotion. London: McGraw Hill, 9th ed.

Boddewyn, J. J., & Leardi, M. (1989). Sales promotions: Practice, regulation and self-regulation around the world. *International Journal of Advertising*, *8*(4), 363-374.

Boldeanu, D, & Pugna, I. (2014). The Analysis of the Influence Factors Affecting the Performance of Pharmaceutical Companies. Theoretical and Applied Economics, 7(596), 23-42.

Coughlan, M., Ryan, F., & Cronin, P. (2013). Doing a Literature Review in Nursing, Health and Social Care (1st ed.). Los Angeles, USA: SAGE Publications Ltd.

Day, G.S. (2004), Assessing advantage: a framework for diagnosing Competitive superiority", Journal of Marketing, 52(2), 1-20

Dogramatzi, D. (2002), Pharmaceutical Marketing: A Practical Guide. New York: C RC Press. P.269-305.

Ekanem, U. A. (2021). A Critical Analysis of Promotional Mix Element and Organizational Performance in Champion Brewery Plc, Uyo. *European Journal of Business and Innovation Research*, *9*(4), 11-23.

Esmaeillou, Y., Asl, I. M., Tabibi, S. J., & Cheraghali, A. M. (2017). Identifying Factors Affecting the Pharmaceutical Supply Chain Management in Iran. Galen Medical Journal, 6(4), 346-355.

Floor en. Van. Raaij (2006), Marketing communicating strategies. Newbury Park, CA: Sage.

Goyal, S., Priti, J. B. & Ahuja, R. (2022). Green marketing in Indian pharmaceutical market: a review. Journal of Advanced Scientific Research, 13(1).

Grujic, J., Morača, S., & Fajsi, A. (2020). Analysis of Risk Factors in the Channels of Drug Distribution: Professional Perspectives. Sustainability, 12 (11), 4787.

Hajli, M. N. (2014). A study of the impact of social media on consumers. International Journal of Market Research, 56(3), 387-404.

Hanson, C. L., West, J., Thackeray, R., Barnes, M. D. & Downey, J. (2014). Understanding and Predicting Social Media Use Among Community Health Centre Patients: A Cross-Sectional Survey. Journal of Medical Internet Research, 16(11), e270.

Harrington, N. G. (2014). Health Communication: Theory, Method, and Application (1st ed.). NY: Routledge.

Homburg, C., Wieseke, J., & Kuehnl, C. (2010). Social influence on salespeople's adoption of sales technology: A multilevel analysis. Journal of the Academy of Marketing Science, 38(2), 159–168.

Hristova, S., Stevcevska-Srbinoska, D., Mileva, I., & Zafirova, A. (2019). Trade-Off Between Liquidity and Profitability: An Empirical Study of Pharmaceutical Sector in the Republic of North Macedonia. Timisoara Journal of Economics and Business, 12(2), 127 - 148.

Ingram, J. J., Self, D. R., McCullin, R. S., & McKinney, R. (1987). Direct response advertising as an element in the promotional mix. *journal of Direct Marketing*, *1*(1), 50-56.

Islam, M. N., & Khan, M. S. (2019). The Determinants of Profitability of the Pharmaceutical Industry of Bangladesh: A Random Effect Analysis. International Journal of Financial Research

Jaseem, M., Kumar, P., & John, R. (2017). An overview of waste management in pharmaceutical industry. The Pharma Innovation Journal, 6(3), 158-161.

Kasliwal, N. & Bansal, I. (2013). Influence of pharmaceutical promotional tools on doctors' prescribing behavior: An exploratory study. Indian Journal of Marketing, 43(8), 23-34.

Kenton, W., James, M., & Jackson, A. (2023). *Marketing Mix: The 4 Ps of Marketing and How to Use Them. Investopedia*.

Kim, B., Lee, N. S., Wi, J., & Lee, J. (2017). The effects of slack resources on firm performance and innovation in the Korean pharmaceutical industry. Asian Journal of Technology Innovation, 25(3), 387 - 406.

Kim, Y.-H., & Kim, Y.-T. (2020). Determinants of Sustainability Performance in Pharmaceutical Distribution Industry. Journal of Distribution Science, 18(12), 91–100.

Kotler, P and G, Armstrong. 2004. *Marketing: An introduction*. Prentice Hall, Upper Saddle River, New Jersey.

Kotler, P., & Keller, K. L. (2006). *Dirección de marketing*. Pearson education.

Kotler,P& Keller, K. L. (2012). Marketing management 14th Edition

Kumar, S., & Patra, S. (2017). Does promotion mix really help to enhance brand equity: A literature review. *Indian Journal of Commerce and Management Studies*, *8*(2), 80-86.

Lee, C., Ha, B., & Lim, S. (2020). Impact of Informational Justice on Pharmaceutical Enterprises. Journal of Distribution Science, 18(8), 55-64.

Lee, M., & Choi, M. (2015). Analysis of Time-Lag Effect of Research and Development Investment in the Pharmaceutical Industry in Korea. Osong Public Health and Research Perspectives, 6(4), 241 - 248.

Lim, W. M. (2021). A marketing mix typology for integrated care: The 10 Ps. Journal of Strategic Marketing, 29(5), 453-469.

Lui, G. J., Shah, R., & Schroeder, R. G. (2011). Linking work design to mass customization: A socio-technical systems perspective. Journal of Retailing, 37(4), 519–545.

Mbugua, D. M. (2014). Personal selling strategies and performance of pharmaceutical firms in Nairobi. University of Nairobi, Kenya.

McCarthy, E. J. (1978). Basic marketing: a managerial approach.

Merlo, O. (2011). The influence of marketing from a power perspective. European Journal of Marketing, 45(7/8), 1152-1171.

Miller, K., & Rasmussen, A. (2010). War exposure, daily stressors, and mental health in conflict and post-conflict settings: bridging the divide between trauma-focused and psychosocial frameworks. Social science & medicine, 70(1), 7-16.

MOH and MOI (2015). National strategy and plan of action for pharmaceutical manufacturing development in Ethiopia (2015-2025). The Federal Democratic Republic of Ethiopia (Ministry of Health and Ministry of Industry), World Health Organization

MOH, (2021). Health and Health Related Indicators2009 EFY. Federal Democratic Republic of Ethiopia, Ministry of Health, Addis Ababa.

Mohiuddin, M., Rashid, S. F., Shuvro, M. I., Nahar, N., & Ahmed, S. M. (2015). Qualitative insights into promotion of pharmaceutical products in Bangladesh: how ethical are the practices? BMC medical ethics, 16(1),80.

Negash, M and Adamu,A (2017). The Impact of Pharmaceutical Promotion Strategies on Prescribing Behavior of Physicians A Developing Country Experience: Case of Addis Ababa, Ethiopia,9(8)

Nurlanova, N., Satybaldin, A., Brimbetova, N., & Kireyeva, A. A. (2019). Reduction of Economic Disparities in the Regions of Kazakhstan Based on Inclusive Development. Journal of Asian Finance, Economics and Business, 6(2), 299-307.

Pal, B., & Nandy, M. (2019). Innovation and business sustainability (IBS): empirical evidence from Indian pharmaceutical industry (IPI). Artificial Intelligence for Engineering Design, Analysis and Manufacturing, 33(2), 117-128.

Prajapati, D., & Singh, S. (2016). Determination of level of correlation for products of pharmaceutical industry by using modified X-bar chart. International Journal of Quality & Reliability Management, 33(6), 724-746.

Rejikumar, G., Asokan, A. A. & Kumar, G. V. (2018). Pharmaceutical marketing: Directions for customer orientation. Research Journal of Pharmacy and Technology, 11(8), 3283-3289.

Rizvi, S. N. Z., Malik, S., & Zaidi, S. F. B. (2012). Short term and long-term impact of sales promotion on organizations' profitability: A comparative study between convenience and shopping goods. *International Journal of Business and Management*, *7*(5), 247.

Shabaninejad, H., Mehralian, G., Rashidian, A., Baratimarnani, A., & Rasekh, H. (2013). Identifying and prioritizing industry-level competitiveness factors: evidence from pharmaceutical market. DARU Journal of Pharmaceutical Sciences, 22(35), 35-45.

Shakib,N.(2017). Different effective promotional materials and strategies of SQUARE Pharmaceuticals Limited‖ (Internship Report transmittal). BRAC Business School, BRAC University.

Shirazi, P. A. (2007), "Contribution, Challenge, or Threat? Dutch Psychiatrists' Attitudes and Opinions toward Pharmaceutical Promotion". Master's thesis. Universiteit Van Amsterdam.

Stone, B., & Jacobs, R. (2004) Successful direct marketing methods, Chisinau: ARC Publishing house,7th edition

Teshale, C. (2018). Determinants of Sales Force Performance: The Case of Multinational Pharmaceutical Companies operating in Ethiopia (Doctoral dissertation).

Tyagi, S., & Nauriyal, D. K. (2017). Firm level profitability determinants in Indian drugs and pharmaceutical industry. International Journal of Pharmaceutical and Healthcare Marketing, 11(3), 271-290.

Weldegebriel, G. (2011). An Evaluation of Promotional Practices for Private Colleges: The Case of Addis Ababa Medical College and CPU College. Addis Ababa University.

WHO, (2021). WHO Operational package for assessing, monitoring, and evaluating country pharmaceutical situations: Guide for coordinators and data collectors.

Appendixes

Appendix-A: Descriptive statistics

sex of the respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	female	168	44.7	44.7	44.7
	male	208	55.3	55.3	100.0
	Total	376	100.0	100.0	

age of the respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30	84	22.3	22.3	22.3
	31-40	131	34.8	34.8	57.2
	41-50	123	32.7	32.7	89.9
	51-60	38	10.1	10.1	100.0
	Total	376	100.0	100.0	

education level of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diploma	56	14.9	14.9	14.9
	BSC/BA	157	41.8	41.8	56.6
	MSC/MBA	134	35.6	35.6	92.3
	PhD	4	1.1	1.1	93.4
	other	25	6.6	6.6	100.0
	Total	376	100.0	100.0	

current position in the organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sales person	7	1.9	1.9	1.9
	middle level manager	14	3.7	3.7	5.6
	top level of manager	8	2.1	2.1	7.7
	owner	260	69.1	69.1	76.9
	other	87	23.1	23.1	100.0
	Total	376	100.0	100.0	

Years of experience in the current position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1	66	17.6	17.6	17.6
	1-3	139	37.0	37.0	54.5
	4-6	109	29.0	29.0	83.5
	>6	62	16.5	16.5	100.0
	Total	376	100.0	100.0	

Appendex-B; Correlation Analysis

Correlations

Control Variables			personal_sale	sales_promotion	adverstisment	public_relation	direct_marketing
orgaizational_performance	personal_sale	Correlation	1.000	.210	-.317	-.229	-.102
		Significance (2-tailed)	.	.000	.000	.000	.047
		df	0	373	373	373	373
	sales_promotion	Correlation	.210	1.000	.169	.342	.359
		Significance (2-tailed)	.000	.	.001	.000	.000
		df	373	0	373	373	373
	adverstisment	Correlation	-.317	.169	1.000	.236	.260
		Significance (2-tailed)	.000	.001	.	.000	.000
		df	373	373	0	373	373
	public_relation	Correlation	-.229	.342	.236	1.000	.245
		Significance (2-tailed)	.000	.000	.000	.	.000
		df	373	373	373	0	373
	direct_marketing	Correlation	-.102	.359	.260	.245	1.000
		Significance (2-tailed)	.047	.000	.000	.000	.
		df	373	373	373	373	0

Appendix-C; regression analysis

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	direct_marketing, personal_sale, public_relation, adverstisment, sales_promotion[b]	.	Enter

a. Dependent Variable: orgaizational_performance

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.584[a]	.341	.332	.51630	.341	38.301	5	370	.000

a. Predictors: (Constant), direct_marketing, personal_sale, public_relation, adverstisment, sales_promotion

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.049	5	10.210	38.301	.000[b]
	Residual	98.630	370	.267		
	Total	149.678	375			

a. Dependent Variable: orgaizational_performance

b. Predictors: (Constant), direct_marketing, personal_sale, public_relation, adverstisment, sales_promotion

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.808	.476		1.698	.090
	personal_sale	.373	.057	.331	6.581	.000
	sales_promotion	.134	.078	.089	1.706	.089
	adverstisment	.293	.070	.195	4.201	.000
	public_relation	-.375	.069	-.259	-5.420	.000
	direct_marketing	.343	.066	.248	5.196	.000

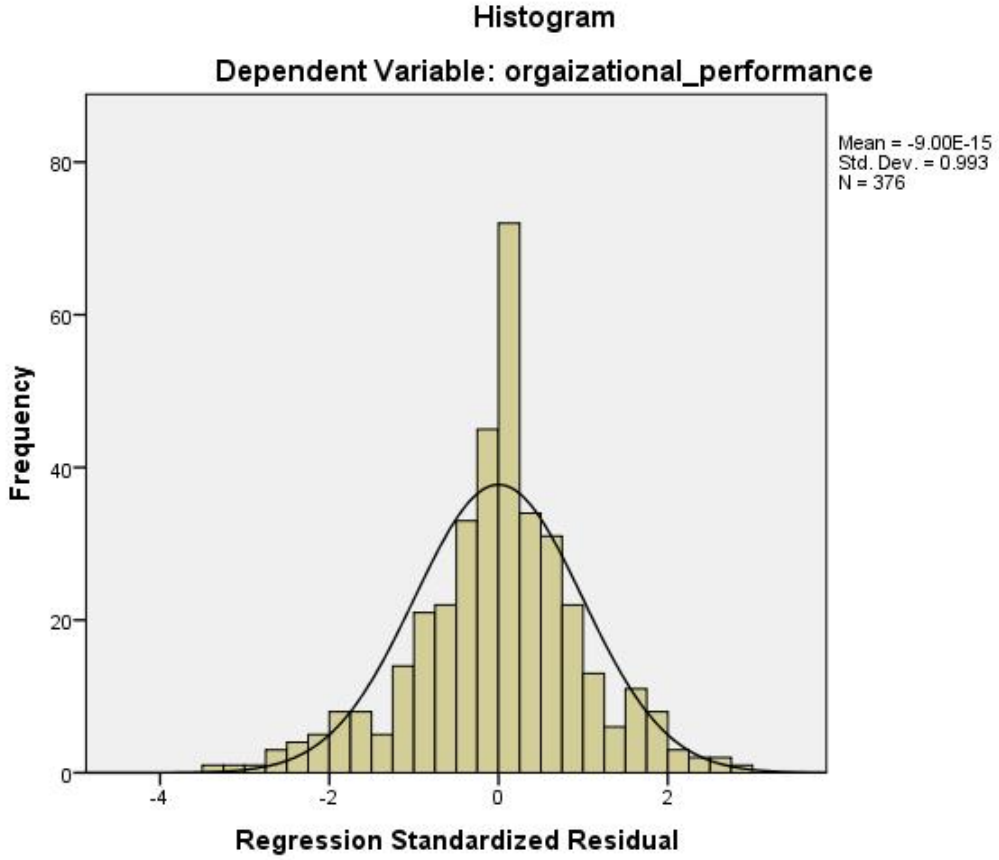
a. Dependent Variable: orgaizational_performance

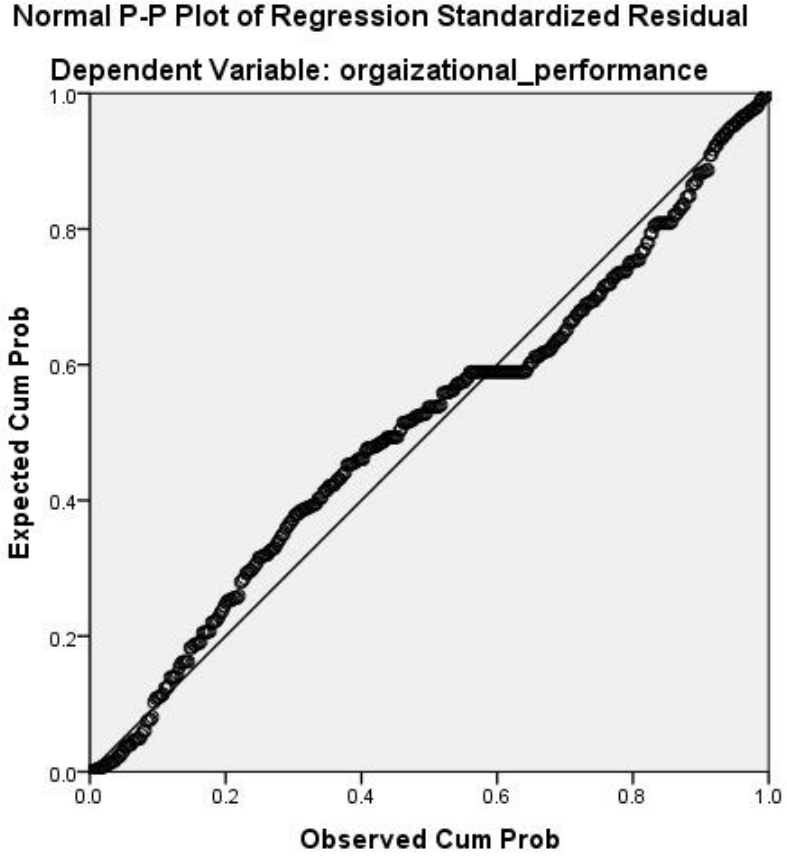
Appendix-D; Post-estimation test results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.808	.476		1.698	.090		
	personal_sale	.373	.057	.331	6.581	.000	.704	1.421
	sales_promotion	.134	.078	.089	1.706	.089	.648	1.543
	adverstisment	.293	.070	.195	4.201	.000	.830	1.204
	public_relation	-.375	.069	-.259	-5.420	.000	.779	1.284
	direct_marketing	.343	.066	.248	5.196	.000	.782	1.279

a. Dependent Variable: orgaizational_performance


Histogram
Dependent Variable: orgaizational_performance
Mean = -9.00E-15
Std. Dev. = 0.993
N = 376
Frequency
80
60
40
20
0
-4
-2
0
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: orgaizational_performance
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob

Appendix-E; questionnaires



ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF GRADUATE STUDIES

MASTERS OF BUSINESS ADMINISTRATION

Dear respondents, I am undertaking research to examine the impact of marketing mix on the business performance in the case of the multinational pharmaceutical companies, in Addis Ababa Ethiopia. The research is conducted as a requirement for the partial fulfillment of the award of the degree of Masters of Business Administration (MBA) at Addis Ababa University. All responses provided will be treated confidentially and is used only for academic purposes. You will not be held responsible for anything arising thereof.

Thank You in Advance

For further inquiry I will be available with the following address.

Name: Aster Eyasu

Tel; +251911766887

Email:

Section 1: Background information of the respondent

1. Name of the firm …….
2. Gender Male ☐ Female ☐
3. Age: 21-30 years ☐ 31-40 years☐ 41-50 years☐ 51-60 years☐ above 60 years ☐
4. Level of education: Diploma ☐ Degree ☐ Masters ☐Other, please specify.....
5. Your current position in the organization: Sales person ☐Middle level manager ☐Top level manager ☐ Owner ☐ other, please specify.....

6. Years of experience in the current position: < 1 year ☐ 1-3 years ☐ 4-6 years ☐ > 6 years ☐

SECTION 2: On a scale of 1-5. How would you rank the effectiveness of the following promotion mix elements on sales by your company? Using the 5 points Likert's scale where (1-Strongly Disagree (SD), 2 -Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree (SA))

	SD (1)	Disagree (2)	Neutral (3)	Agree (4)	SA (5)
i) Personal Selling:					
Medical representatives					
Group presentations					
Product demonstrations					
Pharmacist's advice					
Salesperson (order taker)					
Support through new technologies (electronic detailing)					
(ii) Sales Promotion:					
Premium and gifts (Branded gifts e.g. pens, calendars)					
Sampling (Free medical samples)					
Fair &. trade show (pharmaceutical trade fairs)					
Entertainment (Doctors nights. Distributors dinner parties)					
Continuity programs (Continuous medical educations)					
Bonus (Cash discounts, product discounts)					
Sponsorship (Doctors travel expenses, trophies)					
(iii) Advertising;					
Television					

Radio					
Branded Posters & leaflets					
Directories (dedicated pages for your company)					
Point of purchase display (Floor and wall mats)					
Company Symbols and logos					
Branded Brochures and booklets					
(iv) Public Relations					
Speeches (By leading doctors e.g. Physicians, Surgeons)					
Seminars for doctors					
Charitable donations (Money, free medicine)					
Publications in medical journals					
Community relations (corporate social responsibility)					
Company magazines					
(V)Direct marketing					
Catalogs (product lists, price lists, new introductions)					
Mailings (Individuals and groups of customers)					
Telemarketing (doctors, distributors, retailers, hospitals)					
Fax mail (doctors, distributors, retailers, hospitals)					
E-mail (doctors, distributors, retailers, hospitals)					

Section 3: On a scale of 1-5. How would you rank the extent of use of the following promotion mix elements by your company? (1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree)

Items	SD (1)	Disagree (2)	Neutral (3)	Agree (4)	SA (5)
Promotional Mix elements					
Advertising					
Sales promotion					
Personal selling					
Public Relation and publicity					
Direct Marketing					

Section 4:

a) Promotional mix elements and organization performance

To what extent has the performance of your pharmaceutical firm improved as a result of adopting Promotional mix elements? Use 1-Strongly Disagree 2-Disagree, 3-Neutral 4-Agree, 5-Strongly Agree

Items for performance	SD (1)	Disagree (2)	Neutral (3)	Agree (4)	SA (5)
Increased financial Performance					
Helps for increased volume of sales					
Help for improved profit margin					
Help for faster movement (turnover) of drugs					
Help for increased pharmaceutical firm education and sponsorship of events					
Help for increased customer retention					

Section 4

b) Effects of promotion performance in the pharmaceutical industry

What is your level of agreement with the following statements regarding effect of promotion on performance in the pharmaceutical industry? Circle using a scale of 1to5 where1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree

	Performance items	SD (1)	Disagree (2)	Neutral (3)	Agree (4)	SA (5)
1	Profitability of my company has increased since we start importing					
2	We do all efforts retaining existing customers					
3	Our follow ups in assisting customers to find products is very high					
4	Since we start importing, we have reached our sales targets					
5	We regularly exercise product demonstrations to enhance product					