

**INFLUENCE OF ARTIFICIAL INTELLIGENCE ON MARKETING STRATEGY
AMONG MOBILE TELEPHONY OPERATORS IN KENYA**

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DECLARATION

This project is my original work and has not been presented for a degree/diploma in any other university

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Signature

Date

This project has been submitted for examination with my approval as university supervisor.

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DEDICATION

This Research Project is dedicated to the memory of my brother, Murimi.

ACKNOWLEDGMENTS

First, I thank God for great health and strength throughout the study period.

Secondly I would like to thank my supervisor, Dr. Catherine Ngahu for her patience, suggestions and guidance throughout the research project.

Finally, I wish to appreciate members of my family for their unwavering support throughout the study period. God bless you.

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ABBREVIATIONS AND ACRONYMS

AGI	Artificial General Intelligence
AI	Artificial Intelligence
ATU	Attitude towards Use
BI	Behavior Intentions
DL	Deep Learning
IT	Information Technology
MGI	McKinsey Global Institute
ML	Machine Learning
NLP	Natural Language Processing
PEOU	Perceived Ease of Use
PU	Perceived Use
TAM	Technology Acceptance Model
CAK	Communications Authority of Kenya

ABSTRACT

As technology is evolving like never before, Artificial Intelligence is considered to be a major innovation that is altering the existing marketing landscape. Today, AI has made it possible for marketers to turn humongous sets of data into actionable insights. The application of AI in marketing strategy is not only for competitive advantage but also to constantly follow and foresee the next purchasing decisions of the target customers and to improve their customer journey. In light of this, the study focused on mobile telephony operators in Kenya as deployment of AI technologies has the potential of positively influencing marketing strategy of a firm. The study's objective was to establish the extent of influence of artificial intelligence on marketing strategy among mobile telephony operators in Kenya. The study was carried out through a descriptive study. Questionnaires were employed to collect primary data. Collected data was analysed using descriptive statistics while regression analysis technique was applied to establish the relationship between the dependent and independent variables. The findings indicated that AI technologies have been deployed to some extent. Further, the findings pointed to a strong relationship between AI technologies use and marketing strategy. However from the regression model the variables with a positive and significant influence on marketing strategy are natural language processing, virtual personal assistants, targeted online advertising and machine learning. The study recommends improvements on the organizational AI readiness in the areas of team skills and knowledge, open culture and process flow integration. Further, it points to policy makers to bridge the knowledge and skills gap relating to AI and data science so as to fully exploit and gain from AI and reap the full benefit of its use in marketing strategy.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Technology is evolving like never before, Artificial intelligence (AI) is considered to be a major innovation that is altering the existing marketing landscape. Thanks to AI technology, the digital marketing strategy of a number of business concerns has undergone a major makeover (Alford, 2019). Due to AI, the transformation of marketing has taken place. Today, marketers are in a position to turn humongous sets of data into actionable insights. They have become empowered to delight the market audience and improve the overall efficiency of the business undertaking. AI has allowed marketers to stop guessing about the behavior that is exhibited by the market audience (Alford, 2019). The innovative technology in the market scene allows marketers to understand how modern customers behave and make purchasing decisions. The manner in which Artificial Intelligence has impacted the marketing domain cannot be ignored. Due to AI, technologies, in the cutthroat competitive times, a majority of the businesses are trying to make their processes smarter and more efficient in nature. As per the research study by Wang and Siau (2019), businesses are now empowered to think out of the box while designing their marketing strategies.

The study was guided by technology acceptance model (TAM), established by Davis (1989). The theory posits the acceptance and use of an innovation by individuals. It explains that users consider if the technology is easy to use or if the technology is perceived to be easy to use. In addition, users consider their behavior intentions and their attitude towards using the technology. The four factors influence the decisions of

individuals on whether or not to adopt a specific technology. Moreover, the theory posits that the external environment will impact the decision on whether or not to use a technology. In this instance, the adoption of AI will depend on the market and the customers of a firm. The disruptive innovations theory was developed by Christensen in 1995. The theory opines it is critical to comprehend the market and the technology in order to avoid having a disruptive technology in the market.

Notably, in the modern era, the use of AI in marketing has grown popularity. Conferring to a study done by Henke et al. (2016) 98% of the marketers who took part in the research stated that they intended to adopt AI soon while 20% had already implemented the use of AI in marketing as of 2017. However, this discrepancy is beginning to diminish. In Kenya the adoption of IA in marketing is being adopted by large service firms such as Safaricom (Cheruiyot, 2018). However, in Kenya, the adoption and application of AI and related technologies remains a largely unexplored subject. The same is true of the place of mobile services in the Kenyan context. Consequently, this study focused on mobile telephony operators and their marketing strategies.

1.1.1 Artificial Intelligence

Artificial Intelligence is a computerized system which takes in data to undertake intelligent tasks to maximize its success. AI is viewed as a technology portfolio since there are different types of AI (Kaput, 2016). The different AI innovations undertake different functions and their rate of development also differ, however, all focus on mimicking the intelligence of human beings in computer form making their operations “smart”. AI is categorized into Artificial General Intelligence (AGI) and Narrow AI.

AGI is commonly termed as strong AI; it performs tasks that can easily be performed by intelligent individuals. The AGI is evident in science fiction and can be perceived as an AI that is able to conduct its tasks in a similar way as human beings. Due to the complex nature of human beings, and the little that is known about the working of the minds of humans, Cannella (2018) notes that the development and creation of a true AGI is yet to be accomplished. The Narrow AI is commonly termed as the weak AI, which effectively performs particular tasks. It pays attention to advancing in particular domains of cognitive abilities including predictive analysis, customer segmentation, image recognition and driving of cars. This is the commonly used kind of AI in daily operations.

The rapid growth of AI in the current years has been possible due to the progress of the cognitive mechanisms of AI and of machine competences to learn on the grounds of the data obtained (Lieto, Bhatt, Oltramari, & Vernon, 2017), as well as thanks to the chance to create previously non-existing information (Grawal, Gans, & Goldfarb, 2017). AI power equally lies in the gamut of processing of various formats of data. Besides numerical data, artificial intelligence processes images, texts and sounds, providing them with meaning and relevance for further investigation (Dhar, 2016). So far, AI has been drawing the attention of Information Technology (IT) experts, engineers and analysts, but is now advancing outside its customary areas of occurrence, making a progressively stronger mark in management and marketing. The ever-growing amount of consumer data available in big data systems, online or on mobile devices makes AI a vital marketing partner since it is grounded on analysis of data in its application.

1.1.2 Marketing Strategies

Marketing is a practice by business to meet and surpass the needs and expectations of customers' than its competition in order to gain a competitive advantage. Brodrechtova, (2008) describes marketing strategies as the guideline of the allocation of resources by a firm with respect to environmental factors and achieves its goal by meeting and surpassing the demands and wants of its customers. Moghaddam and Foroughi (2012) describe marketing strategy as the procedures followed by firms when reacting to market and environmental and internal forces to facilitate attainment of objectives in the target market.

According to Njeru (2013), most businesses implement the traditional concepts of marketing mix (Place, product, promotion and price). In support, Aremu and Bamiduro (2012) opine that firms are able to attain customer satisfaction by implementing marketing practices consisting of product, price, promotion and distribution. Moreover, scholars such as Adis (2010) indicated that to remain effective, firms can add other variables of marketing mix such as design strategy and specifications by the target market. Efficient implementation of marketing mix facilitates the growth of firms, creates goodwill with consumers, increases sales and helps a firm gain a competitive advantage, thus influencing its performance (Ghouri *et al.*, 2011).

1.1.3 Telecommunications Industry

In Kenya, the telecommunications sector was liberalized in the late 1990's and has grown rapidly resulting in new players, markets and challenges. Establishment of a large- scale telecommunications infrastructure in Kenya, capable of delivering affordable and efficient

info-communications services was identified as a key requirement for Kenya's economic growth. In 1998 the Kenya Information and Communications Act was enacted with the aim of providing the structure for regulating the sector of communications in Kenya. The enactment of legislation in order to establish a regulatory body that is independent of political, commercial or government interest was provided by the constitution. This paved way for the communications commission of Kenya to be formed, however, an amendment to the Act in 2013 would see it renamed to Communications Authority. The Authority is accountable for the improvement and enactment of policies and strategies with respect to telecommunications services in Kenya. It is the licensing body and monitors performance of telecommunication operators and service providers on constant basis to make sure that they discharge their requirements as stipulated in the licenses.

1.1.4 Mobile Telephony Operators in Kenya

Kenya's mobile industry is among the most developed mobile ecosystems in Sub – Saharan Africa. This has been made possible by the conducive regulatory and policy structure which has facilitated speedy growth of mobile networks and fairly affordable mobile services. Since the telecommunications sector was liberalized in 1998, Kenya has seen tremendous mobile and internet growth. This has motivated the government to transform Kenya into East Africa's leader in ICT (Chesire & Kombo, 2015). Currently, there are five mobile telephony services operators, which include three Mobile Network Operators (MNOs) namely: Safaricom PLC, Telkom Kenya, Airtel Networks Limited and two Mobile Virtual Network Operators (MVNOs) namely: Finserve Africa Limited (equitel) and Mobile Pay Limited.

As indicated by the statistics report Q4 FY 2018-2019 of the CAK, an estimated 96% of the Kenyan populace is served by a mobile network. This can be attributed to government initiatives such as the Universal Service Fund which aim at closing the existing gaps in the communications sector. The last financial year spanning June 2018 – June 2019 saw mobile subscription increase from 45.5 million to 52.2 million. The majority of subscribers belonged to Safaricom PLC at 33.1 Million (63.5%), Airtel Networks Limited with 12.9 million (24.6%), Telkom Kenya with 4.2 million (8.1%), Finserve Africa Limited with 1.9 million (3.6%) and Mobile Pay Limited with 0.09 million (0.2%).

1.2 Research Problem

Artificial Intelligence has made its presence felt in almost every aspect of the business. In fact, AI is believed to be quite common in the marketing arena. AI in Marketing can be termed as the application of machine learning and other innovative technologies to leverage customer data (Tjepkema, 2019). In the digitalized era, this innovative marketing concept can, in fact, act as the bridge that can help to overcome the gap between data science and execution. Lately, AI in marketing activities is gaining a high degree of attention as it gives a deeper insight to marketers about various elements. AI in marketing acts as a vital tool that empowers marketers to have a competitive advantage in the dynamic and competitive market setting. AI technologies especially computer algorithms enable marketers to assess bulky data for identifying patterns in customer behavior and predicting the outcome for the business undertaking. Due to its usefulness, many believe that Artificial Intelligence is the very future of marketing which can completely transform the marketing landscape (Tjepkema, 2019).

The telecommunications business environment has evolved as a result of the changes in regulations of the government, movement of service quality, technology, productivity pressures, marketing restrictions and globalization (Mboga, 2013). This has resulted in dynamism in the mobile service sector. Intense competition and informed customers is the norm of the sector. For survival mobile telephony operators need to practice the differentiation strategy. As such there is a need to incorporate marketing practices in responding to the market needs. Firms employ marketing strategies aligning to their resources and skills available to the external opportunities available in the market. Hence, service organizations are adopting artificial intelligence in their marketing strategies as a response to the changing business environment (Cannella, 2018).

Studies on AI by local researchers exist. Nyang'anga (2015) researched the AI application in pest management in maize production where he established that AI can be used to provide extension services. Gikaru (2015) researched on risk management and its prediction he proposes an AI based Recidivism Prediction System to Kenya Prisons; it seeks to predict reconviction of released prisoners. Cheruiyot (2018) researched on artificial intelligence and operational performance of selected service organizations in Nairobi he established a knowledge gap existing on understanding the applicability of AI without using other technology needs to be filled in all aspects of organization operations. From the foregoing emanate a glaring gap into the relationship between AI and marketing strategy, the research question was therefore: To what extent has artificial intelligence influenced marketing strategy among mobile telephony operators in Kenya?

1.3 Objective of the Study

To determine the extent to which artificial intelligence has influenced marketing strategy among mobile telephony operators in Kenya.

1.4 Value of the Study

The study will be valuable to mobile telephony operators' management since it will help them build on the strategies that have been developed with respect to AI in marketing. Moreover, the study will be a basis of reference material to the telecommunication sector giving insights on the impact of artificial intelligence on marketing strategy so as to remain sustainable in the dynamic business environment.

The policy makers will also benefit from this study since it will assist them develop framework for policies which artificial intelligence can be built on. To the stakeholders, the study will try to show the importance of adopting artificial intelligence in marketing strategy.

To academicians, much knowledge will be gained from this study. It will establish a better foundation to people who want to get into research in the future related to artificial intelligence and its relationship with marketing strategies. It will also act as reference material for upcoming academicians and researchers on other topics related to the one discussed here. It will provide a basis for research scholars wishing to carry out a further study in the sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents the relevant theoretical as well as empirical literature and further put into context artificial intelligence and its influence on marketing strategy.

2.2 Theoretical Foundation of the Study

The study will be steered by the technology acceptance model (TAM) theory as well as the disruptive innovations theory.

2.2.1 Technology Acceptance Model

Davis (1989) suggested TAM. The theory posits that that the decisions by individuals to either use or reject a specific technology relies on various factors namely; the perceived use (PU); attitude towards use (ATU); perceived ease of use (PEOU) and behaviour intentions (BI). The aim of TAM is to give an account to the factors influencing the acceptance of technology by users by also providing an explanation to the behaviour of users towards particular technologies. Ndegwa (2012) found that PU and PEOU are the core indicators of TAM that are used to forecast the acceptance behaviour of users to specific technologies. Hence, TAM is able to forecast the influence of external indicators on the internal attitudes and beliefs. TAM makes the assumption that cognitive responses and in particular PU and PEOU determine the decision by users on the acceptability of particular technologies. This ultimately influences the behaviour and attitude of technology users (Ndegwa, 2012).

According to the model, individuals and organizations adopt a technology if they believe that the technology will be useful to their operations and if the technology is easy to use. AI is a complex technology, however, its perceived usefulness has encouraged organizations to adopt the technology. Moreover, the theory posits that the external environment will impact the decision on whether to reject or accept a specific technology. In this instance, adoption of Artificial Intelligence will depend on the market and the customers of a firm. Hence, the use of AI in marketing will be influenced by customer needs, demands, and wants. Moreover, the competition in the market will drive the organization's decision on the usage of a particular technology. As such the importance of the theory to this study is its explanation that an organization must assess the PU and PEOU before adopting a technology.

2.2.2 Disruptive Innovations Theory

This theory was hypothesized by Christensen in 1995 (Gachigo ET AL., 2019). According to him, innovation is a process; and disruptive innovations are inferior, they offer varying values from technologies that are main stream and they do not matter as much to the main stream clients. Christensen and Raynor (2015), explains that disruption involves a challenges by a small firm with few resource on an already established company in the market by coming up with a simple application product or service positioned at the bottom of the market which steadily improves its performance in the market and eventually outperforming the already existing organizations.

Lara, Kolasani and Ramamurthy (2014), observed that firms tend to come up with new technologies at a faster rate than the customer needs thereby ending up producing too

complicated products in the market through sustaining innovations with the hope maximizing profitability. However, this action unwittingly opens a pathway to disruptors who seek to serve the neglected bottom market and serve them with simple application products which are inexpensive. These products often have lower gross margins, are unattractive and have a smaller target markets in comparison to traditional metrics of performance (Govindarajan & Kopalle2006).

The theory shows that as incumbents concentrate producing improved and making them better and better for their most demanding customers (cash cow), they exceed the customers' needs in specific segments. New entrants successfully target these segments which are ignored and deliver quality services/products, often at reduced costs hence the process of disruption starts here. According to Adner (2012), as incumbents concentrate on the profitable segments in the upmarket, they ignore the activities of the smaller companies serving the low end markets that gradually rise to the top of the market and sustaining their new high market position. When the upmarket clients adopt new entrant's products and services in volume, then disruption is said to have occurred.

Govindarajan and Kopalle (2006) say that for disruptive innovations to take place the following has to be fulfilled that is; disruptive innovations must emanate from low or new markets and that products of new entrants are not able to compete with up-market customers until the standards of these products catches up with their standards. However Chao and Kavadias (2012) disagree with the theory as it does not model reality. They argue that incumbents are well aware of the innovations by the new entrants, but their business environments do not allow them to respond to the actions of the new entrants

when they first come up, because they are not lucrative enough at first and they can take their scarce resource away.

The disruptive innovation theory acknowledges that technology is a powerful tool in businesses. According to the theory, it's a powerful tool that either result in the failure or success of a business with respect to how it is utilized. AI is a complex technology, hence its use may either result in either the success or fall down of businesses. The theory opines on the necessity to know the market and the technology in order to avoid having a disruptive technology in the market. Hence, as marketing officials are strategizing on using AI to increase their sales and improve performance, they need to be aware that the type of technology and the way the technology is used may either lead to their success or failure.

2.3 Overview of Artificial Intelligence

Artificial intelligence stems from IT. It is habitually used interchangeably with notions such as automation or robotization. It also tends to be mixed up with algorithm application or machine learning. According to Jarek and Mazurek (2019), AI is the development of systems of computers that can undertake tasks that require human intelligence. The technology created on AI is competent to mimic the cognitive functions that are characteristic to the human mind, plus the ability to crack problems and learn (Syam & Sharma, 2018). AIs purpose is to identify and process data in order to undertake specific tasks. This is the meaning of the so-called Artificial Narrow Intelligence, which functions and carries out jobs in a defined area (Shanahan, 2015). AGI has a scope of intellectual capacity in comparison to that of the human brain (Sterne,

2017). The present potential of AI works in a narrow capacity, and tasks are executed thanks to the development of 3 technologies: machine learning, deep learning, and natural language processing.

Machine learning (ML) has developed AI above the set guidelines. Hence ML has a change in algorithms which have so far been used with AI. ML has facilitated computers to learn by themselves founded on the available data by forming links between distinct pieces of data. These know-hows have enabled ML to draw inferences and form generalizations on the grounds of performed analyses (McIlwraith, Marmanis, & Babenko, 2017). There are various types of ML (Jarek & Mazurek, 2019). Deep learning (DL) is an upper level of ML since it is founded on learning algorithms that require not be managed manually. DL, taking advantage of computing power (of, e.g. server farms, CPU power, cloud computing) and big data, makes it possible to decrypt and offer the result for a new piece of information instantaneously (Alpaydin, 2016). Natural language processing (NLP) is one of the uses of ML and DL, targeting at speech recognition. The possibility to work on large amounts of data (text samples) that act as sources of the context, the vocabulary, the syntax, and the semantic meaning is owed to the many years of research in this area (Jarek & Mazurek, 2019).

2.4 Adoption of Artificial Intelligence

Artificial Intelligence has been used by different industries and sectors in the modern era. The study findings from the Boston Consultancy Group and a MIT Sloan Management Review Annual survey revealed that merely 19% of the surveyed companies had adopted AI in its early stages (Ruder-Hook, 2018). The study outcomes show that there still exists

a large gap between the expectation and action of AI application in firms. Ruder-Hook (2018) also observed that 80% of executives agreed that the use of AI gives a firm a strategic advantage. However, only 25% of firms have implemented AI in their daily operations. Moreover, the report revealed that only 10% of the surveyed firms had extensively implement AI in their operations. According to the report by Accenture AIQ, there is still a large discrepancy between the excitement and adoption of AI. Chui et al., (2017) observed that the adoption of AI is at its infancy stage, this is because despite the extensive investments in the AI technology, its adoption is still slow.

The leading sectors using AI, as indicated by the McKinsey's Industry Digitization Index, include those dealing in the high-tech industry such as financial and telecommunications industries. Henke *et al.*, (2017) observed that these are industries that have long histories of investing in digitization. However, Bughin, et al., (2017) noted that although these industries were quick to adopt digitization, they are still lagging behind in adopting AI. A Harvard Business Review article found that sectors that are leading in adopting AI such as automotive and telecommunication industries are among the most digitized industries (Bughin et al., 2017). Moreover, an analysis by Accenture (2017) found that there are different industries (service industry, IT and digital platform industries) that are leading the adoption of AI contrary to those revealed by McKinsey Global Institute (Ruder-Hook, 2018).

Some of the AI assets already being deployed in the retail sector include but not restricted to; robotics, machine learning as well as deep learning to enhance customer experience, retention, loss prevention, and delivery and supply chain activities and so on. Yet McKinsey Global Institute (2016) gives premium to three application areas namely;

product promotion, variety of products and finally, restocking of supplies. Customer-facing activities that affect satisfaction and retention like setting prices and tweaking promotional offers have started benefiting from artificial intelligence techniques.

In the realm of healthcare, AI pose greater opportunity in turning around diagnosis, picking out patterns and trends, medical imaging, mapping out disease spread and threats while offering huge opportunity for taming the same. Healthcare stakeholders have, at hand, an opportunity, through AI, to better manage healthcare budgets. Remote medicine, for instance is one such avenue (McKinsey Global Institute, 2016). Forecasting in the medical field is critical especially in the field of epidemiology. Mapping out populations that face risk and at micro-level, prediction of patient survival likelihoods are just but some areas of pertinent AI application.

In the financial sector the major AI and machine learning use cases include customer facing, operational deployments, investments portfolio reviews and finally regulatory uses. The use of AI techniques in lending decisions is not without impact at macroeconomic level. For instance, Stefan, Bart, Hsin-Vonn, and Lyn (2015) noted that financial inclusion is achieved by use of AI in credit scoring. This is because most would-be credit worthy borrowers do not have sufficient credit data to form a sizeable credit history.

The use of AI in logistics applications is largely a classic case of the optimization problem. This utilizes the maximization of predetermined objectives of outcomes for example, the analysis and prescription of feasible routes in transportation and logistics models. Companies that operate transport and logistics as well as taxi hailing services

like Uber find AI techniques useful in operating cost cutting. Of significant relevance include behavioral coaching that according to MGI (2016), can drive fuel cost down by 15%. Luckin et al (2016) argue that AI in education will not replace teachers. Instead their role will evolve and transform into effective and efficient players in the manner in which they will be ‘deployed, leveraged and augmented’, for expertise. AI for education must augur well for the triumvirate models of education namely, the learner model (what the individual learner is taught), the model of pedagogy (the teaching know-how) and the domain model (subject matter knowledge) (Cheruiyot, 2018). AI education algorithms choose what content (text, images, animations and sound) to expose learner to, based on needs and abilities. Learner outcomes e.g. correct answers, affective conditions etc., then determine the feedback served and progression to the next level. Open-learner models share outcomes between learners and tutors including qualitative ones like misconceptions held by the former and their motivations (Cheruiyot, 2018).

2.5 Artificial Intelligence in Marketing Strategy

In 2019, a lot of enthusiasm surrounds the use of AI in marketing, however, its implementation is still low. Notably, the difference between the excitement and application of AI is beginning to decrease. According to Bughin, McCarthy and Chui, (2017) 98% of marketers investigated stated that they are looking forward to using AI while only 20% indicated that they had already implemented AI in their operations. Notably the use of AI in marketing is gaining momentum given the emphasis of technology in creating brands.

Marketing hold the 4th position of sectors using AI resources and the 6th position as the largest sector that has adopted AI with about 2.5% of the whole industry having made its investment (Naimat, 2016). In the recent past, the use of AI in marketing has grown popularity as a result of specific factors. Among the aspects that have steered to the upsurge in interest in the use of AI in marketing include; the increase in computing capabilities to assess AI algorithms at lower prices, Big Data, the advancements in data management, and skilled and qualified personnel to use AI. Cannella (2018) observed that the recent popularity for the use of AI has led to a funding venture of \$27billion towards AI startups.

Since marketing is the blend of qualitative as well as quantitative aspects, it provides a unique chance for the growth of AI (Wierenga, 2010). The core uses of AI in marketing include expert systems, cost-based reasoning, and neural networks. Hoanca and Forrest (2015) noted that practically, AI is used in the upgrade of all outdated marketing techniques. AI is a helpful tool to companies, since through the analysis of data, the firms are able to customize marketing strategies that reach their customers (Bughin *et al.*, 2017). Moreover, AI helps improve the management yield through favorable pricing and quality customer service. Management in marketing requires decision makers in a specific market to come up with answers to problems and become a market leader. The Marketing Management Support System is the commonly used software in marketing allowing management to analyze data using AI prior to making decisions (Shahid & Li, 2019). Precisely, it is a tool of knowledge that assists in making decisions through probing the information with the enhancement of AI.

2.6 Empirical Review

A study Jarek & Mazurek, (2019) focused on the link between marketing and artificial intelligence. The research employed secondary data. The study results showed that AI has already been introduced in marketing, however, its application varies from levels of operations. The slow applicability is as a result of AI still being a novel technology introduced in firms. The uncertainty of the implementation of AI cautions firms from using the innovation. In addition the research found that AI has a significant bearing on marketing mix affecting the company's management. The study was however limited since it only used secondary data to evaluate the link between AI and marketing while the current study gathered data from mobile telephony operators in Kenya to determine the link between AI and marketing strategy.

In 2013, experts and researcher of AI carried out a survey where they reported that AGI would be developed by 2040-2050. Moreover the report estimated that the development of AGI by 2075 is 90% likely to occur. Other researchers and experts show that there is a big chance that the projections may be accomplished as researchers continue to understand the human brain (Zdnet 2018). The report was limited since it paid close attention at predicting the adoption of AI rather than discussing the current adoption of AI.

Sterne (2017) has stated that AI is the apt tool that can solve the existing marketing problem. The innovative technology enables companies to get a proper understating of detailed customer behavior so that marketers can specifically target their market audience. In addition to this AI technology can also enable marketers to deliver value

across different channels and ensure robust communication takes place at all the existing customer touch points. Sterne (2017) has also pointed out that business organizations will be empowered to make critical marketing decisions with similar kind of criteria across the virtual and analog marketing setting (Sterne, 2017). AI can increase the overall efficiency of the marketing job as the interference by humans will be restricted. This advanced technology will make sure that there exists no form of bias in the marketing setting that can impact a marketer in an adverse way (Sterne, 2017). This innovative approach can streamline a number of activities which increase the complexities of marketing such as recruitment. The book by Sterne (2017) documents the general relationship between AI in marketing.

In Kenya, Nya'nga'nga (2015) carried out a study on system of AI for management and diagnosis of maize pest in Uasin Gishu County. The study findings revealed that the participants were open to adopting artificial intelligence. The findings indicate that extension officers and farmers want a web based system that can be accessed via computers and mobile phones. The study found that AI was found to provide accurate diagnostics service. Thus, Nya'nga'nga (2015) drew the conclusion that an AI system can allow extension services such as management of diseases and diagnosis sharing on information.

Cheruiyot (2018) conducted a study on artificial intelligence and the performance of operations of service organizations in Nairobi. The study found that AI techniques are deployed 'to a small extent', pointing to already installed technologies whose full potential is not being exploited. In addition, AI impacts operational performance of service firms. However, from the regression model, the variables with the most

significant impact on performance are machine learning, targeted advertising and natural language processing. The study determined the influence of AI on operational performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was employed to complete the research. The chapter covers the research design, target population, sampling, techniques of data collection and the techniques for data analysis.

3.2 Research Design

A descriptive research design was employed for the study. This design shows variable relationships being studied. According to Creswell (2013), a descriptive study should be competent to answer the what, where and how questions of an event. The research design was seen to line up with this research as it shows the relationships between artificial intelligence and marketing strategies.

3.3 Population of the Study

The population for this study was the 5 licensed mobile telephony services operators in Kenya. A target population is described as a set of elements, people, events and services that a researcher targets for investigation (Bryman, 2012). For the purpose of this study, 28 respondents drawn from the staff of the leading mobile network operator (MNO), Safaricom and the leading mobile virtual network operator (MVNO), Finserve made up the target population. (CAK, 2019)

3.4 Sampling

Purposive sampling was employed to identify the targeted companies from the population and the respondents therein.

3.5 Data Collection

The study used primary data that was collected through self-administered questionnaires. In total the study distributed 28 research instruments. Prior to collecting the data the researcher produced an introductory letter which was obtained from the university, granting the researcher permission to gather research data. The researcher educated the participants on the objective of the research. Moreover, the researcher assured the participants of utmost confidentiality.

The questionnaires adopted Likert scale. The questionnaires were split into two sectors. The first section gathered the general information data of the respondent (the age, education background, gender, work background). The second part gathered data with respect to the research objective.

3.6 Data Analysis

The data was scrutinized for completeness, consistency and accuracy. It was then fed into a computer using SPSS for analysis of the data. Descriptive statistics that is frequencies, percentages, mean and standard deviation were applied to analyze data to establish extent of AI use, motivation for AI use and the outcomes of AI use. While the relationship between Artificial Intelligence and Marketing Strategies was examined by use of regression analysis.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This Chapter covers the analysis of findings, results and discussion. The purpose of this research was to establish the influence of artificial intelligence on marketing strategy among mobile telephony operators in Kenya. The study pursued to achieve this through one objective: to determine the extent to which artificial intelligence has influenced marketing strategy among mobile telephony operators in Kenya. Data was successfully collected from 25 respondents out of the 28 respondents targeted, providing an 89% response rate.

4.2 General Information

In the study, the general information sought was the respondent gender, respondent level of education, respondents department and their period of service/experience.

4.2.1 Gender of the respondents.

Gender distribution of the respondents in this study was found to be as presented in Table 4.1.

Table 4.1 Gender Distribution

Gender	Frequency	Percent
Male	14	56
Female	11	44
Total	28	100

Source: Author, 2019

The results show that 56 percent of the respondents were male while 44 percent of the respondents were female.

4.2.2 Level of education

Respondents were asked to indicate their highest level of academic qualification attained. This was important to give an accurate description of the influence of AI on marketing strategy of the companies. The results are as presented in Table 4.2.

Table 4.2 Level of Education

Level of education	Percent
Certificate	-
College Diploma	8
Undergraduate	76
Master	16
Total	100

Source: Author, 2019

From Table 4.2 the data provided shows that 76% of the respondents had undergraduate qualification, 16% had masters qualification while 8% had College diploma qualification. Overall over 92% of the respondents had undergraduate academic qualification and above and therefore would understand the influence of artificial intelligence on marketing strategy.

4.2.3 Department of Service

This study sought the department the respondent served in as presented in Table 4.3.

Table 4.3 Department

Department	Percent
IT	20
Marketing	20
Sales	16
Business Analytics	16
Cyber Defense/ Security	12
Senior Management	12
Human Capital	4
Total	100

Source: Author, 2019

The position of the respondents in their respective department was supervisory and work closely with AI technology and the organizations marketing strategy, presenting a holistic view.

4.2.4 Working Years

This study sought the period of service to the company of the respondents.

Table 4.4 Working Years

Period Served in the Company	Percent
Below 5yrs	52
5 to 10yrs	40
10 to 15yrs	8
Above 15yrs	
Total	100

Source: Author, 2019

The findings as presented in Table 4.4 show that 52% of the respondents had experience of below 5yrs, 40% had worked for 5-10yrs while 8% had worked for 10 to 15yrs. The data indicates that the respondents had work for the firm for a substantial length of time, suggesting that the respondents are fully conversant with the company's marketing strategy and use of artificial intelligence.

4.3 Extent of Use of Artificial Intelligence Technologies

Artificial Intelligence technologies are deployed 'to some extent' (Mean >3) in the sampled firms. Notably, the mean from the study of 3.205 is contributed by one outlier technology namely, predictive inventory management with a mean of 2.32, which is below average. The remaining seven technologies all had an above average mean of between 2.7 and 3.6. This therefore means that the respondents were of the opinion that predictive inventory management was somewhat of rudimentary use. However, a total mean score of 3.2 shows that the extent of AI technologies uses among mobile telephony operators in Kenya is to some extent.

Table 4.5 Extent of AI Technologies Use

Extent of AI Technologies Use	Mean	Standard Deviation
Voice Recognition and response solutions	3.6	1.22475
Speech to text, Text to Speech	2.76	1.16476
Machine learning	3.4	1.35401
Virtual Personal Assistants, chatbots	3.44	1.15758
Predictive Consumer Behaviour	3.16	0.8
Predictive Inventory Management	2.32	1.40594
Targeted Online advertising	3.4	1.19024
Natural Language Processing	3.56	1.08321
Average	3.205	1.17256

Source: Author, 2019

The findings point to the fact that despite most technologies being installed, this has not translated to them being fully utilized. This could be explained by possible lack of AI knowledge and skills, company culture does not support full exploration of the technologies and challenges in process flow integration in order to fully utilize the installed technologies.

4.4 Motivation for Use of AI

Use of AI by an organization may be motivated by several factors. In this study, the factors included ‘cut cost’, ‘enhance experience and insight’, ‘creation of new products’, ‘to keep up with competition’, ‘support in decision making’. The study sought to learn from the respondent the most critical motivation for the use of Artificial Intelligence.

Table 4.6 Motivation for Use of AI

Motivation for use of AI	Percent
Cut Cost	16
Enhance experience and insight	56
Creation of new products	20
To keep up with the completion	-
Support in decision making	8
Total	100

Source: Author, 2019

The findings point to, ‘enhance experience and insight’ as the most critical motivation cited by 56% of the respondents.

4.5 Company's readiness for Artificial Intelligence

The study examined the extent of company's readiness for artificial intelligence. Respondents were asked to rate their readiness on a multipoint likert scale. As shown in the Table 4.7 the sampled companies were found to be 'somehow ready' to exploit AI at a mean of 2.4114. The mean was contributed by three outliers namely, team skills and knowledge, open culture and process flow integration with a mean of 1.92, 1.92 and 1.96 respectively. Their exclusion from the analyses of mean shores up the average mean for the company readiness for AI of the sampled companies to 2.77 that would be 'Very ready' .

Table 4.7 Company readiness for AI

Company Readiness for Artificial Intelligence	Mean	Standard Deviation
Platform capability	2.72	0.458
Data management	2.96	0.2
Team Skills and knowledge	1.92	0.640
Open Culture	1.92	0.759
Process Flow Integration	1.96	0.735
Strategic fit	2.76	0.436
Business Case	2.64	0.569
Average	2.4114	0.5425

Source: Author, 2019

Team skills and knowledge and open culture were cited with the highest tendency towards a 'Not ready' status as both had a mean of 1.92. This indicated skills and knowledge gaps in the labor market for AI skills. There are few AI experts and data scientist in Kenya. Mckinney, (2016) opines that AI talent is scarce, in the USA only 0.16% of the workforce population of 150million has skills in AI and Data Science. Open culture tendency towards 'not ready', points to the company's acceptance behavior to new technologies. The perceived use and the perceived ease of use of the technologies influences behavior and attitude of the technology users. Process flows integration tendency towards 'not ready', points to the lack of unity between departments to work together seamlessly in order to fully utilize AI.

However, the findings on poor readiness are not unique, previous studies have identified the lack of readiness for AI amongst organizations globally. For example, Pierre Audrin Consultant (2018) in a study of 240 European decision makers, the respondents viewed AI as a topic of the future and thus they were resistant towards AI readiness. In addition, some of the respondents did not see its strategic importance. Lack of skills in data science and AI, lack of quality data and lack of senior management support and championing add to poor readiness for AI. Notably, the study held that larger companies with above 2,500 staff have a more favorable view of AI and tend to invest towards readiness for AI.

4.6 Effects of use of AI by company

The respondents were asked to indicate the effects of AI use by the company. Table 4.8 below shows the various effects that use of Artificial Intelligence has had on the company.

Table 4.8 Effect of AI use on company

Effect of AI use on company	Frequency	Percent
Change in Consumption pattern	3	12
Work is done faster now	5	20
Created new business opportunities	18	78
Helped create new products	20	80
Change in organizational structures	4	16
Change in business model	5	20
Improved efficiency	22	88
Increased customers' responsiveness	21	84

Source: Author, 2019

The findings revealed that improved efficiency ranked highest at 88% as the most cited effect of AI use on company by the respondents. This could be attributed to AI technologies enabling the automation of some tasks bringing about speedy service. The employees become more productive and have more time to focus on creative ideas.

Increased customers' responsiveness ranked second at 84%, this can be attributed to AI technologies such as chatbots that simplify customer interface, allowing the customer to channel their needs at any time and get speedy response. 'Helped create new products'

and 'created new business opportunities' ranked third and fourth respectively with 80% and 78 % respectively of the respondents citing them as effects of AI use by the company. This can be ascribed to the fact that customer needs are better understood and products best suited to the needs can be created. In addition, sales leads are better followed to closure therefore securing new business opportunities.

4.7 Marketing Strategies

The respondents were requested to indicate their level of agreement with statements on marketing strategy in their organizations for the last one year.

Table 4.9 Marketing strategies

Marketing strategies	Mean	Standard Deviation
We have improved our interactions with customers	3.8	0.866
We conduct research prior to introducing and product/service/technology in the market	3.4	0.913
We have adopted AI to increase our competitiveness in the market	2.96	1.172
Our customers are our key priority	4.12	0.781
Meeting the needs of our customers is our main goal	4.2	1
We understand the needs of our customers	3.84	0.688
We offer quality product to our customers	4.08	0.759
Our products and services are readily available to customers	4	0.764
Our target market can afford the products and services we offer	3.8	1.118
Average	3.8	0.896

From the results presented in Table 4.9, two of the elements tested had a mean score below 3.5. Meaning that the respondents were of the view that the two elements i.e. ‘we conduct research prior to introducing any product/ service/ technology in the market’ at a mean of 3.4 and ‘we have adopted AI to increase our competitiveness in the market’ at a mean of 2.96, were not reflective of the marketing strategy embraced by the company in the last year.

‘Meeting the needs of our customers is our main goal’, ‘Our customers are our key priority’, ‘We offer quality product to our customers’ and ‘Our products and services are readily available to customers’ had highest levels of agreement with mean scores of 4.2, 4.12, 4.08 and 4 respectively

A total mean score of 3.8 shows the respondents agree that majority of statements are true of marketing strategies in their organizations within the last one year.

4.8 Regression Analysis between Artificial Intelligence and marketing strategy

The dependent variable (marketing strategy) was regressed on the 8 variables defining the independent variable (Artificial Intelligence). Regression analysis assisted the researcher to establish or predict how unit changes in AI technologies(X) may affect the marketing strategy (Y) so as to make a valid conclusion and recommendation about the variables.

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961 ^a	.923	.885	.243

a. Predictors: (Constant), *Natural language processing, Speech to text/ text to speech, Predictive consumer behavior, Predictive inventory management, Virtual personal assistant chatbot, Voice recognition solutions, Targeted online advertising, Machine learning*

The model significantly predicts the relationship between artificial intelligence and marketing strategy among mobile telephony operators in Kenya. The table 4.10 shows an R squared value of 0.923. This value demonstrates that the eight independent variables

relating to AI can 92.3% of the times predict marketing strategy and its variation in this study.

Table 4.11 Anova Results for Regression model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.374	8	1.422	24.019	.000 ^b
	Residual	.947	16	.059		
	Total	12.321	24			

A. Dependent Variable: Marketing strategy

B. Predictors: (Constant), Natural language processing, Speech to text/ text to speech, Predictive consumer behavior, Predictive inventory management, Virtual personal assistant chatbot, Voice recognition solutions, Targeted online advertising, Machine learning

Analysis of variance was used to establish the significance of the regression model where a significance value of 0.000 was established. This implies the regression model has passed the test of statistical significance and has 0 probability of giving erroneous prediction. The regression model is therefore an apt prediction model for explaining extent of influence of AI on marketing strategy.

Table 4.12 Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.810	.296		6.124	.000
Voice Recognition Solutions	-.073	.060	-.125	-	.239
Speech to text text to speech	-.012	.056	-.020	-.222	.827
Machine learning	.166	.076	.314	2.198	.043
Virtual Personal Assistant, Chatbot	.169	.065	.273	2.615	.019
Predictive Consumer Behavior	-.063	.094	-.071	-.674	.510
Predictive Inventory Management	.015	.057	.030	.270	.790
Targeted online advertising	.163	.074	.270	2.209	.042
Natural Language Processing	.211	.078	.320	2.714	.015

a. Dependent Variable: marketing strategy

The regression equation obtained from the Table 4.12 was:

$$Y=1.8101+-0.073X1+-0.012X2+0.166X3+0.169X4+-0.063X5+0.015X6+0.163X7+0.211X8$$

Where:

Y = Marketing strategy

X1= Voice Recognition and response solutions

X2= Speech to text, Text to Speech

X3= Machine learning: analytic model building, pattern recognition, insights

X4= Virtual Personal Assistants, chatbots

X5= Predictive Consumer Behaviour –e commerce recommenders

X6= Predictive Inventory Management

X7= Targeted Online advertising

X8= Natural Language Processing

The outcomes in Table 4.12 show that voice recognition solutions, speech to text, text to speech, predictive customer behavior and predictive inventory management did not have any significant effect on market strategy. This is because all of the variables had a p value of more than 0.10. Natural language processing had a positive and significant effect at 5 percent significance level (p value=0.015) on market strategy index. A one unit increase in extent of use of the natural language processing will lead to a 0.21 increase in the market strategy. This means that, as mobile telephony operators increases the extent of use of natural language processing, they improve their average marketing strategy. This is because natural language processing enables voice applications the ability to interpret human voice into data giving firms that use it speedy customer service and great flexibility.

Further, the results indicated that machine learning also had a positive and significant effect on market index strategy at 5 percent significance level (p value=0.043). A unit increase in the extent of use of machine learning lead to a 0.17 unit increase in market strategy unit. These findings suggest that when companies increase the extent of use of machine learning, their average market strategy improves. Machine learning is therefore one of the elements of AI that can be harnessed to improve marketing strategy among the mobile telephony operators. This can be explained by the fact that machine learning allows for a computer to learn without being explicitly coded do so. This enables firms to learn hidden insights and make predictions at low cost.

Additionally, virtual personal assistant chatbot had a positive and significant effect at 5 percent significance level (p value=0.019). One unit increase in extent of use of virtual personal assistant chatbot leads to a 0.17 increase in the market strategy unit. This means that the increasing the extent of use of virtual personal assistant chatbot among the mobile telephony operators would eventually lead to improved their average market strategy. This could be because, virtual personal assistant, chatbots allow human users to dialog with a bot that answers automatically to them. The chatbot provides relevant and timely information giving clients the facility to interact with the firm at any time. The technology adds value and satisfaction to the overall customer experience as they are engaged as quickly as they land on the website, influencing their choices at strategic points on the customer journey.

Lastly, the findings also indicated a positive and significant at 5 percent significance level (p value=0.042) effect of targeted online advertising on market strategy. One unit in the extent of use of the targeted online advertising leads to a 0.16 increase in the market strategy unit. Targeted online advertising is therefore one of the technologies that mobile telephony operators can use to improve their average market strategy. This result could be ascribed to the fact that targeted online advertising enables firms to determine the best time to serve an ad, the probability of an impression converting, the likelihood that a user will engage with an ad that appear in the middle of a video they are watching or an article they are reading. By evaluating client behavior in an organic format, marketers can come up with progressively precise client divisions that have a greater likelihood of a marketing message resonating with them.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings from the study, conclusions and the recommendations for further study bearing in mind limitations of the study.

5.2 Summary of the findings

The study aimed to examine the extent to which artificial intelligence technologies have been used and their influence on marketing strategy. The study had one objective; to establish the extent to which artificial intelligence has influenced marketing strategy among mobile telephony operators in Kenya. This study was conducted among two selected mobile telephony operators in Kenya. It involved 25 respondents of supervisory level practicing in these firms.

The study established that AI technologies namely, predictive inventory management, speech to text, text to speech , predictive consumer behaviour, machine learning, targeted online advertising, virtual personal assistant, natural language processing and voice recognition are deployed to some extent (mean = 3.205), in the selected mobile telephony operators in Kenya. Predictive inventory management and speech to text, text to speech with means of 2.32 and 2.76 respectively are the least used technologies by the firms. Notably, voice recognition solutions, speech to text, text to speech, predictive customer behavior and predictive inventory management did not have any significant effect on market strategy. This is because all of the variables had a p value of more than 0.10. However, from the regression model, the variables with positive and significant impact

on marketing on marketing strategy are natural language processing, virtual personal assistant, targeted online advertising and machine learning all with significance levels below 0.05.

5.3 Conclusion

The selected mobile telephony operators in Kenya have deployed AI technologies to some extent. The deployment of AI technologies has had influence on their marketing strategy and this is collaborated by the findings of the regression analysis that found a strong relation between AI technology use and marketing strategy.

Further, mobile telephony operators are not yet fully ready to exploit and gain from AI, with team skills and knowledge, open culture and process flow integration being identified as the most critical areas that require to be improved. The most critical motivation for AI use cited in this study was to enhance customer insights and experience. Indeed, investment in AI with a bias towards customer focus yields better return and performance.

This study note that the most valued AI benefits are those that help in improving efficiency of the organisation, increasing customer responsiveness and creation of new products all which are very customer focused.

5.4 Recommendations

The study has established that the use of AI technologies is significant in marketing strategy. The study recommends that mobile telephony operators should improve on their AI readiness in the areas of team skills and knowledge, open culture and process flow integration so as to fully exploit and gain from AI and reap the full benefits of using it in marketing strategy.

Noting the multidisciplinary nature of AI, the study recommends that policy makers in Kenya tackle bridging the knowledge and skills gap relating to AI technologies. This is necessary to enjoy the full benefits of AI technologies. Cheruiyot(2018) held that academia need to make curriculum changes to expose learners to basic skills in algorithms, autonomous decision and AI awareness in all specializations as AI is multidisciplinary. There is need to develop talent in data science as AI in marketing is anchored on turning humungous sets of data actionable insights.

5.5 Limitations of the Study

There are limitations in this study that should be considered when interpreting the study findings. First, the study focused on mobile telephony operators in Kenya. Thus, the findings are not generalizable to organizations outside mobile telephony operators. In addition, self-administered questionnaires were used to collect data and were completed through self-report of the respondents. The respondents could have possibly misrepresented their authentic perception about AI technologies and marketing strategy in their firms. The design of the questions and answer set may also have not correctly represented the participant's responses.

5.6 Suggestion for Further Study

The study may be replicated across different sectors of the economy. Further, since the regression analysis showed that not all AI technologies improve marketing strategy, there is need to critically examine aspects relating to level of firm readiness for AI and best use case so as to be able to recommend the best fitted AI technologies to deploy and avoid costly trial and error by firms

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APPENDIX 1: QUESTIONNAIRE

This questionnaire is designed to gather information on the influence of artificial intelligence on marketing strategy among mobile telephony operators in Kenya and is for academic purposes only. All information shall be treated with utmost confidentiality.

Kindly respond to all questions by putting a tick (✓) in the box matching your answer or write your answer in the space provided if it is not included in the choices. For questions that require own opinion, fill in the blanks

Section A: General Information

1. Please indicate your gender
 - a. Male
 - b. Female
2. Name of your company?
3. What is your current position/title?
4. What is your highest level of education attained?
 - a. Certificate
 - b. College Diploma
 - c. Undergraduate
 - d. Master
 - e. Others (specify)
5. How long has your company been in existence?
 - a. Below 5 years
 - b. 5 – 15 years
 - c. 15– 25 years
 - d. Above 25 Years
6. What is your department in this company
 - a. IT department
 - b. Marketing department
 - c. Sales department
 - d. Senior management

- e. Cyber defense department []
- f. Business analytics department []
- g. Human capital department []
- h. Other (Specify).....

7. For how long have you been working at your company

- a. Below 5 years []
- b. 5 to 10 years []
- c. 10 to 15 years []
- d. Above 15 years []

Section B: Artificial Intelligence & Marketing Strategy

8. To what extent has your organisation adopted the following technologies?

**1=Not at all 2=To a small extent 3=To some extent 4=To moderate extent
5=To a great extent**

	1	2	3	4	5
Voice recognition and response solutions					
Speech to text, text to speech					
Machine learning: analytic model building, pattern recognition, insights					
Virtual personal assistants, chatbots					
Predictive consumer behaviour- ecommerce recommenders					
Predictive inventory management/supply chain					
Targeted online advertising					
Natural language processing e.g. translation, speech recognition					

9. What is the most critical motivation for use of AI?

- a. Cut costs
- b. Enhance experience and insight
- c. Creation of new products
- d. To keep up with competition
- e. Support in decision making

10. How would you rate your company's readiness for Artificial intelligence

1 = Not ready 2= Somehow ready 3= Very Ready

	Not ready	Somehow ready	Very ready
Platform capability			
Data management			
Team skills and knowledge			
Open culture			
Process flow integration			
Strategic fit			
Business case			

11. How has the use of AI affected the company? (multiple selection allowed)

- a. Change in consumption patterns
- b. Work is done faster now
- c. Created new business opportunities
- d. Helped create new products
- e. Change in organizational structures
- f. Change in business model
- g. Improved efficiency
- h. Increased customers' responsiveness

12. State your level of agreement with the following statements about marketing strategies in your organization for the last one year.

**1= Strongly disagree 2=Disagree 3=Not sure 4=Agree
5=Strongly agree**

Marketing Strategies	1	2	3	4	5
We have improved our interactions with the customers					
We conduct research prior to introducing any product/service/technology in the market					
We have adopted AI to increase our competitiveness in the market					
Our customers are our key priority					
Meeting the needs of our customers is our main goal					
We understand the needs of our customers					
We offer quality products to our customers					
Our products and services are readily available to customers					
Our target market can afford the products and services we offer					

“THANK YOU FOR YOUR PARTICIPATION”