THE EFFECT OF MARKETING INFORMATION ON SALES PERFORMANCE: A CASE OF B.G.I. ETHIOPIA HAWASSA PLANT, HAWASSA, ETHIOPIA.

A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES, HAWASSA UNIVERSITY IN PARTIAL FULFULLMENT OF THE REQUIRMENTS FOR THE DEGREE OF MASTERS OF BUSINESS ADMINSTRATIONSPECIALIZATIONINMARKETINGMANAGEMENT

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HAWASSA UNIVERSITY

COLLEGEOFBUSINESSANDECONOMICS

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DECLARATION

I, Tamirat Tafesse, hereby declare that this research project entitled with "The effect of marketing information system on sales performance" .A case of B.G.I. Ethiopia Hawassa Plant, Hawassa Ethiopia under the supervision of BerhanuBorji (Professor) and Ms. AbiyotTefera(MA) is my authentic work and that all sources of materials used for this research project have been duly acknowledged. And it has been submitted in partial fulfillment of the requirements for MBA at the Hawassa University and is deposited at the University Library to be available to borrowers under rules of the library. I seriously declare that this research project is not submitted to any other institution anywhere for the award of any academic degree, diploma, or certificate. Brief quotations from this research project are allowable without special permission provided that accurate acknowledgement of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the School of Graduate Studies when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

Name; Tamirat Tafesse Endale

Signature Date

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ADVISORS' APPROVAL SHEET

This is to certify that the thesis entitled "**The effect of marketing information system on sales performance:A caseof B.G.I. Ethiopia Hawassa Plant,Hawassa, Ethiopia** submitted in partial fulfillment of the requirements for the Master's degree of Business Administration specialization in marketing management, the Graduate Program, department of Management and to be carried out by **Tamirat Tafesse Endale.** ID. No GPMaMW/0039/14, under my supervision. Therefore I recommend that the student has fulfilled the requirements of thesis and hence hereby can submit the thesis to the Department.

Principal Advisor	Signature	Date
Co-Advisor	Signature	Date

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EXAMINERS' APPROVAL SHEET

We, the undersigned, members of the Board of Examiners of the final open defense by **Tamirat Tafesse Endale** have read and evaluated his/her Research project entitled "**The effect of marketing information system on sales performance. Acase of B.G.I. Ethiopia Hawassa Plant, Hawassa, Ethiopia"**, and examined the candidate. This is, therefore, tocertifythattheResearchProjecthasbeenacceptedinpartialfulfillmentoftherequirementsfor the degree **Master of Business Administration (Specialization in Marketing Management)**.

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SGS Approval	Signature	Date

Final approval and acceptance of the thesis is conting entupon the submission of the final copy of the thesis to the School of Graduate Studies (SGS) through the Department/School Graduate Committee (DGC/SGC) of the candidate's department.

DEDICATION

This thesis work is dedicated to my beloved Mother Asnakech Kenea and friend YirguTafesse (Abule) whom gone Addis Abeba in the last 19 consecutive years that deserves to see my academic success. My Friend, do you remember your advice to me? That kept me going; thank you, your wish to me has completed even you left from me.

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LIST OF ABRIVATION AND ACRONYMS

ANOVA –Analysis of Variance

B.G.I-Brasseries et Glaciers Internationals

DMS-Decision Making System

DSS-Decision Support System

DV-Dependent Variable

HU-Hawassa University

IRS-Internal Recording System

IT- Information Technology

IV-Independent Variable

MDSS-Marketing Decision Support System

MI-Marketing Intelligence

MKIS-Marketing Information System

MR-Marketing Research

MRA-Multiple Regression Analysis

OLAP-On-Line Analytical processing

PPS-Probability Proportional to Size

SP-Sales Performance

SPSS-Statistical Packaging for Social Science

VIF-Variance Inflation Factor

ABSTRACT

The purpose of this study Is to identify the effect of marketing information system on sales performance in case of B.G.I Ethiopia, Hawassa Plant. The study was done from March 2023 to March 2024. To accomplish the objectives of the study both primary and secondary data were used. The study adopted quantitative research approach with theuseofsurveyquestionnairetoelicitdatafromthetargetpopulation.231sampleswas selected from543respondents. More over stratified sampling technique was used to select 231 samples and purposive sampling was used to distribute 231 questionnaires.. Finally 218 samples were used for final analysiswith96.15% of questionnaire response rate. Descriptive as well as explanatory research design was used to test the hypothesis developed. Descriptive and inferential statistical tools such as; Frequency tables, percentages, Means, standard deviations, Pearson correlation and multiple linear regression analysis were used for data analysis with the support of SPSS version 26 to analyze the core data. The mean score of measurement variables indicates that the respondents were answered as the firms sales performance is strong and as all sales forces are doing well.. This shows that there is a sales performance in the selected case areas.. The correlation results revealed that Marketing Information system has positive and significant relationship with all independent variable included in the study. Multiple regression model explained 80.2% of the variance in sales performance while the collective marketing information system variables included in this study was found to be significant (P<0.000).) All of the independent variable included in study were statistically significant (either at p<0.05or p<0.01). The most important finding is that marketing research (p<0.01), Internal recording system (p<0.05), Marketing decision support system (p<0.05), and Marketing intelligence (p<0.05) are the variables included in the study. Based on the findings, it was recommended that the stakeholders and managers of the organization should primarily focus on Doing Market research every time as a usual, having strong internal recording system, having marketing decision support system and strongly developing marketing intelligences for having effective sales performance.

KEY WORDS: Sales performance, Marketing Research, Internal recording system, Marketing Intelligence, Marketing decision support system

CHAPTER ONE

1. INTRODUCTION

This chapter is an introductory chapter which includes background of the study, statement of the problem, objective of the study, research hypothesis, and significance of the study, scope of the study, operational definitions of terms and organization of the study.

1.1. Background of the Study

Successful business strategy depends on successful decision-making. Marketing strategies are the means by which marketing objectives are achieved (McDonald, 1996). Marketing strategy development is concerned with devising the means by which the company can effectively differentiate itself from its competitors, by capitalizing on its strengths to provide superior value to its customers over time. The purpose of marketing strategy development is to establish, build, defend, and maintain competitive advantage (Lieve, 2016)

Marketing information is the blood vessel of marketing process; marketing decision won't be taken in the absence of marketing information. Marketing decisions are affected by many internal and external environmental variables, so the marketing decision maker needs a great deal of information related to these variables, to predict their directions and their expected effects on the internal activities of the organization and the market and in order to make rational marketing decisions in an uncertainty environment facing the marketing administration. The marketing success in the organization depends basically on the availability and the accuracy of marketing information from its multiple sources (Sultan, 2017).

Marketing information system plays an important role in raising the efficiency of economic performance to the companies in highly competitive markets, through providing the necessary information for the various administrative levels. The success of the marketing process depends to a large extent on the marketing information system and the success in each elements of this system. Marketing information system has been needed by marketing management for the purpose of identifying, measuring, and forecasting marketing opportunities, besides, analyzing of market segments. Marketing information system consists of people, facilities, and integrated procedures that used to provide management with accurate and regulated information about the environment-related marketing, which helps

decision makers to hunt opportunities and build strategies and marketing plans (Kotler, 2010).

Marketing activities are directed toward planning, promoting, and selling goods and services to satisfy the needs of customers and the objectives of the organizations; marketing information systems (MKIS) support decision making regarding to these activities (Harmon, 2013).

MKIS is a continuing and interacting structure consist of people, equipment and procedures designed to gather, sort, analyze, evaluate and distribute needed, timely and accurate information to marketing decision makers; it begins and end with information users-marketing managers, internal external partners, and others who need marketing information (Kotler& Armstrong, 2010).

The ultimate purpose of MKIS is to facilitate mangers mission to make decision at all levels of operations based upon the information flows. Information is the essential ingredient of management and decision-making for both external and internal factors. Higher level of management is concerned with external factors such as new and proposed government legislation, changes in the market, Economic Status, competitor's actions, etc. At lower levels, external influences are considered less important. A value of information can be computed for decisions, which fits these frameworks of analysis (Varma & Agarwal, 2014).

The role of the MKIS is to assess the manager's information needs, develop the needed information, and distribute the information in a timely fashion to marketing managers (Kotler & Armstrong, 2010)

The decision is the point at which plans, policies and objectives are translated into concrete actions. Planning leads to sound decision-making and that implies the selection from alternatives course of actions. Decision-making is the core of planning, for instance, choosing of objectives, policies, procedures, programs, rules, strategies and tactics etc., require the entire process of decision-making. Therefore, the quality of marketing management decision is linked with the quality, quantity, adequacy and speedy availability of data (William, 2014).

Thus this paper has been conducted focusing on the effect of marketing Information System on sales performance with reference to BGI Ethiopia, Hawassa Plant.

1.2. Statement of the Problem

The ultimate purpose of MKIS is to facilitate mangers mission to make decision at all levels of operations based upon the information flow. Information is the essential ingredient of management and decision-making for both external and internal factors. Higher level of management is concerned with external factors such as new and proposed government legislation, changes in the market, economic status, and competitor's actions. At lower levels, external influences are considered less important. A value of information can be computed for decisions, which fits these frameworks of analysis (Kotler& Armstrong, 2008).

Market information includes all facts, estimates, opinions and other information used in marketing decisions, which affects the marketing of goods. Goods are produced or purchased for resale in anticipant of demand. Therefore, the success of a producer or a merchant depends upon the knowledge of the demands of his product or products in the market. In the modern method of marketing it is necessary for a manufacturer to possess accurate information on the following points:

Accurate information about the market may help in sound sales forecast and to plan buying policies on the basis of such sales forecast. If risk is minimized, solution of the problem of market financing is made easier. Smaller amount of capital would be required for stocks, expenses of selling may be reduced and loans can be optioned and credit extended more freely. Further, accurate market information may be helpful in price-stabilization because with the correct knowledge of demand, production may be so planned that the equilibrium of demand and supply is least disturbed. Thus, market information helps a manufacturer to create, retain and expand the market for his products. Brien defined MKIS as "A structured, interacting complex of persons, machines and procedures designed to generate an orderly flow of pertinent information collected from both intra and extra-firm sources for use as the bases for decision making in specific responsibility areas of marketing management (Pride & Ferrell, 2006). Many studies have been conducted on effect of marketing information system on sales performance. According to Shaker and Abdel (2014), the roles for computer based support for developing marketing strategy present a real challenge to individual computer-based techniques and technologies in the dynamic environment Sukri and Mohsen (2015) conducted a study on the role of information systems in organizations. They found that the management information system focus only on fully structured task or routine for decision. Viveket. al. (2014) conducted a study on application of management information system in

marketing management. Also Amir H. et al. (2013) examined marketing informational system and its role on improving decision making for marketing managers in different organizations and corrects application of information on decision making process. Mohammad and Khalid (2020) study the impact of Marketing Information Systems (MKIS) on Decision Making Systems (DMS) at banks sectors. Navadgi G.M. (2022) Study findings on marketing information system (MKIS) revealed that there is no study has been conducted on the same problem in the organization at BGI Ethiopia, Hawassa Plant. The study therefore filled the gap by examining the effect of Marketing Information Systems on sales performance with reference to BGI Ethiopia, Hawassa Plant.

1.3. Objectives of the Study

1.3.1. General Objective

The general objective of the study is to examine the effect of marketing information systems on sales performance in case of BGI Ethiopia Hawassa Plant

1.3.2. Specific Objectives

The specific objectives of the study are

- To examine the effect of internal records on sales performance at BGI Ethiopia, Hawassa Plant
- To examine the effect of Marketing Intelligence on sales performance at BGI Ethiopia, Hawassa Plant
- To examine the effect of Marketing Research on sales performance at BGI Ethiopia, Hawassa Plant
- To examine the effect of Marketing Decision Support System on sales performance at BGI Ethiopia, Hawassa Plant

1.4. Hypothesis of the study

The following hypothesis were tested by the study

- HO1: Internal Records has no statistically significant effect on sales performance.
- HO2: Marketing Intelligence has no statistically significant effect on sales performance.
- HO3: Marketing Research has no statistically significant effect on sales performance.

- HO4: Marketing Decision Support System has no statistically significant effect on sales performance.

1.5. Significance of the Study

The findings of this study expected to provide a lot of advantage for different organizations. It gives insights for organizations and practitioner about the effect of marketing information system on sales performance. It serves as a stepping stone for those who want to make further study on this topic and helps students and practitioners as a reference material to get deep insight with regard to marketing information systems and sales performance. It also informs the company gaps in its practice of marketing information systems and sales performance thereby to make the necessary adjustment and the partial fulfillment of the requirement for the award of masters of business administration in marketing management.

1.6. Scope of the Study

Geographical: The scope of the study is limited only in BGI Ethiopia, Hawassa Plant which is located in Hawassa. This study is also limited to the company's employee (Managerial & Non-Managerial).

Conceptual: The study focuses on the effect of marketing information systems (Internal Records, Marketing Intelligence, Marketing Research and Marketing Decision support system on sales performance in BGI Ethiopia, Hawassa Plant.

Time: The study was conducted from June 2023 to March 2024 academic year.

Methodologically the study employed both the descriptive and explanatory research design. It also used both quantitative and qualitative approaches. The study target population was managerial and non-managerial staff and the data was collected from primary and secondary source.

1.7. Operational Definition of Key Terms

Marketing Information System: is defined as a computer based system that works in conjunction with other functional information systems to support the BGI's management in solving problems that relate to marketing the firm's products.

Internal Records (Data Bases): is the data collected in the form of database about the daily operations of the companies that produce medicines (under study), and includes the necessary

data records to obtain information regarding the scale of activity and the current performance in sales, cost, inventory and cash flow.

Marketing Intelligence: is the means by which management can keep in contact with new knowledge of competitors emerging conditions.

Marketing Decision Support System: A decision support system (MDSS) is an integrated set of computer tools allowing a decision maker to interact directly with computer to retrieve information useful in making semi structured and unstructured decisions.

Market Research: Is the process of collecting and analyzing of data for the purposes of identifying and resolving problems related to companies marketing services and marketing opportunities.

1.8. Organization of the Thesis

The study contains five chapters. Each and every chapter's subtopic is described here below

Chapter I: Introduction and background of the Study, statement of the problems, objectives of the study, and hypotheses of the study, significance of the study, and scope of the study, limitation of the study and organization of the study. Chapter II: Review of Literature: This chapter deals with the review of literature. The literature survey includes the international literature and empirical studies. Chapter III: Research Methodology: This chapter tends to discuss about description of study area, Research design and strategy, Target population of the study, sample size and sampling techniques, methods of data collection, methods of data analysis, Test of Reliability and validity ethical consideration and operational definition of the variable. Chapter IV: Result and Discussion: empirically analyze the collected data in order to arrive at finding which in turn be inferred or generalized to the entire population. Data should be analyzed to find out relationships or differences between variables. Chapter IV: Summary, Conclusion and Recommendations: This chapter presents summary of the study, major findings and Recommendations.

CHAPTER TWO:LITERATURE REVIEW

2. Introduction

This chapter of the thesis is deal about the review of related literature. It consists of the concept of marketing information system, components of marketing information system, theoretical literature and conceptual framework of the study

2.1. The Concept of Marketing Information Systems

Marketing Information System (MKIS) is "A structured, interacting complex of persons, machines and procedures designed to generate an orderly flow of pertinent information collected from both intra and extra-firm sources for use as the bases for decision making in specific responsibility areas of marketing management (Brien, 2009)

MKIS is: "A marketing information system is a continuing and interacting structure of people, equipment and procedures designed to gather, sort, analyze, evaluate and distribute pertinent, timely and accurate information for use by marketing decision makers to improve their marketing planning, execution and control (Kotler and Armstrong, 2010).

Kotler suggests that the organization should design the marketing information system in a way that reconciles what executives would like to have, what executives really need and what is economically feasible to offer, with the information being precisely related to the major decisions which marketing manager have to make.

According to Berson (2014) marketing information system is more comprehensive than marketing research. "A marketing information system involves broader and more inclusive activity than marketing research. It includes: "determining specifying the data needed, the generation of this information by means of marketing research; distribution cost, analysis, or some other tool, and then processing of these data. The marketing managers, in order to carry out analysis, planning, implementation and control responsibilities need information about developments in the marketing environment. The role of the MKIS is to assess the manager's information needs, develop the needed information, and distribute the information in a timely fashion to marketing managers (Kotler and Armstrong, 2008). In the words of Adere Lee "A marketing information system or marketing intelligence systems are defined as an interacting, continuing, future-oriented structure of people, equipment and procedure designed to

generate and process an information flow which can aid business executives in the management of their marketing programs (Ader Lee, 2008).

Marketing information system plays an important role in raising the efficiency of economic performance to the companies in highly competitive markets, through providing the necessary information for the various administrative levels. The success of the marketing process depends to a large extent on the marketing information system and the success in each elements of this system. Marketing information system has been needed by marketing management for the purpose of identifying, measuring, and forecasting marketing opportunities, besides, analyzing of market segments. Marketing information system consists of people, facilities, and integrated procedures that used to provide management with accurate and regulated information about the environment-related marketing, which helps decision makers to hunt opportunities and build strategies and marketing plans (Kotler, 2016).

Despite the fact, that there are large and variety numbers of marketing information system definitions, but all of them are focused in one sense which is: the marketing information system is a structure composed of personnel, equipment, that ensuring the flow of internal and external information, which allows the spread and control of the organization's external environment, and the rationalization of marketing decisions (ibid).

2.2. Components of Marketing Information Systems

MKIS design is important since the quality of marketing information system has been shown to affect the effectiveness of decision- making (Jobber and Fahy, 2006). The MKIS comprises the following four elements:

2.2.1. Internal Records (Data Bases)

Many companies build extensive internal data base, electronic collections of consumers and market information obtained from data source within the company network. Marketing managers can readily access and work with information in the data base to identify marketing opportunities and problems, plan programs, and evaluate performance (Kotler and Armstrong, 2008). Internal data bases usually can be accessed more quickly and cheaply than other information sources (Pride and Ferrell, 2006).

2.2.2. Marketing Intelligence

Marketing intelligence (MI) systems increasingly provide the data that drivers both strategic and tactical decision for enterprise. Many businesses have already invested heavily to aggregate data from diverse system and applications in order to create a whole-enterprise view to fully reflect the daily state of business, as well as support more effective, informed decisions (Jazdtech, 2010). A marketing intelligence system is a set of procedures and data sources used by marketing managers to sift information from the economic and business environment that they can use in their decision making (Pride and Ferrell, 2006).

2.2.3. Marketing Research

Marketing research is a proactive search for information to solve a perceived marketing problem; marketing research is the systematic and objective identification, collection, analysis, dissemination, and use of information and solution of problems and opportunities in marketing The American Marketing Association formally defined marketing research as a function that links the consumer, customer, and public to the marketer through information-information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process (Malhotra N. K, 2007).

Organizations engage in marketing research for two reasons: to identify and to solve marketing problems. This distinction serves as a basis for classifying marketing research into two main parts. The first one is problem identification research; market potential research, market share research, image research, market characteristics research, sales analysis research, forecasting research, and business trends research. The second one is problem-solving research; segmentation research, product research, pricing research, promotion research, and distribution research (Malhotra N. K, 2007).

2.2.4. Marketing Decision Support System

A decision support system (MDSS) is an integrated set of computer tools allowing a decision maker to interact directly with computer to retrieve information useful in making semi structured and unstructured decisions (Power, 2002).

A marketing decision support system (MDSS) is an interactive computer system that is easily accessible to, and operated by non-computer specialists to assist them in planning and

decision-making functions. While MDSSs may differ in their emphases on data-access and modeling functions, there is an overriding emphasis in all such systems on user accessibility to data for decision-making (Power, 2002). This decision-making applicability permits managers to simulate problems using formal mathematical models and to test the outcomes of various alternatives for reaching the best possible decision (Bernard, 2011).

The term decision support system refers to a class of systems, which support the process of making decision MDSS allow the decision maker to retrieve data and test alternative solutions during the process of problem solving. The meaning of MDSS is based on following assumptions about the role of the computer in effective decision-making (James, 2014).

The MDSS can provide analytical models for forecasting, simulation, and optimization. DSS tools include simple spreadsheets such as Excel, statistical analysis packages such as SPSS and SAS, on-line analytical processing (OLAP) tools, data mining applications, and neural networks. The MDSS provides the user with the ability to explore multiple options.

2.3. The Concept of Decision Making

Decision making is a conscious human process, particularly a course of action from among a set of possible alternatives. To decide means to come to a conclusion or resolution, decision-making defined as the "conscious and human process, involving both individual and social phenomenon based upon factual and value premises, which concludes with a choice of one behavioral activity from among one or more alternatives with the intention of moving toward some desired state of affairs" (Fremont, et, al 2020)

Decision making is the selecting of action from among alternatives to achieve a specific objective or solve specific problem. The art of decision-making provide us a variety of approaches, methods and techniques helpful and useful for making high quality of decision. A decision maker, as an individual, or as a member of formal organization with his own philosophy and perception of the organization, selects for optimizing values within the constraints imposed by the organization (Varshney, 1997).

Decision making is the "conscious and human process, involving both individual and social phenomenon based upon factual and value premises, which concludes with a choice of one behavioral activity from among one or more alternatives with the intention of moving toward some desired state of affairs". It represents a course of behavior or action about what must or

must not be done. Three aspects of human behavior are involved in decision making: cognition, activities of the mind associated with knowledge; the action of the mind implied by such words as willing, desire, and a version, and the aspect of mind associated with emotion, feeling, mood and temperament. All these factors go into decision-making. Thus, decision-making is defined as the selection of the one course of action. It is a choice making activity and the choice determines our action or in action (Donald, 2016).

2.3.1. Types of decision

There are different types of decision. Decisions are typically characterized as unstructured, semi-structured and structured (James, 2014).

2.3.1.1. Unstructured Decisions

The unstructured decision involves decision situations where it is not possible or desirable to specify in advance most of the decision procedures to fellow. Many decision situations in the real world are unstructured because they are subjected to too many random or changeable events or involve too many unknown factors or relationships. It is occurs when the relevant parameters as well as the influencing relationships are unknown. The manager does not know the information required. The information system can be of no help to the manager under this type of situation. For unstructured decisions cost system, sales and production R&D planning etc., techniques can be used (James, 1998).

2.3.1.2. Semi Structured Decisions

Semi-structured decisions occur in an environment where the relevant parameters are mostly known and where influencing relationships are suspected or are approximately known. In such cases the MIS can provide assistance to the decision maker through provision of information. For semi-structured decisions, e.g., production, scheduling, cash management, overall budget, new product planning, etc., techniques can be used (James, 1998).

2.3.1.3. Structured Decisions

Structured decisions involve situations where the procedures to follow when a decision is needed can be specified in advance. Structured decisions are those where both the relevant parameters and relationships are known. Any decision process that can be defined in a procedure and issued to any organization is an example of structured process. For example account receivable inventory control, the reorder point; determination of the economic order

quantity, short-term budgeting and the safety stork and stock are structure decision system provides analyses of determination to assist in decision-making. The structured decisions can be automated and can be computerized. The objectives of an MIS is to ensure that all the structured decisions are computer generated and the managers need not spend much time in making structured decisions (James, 2014).

2.3.2. Information Systems and Decision Making

The relationship between information systems and decision making is a strong one. The availability of information in large quantities means power, provides organizational options, and an effective decision maker can determine the best options at a tremendous speed, but sometimes the decision maker cannot obtain information due to lack of availability or lack of access. Because the prices and the cost of collection is very high, the less information the greater the ambiguity and increased the degree of risk and the increased risk of non-decision (Ajayi, I. A. and Omirin F. F., 2007).

But after the adoption of the modern scientific method in management, the decision is no more made by intuition or guessing or even based on the experience of the manager, but depends on the exact search which could not be achieved except by collecting data on all aspects of the problem then analyzing, interpreting and translating it into reality to help making the decision (Harrison, D. et. al., 2016)

2.4. Theoretical Literature

The art of decision-making provide us a variety of approaches, methods and techniques helpful and useful for making high quality of decision. A decision maker, as an individual, or as a member of formal organization with his own philosophy and perception of the organization, selects for optimizing values within the constraints imposed by the organization. Some of these theories are as under (Varshney, 1997).

2.4.1. Probability theory

Probability is defined as relative frequency. The role played by it in decision-making is that of a substitute for certainty. In an organizational problem where possibility can be substituted for unknowns, the margin of error in the solution is limited.

2.4.2. Linear Programming

This technique is used in finding the solution for optimizing an objective function under certain constraints. The technique is concerned with optimum allocation of limited resources for optimizing a given function.

2.4.3. Simulation

In simulation a series of random numbers are generated and stored by a computer. It is a quantitative technique used for evaluating alternative courses of action based upon facts and assumptions with a computerized mathematical modal in order to represent actual decision-making under conditions of uncertainty.

2.4.4. Mathematical Decision Theory

It is not designed to show decisions are actually made. Rather, it is design to help the decision maker who is interested in maximizing profit in a given situation, to lie out the alternatives in such a way that he sees the risks and the consequences more clearly. With the development of operations research and computers for handling complex mathematical models, this approach is commonly used by large organizations where decision-making problem is very complex (Nauhria, and Rajnish, 1995)

2.5. Empirical Literature

Many previous researches tried to study the impact of information systems on decision making to help decision-makers in the organizations to make the right decision and achieve the organization's goals (Aina et al., 2016).

Navadg G.M. (2022) conducted a study on "Marketing Information System (MKIS) A Need for Effective Marketing Decisions". The objective of this study is to know the steps of Marketing Information System and highlight the need of Marketing Information System. The study is descriptive in nature. Secondary sources of literature have been used for the development of the concept. This study sought that marketing information system helps managers to recognize marketing trends. Also marketing information system provides the information necessary to develop marketing strategy.

A research was done by Thair A.H. and Tahir S.T. (2020), on "The Effect of the Marketing Information System (MKIS) on Decision Making: an applied study on a Saudi Telecommunication Company." The study aims at measuring the effect of the Marketing

Information System (MKIS) on decision making and highlighting the significance and importance of using the MKIS in decision-making. The empirical research method represents an expert assessment that is based on given questionnaires to voluntarily and randomly selected respondents. The correlation analysis is employed to test the validity of the procedure. The findings that are obtained from the empirical study confirm positive relationships among the top management that is adopted by a number of MKIS elements and the success of an organizational decision making.

According to a study conducted by Mohammad and Khaled (2020) on "Impact of Marketing Information Systems on Decision-Making Systems at Islamic International Arab Bank in Jordan". marketing information systems have a significant influence on decision making systems of bank management.

As a research conducted by Şukri Adaand Mohsen Ghaffarzadeh. (2015) the role of management information systems are crucial in achieving organizational goals. Initially the importance of information systems in today's organizations is explained. A major focus of this study was to identify similarities and distinction, decision support systems and management information systems. The study revealed that the management support system supports medium level of data and in decision support system it supports huge volume of data. The study also found that the management information system focus only on fully structured task or routine for decision but decision support system focuses on structure as well as semi-structured data.

Shaker and Abdel (2014) conducted their study on "The Role of MKIS in Decision Making: A Conceptual Framework". This study aims at highlighting the significance and importance of utilizing MKIS in decision-making, as well as to describe the process of decisions taken by decision maker using MKIS. The study revealed that the roles for computer based support for developing marketing strategy present a real challenge to individual computer-based techniques and technologies in the dynamic environment. A single support technique cannot meet the broad requirements of the new roles, and can only fit some of them.

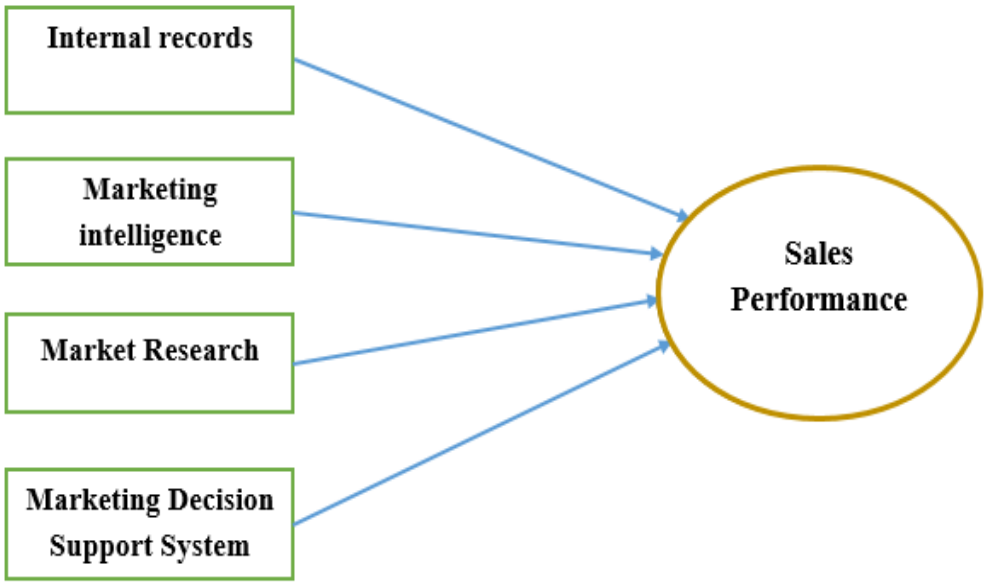
2.6. Conceptual Framework of the Study

Internal recording system**s**: The internal records that are of immediate value to marketing decisions are: orders received, stockholdings and sales invoices.

Marketing research: The general topic of marketing research has been the prime ' subject of the textbook and only a little more needs to be added here. Marketing research is a proactive search for information. The other form of marketing research centers not around a specific marketing problem but is an attempt to continuously monitor the marketing environment. These monitoring or tracking exercises are continuous marketing research studies, often involving panels of farmers, consumers or distributors from which the same data is

Marketing intelligence: A marketing intelligence system is a set of procedures and data sources used by marketing managers to sift information from the environment that they can use in their decision making a system.

Figure 2.1: Conceptual framework of the study



Source: Literature review and Researcher own frame

CHAPTER THREE:

3. RESEARCH METHODOLOGY

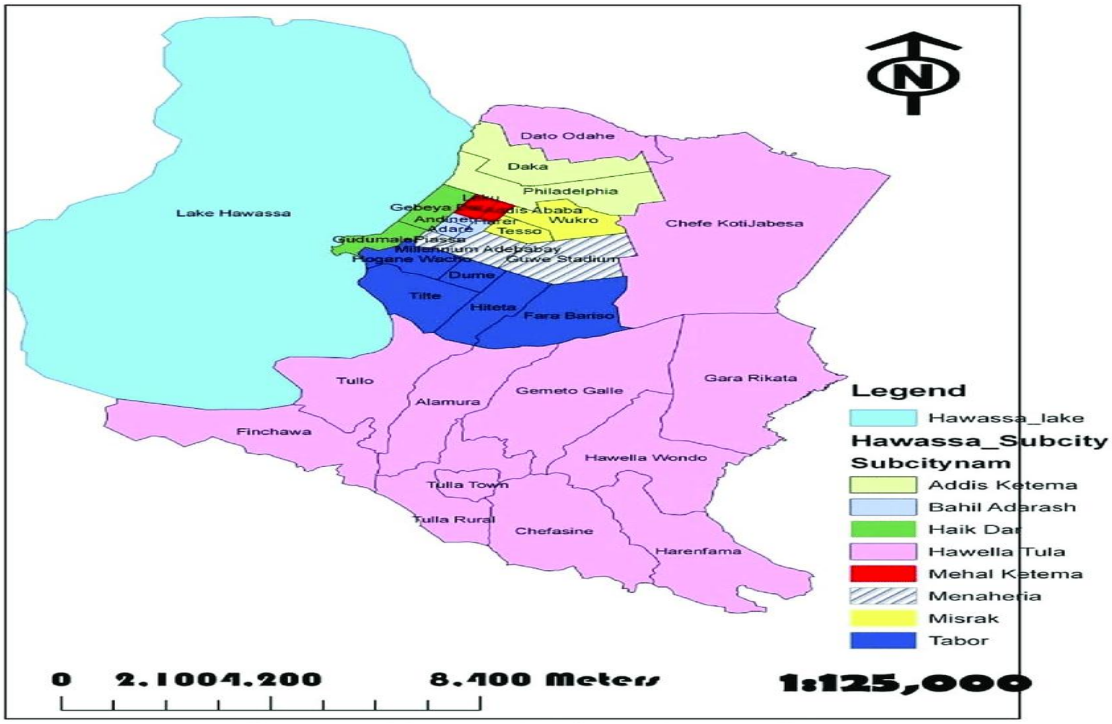
3.1. Introduction

This chapter details the methodology that was used in conducting the research study. This chapter presents the research design research approach, data sources, sampling design, sample size determination, data collecting instruments, pre-test and method of data analysis.

3.2. Description of the Study Area

Hawassa (also spelled Awassa or Hawassa) is a city in Ethiopia, on the shores of Lake Awassa in the Great Rift Valley. It is located 285 km south of Addis Ababa via DebreZeit, 130 km east of Sodo, and 75 km north of Dilla. The town serves as the capital of the Sidama Region. It lies on the Trans-African Highway 4 Cairo-Cape Town, and has a latitude and longitude of 7°3′N 38°28′E coordinates: 7°3′N 38°28′E and an elevation of 1708 meters above sea level.

Figure 3.1:: Map of the Study Area



Source: Google, (2024)

3.3. Research Design

According to Oppenheim (1992), research design refers to the basic plan or strategy of the research, and the logic behind it, which was made m it possible and valid to draw more general conclusions from it.

The study employed descriptive studies to describe the real situation of the marketing information system on sales performance within the case study organization, BGI Ethiopia, Hawassa District. Also the study employed Explanatory studies in order to explain key links or relations on the marketing information systems with sales performance within the case study organization at BGI Ethiopia, Hawassa plant.

3.3.1. Research Approach

According to Creswell (2009), there are three basic research approaches; these are quantitative, qualitative and mixed research approaches. To achieve the aforementioned objectives, to reveal the Effect of marketing information system on sales performance, this study quantitative research approach,

3.4. Types and Source of data

The researcher employed both primary and secondary sources for the study. Primary data was collected by the researcher himself from the employees of BGI Hawassa, Ethiopia. The study also used secondary date from different sources lie that of research articles, reports, books and other official publications to develop conceptual framework and review literatures in the area of marketing information system and its effect on sales performance.

3.5. Data Collection methods

Data collection is a systematic process that involves gathering and measuring information from various sources to achieve complete and accurate representation of previously set hypotheses. It enables a researcher to answer relevant research questions, evaluate the outcome and make predictions and recommendations about probable future trends (Zikmund W., &Babin, B., 2012).

3.5.1. Questionnaire

A questionnaire is a research instrument consisting of a set of questions (items) intended to capture responses from respondents in a standardized manner (Sauders et. al, 2003). The

study depended on primary data which was collected through self-administrated questionnaire. The questionnaire was prepared in line with the objectives of the study.

The questionnaire was first designed in English language and then translated into Amharic language. This can be due to the samples of the study was targeted different employee with different educational background, and to obtain the reliable information from the respondents.

3.6. Target Population

Target population in the study was the employees working with in BGI Ethiopia, Hawassa Plant. As per the information gathered from the company the total employees are 545. The total population of the study was 545.(BGI Ethiopia Hawassa plant HRM FILE).

Table 3.1: Population of the Study

S.N	Department	Number Of Employees	Sample Size
1	Administration	80	34
2	Finance	71	30
3	Maintenance	254	108
4	Sales	54	23
5	Production	86	36
6	Total	545	231

Source: BGI Ethiopia, Hawassa Plant

Where nk= Sample proportion for each

n=Sample size

NK=Total population

N1=Total population of the department

$$nk = n(N1)/Nk$$

3.7. Sampling techniques

A sampling technique is the method used to select components of the sample that gave a representative view of the whole population (Shajahan S., 2008).

This work was used stratified sampling technique of probability sampling technique to draw a representative sample. In order to acquire sufficient information on quality and quantity, the researcher employed stratified sampling techniques. The BGI Ethiopia was classified in to different groups (strata) based on departments i.e. Administration, finance, sales, maintenance and production. At the second stage, probability proportional to size (PPS) was used to each department. Finally, sample size of 231 was chosen using lottery method.

For the purpose of this study random sampling technique was used to gather data using questionnaire and interview. Simple Random Sampling was utilized to select a small segment of individuals or members from a whole population. It provides each individual or member of population with an equal and fair probability of being chosen. The simple random sampling method is one of the most convenient and simple sampling selection techniques.

A given number of employees was randomly selected and engaged into questionnaires to respond.

3.7.1. Sample size determination

A sample size is the list or quasi list of elements from which a probability sample is selected (Denscombe, 2014). Sample size for this study was determined by using Yamane 1967 formula which is

$n = \frac{N}{1+Ne^2}$, where as $n = Sample\ Size$, $N = Total\ Population$ and $e = error = 0.05$

$$n = \frac{545}{1 + 545 * 0.05^2} \cong 231$$

3.8. Method of Data Processing and Analysis

The purpose of data analysis is to reduce accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques (Cooper and Schindler, 2011). The data collected was coded and captured into the computer for analysis using Statistical Package for Social Sciences (SPSS) version 26. The data then presented in a

convenient and informative way including frequency tables, graphs and charts for easier analysis and interpretation.

Descriptive analysis was used to determine the proportions and frequency of the variables. Correlation and regression analysis were used to draw inferences about the population from the sample. The results are presented in the form of tables and figures.

3.8.1. Model specification

Multiple regression analysis is a statistical method utilized to determine the relationship between one dependant variable and one or more independent variables (Hair et al, 2010) this study used multiple linear regression model analysis as follow:

$$\boldsymbol{Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where as

y refersdependent variablewhich is sales performance

$$\beta_o \; refers \; constant$$

$\beta_1, \beta_2, \beta_3$ and $\beta_4$are the coefficients of the independent variables (Internal Records, Marketing Intelligence, Marketing Research and Marketing Decision Support System)

X_1, X_2, X_3 and X_4 refers the independent variables (Internal Records, Marketing Intelligence, Marketing Research and Marketing Decision Support System)

εrefers significant error

3.9. Validity

Validity is the degree to which a measure accurately represents what it is supposed to. It is concerned with how well the concept is defined by the measure(s). There are three types of validity: content validity, predictive validity, and construct validity. The content validity is the assessment of the correspondence between the individual items and concept. Validity is the criteria for how effective the design is in employing methods of measurement that will capture the data to address the research questions (Hair et al, 1998).

Therefore, in this study in order to assure the validity of the research instrument, various relevant literatures and different previous research questionnaires was used. Also the research advisor critically checked for the validity of the questionnaire.

3.10. Reliability

The reliability of a measure indicates the stability and consistency with which the instrument measures the concept and helps to assess the goodness of a measure (Zikmund, 2003). In this study, the reliability of the items in the instrument was measured using Cronbach's alpha which is the most frequently used reliability test to measure internal consistency when using the Likert scale.

According to Sekaran (2003), the closer the reliability coefficient gets to 1.0, the better it is, and those values over .80 are considered as good. Those values in the .70 are considered as acceptable and that reliability value less than .60 is considered being poor.

Table 3.2: Reliability test

Variables	**Cronbach's alpha**	**Items**	**Strength Reliability**
Internal recording system	.882	6	Good
Marketing inelegancy	.817	6	Good
Marketing research	.866	6	Good
Management decision support system	.873	6	Good
Sales performance	.884	7	Good

Source: Survey result, (2024)

Table 3.2 shows the pilot test results generated using the SPSS software. The independent variable of perceived benefit shows the highest reliability value among all the variables with Coefficient Alpha value of 0.884

As for Internal recording system, the Coefficient Alpha value is 0.882. Meanwhile, the Coefficient Alpha value of Marketing intelligence and Marketing research 0.817 and 0.866 respectively and the coefficient of alpha for marketing decision support system is 0.873. Moreover, for the dependent variable, the Coefficient Alpha value for Sales performance is 0.884. Since the Coefficient Alpha value for the dependent variable (Sales performance) and all the independent variables (Internal recording system, Marketing intelligence, Marketing

research and Marketing decision support system) are above 0.7, it indicated that all of the variables have good reliability.

As we can see from the table all the Cronbach's alpha values of the variables are above 0.7. Hence, as recommended by the scholars it indicates that the instruments are reliable

In a nutshell, the questionnaire is reliable and appropriate to use in the full study depends on the pilot test result. Therefore, the values of Cronbach's alpha in this study indicate that the scales used in the instrument are adequate and suitable for the main study.

3.11. Ethical Considerations

Some of the expected tenets (principles) of ethical behavior that are widely accepted within the scientific community are: voluntary participation and harmlessness, anonymity and confidentiality, disclosure, analysis and reporting (Bhattacherjee, 2012). Therefore, the researcher will attempt to consider these issues in respect of each as follows.

Voluntary participation and harmlessness: Subjects in a research must be aware that their participation in the study is voluntary, that they have the freedom to withdraw from the study at any time without any unfavorable consequences, and they are not harmed as a result of their participation or non-participation in the thesis. To this effect, the researcher gave freedom to the respondents and they exercised freely on questionnaire to be given.

Anonymity and confidentiality: to protect subjects' interests and future well-being, principles of anonymity and confidentiality. Anonymity implies that the researcher or reader of the final research report or paper cannot identify a given response with a specific respondent. Confidentiality means the researcher can identify a person's responses, but promises not to divulge (reveal) that person's identify in any report, paper, or public forum.

Disclosure: usually, the researcher has an obligation to provide some information about his/her study to potential subjects before data collection to help him/her decide whether Or not they wish to participate in the study. For instance, who is conducting the study, for what purpose, what outcomes are expected, and who will benefit from the results.

Analysis and reporting: it could be evident that the researcher also has ethical obligations to the scientific community on how data is analyzed and reported in the study. Accordingly, more clear and candid information will be forwarded not to mislead the scientific community.

CHAPTER FOUR

4. RESULT AND DISCUSSION

This study examined the effect of marketing information system on sales performance. The collected data are presented, analyzed and interpreted in this chapter. The study applied descriptive statistics like mean, standard deviations, simple percentage; frequency, charts and tables were used to give clear picture about the Demographic Characteristics of Respondents and organizations demographics. The study made use of correlation and multiple regression analyses to investigate the covariance among observed items, investigate which observed items share substantial amounts of variance and to reveal those items which share lots of variance are considered to represent the same construct.

4.1. Response Rate

From A total of 231 sets of questionnaires distributed to the potential respondents and a total of 218 questionnaires were collected. Out of this, 5 sets of the questionnaires were considered unusable because they were not properly filled in while 8 of the questionnaire were not filled totally because of the unwillingness of the selected respondents. It was assumed that the respondents were either unwilling to cooperate or not serious with the survey. Therefore, only 218 usable sets of collected questionnaires were used for the data analysis. Accordingly, the response rate was 96.15 percent

Table 4.1: Overall response rate

Sample	**Number**	**Percent**
Total number of questionnaire distributed	231	100%
Number of questionnaire returned	218	96.15%
Number of unreturned questionnaire	5	1.44%
Defective questionnaire	8	2.40%
Total usable questionnaire	218	96.15%

Source: Survey result, (2024)

4.2. Descriptive Statistics of Demographic Variables

Before conducting reliability, validation and further analysis for collected data it is advised to run descriptive statistics (Pallant, 2011). In this study, predictors of Demographic factors such as Educational status, a service years, Gender and Marital status are not considered as indicator variables; rather they are used to describe only the -demographic profile of respondents and organizations.

Therefore, to give clear picture about the Respondents, Simple statistics such as frequencies, percentage and mean were used to describe the Demographic Characteristics of Respondents

4.3. Educational Level of Respondents

From the top level management until the subordinates of the sales and marketing department of the company, the staffs are well educated. From the total of 218 respondents about 104 (47.7%) Respondents are bachelor degree holders, 54 (24.8%) Respondents have Collage diploma, 35(16.1%) Respondents have Master's degree and 25(11.5 %.) are technical and vocational school graduates. This implies that most of the respondents are knowledgeable in their fields of work. The educational levels of the respondents are summarized in the table below.

Table 4.2: Educational level of the respondent

Variables	Frequency	Percent	Valid Percent
Technical school graduate	25	11.5	11.5
College diploma	54	24.8	24.8
BA/BSc degree	104	47.7	47.7
Master's degree	35	16.1	16.1
Total	218	100.0	100.0

Source: survey result, (2024)

4.4. Respondents Continuous Service with the Firm

BGI Ethiopia Hawassa District staffs of the company are considered as well experienced. From the total of 218 respondents staffs with a range of 1-4 years of work experience constitute 11 (5.0%), staffs with a range of 5-9 years of work experience constitute 116 (53.2%), the rest staffs with a work experience of 10-19 and above constitute 91 (41.7%). This implies that the service years of the respondents are well experienced. Most of the

resondents are well experienced and they stayed in the organization many years The experiences of the respondents are summarized in the table below.

Table 4.3: Work experience

Variables	Frequency	Percent	Valid Percent
1- 4 YEARS	10	4.6	4.6
5-9 YEARS	109	50.0	50.0
10-19 YEARS	91	41.7	41.7
≥20 YEARS	8	3.7	3.7
Total	218	100.0	100.0

Source: survey result, (2024)

4.5. Marital Status of the Respondents

BGI Ethiopia Hawassa district staffs of the company are considered as well marital status from the total of 218 respondent's staffs with the number of Marrid143 (65.6 %) with the number of Single 56 (25.7 %) with the number of Divorce 14 (6.4%) with the number of Widowed 5(2.3%) . This implies that majority of the respondents are married. This indicate that the married respondents shoulder the responsibility of sales very well than others because they have so many mandate to do getting an income from their actual job.

Table 4.4: Marital Status of the Respondents

Variables	Frequency	Percent	Valid Percent
SINGLE	56	25.7	25.7
MARRIED	143	65.6	65.6
DIVORCE	14	6.4	6.4
WIDOWED	5	2.3	2.3
Total	218	100.0	100.0

Source: SPSS Survey output, (2024)

4.6. Descriptive Statistics Analysis of Scale Items

Descriptive statistics describes the general nature of the data gathered (Leedy&Ormord, 2005). The reporting of the descriptive statistics allows for describing and comparing of variables numerically to enable certain conclusions to be reached in terms of data gathered (Saunders M. L., 2007). Descriptive statistics stands for the conversion of the raw data into

useful information which can be interpreted to explain a group of dimensions (Bryman A., 2011) The researcher uses all respondents (n=218) responses from the questionnaire using SPSS version 26 and Ms Excel 2013 for overall mean computation of each scale items for the variables Internal recording system, Marketing intelligence, Marketing research, Marketing decision support system and Sales performance. In this part, the respondents were asked different questions concerning on Effect of marketing information system on sales performance.

In structured close-ended five point Likert scale items, respondents were asked to choice from five alternatives ranging from 1= (strongly disagree) to 5= (strongly agree) for independent variables and from Thus, based on the responses obtained from the respondents and data organized as mentioned above, the analysis and interpretation of data were presented according to the information in the table. Derived from (Yitbarek, 2019) Standard deviation is widely used measurement of variability of diversity used in statistics of

Table 4.5: Five point scale Likert's Criterion Response

For Dependent Variables			**For Independent Variable**	
S.N	**Mean range**	**Response Option**	**Mean range**	**Response Option**
1	[1.00-1.80]	Strongly disagree (SD)	[1.00-1.80]	Strongly disagree (SD)
2	[1.81-2.60]	Disagree (D)	[1.81-2.60]	Disagree (D)
3	[2.61-3.40]	Neutral (N)	[2.61-3.40]	Neutral (N)
4	[3.41-4.20]	Agree (A)	[3.41-4.20]	Agree (A)
5	[4.21-5.00]	Strongly agree (SA)	[4.21-5.00]	Strongly agree (SA)

Probability theory. It shows how much variation or "dispersion" there is the average (mean or expected value). A low standard deviation indicates that the data points tend to be very close to the mean; whereas a high standard deviation indicates that the data are spread out over large range of values. The sample mean is to show the majority of respondents as the best predictors of the population and hence to infer for the other (i.e. the whole large scale Factory in Hawassa city)

In this paper, descriptive analysis was made by the data obtained from 218 respondents by asking structured close ended questionnaires. This study has four independent variables i.e.

Internal recording system, Marketing intelligence, Marketing research and Marketing decision support system one dependent variable i.e. Where 1=Strongly Disagree (SD) 2=Disagree (D) 3=Neutral (N) 4=Agree (A) 5= strongly agree (SA), under the independent variable constructs

4.6.1. Descriptive statistics per question for construct internal recording system

Table 4.6: Descriptive statistics per question for construct internal recording system

S. N	Items	Scale	S. D	D	N	A	SA	Total	Mean	Standard Deviation
			1	2	3	4	5			
1	The Company has a multiple internal marketing Database.	FR	8	10	22	62	116	218	4.23	1.048
		%	3.7	4.6	10.1	28.4	53.2	100		
2	All the information received from marketing research and intelligence is maintained in the company's internal records.	FR	4	7	29	64	114	218	4.27	0.938
		%	1.8	3.2	13.3	29.4	52.3	100		
3	Data contained in the Company's internal records can be considered to be accurate.	FR	-	12	26	59	121	218	4.33	0.890
		%	-	5.5	11.9	27.1	55.5	100		
4	Company's internal records supply critical information on customer Performance.	FR	2	8	24	61	123	218	4.35	0.885
		%	0.9	3.7	11.0	28.0	56.4	100		
5	Company's internal records supply critical data on the Company's sales and Purchase	FR	-	8	22	67	121	218	4.38	0.813
		%	-	2.3	10.1	30.7	55.5	100		
6	Every department within the Company stores their data in the database	FR	4	5	14	75	120	218	4.39	0.852
		%	1.8	2.3	6.4	34.4	55.0	100		
	Grand Mean And Standard Deviation								4.33	0.904

Source: SPSS Survey output, (2024)

The Internal recording system was assessed by 6 measurement items. Table 4.6 shows the mean score, percentage, frequency and standard deviation for the items describes internal recording system dimension of marketing information system. As can be seen the above table 4.6, the 1st item, The Company has a multiple internal marketing Database, majority 116(53.2%) of the respondents are strongly agree, 62(28.4%) of the respondents are agree, 22(10.1%) of the respondents are neutral, 10 (4.6%) disagree and 8 (3.7%) are strongly dis agree to the item. The item has a mean value of 4.23 and standard deviations 1.048, most of the respondents were answered strongly agreed. That the Company has a multiple internal marketing Database.

Concerning every department within the Company stores their data in the database. Majority 120(55.0%) of the respondents are strongly agree, 75(34.4%) of the respondents are agree, 14(6.4%) of the respondents are neutral, 5(2.3%) of the respondents are disagree and 4(1.8%) the respondents are strongly disagree to the item

The item has mean value of 4.39 and standard deviation of 0.852, this implies that most of the respondents were strongly agreed that every department within the Company stores their data in the database.

With Regard to whether Company's internal records supply critical information on customer Performance , Majority 123(56.4%) of the respondents are strongly agree, 61 (28.0%) of the respondents are agree, 24(11.0%) of the respondents are neutral, 8(3.7%) of the respondents are disagree and 2(0.9%) of the respondents are strongly disagree to the item. The item has the mean value of 4.35 with the standard deviations of 0.885; this implies that most of the respondents were in strongly agreed that the Company's internal records supply critical information on customer Performance.

With Regard to whether Company's internal records supply critical data on the Company's sales and Purchase, majority 121(55.5%) of the respondents are strongly agree, 67(30.7%) of the respondents are agree, 22(10.1%) of the respondents are neutral, 8(3.7%) of the respondents are disagreed and none of the respondents are strongly disagree to the item. This item has a mean value of 4.38 with standard deviation of 0.813. This implies that most of the respondents are strongly agreed that the 'Company's internal records supply critical data on the Company's sales and Purchase.

With Regard to whether 'Data contained in the Company's internal records can be considered to be accurate. , majority 121(55.5%) of the respondents are strongly agree, 59(27.1%) of the respondents are agree, 26(11.6%) of the respondents are neutral, 12(5.5%) of the respondents are disagree and none of the respondents are strongly disagree to the item. This item has a mean value of 4.33 with standard deviation of 0.890

This implies that most of the respondents were strongly agreed that the "Data contained in the Company's internal records can be considered to be accurate. ".

The 6th item which states "All the information received from marketing research and intelligence is maintained in the company's internal records was asked by the respondents of the study. Majority 114(52.3%) of the respondents are strongly agree, 64(29.4%) of the respondents are agree, 29(13.3%) of the respondents are neutral, 7(3.2%) of the respondents are disagree and 4(1.8%) of the respondents are strongly disagree to the item. This item has a mean value of 4.27 with standard deviation of 0.938. This implies that most of the respondents were strongly agreed that all the information received from marketing research and intelligence is maintained in the company's internal records.

In summarizing this description, the average means result for perceived benefit dimensions were 4.33 and standard deviation of 0.904 which should be seen as good result by the organizations because as the researcher observed that majority of the respondents were strongly agreed with Internal recording system related questions and this result as the organizations increase desire to Sales performance. Generally it implies that with regards to internal records being a source of information that is easy and cheap source of information, being accurate and fit for purpose as well as containing information that is up to date thus making decision making about sales more effective, the findings showed that majority of respondents were positive. These findings are supported by the findings of Alhadid, Al-Zu'biandSamer (2015), which reached to a conclusion that internal records had a significant role in a firm's sales performance

4.6.2. Descriptive statistics per question for construct marketing intelligence.

Table 4.7: Descriptive statistics per question for construct marketing intelligence

S.N	Items	Scale	SD	D	N	A	SA	Total	Mean	Standard Deviation
			1	2	3	4	5			
1	Marketing intelligence benefits Company by providing knowledge as well as enabling them to be aware of current business environment.	FR	3	5	27	103	80	218	4.16	0.828
		%	1.4	2.3	12.4	47.2	36.7	100		
2	Company makes use of marketing Intelligence regularly to learn about their competitors.	FR	3	7	21	109	78	218	4.16	0.828
		%	1.4	3.2	9.6	50.0	35.8	100		
3	Internal information sources such as management, consultants, and sales staff among others are the main information sources for upcoming market developments.	FR	1	6	11	120	80	218	4.25	0.714
		%	0.5	2.8	5.0	55.0	36.7	100		
4	Customers provide important information regarding markets and the competitors.	FR	2	4	26	90	96	218	4.26	0.808
		%	0.9	1.8	11.9	41.3	44.0	100		

5	The company is enabled by marketing intelligence to constantly track and evaluate competitor Performance.	FR	1	2	20	82	113	218	4.39	0.731
		%	0.5	0.9	9.2	37.6	51.8	100		
6	Sufficient and relevant information about company clients is supplied by marketing intelligence.	FR	-	5	9	90	114	218	4.44	0.684
		%	-	2.3	4.1	41.3	52.3	100		
	Grand Mean and Standard Devation								4.28	0.766

Source: SPSS Survey output, (2024)

As shown in the above table 4.7, for the 1st item, marketing intelligence benefits Company's by providing knowledge as well as enabling them to be aware of current business environment. , majority 80(36.7%) of the respondents are strongly agreed, 103(47.2%) of the respondents are agreed, 27(12.4%) of the respondents are neutral, 5(2.3%) of the respondents are disagreed and 3(1.4%) respondents are strongly disagreed to the item. The item has a mean value of 4.16 and standard deviation 0.828, this implies that most of the respondents were answered strongly agreed that the marketing intelligence benefits Company's by providing knowledge as well as enabling them to be aware of current business environment.

With regard to whether if the Company makes use of marketing Intelligence regularly to learn about their competitors. , which shows that majority 78(35.8%) of the respondents are strongly agreed, 109(50.0%) of the respondents are agree, 21(9.6%) of the respondents are neutral, 7(3.2%) of the respondents are disagreed and 3(1.4%) of the respondents are strongly disagreed to the item. The item has the mean value of 4.16 and standard deviation of 0.828,

this implies that most of the respondents were in strongly agree in the ‘‘Company makes use of marketing Intelligence regularly to learn about their competitors. ’’

With Regard to whether customers provide important information regarding markets and the competitors. Shows that majority 96(44.0%) of the respondents are strongly agreed, 90(41.3%) of the respondents are agreed, 26(11.9%) of the respondents are neutral, 4(1.8%) of the respondents are disagreed and 2(0.9%) of the respondents are strongly disagree to the item. This item has a mean value of 4.26 with standard deviation of 0.808. This implies that most of the respondents were in strongly agreed that the Customers provide important information regarding markets and the competitors.

With Regard to whether “Internal information sources such as management, consultants, and sales staff among others are the main information sources for upcoming market developments, majority 80(36.7%) of the respondents are strongly agree, 120(55.0%) of the respondents are agreed, 11(5.0%) of the respondents are neutral, 6 (2.8%) of the respondents are disagree and 1(0.5%) of the respondents are strongly disagree to the item.

The item has a mean value of 4.25 with standard deviation of 0.714. This implies that most of the respondents are strongly agreed with the Company makes use of marketing Intelligence regularly to learn about their competitors.

With Regard to whether ‘‘The Company is enabled by marketing intelligence to constantly track and evaluate competitor Performance.’’; majority 113(51.8%) of the respondents are strongly agreed, 82(37.6%) of the respondents are agreed, 20(9.2%) of the respondents are neutral, 2(0.9%) of the respondents are disagreed and 1(0.5%) of the respondents are strongly disagreed to the item. This item has a mean value of 4.39 and standard deviation of 0.731 this implies that the respondent are strongly agreed the question on The Company is enabled by marketing intelligence to constantly track and evaluate competitor Performance

However, for the 6th the sentence ‘‘Sufficient and relevant information about company clients is supplied by marketing intelligence, majority 114(52.3%) of the respondents are strongly agree, 90(41.3%) of the respondents are agreed, 9(4.1%) of the respondents are neutral, 5(2.3%) of the respondents are disagreed and none of respondents are strongly disagree. This item has a mean value of 4.44 with standard deviation of 0.684. This implies that all the respondents are strongly agreed to the question on Sufficient and relevant information about company clients is supplied by marketing intelligence.

In summarizing this description, the average means result for perceived benefit dimensions were 4.28 and standard deviation of 0.776 which should be seen as good result by the organizations because as the researcher observed that majority of the respondents were strongly agreed with marketing intelligence related questions and this result as the organizations increase desired to Sales performance. The implication from the analysis was that marketing intelligence greatly affected the sales performance concerning BGI, Ethiopia Hawassa Plant. The effect of marketing intelligence on sales performance was measured against the indicators; sales volume, profitability, market share, the growth of customers and market share The findings of regression analysis showed that marketing intelligence was strongly correlated to sales performance indicators Rotich (2016).

4.6.3. Descriptive statistics per question for marketing research

Table 4.8: Descriptive statistics per question for marketing research

S.N	Items	Scale	S.D	D	N	A	S.A	Total	Mean	Standard Deviation
			1	2	3	4	5			
1	The risk that is brought by uncertainty is reduced by conducting marketing research	Fr	3	8	27	76	104	218	4.24	0.905
		%	1.4	3.7	12.4	34.9	47.7	100		
2	The allocated budget for the company's marketing research department is sufficient enable efficient performance	Fr	-	11	30	60	117	218	4.30	0.889
		%	-	5.0	13.8	27.5	53.7	100		
3	The company often carries out activities Related to	Fr	1	5	33	67	112	218	4.30	0.842
		%	0.5	2.3	15.1	30.1	51.4	100		

	marketing research									
4	Company ’management ensures that the research plan is continuously enhanced.	Fr	3	3	25	74	113	218	4.32	0.838
		%	1.4	1.4	11.5	33.9	51.8	100		
		%	1.4	3.7	12.4	34.9	47.7	100		
5	The performance of staff in the company reflects the positive impact of marketing research.	Fr	3	7	22	71	115	218	4.33	0.884
		%	1.4	3.2	10.1	32.6	52.8	100		
6	Understanding consumer behavior is aided by conducting marketing research.	Fr	5	1	12	88	112	218	4.38	0.807
		%	2.3	0.5	5.5	40.4	51.4	100		
	Grand mean and standard deviation								**4.31**	0.861

Source: SPSS Survey output, (2024)

The Marketing Research dimension was assessed by 6 measurement items. As can be seen from the above table 4.8, the 1st scale item, with the question asked The allocated budget for the Company’s marketing research Department is sufficient enable efficient performance, majority 117(53.7%) of the respondents are strongly agree, 60(27.5%) of the respondents are agreed, 30(13.8%) of the respondents are neutral, 11(5.0%) of the respondents are disagreed and none of respondents are strongly disagreed. The item has a mean value of 4.30 and standard deviation 0.889.This implies that most of the respondents were strongly agreed to that the allocated budget for the Company’s marketing research Department is sufficient enable efficient performance.

With regard to whether, The Company often carries out activities Related to marketing Research , majority 112(51.4%) of the respondents are strongly agreed, 67(30.7%) of the respondents are agreed, 33(15.1%) of the respondents are neutral, 5(2.3%) of the respondents are disagreed and 1(0.5%) of respondents are strongly disagreed.

This item has mean value of 4.30 and standard deviation of 0.842, this implies that most of The respondents were in strongly agree level of the response to ‘‘the company often carries out activities related to marketing research .’’

With regard to whether if Company ’management ensures that the research plan is continuously enhanced. , majority 113(51.8%) of the respondents are strongly agreed, 74(33.9%) of the respondents are agreed, 25(11.5%) of the respondents are neutral, 3(1.4%) of the respondents are disagreed and 3(1.4%) of respondents are strongly disagreed which the 3rd item has a mean value of 4.33 with standard deviation of 0.838. this implies that the most of the the respondents were strongly agree on the Company ’management ensures that the research plan is continuously enhanced.

With regarding to whether ‘the risk that is brought by uncertainty is reduced by conducting marketing research, majority 104(47.7%) of the respondents are strongly agree, 76(34.9%) of the respondents are agree, 27(12.4%) of the respondents are neutral, 8(3.7%) of the respondents are disagree and 3(1.4%) of respondents are strongly disagree. The item has a mean value of 4.24 and standard deviation of 0.905. This implies that the most of the respondents were strongly agreed on the risk that is brought by uncertainty is reduced by conducting marketing research. The result on marketing research show that the component affect the sales performance. This can be attributed to the improvement and advantage that marketing research provide for sales decision. Similarly the study done by Kayode (2010) show that marketing research was a veritable tool for enhancing profitability, customer satisfaction, sales performance and customer loyalty.

4.6.4. Descriptive statistics per question for construct marketing decision support system

Table 4.9: Descriptive statistics per question for construct marketing decision support system

S.N	ITEMS	SCALE	SD	D	N	A	SA	TOTAL	MEAN	standard deviation
			1	2	3	4	5			
1	Computer have the ability to define the costs in marketing variables.	FR	2	10	12	119	75	218	4.17	0.800
		%	0.9	4.6	5.5	54.6	34.4	100		
2	Computer programs gauge how effective the Company's marketing operations are.	FR	4	6	19	101	88	218	4.21	0.853
		%	1.8	2.8	8.7	46.3	40.4	100		
3	Computer program have the ability of predicting changes occur to the Company's marketing strategy	FR	6	2	18	107	85	218	4.21	0.847
		%	2.8	0.9	8.3	49.1	39.0	100		

4	Computer program deliver information that is achieve marketing goals	FR	4	1	17	116	80	218	4.22	0.762
		%	1.8	0.5	7.8	53.2	3.7	100		
5	Computer programs can help in identifying the Company's marketing strong point and also weaknesses.	FR	2	6	28	86	96	218	4.23	0.844
		%	0.9	2.8	12.8	39.4	44.0	100		
6	Computer programs have the ability influence Company's sales	FR	2	3	19	86	108	218	4.35	0.773
		%	0.9	1.4	8.7	39.4	49.5	100		
	Grand mean and standard deviation								**4.23**	0.813

Source: SPSS Survey output, (2024)

With regarding to whether 'The performance of staff in the Company reflects the positive impact of marketing research. , majority 115(52.8%) of the respondents are strongly agree, 71(32.6%) of the respondents are agree, 22(10.1%) of the respondents are neutral, 7(3.2%) of the respondents are disagree and 3(1.4%) of respondents are strongly disagree. The item has a

mean value of 4.32 with standard deviation of 0.884. This implies that most of the respondents were strongly agree on The performance of staff in the Company reflects the positive impact of marketing research

For the 6th item which states "Understanding consumer behavior is aided by conducting marketing research.", majority 112(51.4%) of the respondents are strongly agreed, 88(40.4%) of the respondents are agree, 12(5.5%) of the respondents are neutral and 1(0.5%) of respondents are disagreed and 5(2.3%) of the respondents are strongly agreed. This item has a mean value of 4.38 with standard deviation of 0.807. This implies that most of the respondents were strongly agreed on the Understanding consumer behavior is aided by conducting marketing research.

In summarizing this description, the average means result for perceived benefit dimensions were 4.31 and standard deviation of 0.861 which should be seen as good result by the organizations because as the researcher observed that majority of the respondents were strongly agreed with marketing research related questions and this result as the organizations increase desire to Sales performance

As shown in the above table 4.9 For the 1st scale item, Computer program deliver information that is considered important in plans to achieve marketing goals , majority 80(36.7%) of the respondents are strongly agreed, 116(53.2%) of the respondents are agreed, 17(7.8%)of respondents are neutral and 1 (0.5%) of respondents are disagreed and 4(1.8%) strongly disagree This item has a mean value of 4.22 and standard deviation 0.762.This implies that most of the respondents were strongly agreed on the Computer program deliver information that is considered important in plans to achieve marketing goals on the effect of marketing information system on sales performance.

With regarding to whether, Computer program have the ability of predicting changes likely to occur to the Company's marketing strategy variables. Majority 85(39.0%) of the respondents are strongly agreed, 107(49.1%) of the respondents are agreed, 18(8.3%) of respondents are neutral, 2(0.9%) of respondents are disagreed and 6(2.6%) strongly disagree to the item. The item have mean value of 4.21 and standard deviation of 0.847, this implies that most of the respondents were in strongly agree level of the Computer program have the ability of predicting changes likely to occur to the Company's Marketing strategy variables sale's performance.

With regarding to whether if the Computer program have the ability to define the costs resulting from changes in marketing variables. Majority 75(34.4%) of the respondents are strongly agree, 119(54.6%) of the respondents are agree, 12(5.5%) are neutral, 10(4.6%) of respondents are disagree and 2(0.9%) of respondents are strongly disagree.

The item has a mean value of 4.17 with standard deviation of 0.800.This implies that most of the respondents were strongly agree on the Computer program have the ability to define the costs resulting from changes in marketing variables.

With regarding to whether ‘‘Computer programs are able to gauge how effective the Company’s marketing operations are. , majority 88(40.4%) of the respondents are strongly agreed, 101(46.3%) of the respondents are agreed, 1(8.7%) of the respondents are neutral, 6(2.8%) of the respondents are disagreed and 4(1.8%) of respondents are strongly disagreed. This item has a mean value of 4.21 and standard deviation of 0.853. This implies that most of the respondents were strongly agreed on that the Computer programs are able to gauge how effective the Company’s marketing operations are.

With regarding to whether ‘‘Computer programs can help in identifying the Company’s marketing strong point and also weaknesses. ”, majority 96(44.0%) of the respondents are strongly agreed, 86(39.4%) of the respondents are agreed, 28(12.8%) are neutral, 6(2.8%) of respondents are disagreed and 2(0.9%) of respondents strongly disagreed. This item has a mean value of 4.23with standard deviation of 0.844, This implies that the most of the respondents were strongly agree on that the Computer programs can help in identifying the Company’s marketing strong point and also weaknesses.

For the final item of Marketing decision support system dimension which states “Computer programs have the ability of determining customer size which can positive influence Company’s sales”, majority 108(49.5%) of the respondents are strongly agree, 86(39.4%) of the respondents are agreed, 19(8.7%) are neutral, 3(1.4%) of respondents are disagreed and 2(0.9%) of respondents are strongly disagreed. This statement has a mean value of 4.35with standard deviation of 0.773. This implies that most of the respondents were strongly agree on the “Computer programs have the ability of determining customer size which can positive influence Company’s sales”

In summarizing this description, the average means result for perceived benefit dimensions were 4.23 and standard deviation of 0.813 which should be seen as good result by the

organizations because as the researcher observed that majority of the respondents were strongly agreed with marketing decision support system related questions and this result as the organizations increase desire to Sales performance.

The findings on MDSS indicated that majority of the firms had adopted and that it had a significant influence on competitive advantage of firms. The findings are also supported by Kimani (2006) who concluded that MDSS analyzed information and produced reliable output which was used in decision making about sales performance.

Table 4.10: summary of descriptive analysis for independent variables

S.N	Items	Mean	Standard Deviation
1	Internal Recording	4.3242	.71551
2	Marketing Intelligence	4.2653	.57809
3	Marketing Research	4.3402	.62593
4	Marketing decision Support System	4.2546	.56165
	Grand Mean / Standard Deviation	**4.2961**	**.6223**

Source: SPSS Survey output, (2024)

The mean score of the measurement variables are used to measure the four constructs. As shown in table above the mean and standard deviation of all independent variable included in the study indicates the employees of the industries perceived that the industries are strong in practicing of marketing information system with mean value of internal recording system (M= 4.3242, SD =0.71551), marketing intelligence with mean value of (M=4.2653, SD= 0.57809), Marketing research with mean value of (M=4.3402, SD= 0.62593), Marketing decision support system with mean value of (M=4.2546 , SD= 0.56165). The mean values of all determinants of marketing information system included in the study constructs indicates that respondents are strongly agreed for sales performance practice of the industries. Because the independent variables included in the study was vital to sales performance and they were effectively practiced in the selected case area. The standard deviations of all constructs are not greater than 0.6223 indicates that the response of clients was consistent.

Five statements relating to product focus were rated on a five point Likert scale (where, 1 strongly disagree; 5=strongly agree). The mean and the standard deviation were computed

and the results were as presented in and where; S.D, strongly disagree -D disagree N-neutral, A, agree and S.A, strongly agree.

Table 4.11: Descriptive statistics per question for construct sales performance

S.N	Items	Scale	S.D	D	N	A	S.A	Total	Mean	Standard Deviation
			1	2	3	4	5			
1	Our marketing efficiency has thus been enhanced due to our effective use of information systems	FR	1	5	20	96	96	218	4.29	0.764
		%	0.5	2.3	9.2	44.0	44.0	100		
2	We have increased our production sales volume due to enhanced use Of marketing information systems.	FR	4	5	28	60	121	218	4.33	0.915
		%	1.8	2.3	12.8	27.5	55.5	100		
3	Our Company usage of marketing information systems has led to increased market share.	FR	3	9	22	58	126	218	4.35	0.920
		%	1.4	4.1	10.1	26.6	57.8	100		
4	We have continuously increased the number of products due to our use of information	FR	1	8	28	58	123	218	4.35	0.873
		%	0.5	3.7	12.8	26.6	56.4	100		

	systems.									
5	Our company has enhanced customer perception about our products and services through our continuous and timely interaction aided by usage of information systems.	FR	1	3	22	82	110	218	4.36	0.757
		%	0.5	1.4	10.1	37.6	50.5	100		
6	We have managed to reduce process delays and enhanced our delivery rates to our customers.	FR	-	6	25	61	126	218	4.41	0.799
		%	-	2.8	11.5	27.0	57.8	100		
7	Creating friendly relationship with our prospect customers helps us make more sales	FR	-	2	16	90	110	218	4.41	0.668
		%	-	0.9	7.3	41.3	50.5	100		
	Grand Mean And Standard Deviation								**4.36**	**0.814**

Source: SPSS Survey output, (2024)

As can be seen from the above table 4.11, the 1st scale item, with the question asked" Our Company usage of marketing information systems has led to increased market share. ", Majority 126(57.8%) of the respondents answered that firms are practice strongly agree, 58(26.6%) of the respondents answered firms are practice to agree, 22(10.1%) of respondents answered firms are neutral, 9 (4.1%) of respondents answered firms disagree, 3 (1.4%) of the firms are strongly disagree. The item has a mean value of 4.35 and standard deviation 0.920, this demonstrate to strongly agree most of the firms are using Our Company usage of

marketing information systems has led to increased market share. as the mean scale lies between 4.21-500.

Regarding, the 2nd statement". We have increased our production sales volume due to enhanced use of marketing information systems. " Majority 121(55.5%) of the respondents answered strongly agree, 60(27.5%) of the respondents answered firms are agree, 28(12.8%) of respondents answered neutral, 5 (2.3%) of respondents answered firms are practicing to disagree, and 4(1.8%) of the respondents answered firms are strongly disagree. The item has a mean value of 4.33 and standard deviation of 0.915. To strongly agree firms products been standardized to We have increased our production sales volume due to enhanced use of marketing information systems as the mean scale lies between4.21- 5.00.

Regarding the 3rd item "We have continuously increased the number of products due to our use of information systems., " Majority 123(56.4%) of the respondents answered strongly agree, 58(26.6%) of the respondents answered firms are agree, 28(12.8%) of respondents answered firms are neutral, 8(3.7%) of respondents answered firms are practicing to disagree, and 1(0.5%) of the firms are strongly disagree has the mean value of 4.35 with 0.873 standard deviation. To strongly agree the we have continuously increased the number of products due to our use of information systems as the mean scale lies between4.21-5.00.

For the 4th item Our Company has enhanced customer perception about our products and services through our continuous and timely interaction aided by usage of information systems. 'Majority 110(50.5%) of the respondents answered strongly agree, 82(37.6%) agree, 22(10.1%) of respondents answered firms are neutral, 3(1.4%) of respondents answered firms are disagree, and 1 (0.5%) of the respondents answered firms are strongly disagree. The item has the mean value of 4.36 and the standard deviation is 0.757. strongly agree firms make use as the mean scale lies between 4.21-5.00. This implies that the. Item Our Company has enhanced customer perception about our products and services through our continuous and timely interaction aided by usage of information systems.

Regarding the5th item 'We have managed to reduce process delays and enhanced our delivery rates to our customers. Majority 126(57.8%) of the respondents answered strongly agree, 61(28.0%) of the respondents answered firms are agree, 25(11.5%) of respondents answered firms are neutral, 6(2.8%) of respondents answered firms are practicing to disagree, and none of the firms respondents answered strongly disagree. The item has the mean value of 4.41 with the standard deviation of 0.799 strongly agree as the mean scale lies between

4.21-5.00. This demonstrates that we have managed to reduce process delays and enhanced our delivery rates to our customer.

For the 6 th item "Our marketing efficiency has thus been enhanced due to our effective use of information systems " Majority 96(44.0%) of the respondents answered strongly agree, 96(44.0%) of the respondents answered firms are agree, 20(9.2%) of respondents answered neutral, 5 (2.3%) of respondents answered firms are disagree and 1(0.5%) of the firms are strongly disagree. The item has the mean value of 4.29 and standard deviation 0.764 strongly agrees as the mean scale lies between 4.21-5.00. This demonstrates that Our marketing efficiency has thus been enhanced due to our effective use of information systems

Finally for the item Creating friendly relationship with our prospect customers helps us make more sales 'Majority 110(50.5%) of the respondents answered strongly agree, 90(41.3%) of the respondents answered firms are agree, 16(7.3%) of respondents answered neutral, 2 (0.9%) of respondents answered disagree, and none of the firms are strongly disagree. The item has the mean value of 4.41 and the standard deviation is 0.668. Strongly agree as the mean scale lies between 4.21-5.00. This demonstrates that creating friendly relationship with our prospect customers helps us make more sales. In summarizing this description, the average mean result for sales performance were 4.41 and standard deviation of 0.77 which should be seen strongly agree result by the organizations because as the researcher observed that majority of the firms to strongly agree adopt sales performance as a mean lies between 4.21-5.00.

4.7. Inferential Statistics Analysis

Inferential analysis is concerned with the various tests of significance for testing research questions in order to determine with what validity data can be said to indicate some conclusions. It is concerned with the estimation of population values.

It is mainly on the basis of inferential analysis that the task of interpretation (i.e. the task of drawing inferences and conclusions) is performed (Kothari, C.R. ,2004). Pearson correlation and multiple linear regressions are the main inferential methods employed in this study to analyze the relationship between independent and dependent variables.

4.8. Pearson Correlation Analysis

The correlation matrix was calculated to identify bi-variate links among the variables of the study. The results of these correlations can be viewed in Table 4.12 below summarizes the descriptive statistics and analysis results.

The sign of the Pearson correlation coefficient indicates the direction of the relationship, and its absolute value indicates the strength. In this study, correlation coefficients represent the nature of the relationship between independent variables with dependent variable, whereby a coefficient of above represents a strong relationship, a coefficient of between±0.81 to ±1.00 Very Strong, ±0.61 to ±0.80 Strong, ±0.41 to ±0.60 Moderate, ±0.21 to ±0.40 weak and 0.00 to ±0.20 no relationship (Bhattacherjee, 2012) The Correlation analysis results show that there is a positive and significant correlation among the constructs

Table 4.12: Rule of Thumb for Interpreting the Size of a Correlation Coefficient

Size of Correlation	**Interpretation**
(±0.81 to ±1.00]	Very Strong
(±0.61 to ±0.80]	Strong
(±0.41 to ±0.60]	Moderate
(±0.21 to ±0.40]	Weak
(0.00 to ±0.20]	No relationship

Source: (Bhattacherjee, 2012)

Therefore, using the above table 4.12 rule of thumb and SPSS output of the survey, the below results of the dependent and independent variables is going to be discussed in detail.

Table 4.13: Pearson Correlation (zero ordered matrix n=218

Correlations						
		IRS	**MI**	**MR**	**MDSS**	**SP**
Internal recording system	Pearson correlation	1	.	.	.	
	Sig. (2-tailed)			.		
	N	218				
Marketing intelegence	Pearson correlation	.535**	1			
	Sig. (2-tailed)	.000				

	N	218	218			
Marketing research	Pearson correlation	.741**	.611**	1		
	Sig. (2-tailed)	.000	.000			
	N	218	218	218		
Marketing decision support system	Pearson correlation	.607**	.613**	.674**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	218	218	218	218	
Sales performance	Pearson correlation	.735**	.634**	.876**	.694**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	218	218	218	218	218
**. Correlation is significant at the 0.01 level (2-tailed).						

Source:Survey data, 2024

4.9. Relationship between Dependent and Independent Variables

According to table 4.13 the correlation between Internal recording and sales performance has a positive significant correlation with ($r = 0.735$, $n = 218$, $p < 0.000$), according to (Bhattacherjee, 2012) magnitude of correlation, the relationship between two variables was positive very strong significant relationship.

According to table 4.13 the correlation between Marketing intelligence and sales performance has positive strong relationship ($r = 0.634$, $n= 218$, $p< 0.000$), according to (Bhattacherjee, 2012) magnitude of relationship between two variables was strong positive significant relationship.

According to table 4.13 the correlation between Marketing research and sales performance has a significant positive strong relationship with ($r = 0.876$, $n = 218$, $p< 0.000$), according to (Bhattacherjee, 2012) magnitude of correlation relationship between two variables is a very strong positive significant relationship.

According to table 4.13 the correlation between Marketing decision support system has a positive strong relationship with the ($r = 0.694$, $n = 218$, $p< 0.000$), according to (Bhattacherjee, 2012) magnitude of correlation the relationship between two variables is strong positive significant relationship..

Based on the correlation reported in table 4.13 one would expect to find positive regression coefficients when conducting a multiple regression analysis with sales performance as dependent variable and Internal recording system, Marketing intelligence, Marketing research and Marketing decision support system as independent variables.

4.10. Multiple regression analysis

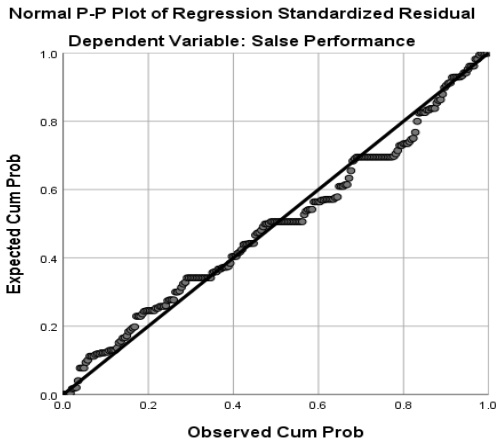
In order to examine the relationship between Sales performance as dependent variable and marketing intelligence, internal recording system, marketing research, and marketing decision support systems as independent variables, the statistical method used in this study was multiple regression analysis. Multiple regression analysis was used to determine whether a group of variables together or singly predict the dependent variable (Kothari, 2008). Multiple regression analysis was based on a number of assumptions, which need to be considered in order for the technique to be successful. The assumptions were discussed below

4.10.1. The underlying assumptions of multiple regressions

In order for results from multiple regression analysis to be applicable to a wider population, certain assumptions have to be met (Fields, 2005). The assumptions include:-

Sample Size: - Regression analysis is often sensitive to sample sizes. The common rule of thumb floating about the sample size in standard linear regression is fifteen (15) cases of data per predictor (Fields, 2005). According to (Green, 1991 as cited in Field 2009) to test the overall model the recommended minimum sample size of n=50+8k, where k is the number of independent variables. Taking into account the four (4) number of independent variables in the present study; 50+8(4) =82 which is less than observed respondents/sample size/. i.e. 50+ 8(4) = 82<218. Based on the criteria, the sample size exceeds the minimum to run the standard multiple linear regressions

Linearity: - the assumptions require the mean value of the dependent variable for each increment of the independent variable to lie along a straight line, indicating a linear relationship (Fields, 2005).Such a linear relationship allows for inference of the finding and was supported in this study shown under figure 4.1 below

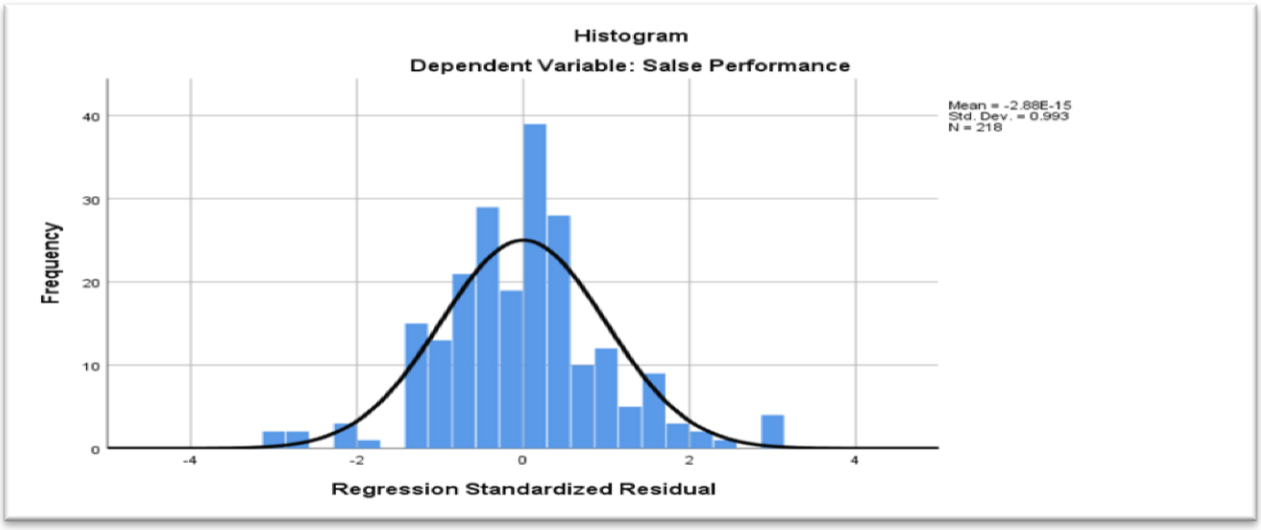


Source: survey, (2024)

Figure 4.1 :Normal p-p plots for standardized residual

Normality: - This refers to the importance of the residuals or error in the dependent variable being normally distributed with a mean of zero (pallant, 2010). As shown in histogram below for each value of X the distributions of Y (i.e., the conditional distributions); though not identical or exactly normal by any means, do not appear to signal any major problems with normality or homoscedasticity. The histogram further reveals that the variation in DV, about the predicted value is almost the same regardless of the value of IV except some outliers which can be disregarded. Statistically, this is referred to as homoscedasticity

Figure 4.1: Normality test on Histogram



Source: survey,(2024)

Multi-Collinearity: - Presence of multi co-linearity in a research model reduces dependability on estimation and renders false sign on beta coefficients for respective correlated variables Tolerance and VIF in exploring presence of multi co-linearity, tolerance is the degree where by one construct varies from other constructs and presence of tolerance value less or equal to 0.1 indicates existence of multi co-linearity. On the other hand VIF is the opposite of tolerance and existence of its value greater or equal to 10 reveals presence of multi co-linearity. The table 4:24 shows, all the VIF values for all determinants and all Indicators were under 10, which demonstrated that the data set is free from multi-co linearity problems.

Table 4.14 :Variance Inflation Factor and tolerance Results of Independent variables

Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	Internal recording system	.426	2.346
	Marketing intelligence	.548	1.825
	Marketing research	.350	2.857
	Marketing decision support system	.466	2.146
Dependent Variable Sales Performance			

Source: - survey data, (2024)

None zero variance: - the predictors should have some variance in value, or in other words, they should not have a variance of zero (Fields, 2005).The data in this study showed variance between the predictors.

When any of the above assumptions were not met, the regression model can't accurately be generalized to the population (Fields, 2005) If, however, the assumptions are met, an unbiased regression model allows one to draw on average conclusions regarding the population based on the model.

4.11. The Multiple Regression Analysis Results for the Study

Multiple regression analysis was conducted on the data on this study in order to gather the necessary diagnostic information. The dependent variable was Sales Performance while the four (Internal Recording System, Marketing Intelligence, Marketing Research and Marketing Decision Support System) the effect of sales performance were the independent variables. The findings were reported below and assumptions are discussed in the previous section

commented on where applicable. The results of the regression analysis are shown below on table 4.15

Table 4.15: Regression model summary

Model Summary									
R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square	F	df1	df2	Sig. F	
.896a	.802	.798	.28223	.802	215.681	4	213	.000	1.771
A. Predictors: (Constant), Internal Recording System, Marketing Intelligence, Marketing Research, Marketing Decision Support System									
B. Dependent Variable: Sales Performance									

Source: survey data, (2024)

The R- value in table 4.15 represents the multiple correlation coefficients, which shows the correlation between the predictors and the dependent variable (Fields, 2005). R2 represents the measure of how much variability in dependent variable was accounted for by the predictors in the model as a group taken together (Coope, 2003). In table 4.15 above identified the R- value as .896 which suggests that 89.6% is the value of multiple correlation coefficients between the predictors and the dependent variable. The squared multiple correlation coefficients, R2 –value shows the percentage variance in the dependent variable that can be explained by predictors, which as per the table is 80.2% This meets the assumption of non-zero variance based on the fact that R2-value the variance in the predictor values, which in this case is not equal to zero.

The third value that of the adjusted R2- value can be used to determine how well the model can be generalized, where ideally the adjusted R2 -value should be the same or closer to R2-value (Fields, 2005) which is 79.9%. Table 4.16 shows a difference in the model of 0.004 (0.802- 0.798) which is small and means that if the model were applied to the population, it would account for 0.5% less variance in outcome.

In addition the ANOVA table 4.16 below contains an analysis of variance which tests the fit of the model to the overall data (Fields, 2005) . The significance or P-value should be smaller than 0.05 in orders to be statistically significant (Coope, 2003) .

Table 4.16: ANOVA

ANOVA						
Model		Sum Of Squares	Df	Mean Square	F	Sig.
1	Regression	68.718	4	17.179	215.681	.000b
	Residual	16.966	213	.080		
	Total	85.684	217			
A. Dependent Variable: Sales Performance						
B. Predictors: (Constant), Marketing Decision Support System, Internal Recording System, Marketing Intelligence, Marketing Research						

Source: - survey data, (2024)

SPSS only displays the first three decimal values for P-value. In table 4.16 the P-value is shown as 0.000 which is less than 0.5 indicating that the model has a significant fit to the overall data. According to table 4.16 shows analysis of variance (ANOVA) of regression analysis between independent variables (internal recording system, marketing intelligence, marketing research, marketing decision support system) considered and a dependent variable Sales performance. The ANOVA tells us whether the model, overall, results in a significantly good degree of prediction of the outcome variable (Fields, 2005).

The table depicts that in regression, the value of sum of squares is 68.718, the value of degree of freedom (df) is 4, and the value of mean square is 17.179. The most important part of the table is the F-ratio, it is a measure of how much the model has improved the prediction of the dependent variable (sales performance) compared to the level of inaccuracy of the model (Field, 2009)

The value of F-statistics is 215.681 which is significant at $p< 0.000$. This result tells us that there is less than a 0.1 percent chance that an F-ratio this large would happen if the null hypothesis true. The significant level in ANOVA table shows that the combination of the variables significantly predicts the dependent variable. On the other hand, in residual, the value of sum of squares is 16.916 the value of df is 213 and the value of mean square is 0.080.

According to Field (2009) if a model is good, then I expect the improvement in prediction due to the model to be large and the difference between the model and the observed data or mean square residual to be small. In short, a good model should have a large F-ratio (greater

than one at least) because the mean square regression will be bigger than the mean square residual.

(Fields, 2005), suggests following the multiple regression summery data and ANOVA table it is necessary to investigate the beta coefficients of the model. The beta -value or unstandardized coefficients demonstrates the contribution of independent variables to the model individually (cooper and shnidler, 2003).

The b-value indicates how much the dependent variable (sales performance) will increase if a specific predictors (among the mentioned independent variables) is increased while others are held constant. Positive values suggest a positive relationship between sales performance and predictors, while a negative value indicates a negative relationship (Feilds, 2005).

Table 4.17:Coefficients of the regression model (saturated model with all IV)

Coefficients						
Model		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. Error	Beta		
1	(constant)	.037	.163		.226	.822
	Internal recording system	.125	.041	.142	3.047	.003
	Marketing intelegence	.107	.045	.099	2.395	.017
	Marketing research	.628	.052	.626	12.142	.000
	Marketing decision support system	.140	.050	.125	2.805	.005
A .dependent variable sales performance.						

Source: - survey data, (2024)

Beta Coefficient

To compare the different variables, it is important that you look at the standardized coefficients, not the unstandardized ones. “Standardized” means that these values for each of the different variables have been converted to the same scale so that you can compare them. If you were interested in constructing a regression equation, you would use the unstandardized coefficient values listed as β (Pallant, 2016).

Unstandardized Beta Coefficient

By recalling the model specifications of the variables from the chapter three of methodology part, it was said that, the unstandardized coefficients (β1 up to β4) are the coefficients of the estimated regression model. Hence, the model of sales performance can be written by including error term (Ɛ), in the below form.

$Y= \beta o+ \beta 1X1+ \beta 2X2+ \beta 3X3+ \beta 4X4 +Ɛ$

β1=unstandardized regression coefficient of internal recording system(X1)

β2=unstandardized regression coefficient of marketing intelligence(X2)

β3=unstandardized regression coefficient of marketing research (X3)

β4=unstandardized regression coefficient of marketing decision support system(X4)

Ɛ=error term

Taking in to consideration the results from table 4.18 the regression equation for the study was as follows

$Y= 0.037+ 0.125X1+ 0.107X2+ 0.628X3+ 0.140X4 +0.163$

Based on the regression coefficients indicated in table 4.18, all independent variables (internal recording system, marketing intelligence, marketing research, marketing decision support system.) have positive and significant relationship with sales performance. This is indicated by the level of significances of the variables that are less than 5%.

Unstandardized coefficients

Keeping all other variables Constant;

If X1 increases by one unit, sales performance will increased by 12.5 percent

If X2 increases by one unit, sales performance will increased by 10.7 percent

If X3 increases by one unit, sales performance will increased by 62.8 percent

If X4 increases by one unit, sales performance will increased by 14.0 percent

From the regression equation, the constant value βo= 0.037 implies that, if the independent variables above-mentioned in this study are kept constant as they exist or make them

unavailable, the sales performance of the firms would be in danger. This shows that the independent variables in the study are vital and crucial for the sales performance of the firms.

Standardized Beta Coefficient

The standardized coefficients are the coefficients which explain the relative importance weight (RIW) of explanatory variables. These coefficients are obtained from regression after the explanatory variables are all standardized. The idea is that the coefficients of explanatory variables can be more easily compared with each other as they are then on the same scale.

The larger the standardized coefficient, the higher is the relative importance and contribution of the determinate of sales performance of the firm.

Where, Y = Dependent Variable (Sales Performance)

Interpretation:

A one standard deviation increase in standardized internal recording system is predicted to result in 0.142 standard deviation increase in standardized sales performance holding constant the remaining variables.

A one standard deviation increase in standardized marketing intelligence is predicted to result in 0.099 standard deviation increase in standardized sales performance holding constant the remaining variables.

A one standard deviation increase in standardized marketing research is predicted to result in 0.626 standard deviation increase in standardized sales performance holding constant the remaining variables.

A one standard deviation increase in standardized marketing decision support system is predicted to result in 0.125 standard deviation increase in standardized sales performance

Holding constant the remaining variables.

4.12. Hypothesis testing and discussions

Hypothesis testing is the method of testing whether claims or hypothesis regarding a population are likely to be true. The goal of hypothesis testing is to determine the likelihood that a population parameter. Here there are two hypotheses: null (Ho), and alternative (Ha). The significance (sig.) value expresses a value to accept or reject the (null) hypothesis. It is

also called the P-value. The P-value is the probability that the correlation is one just by chance.

Therefore, the smaller the P-value, the better will be. The general rule is reject Null hypothesis (H0) if P<.05 and accept (Ha) if P≥.05 (Pallant, 2016). In this part of the study, proof of the null hypothesis is made based on table 4.18 below for the variables.

Because, to test the research hypothesis already set in chapter one, it is possible to find out if the independent variables are significant predictors of the dependent variable. To test this relationship, the regression analysis was applied.

The research is being done at 95% confidence interval. Hence, each hypothesis should be either accepted or rejected with reference to 5% level of significance; i.e. the null hypothesis must be rejected if P-value is less than 0.05 other wise accept it. Therefore

Ho1: Internal recording system has no statistically significant relationship with Sales performance of BGI Ethiopia Hawassa Plant.

Internal recording system has no statistically significant relationship with Sales performance of BGI Ethiopia Hawassa Plant. (Reject Ho1 if p<0.05) otherwise accept it. From table 4.18, the significant value for internal recording system is 0.003 which is less than p-value of 0.05. Therefore, Ho1 is rejected, which indicates that internal recording system has a statistically significant relationship with sales performance of B.G.I Ethiopia Hawassa Plant. Besides, the value of beta for internal recording system is (β=.142) this shows that internal recording system has positive relation and it had statistically significant relationship with sales performance of B.G.I. Ethiopia Hawassa Plant.

Hence, the above proposed hypothesis is rejected and the alternative hypothesis is accepted; which indicates that internal recording system has statistically significant relationship with sales performance of the firms.

The study support the results from various studies, Wady (2009) in his study concluded that marketing managers believe that Internal records has great effects on employees' marketing performance and decision making. In addition, Wood (2011), study found that MkIS used in small to medium companies is based on Internal Data Records. Nasri (2011) study also agreed with the research findings where he concluded that managers consider Internal Marketing as the most reliable source of information and has effects on the decision

making. Hashim (2006) concluded that Internal Records are the most dependent on source of information from this studies the researcher concluded that as internal recording system have strong base for sales performance. The company should have strong data recorder to increase a sales volume, the order must be recorded to keep the order of different agents as it will affect the sales of the company's performance in general. Not only this, Fadzil et al. (2005) reported that effective internal records provide an independent appraisal of the quality of managerial performance in carrying out assigned responsibilities or better revenue generation, reduce chance of loss of revenue, and it also helps in meeting the organizational revenue target.

Ho2: Marketing intelligence has no statistically significant relationship with Sales performance of BGI Ethiopia Hawassa Plant.

Marketing intelligence has no statistically significant effect on sales performance of B.G.I Ethiopia Hawassa Plant. (Reject Ho2 if $p<0.05$) otherwise accept it. From table 4.19, the significant value for marketing intelligence was 0.017 which is less than p value of 0.05. Therefore, Ho2 is rejected, which indicates that marketing intelligence has a statistically significant relationship with sales performance of the firms.

Besides, the coefficient of beta for marketing intelligence was ($\beta=0.099$) this shows that marketing intelligence has positive and statistically significant relationship with sales performance. Hence, the above proposed hypothesis was rejected and the alternative hypothesis is accepted; which indicates that marketing intelligence has statistically significant relationship with sales performance of the firm.

Thus the study support Al-Rfou's (2015) which posits continuous product differentiation over competitors had a positive strong effect on sales performance. Marketers should gain more knowledge about customers and their behavioral thinking, which is necessary to understand the dynamics of their conscious and unconscious thinking that leads to the ultimate commercial success (Al-Abrash, 2014). It can be concluded that the results of the findings revealed marketing intelligence has a positive and significant effect on enhancing the sales performance of BGI, Ethiopia Hawassa Plant. Marketing knowledge or intelligence from the company side, competitor side, and the overall marketing information analysis are required to enhance sales performance. Knowledge in the area of what product a bank is developing, how its functional processes facilitate and support the business, to what extent the offers of strategic competitors are good predictors of the sales performance.

Ho3: Marketing research has no statistically significant relationship with sales performance of B.G.I. Ethiopia Hawassa Plant.

Marketing research has no statistically significant relationship with sales performance of B.G.I. Ethiopia Hawassa Plant. (Reject Ho3 if $p<0.05$) otherwise accept it. From table 4.28, the significant value for marketing research was 0.000 which is less than p-value of 0.05. Therefore, H03 is rejected, which indicates that marketing research has statistically significant relationship with sales performance of the firm. Besides, the coefficient of beta for marketing research was ($\beta=0.626$) this shows that marketing research has positive and statistically significant relationship on sales performance. Hence, the above proposed hypothesis was rejected and the alternative hypothesis is accepted; which indicates that marketing research has statistically significant relationship with sales performance of the firm.

Environmental support policies can help product development employees understand the required tasks and how to perform key processes and routines effectively which this study support the work of (Kleinschmidt & De Brentani , 2007) which is the green marketing practice in the manufacturing industry. Specifically, specialized environmental departments, along with the existence of formalized environmental procedures, can be instrumental in helping firms respond swiftly to stakeholder environmental demands, provide cutting-edge information on environmental best practices, and communicate green achievements and changes to interested parties (Sarkis, J; Gonzalez-Torre, P.&Adenso-Diaz, B, 2010

Ho4: Marketing decision support system has no statistically significant relationship with sales performance of B.G.I. Ethiopia Hawassa Plant.

Marketing decision support system has no statistically significant effect on sales performance of the firms. (Reject Ho4 if $p<0.05$) otherwise accept it. From table 4.19, the significant value for marketing decision support system was 0.005 which is less than p-value of 0.05. Therefore, Ho4 is rejected, which indicates that marketing decision support system has a statistically significant relationship with sales performance of the firm. In addition to this, the coefficient of beta for marketing decision support system was ($\beta=0.125$) this shows that marketing decision support system has positive and statistically significant relationship with sales performance Hence, the above proposed hypothesis was rejected and the alternative hypothesis was accepted; which indicates that marketing decision support system has statistically significant relationship with sales performance of the firm.

This study also affirms the study of Al-Shaikh (2018) which established that marketing decision support system (MDSS) can investigate and analyze the data assembled from research, intelligence, and internal records. MDSS give rational findings when obtaining enough data; in addition, the various analysis that MDSS provides help with deciding the strength and weaknesses which prompt better decisions. Ismail (2011) and Bahloul (2011) found that MDSS is utilized by BGI Ethiopia, Hawassa plant and alternate firms and MDSS can dramatically affect the correct decision making and the workers' sales performance in an organization.

Table 4.18: Summary of hypothesis test result

No	Hypothesis	Tool	Result
Ha1	Internal recording system has positive and statistically significant relationship with sales performance of B.G.I. Ethiopia Hawassa Plant.	Regression	Accepted
Ha2	Marketing intelligence has positive and statistically significant relationship with Sales performance of B.G.I. Ethiopia Hawassa Plant.	Regression	Accepted
Ha3	Marketing research has positive and statistically significant relationship with sales performance of B.G.I. Ethiopia Hawassa Plant.	Regression	Accepted
Ha4	Marketing decision support system has positive and statistically Significant relationship with Sales performance of B.G.I. Ethiopia Hawassa Plant.	Regression	Accepted

Source: survey data, (2024)

4.13. Results and Discussions of Descriptive Statistics

The descriptive statistics analysis employed in this study was frequency distribution, tables, percentage, mean, and standard deviation. Therefore, through the above tools the researcher arrived at the following finding as under:

The study summarized that internal recording system. were sufficiently fulfilled in the study area as majority of respondents fall under strongly agree level of agreement between 4.21 and

5.00.B G I. Ethiopia Hawassa plant has a multiple internal record database. As a mean value indicate (4.23), which is strongly agree level

Every department within the Company store their data in the database as a mean value indicate (4.39), this indicate that the company's data base are properly functioning.

Company's internal records supply critical information on customer Performance with mean scale of 4.35, Company's internal records supply critical data on the Company's sales and Purchase is in doubt by respondents as a mean scale show that 4.38, Data contained in the Company's internal records can be considered to be accurate.is in doubt as respondents revealed with a mean of 4.33 All the information received from marketing research and intelligence is maintained in the company's internal records.as mean scale show as 4.27.

In the same manner, marketing intelligence was the other variables in the study area; most respondent's response fall under strongly agree with its overall average mean of (4.28): Marketing intelligence benefits Company's by providing knowledge as well as enabling them to be aware of current business environment (4.16,) Company makes use of marketing Intelligence regularly to learn about their competitors. (4.16).

Customers provide important information regarding markets and the competitors. (4.26), internal information sources such as management, consultants, and sales staff among others is the main information sources for upcoming market developments. (4.25), The company is enabled by marketing intelligence to constantly track and evaluate competitor Performance.(4.39) and Sufficient and relevant information about company clients is supplied by marketing intelligence. (4.44)

Similarly the study established that marketing research that was the other variables which influence sales performance of B.G.I.,Ethiopia in the study area. Most respondents response fall strongly agree 4.21-5.00 with its overall average mean (4.31); The Allocated Budget For The Company's Marketing Research Department Is Sufficient Enable Efficient Performance (4.30), The Company Often Carries Out Activities Related To Marketing Research (4.30), Company 'Management Ensures That The Research Plan Is Continuously Enhanced. (4.33). The Risk That Is Brought By Uncertainty Is Reduced By Conducting Marketing Research (4.24), The Performance Of Staff In The Company Reflects The Positive Impact Of Marketing Research. (4.32) and Understanding Consumer Behavior Is Aided By Conducting Marketing Research. (4.38), Likewise, the study established that marketing decision support

system was the other effect in the study area as most respondent's response fall under strongly agree with overall its average mean 4.23which is found between 4.21-5.00 mean score range. Computer program deliver information that is considered important in plans to achieve marketing goals (4.22), Computer program have the ability of predicting changes likely to occur to the Company's marketing strategy variables. (4.21), Computer program have the ability to define the costs resulting from changes in marketing variables. (4.17), Computer programs are able to gauge how effective the Company's marketing operations are. (4.21), Computer programs can help in identifying the Company's marketing strong point and also weaknesses. (4.23) Computer programs have the ability of determining customer size which can positive influence Company's sales (4.35). The finding of this study also reflects that respondents have positive attitude to some items marketing decision support system and yet they satisfied with Awareness about marketing information system in their industry. This finding summarized that in the study area the organization has awareness of marketing information system with its mean of 4.23 which is found between 4.21and5.00.

4.14. Results and Discussions inferential statistics

Result of correlation analysis of this study showed that the relationship between all independent variables (Internal recording system ,Marketing intelligence, Marketing research and Marketing decision support system) has a positive and significant relationship with dependent variable (Sales performance) at 99% confidence level ($p<0.01$).

Internal recording system and Sales performance is had Strong positive significant correlation with ($r = 0.735$, $n = 218$, $p < 0.000$), Marketing intelligence and Sales performance has positive strong relationship ($r = 0.634$, $n= 218$, $p< 0.000$), Marketing research and Sales performance has Strong positive relationship with ($r = 0.876$, $n = 218$, $p< 0.000$), Marketing decision support system and Sales performance has a positive strong relationship with the ($r = 0.694$, $n= 218$, $p< 0.000$), All independent variables those are Internal recording system ,Marketing intelligence, Marketing research and Marketing decision support system are strong relationship with Sales performance. The highest correlation was Marketing research with magnitude (0.876) followed by Internal recording with magnitude (0.735), Marketing decision support system (0.694) and Marketing intelligence (0.634).The regression result revealed that the effects of Marketing information system (Internal recording system ,Marketing intelligence ,Marketing research and Marketing support system) on Sales performance of B.G.I. Ethiopia Hawassa Plant. As such in B.G.I.

Ethiopia Hawassa Plant, all the Effect of Marketing information system included in the study (Internal recording system, Marketing intelligence, Marketing research, and Marketing decision support system) have positive and significant influence on Sales performance.

Similarly, marketing research has the highest positive influence on Sales performance, followed by Internal recording system and Marketing decision support system. Marketing intelligence was the least and significant determinate dimension Marketing information system on sales performance of B.G.I. Ethiopia Hawassa Plant. The value of R2 = 0.802 , demonstrates that 80.2 percent of variance in Sales performance was explained by four determinants (Internal recording system, Marketing intelligence, Marketing research, and Marketing decision support system) and the rest 19.8 percent of Sales performance was determined by the other factor , which was out of the scope of the study.

CHAPTER FIVE

5. FINDINGS, CONCLUSION AND RECOMMENDATION

This chapter consists of the summary of the findings, conclusions drawn from the analysis of the data, and the recommendations forwarded by the researcher in order to Sales performance of the BGI Ethiopia Hawassa plant

5.1. Summary of major findings

The study was intended to identify the effect of marketing information system on sales performance in Acase of BGI Ethiopia Hawassa plant. The findings were based on the questionnaire items consisting of 31 items distributed to 231 to potential respondents of the study.

From the reliability test analysis table 4.1 as the value of Cronbach's alpha for every dimension exceeds the point of 0.7 that indicates the formulated questions were reliable.

The results of demographic information of the respondent in terms of educational level indicated that majority of the respondents from the top level management until the subordinates of the sales and marketing department of the company, the staffs are well educated. From the total of 218 respondents about 102 (46.8%) Respondents are bachelor degree holders, 54 (24.8%) Respondents have Collage diploma, 33(15.1%) of the respondents have Master's degree and 28 (12.8 %.) Respondents are technical and vocational school graduates. This implies that most respondents are knowledgeable in their fields of work: From the total of 218 respondents staffs with a range of 1-4 years of work experience constitute 11 (5.0%), staffs with a range of 5-9 years of work experience constitute 116 (53.2%), the rest staffs with a work experience of 10-19 and above constitute 91 (41.7%). Which means majority of staff member have an experience with the industry.

The frequency, percentage and mean value of the distribution of the respondents indicated that all independent variable included in the study indicates the employees of the industries perceived that the industry is nice in practicing of marketing information system with mean value of internal recording system (M= 4.3242, SD =0.71551), marketing intelligence with mean value of (M=4.2653, SD= 0.57809), Marketing research with mean value of (M=4.3402, SD= 0.62593), Marketing decision support system with mean value of (M=4.2546 , SD= 0.56165). The mean values of all marketing information variables included

in the study constructs indicates that respondents are strongly agreed for sales performance practice of the industries

Generally, as the descriptive results for the marketing information variables which is mentioned as independent variable in this study rests in a mean range of 4.21-5.00 with maximum standard deviation of 0.6223 indicated respondents strongly agreed to the effects of marketing information system variables included in the study area and the average mean result for sales performance were 4.41 and standard deviation of 0.77 which should be seen strongly agreed result by the organizations, as the researcher observed that majority of the firms to answered as the organizations performance is to very large extent as a mean lies between 4.21-5.00

As a result of correlation analysis table 4.13 showed that the relationship between the independent variables (internal record system, marketing research, marketing intelligence, and marketing decision support system) has a positive and significant correlation with dependent variable (Sales performance) at 99% confidence level($p<0.01$. Internal recording system and has very strong relationship with sales performance and Marketing decision support system has moderate and Marketing research and Marketing intelligence has strong relationship with sales performance . The highest correlation was Marketing research with magnitude .876 followed by internal recording system with the magnitude of .735, Marketing decision support system with the magnitude of 0.694 and Marketing Intelligence with the magnitude of 0.634

Table 4.15 also showed that the result of regression analysis model was significance for all independent variables (internal record system, marketing research, marketing intelligence, and marketing decision support system) that influence the sales performance under case area. The Multiple Regression Analysis (MRA) was used in this study to test all the hypotheses.

Based on the finding when the independent were entered together with dependent variable, the R-square value has 80.2% which is considered good as the model was able to explain 80.2% of variation in sales performance , with highly significant value of, $p<0.000$. The adjusted R2 was 0.798. This means that the variables in the model collectively explained 79.8 percent of the variance observed in sales performance by firm. The remaining 20.2 percent is due to other factors beyond the scope of this study. As for Durbin-Watson, the value should fall in the range of 1 to 2.5 which means the error term is independent (Hair et al. 2006). The value of Durbin-Watson is 1.771 which means the error term is relatively independent.

The study summarized above table 4.17 the regression coefficient of marketing information system. All independent variables included in the study(internal record system, marketing research, marketing intelligence, and marketing decision support system) were found to have positively significant relationship towards sales performance , where Internal recording system has a beta of(0.156), with p-value of 0.003, Marketing Intelligence with beta value of (0.099) and p-value of 0.017which is significant, Marketing Research with beta value of(0.626) and p- value 0.000 which is significant and Marketing decision support system has a beta of (0.125) and p-value of 0.005 which is significant.

Thus, all hypotheses H1, H2, H3, and H4 were supported by the model. Therefore all independent variable included in the study (internal record system, marketing research, marketing intelligence, and marketing decision support system) were found to have positive and significant relationship with green marketing practice.

5.2. Conclusion

The main aim of the study was to identify the effect of marketing information system on sales performance in case of BGI Ethiopia, Hawassa Plant. During the investigation of the study the researcher used both descriptive and inferential statistics. Additionally, the researcher made the following conclusions based on findings of data

As most respondent's response found under strongly agree ranges; there was effective internal recording system, good marketing intelligence, High marketing research, and good marketing decision support system. Besides in the study area; sales performance is practiced at very large extent. This indicated that the sales performance is influenced by of marketing information system in case of B.G.I. Ethiopia Hawassa Plant

The correlation analysis show that the four study determinate(internal recording system, marketing intelligence, marketing research and marketing decision support system) that the effect of marketing information system have significant and positive relationship with sales performance of B.G.I. Ethiopia Hawassa Plant with magnitude ranges of strong for all variables included in study (marketing research, internal recording system, marketing decision support system and marketing intelligence). Even though all independent variables have positive correlation with sales performance, marketing research has a high significant and positive relationship with sales performance and the pre-model fitting assumptions like

normality, linearity and multi-co linearity of variables were checked before regression analysis applied

Furthermore the study concluded that regression analysis (R-square) was 0.802; it implied that the four independent variables (internal recording system, marketing intelligence, marketing research and marketing decision support system) can affect the variation of sales performance of B.G.I. Ethiopia Hawassa Plant Therefore; this study concluded that the four variables have significant relationship with sales performance of B.G.I. Ethiopia Hawassa Plant.

The study also concluded that; all independent variables (internal recording system, marketing intelligence, marketing research and marketing decision support system) have statistically significant relationship with sales performance in the study area with p-value less than 0.05. Therefore, all null hypothesis were rejected and instead alternative hypothesis were accepted

In Ethiopia, specifically in Hawassa plant BGI Company there is a lack of empirical studies that investigate the effect of marketing information system on sales volume. Thus, this study contributes to the literature providing an insight into the effect of marketing information system on sales volume in Hawassa Plant. This is in-line with the practice of marketing information system which is virtually in -existence, where manufacturing industries are considered as a back bone of our country Ethiopia where they contribute economic performance of our country. The research findings fulfilled the research objectives and tested the hypothesis of this study. The level of marketing information practice in BGI, Ethiopia Hawassa Plant is high as the forces such as Internal record system, Marketing Intelligence, Marketing Research and marketing decision support system used to practice marketing information system was very high.

The final conclusion is that in BGI, Ethiopia, Hawassa Plant there is a need to accelerate practice of marketing information system. This is to make very ease order to increase sales volume, to improve return on investment of the company and to digitalize the company. Marketing information system will become increasingly important as it gains momentum in this digital era.

5.3. Recommendation

Based on the findings and conclusions of the study, the researcher forwards the following recommendations to the management, decision makers and policy makers of BGI, Ethiopia, Hawassa plant specifically.

In the light of this study, the following recommendations are made so as to help the BGI Ethiopia Hawassa Plant to enhance its operation and be of great value to the firms. Firstly, it is recommended that the management of firms should thus take keen interest in safe keeping all items of information about the operation system, sales data, core competence and other strategies including their strength, weakness, opportunities and threat.

It is better to have strong internal recording system. In this data-driven era, organizations face the constant challenge of handling large amounts of information. From important financial records to sensitive personal data, it is vital to be able to efficiently manage and organize these records.

BGI Ethiopia should have to encourage the marketing research. Because Market research provides relevant data to help solve marketing challenges that a business will most likely face--an integral part of the business planning process. In fact, strategies such as market segmentation (identifying specific groups within a market) and product differentiation (creating an identity for a product or service that separates it from those of the competitors) are impossible to develop without market research (Nevo, 2001). The process of assessing the viability of a new product or service through techniques such as surveys, product testing and focus groups. Market research allows a company to discover who their target market is and what these consumers think about a product or service before it becomes available to the public.

The study recommends that as the company should have strong marketing intelligence. Marketing intelligence is to prevent the astonishments and the employees' inability against environmental changes and to reduce and minimize the company's exposure to danger .A new apparatus which helps the organizations to reach a suitable place in today's environment is the use of marketing intelligence. The concept of intelligence is marketing information that is considered as an ongoing effort to increase the competitive ability of the strategic programming processes. Marketing intelligence is the systematic collection and

analysis of publicly available information about consumers, competitors, and developments in the marketplace.

The researcher also recommend that because by the use of Marketing decision support system BGI, Ethiopia Hawassa plant can coordinate a collection of system tools and technique with software and hardware support for an organization to gather and to interpret relevant information from the business environment and to turn to database , if the company do so they can better facilitate all steps in process of information

Finally, information is a very crucial and sensitive tool that is useful for external bodies in competitive environment. This has caused a lot of hackers' sleepless night and timely stress to break and unlock organizations database in order for them to assess both the organization and their customers' information. Therefore, firms should recruit and train specialists in information technology (IT) popularly

5.4. Implication of the study

The study results present theoretical, Practical and policy implications. The study has added value to stakeholder theory all independent had a positive and significant mediation effect on the correlation within sales performance that all the independent variables included in the study often cause stakeholders to increase sales volume which improve the productivity of the case areas.

The implication of the results to the existence of sales performance is a worthwhile strategy which the management should be committed to in order to gain competitive advantage in a competitive industry with changing dynamic marketing environment. The findings will therefore assist the marketing managers to convince the senior management and business owners on marketing information system issues to be implemented due .Further, managers will realize that marketing information serve the purpose of dealing with the organization

The findings will also help managers understand that businesses in all industries get affected by marketing information system specially in today's digital era and therefore firms' should be sensitive to these influences so as to remain competitive. Finally, marketers should inform, persuade and remind consumers on the benefits of marketing information system.

First, the study recommends that management of the company set aside funds to enhance sales performance through marketing information system in selected areas.. Mainstreaming

marketing information system in firms operations has potential to add value in the pursuit of sales performance. The government should encourage the companies to implement marketing information system to improve sales performance.

5.5. Implication for future studies

This study found out that the effect of marketing information system on sales performance. It is therefore recommended that an investigation into how sales performance is influenced by marketing information system on individual customers bases within the same industry.

The researcher further recommends a similar research be done under different context rather than BGI, Ethiopia, Hawassa Plant if the same results would be obtained.

The study used a cross sectional research design to measure the effect of marketing information system on sales performance at a particular point in time. Future studies should consider the use of longitudinal research design to track changes is effect of marketing information system on sales performance over time. Longitudinal designs have the ability to show the outline of an unpredictable outcome over a period of time. Authoritative learning about causal relationships can be done by use of this technique. Longitudinal examination can also facilitate the discovery of "sleeper effects" or relations among many actions over an extensive period of time;

Linked measures given the magnitude of the study (Creswell & Plano, 2011).The inclusion of other variables in the conceptual framework also brings some useful insights in the study concept. This study therefore recommends an empirical inquiry on the same be conducted. In addition, a research on the implication of marketing information system should be carried out.

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Learning.

Appendix: Research Questionnaires

Hawassa University

College of Business and Economics

Department of Management MBA in Marketing Management

Questionnaire

Questionnaire to be filled by Employees of BGI Ethiopia Hawassa Plant

Dear respondent,

I am a graduate student in the department of Management specialization in Marketing Management, Hawassa University. Currently, I am undertaking a research entitled 'The Effect of Marketing Information System on sales performance :(A case of BGI Ethiopia, Hawassa Plant :) You are one of the respondents selected to participate on this study. Your participation is entirely voluntary and the questionnaire is completely anonymous.

Finally, I confirm you that the information that you share with me will be kept confidential and only used for the academic purpose. No individual's responses will be identified as such and the identity of persons responding will not be published or released to anyone. All information will be used for academic purposes only. A copy of the final report will be availed to you upon request. Thank you in advance for your kind cooperation and dedicating your time.

Sincerely

Tamirat Tafesse Endale

E-mail tamirtafesse@gmail.com

Phone number +251916861524 / +251913119105

General Instructions

There is no need of writing your name.

For Likert scale type statements and multiple choice questions please indicate your answers with a check mark (√) in the appropriate number.

Thank you again!!!

PART I: Participant Information

Sex: Male Female

Which of the following age categories describes you?

18- 25 26-34 35-44 45-54

Number of years you have worked for the Company. 1-4 5-9 10-19 20 and above

Educational Qualification: High school graduate Technical school graduate

College Diploma BA/BSc Degree

Master's Degree PhD

Other (please state

5. Have you been given training for the last one year? Yes No

6 .Have you ever been sponsored by the corporation to attend any training or educational programs outside the corporation? Yes No

PART II: Please state your level of opinion for each given statement using the following scales: 1 = strongly disagree 2 = disagree 3 = Neutral 4 = agree 5 = strongly agree

No.1	INTERNAL RECORDING SYSTEM	Extent of Agreement				
		1	2	3	4	5
1	The Company has a multiple internal marketing Database.					
2	Every department within the Company stores their data in the database.					
3	Company's internal records supply critical information on customer Performance.					
4	Company's internal records supply critical data on the Company's sales and purchases.					
5	Data contained in the Company's internal records can be considered to be accurate.					
6	All the information received from marketing research and intelligence is maintained in the company's internal records.					
NO 2	MARKETING INTELLIGENCE	1	2	3	4	5
1	Marketing intelligence benefits Company's by providing knowledge as well as enabling them to be aware of current business environment.					
2	Company makes use of marketing Intelligence regularly to learn about their competitors.					
3	Customers provide important information regarding markets and the competitors.					
4	Internal information sources such as management, consultants, and sales staff Among others are the main information sources for upcoming market developments.					
5	The company is enabled by marketing intelligence to constantly track and evaluate competitor Performance.					

6	Sufficient and relevant information about company clients is supplied by marketing intelligence.					
NO 3	MARKETING RESEARCH	1	2	3	4	5
1	The allocated budget for the Company's marketing research Department is sufficient enable efficient performance.					
2	The Company often carries out activities Related to marketing Research.					
3	Company 'management ensures that the research plan is Continuously enhanced.					
4	The risk that is brought by uncertainty is reduced by conducting marketing research					
5	The performance of staff in the Company reflects the positive impact of marketing research.					
6	Understanding consumer behavior is aided by conducting marketing research.					
NO 4	MANAGEMENT DECISION SUPPORTS SYSTEM	1	2	3	4	5
1	Computer program deliver information that is considered important in plans to achieve marketing goals.					
2	Computer program have the ability of predicting changes likely to occur to the Company's marketing strategy variables.					
3	Computer program have the ability to define the costs resulting from changes in marketing variables.					
4	Computer programs are able to gauge how effective the Company's marketing operations are.					
5	Computer programs can help in identifying the Company's marketing strong point and also weaknesses.					

6	Computer programs have the ability of determining customer size which can positive influence firm sales.					
NO 5	SALES PERFORMANCE	1	2	3	4	5
1	Our Company usage of marketing information systems has led to increased market share.					
2	We have increased our production sales volume due to enhanced use Of marketing information systems.					
3	We have continuously increased the number of products due to our use of information systems.					
4	Our company has enhanced customer perception about our products and services through our continuous and timely interaction aided by usage of information systems.					
5	We have managed to reduce process delays and enhanced our delivery rates to our customers.					
6	Our marketing efficiency has thus been enhanced due to our effective use of information systems.					
7	Creating friendly relationship with our prospects customer helps us make more sales.					

Thank you for your time