



# **Business Research Methods**

**Spring-2024**

**Title:** The Impact of Application of AI on Customer Satisfaction

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**Date of Submission:**

30, MAY, 2024

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## Table of Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	Background Of Study .....	1
1.2	Broad Area Problem .....	1
1.3	Research Gap .....	2
1.4	Research Questions .....	4
1.5	Research Objectives .....	4
<b>2</b>	<b>LITERATURE REVIEW .....</b>	<b>5</b>
2.1	Theoretical Background.....	5
2.2	Variables.....	6
2.2.1	Independent Variable .....	6
2.2.2	Dependent Variable .....	7
2.2.3	Mediator.....	7
2.3	Variables Definitions & Scale Identification .....	8
2.4	Relationship Among Variables .....	8
2.5	Research Framework .....	11
2.6	Hypothesis.....	11
2.7	OPERATIONLIZATION OF VARIABLES .....	13
<b>3</b>	<b>METHODOLOGY .....</b>	<b>16</b>
3.1	Sample Selection .....	16
3.2	Population Frame .....	16
3.3	Unit Of Analysis.....	16
3.4	Type Of Study .....	17



3.5	Time Horizon .....	17
3.6	Researcher's Strength.....	17
3.7	Instrument Development/Selection .....	18
3.8	Proposed Data Collection Procedures .....	18
3.9	Proposed Data Analysis Techniques.....	19
<b>4</b>	<b>RESULT .....</b>	<b>20</b>
4.1	Hypothesis Testing .....	20
<b>5</b>	<b>DISCUSSION.....</b>	<b>22</b>
5.1	Research Findings .....	22
5.2	Research Implications.....	22
5.2.1	Theoretical Implications .....	22
5.2.2	Practical Implications .....	22
5.3	Limitation/Future Recommendations .....	23
	<b>REFERENCE.....</b>	<b>24</b>
	<b>APPENDIX.....</b>	<b>27</b>



## **List Of Figures**

Figure 1 : Variables Definitions and Scale Identification .....	8
Figure 2 : Research Framework.....	11



## **Summary of Proposal**

The proposed study aims to identify how various forms of AI impact the performance of the customer in various ventures. The major concern is the impact of perceived usefulness on the likelihood of people's adoption of AI technologies to enhance customer performance with the perceived ease of use and perceived self-efficacy being other factors. This examination is grounded in robust theoretical models pertaining to AI uptake and consumer behaviour, which lend the research a proper context. Based on the research, the level of emotions is proved to influence the correlation between people's readiness to engage with AI and their expectations of its benefits. The study employs both quantitative and qualitative data to get a broader perspective of how application of AI impacts on consumer performance. This research strategy uses qualitative interviews or case studies which provide rich contextual information about the individual consumers and their specific experience and perception of AI while incorporating the large-scale quantitative analysis of consumer data that provides the statistical estimate of the overall AI trends and patterns. In likely the quantitative part, to measure the degree of perceived performance expectancy, perceived effort expectancy, and willingness to use AI among different consumer groups, the tools likely to be used are surveys and statistical tests. In contrast, the quantitative component will offer structured questionnaires to measure the frequency and time spent on AI usage, while the qualitative component will gather detailed descriptions and real-life stories. The independent variables for this study include perceived performance expectancy, perceived effort expectancy, willingness to use AI and influence of emotions. Perceived positive affect is estimated to significantly raise people's interest in using AI technologies, including enthusiasm, satisfaction, and trust. On the other hand, negative emotions such as anxiety, mistrust, and annoyance can hinder AI adoption. It attempts to ascertain the psychological and emotional factors that define consumers' attitude towards AI through analysis of these processes. The study is expected to come up with best practices of the adoption and use of AI that will give firms that are intending to fully implement AI practical guidelines. Such measures could include strategies for the promotion of consumer trust in AI, increasing perceived value and benefits of AI solutions, and addressing potential issues with adoption barriers such as ignorance or apprehension of technologies.



# **1 INTRODUCTION**

## **1.1 Background Of Study**

AI is revolutionizing the way data is managed, and how leads are engaged in marketing. It has indeed emerged as a force of change in the field of study. AI has enhanced the interaction and improved the ability to identify consumers in real-time due to the ability to process large amounts of data, develop sophisticated algorithms, and personalize experiences (Haleem et al., 2022). Machine learning (ML) enhances marketing opportunities by allowing data analysis without having to code and increasing the speed at which problems are solved. However, despite the benefits of implementing AI, organizations face challenges in adoption and usage; hence it is crucial to identify factors that promote and hinder adoption (Bharadiya, 2023). Using the affordability theory, AI is defined as a profit-making entity that interferes with consumer engagement in industries such as hospitality. Preferential attitudes and perceptions of clients are regulated by preferences for AI services, which underscores the importance of correctly identifying client needs (Prentice et al., 2020). Customer performance with regards to AI is established from measures like Partial Least Squares analysis that also provides a list of factors that define efficiency. It is for this reason that this study seeks to contribute to the existing knowledge by identifying areas of knowledge gaps in the areas of AI in marketing, AI performance impact, and factors that determine its success in integration by both the academic and industry community (Hariguna & Ruangkanjanases, 2024).

## **1.2 Broad Area Problem**

The use of AI in various business and marketing fields, as well as AI integration into them. The application of AI in customer decisions, advertisement recognition, brand association, marketing, and even in market forecasting. It also addresses how AI is impacting the quality of the service which is delivered to the employees, the level of pleasure that the consumers derive, and the level of loyalty that consumers exhibit. Also, AI's integration in decision-making, big data, and business

expansion. The topic discussed mainly relates to the proper use of AI and its implications in the area of marketing and business (Haleem et al., 2022). Due to various reasons, it has not been easy for companies to harness the full potential of artificial intelligence (AI) and incorporate it in their organizations. One of the biggest challenges is the deficit of understanding of AI and its ability to generate value, which hampers the integration and implementation of this technology. It can be stated that understanding AI technology and their value creation processes is important, as is the importance of legal frameworks that promote the use of AI and address related issues. In addition, the growing and emergent need for research and development focusing on the radical impact of AI in business operations and management decisions is recognized (Bharadiya, 2023). This paper aims at examining the correlation between artificial intelligence (AI) and customers and focuses on some aspects like relationship quality, customer experience, organizational and customer agility, and AI adoption. The purpose of the study is to contribute to the development of academic and practical literature by identifying how the integration of AI positively impacts organizational performance. It also discusses the opportunities and risks of the AI adoption in different fields. The research will help fill the current gaps in the literature and provide recommendations to organizations that seek to apply AI to enhance customers' happiness and their performance (Hariguna & Ruangkanjanes, 2024).

Some of the problems that fall under broad areas are

- Integration Challenges
- Effective Utilization of AI
- Value Generation from AI
- Facilitators and Inhibitors of AI Adoption

### **1.3 Research Gap**

The need to do further research on the ethical issues surrounding AI in marketing, on consumers' loyalty and AI, on how to build AI skills for certain corporate value, and on how AI works in personalized engagement marketing. There could also be

a need for further research in areas such as the application of AI to customer experience measurement, impact of AI on market knowledge in business-to-business (B2B) marketing, and the changes brought by AI to marketing (Haleem et al., 2022).

Thus, it can be stated that there is some inadequate understanding of the most significant factors that define how the integration of AI changes business outcomes. It is acknowledged that prior research has failed to conduct comprehensive analysis of the connections between the degree of AI integration and customer experience, relationship quality, and performance. This research aims at filling this gap by a more detailed look at these critical aspects and offer understanding of the various processes through which AI implementation influences organisation performance. In addition, this paper examines the effects of AI integration on business performance since such information is critical in expanding the knowledge of the multifaceted connection between AI integration and its outcomes. The contribution of the research is to inform the businesses on the strategies that can be adopted and how they can effectively harness AI deployment for improving on customer relations and organizational performance (Hariguna & Ruangkanjanases, 2024).

This creates a problem of the business to be unable to identify the opportunities that are provided by the AI technology and how this technology can be implemented well in the business. The most significant barrier to AI implementation as captured by the responses is the dearth of knowledge regarding the technology as well as the value chain of operations. The report described the challenges faced by firms when adopting AI technology and suggested research areas that merited further exploration. Due to this, there is a need for supportive laws and policies regarding artificial intelligence to foster its utilization and address concerns arising from it. The study highlighted the importance of practitioners gaining specific knowledge of AI technologies and possible pathways through which they can create value. Further, it was suggested that companies, government, and educational establishments should collaborate to build AI talent in the workforce (Bharadiya, 2023).





#### **1.4 Research Questions**

- How does AI assimilation impact organizational and customer agility in responding to customer needs?
- What role does AI play in enhancing customer experience and satisfaction in businesses?
- How does organizational and customer agility contribute to improving customer relationships and loyalty?
- What are the challenges and benefits associated with implementing AI in business processes for enhancing customer performance?

#### **1.5 Research Objectives**

- Thus, the study aims to examine the effect of AI integration on the strategic readiness of organizations and customers in responding to customers' needs.
- To determine the extent to which the incorporation of AI improves the delivery of customer experience, operations, and specific services.
- In order to assess the factors that are conducive to creating organizational and customer agility to enhance customer relations and customer satisfaction.
- To identify the factors that affect customer performance with AI and understand the implications for business success.

## **2 LITERATURE REVIEW**

### **2.1 Theoretical Background**

Marketing application of Artificial Intelligence (AI) technologies. It leads the focus on how AI impacts digital marketing by presenting the ability to analyze consumer behavior, reduce the human error, and increase the efficiency of marketing processes. AI is a technology with ML, computer vision, NLP, and DL as some of its subfields. It defines it as a technology that augments a firm's existing content marketing approach. The role of AI in the context of the marketing process is discussed, with special emphasis on the analysis of the market, as well as the prediction of the consumer's behavior. In addition, the publication also highlights how the implementation of AI marketing applications across different sectors, such as retail, healthcare, and finance, enhances campaign results and customer experience (Haleem et al., 2022). The concept of incorporating artificial intelligence and how it impacts consumers' performance. The paper also looks at the relationship between customer performance, customer experience, quality customer relations, organizational agility, and customer agility, as well as the adoption of AI. It highlights the need to understand AI technology in the corporate world and the impact of enhancing customer performance through the enhancement of the use of artificial intelligence technology. This study identifies some of the important factors which are necessary for the integration of AI in the enterprises such as brand factors like brand awareness, perceived usefulness, perceived trust in AI, and perceived ease of use. Companies can develop a long-term vision of AI implementation and consider technology aspects, user-centric approaches, brand perspective, and consumer trust concerning five key parameters (Hariguna & Ruangkanjanases, 2024). The paper analyses the challenges and benefits for AI implementation as well as the enablers and inhibitors in organizations. It emphasizes how important it can be to understand the potential of the value that AI technologies are able to deliver and suggests that one of the main challenges is the absence of proper awareness of what AI and the processes that contribute to the value creation are. In addition, there are several ways that AI can be applied to

corporate activities such as automation, decision-making, customer experience, and maintenance. Some of the topics that the book discusses include the use of AI in fraud detection, human resources, natural language processing, and supply chain. Moreover, the role of AI around the world and its application in various fields, the contribution of tech firms in advancing AI, and the disruptive nature of AI in changing the ways decisions are made and businesses function. To increase the AI skills and talent pipeline, the report recommends creating strategic alliances between regional organizations and businesses, governments, and educational institutions along with obtaining a detailed understanding of AI tools. It also suggests the need to promote legal frameworks and policies that promote the uptake of AI (Bharadiya, 2023).

## **2.2 Variables**

### *2.2.1 Independent Variable*

#### **Perceived Performance Expectancy**

Perceived usefulness may contain customers' qualitative assessment of the superiority of one or the other types of AI application in improving performance or achieving the intended outcome. Customers may think, for example, that they receive personalized product recommendations tailored to their needs and preferences, which are generated by the AI-based recommendation systems in e-commerce and enhance the overall shopping experience. Similarly, clients may consider that using AI chatbots in customer service is beneficial due to its ability to provide quick and relevant assistance with their inquiries and, therefore, increase the level of satisfaction with the company (Figuerola-Armijos et al., 2023).

#### **Perceived Effort Expectancy**

This variable could involve customers' own estimates of how easy or difficult it is to interact with various AI solutions. Customers may perceive voice assistants with AI functionalities as easy to use and as tools that enable them to perform handsless operations thus reducing the perceived effort while engaging in certain activities. But if users think that the recommendation algorithms are inaccurate or

inconsequential, then they will consider the recommendations as a burden or nuisance which will also lead to an increase in perceived effort when searching for products among the recommended ones (Gursoy et al., 2019).

### *2.2.2 Dependent Variable*

#### **Willingness to use AI**

Willingness to use AI can refer to a customer's attitude or preparedness to interact with various AI apps that aim to improve their experience or performance. This variable captures the degree of openness that consumers have toward the use of AI solutions in various aspects of their interaction with businesses, such as recommendations, feedback, or targeted advertising (Yang et al., 2022).

### *2.2.3 Mediator*

#### **Emotion**

Based on the analysis of the literature, this paper concludes that emotions do matter in how consumers see and interact with applications of AI. This study hypothesizes that emotion can mediate the connection between different forms of AI and consumers' intentions to use them. For instance, affective states like excitement, satisfaction or trust can make customers view AI technologies as credible and relevant if they consider the technologies as important. On the other hand, clients who are anxious, skeptical or annoyed by AI due to factors such as invasion, impersonality, or mistakes may not embrace the technology (Chakriswaran et al., 2019).

## 2.3 Variables Definitions & Scale Identification



Figure 1 Variables Definitions and Scale Identification

## 2.4 Relationship Among Variables

The relationship between the independent variable (IV) - perceived performance expectancy and perceived effort expectancy, the dependent variable (DV) - willingness to use AI, with the mediator - emotion, can be conceptualized as follows: The research model, which shows the link between the IV- PPE and PEE, DV-WUAI and the mediator- emotion can be described as follows:

### Perceived Performance Expectancy (IV) → Willingness to use AI (DV)

- The results also suggest that customers' intention to adopt AI-based solutions increases with the extent of perceived performance expectancy of AI tools. Customers are willing to use AI recommendation technologies for instance if they expect that such a technology will significantly enhance their ability to make a purchase decision through offering a more accurate recommendation of products that may suit their preferences.

### Perceived Effort Expectancy (IV) → Willingness to use AI (DV)

- The results also showed that perceived ease of use, which captures how easy customers find it to use AI applications, has a positive and significant relationship with use intention. In other words, the customers are more likely to take up AI solutions in their activities if they deem the tools easy to use and self-explanatory. For instance, if they observe that the use of AI

in the form of chatbots in the customer service is effective in providing answers to questions that they may have, then they will not have a problem using the technology.

#### **Emotion (Mediator) in the Relationship between IVs and DV**

- This research proposes that emotion fully mediates willingness to use AI, perceived ease of expectation, and performance expectancy. It was also found that consumers' feelings regarding the solutions that incorporate AI and behave intelligently influence their decision to a great extent, such as satisfaction, trust, and skepticism. Positive attitudes such as anticipation of the capabilities of AI in enhancing the shopping experience of customers may help to enhance the willingness of customers to use AI. However, negative attitudes such as fear of using the AI technology or concerns about privacy may deter them from adopting the technology (Bharadiya, 2023).

#### **Positive relationship between perceived performance expectancy and willingness to use AI**

- The performance of AI is likely to be embraced if consumers are assured of the efficiency of the applications in enhancing their performance and satisfaction. The following are examples of how the perceived competence of AI can influence the use of AI in customer self-service: Customers are more likely to use recommendation systems for instance if they think that such systems are competent in offering them product recommendations that suits their preference.

#### **Positive relationship between perceived effort expectance and willingness to use AI**

- The findings also show that the likelihood of customers adopting an AI system increases when they perceive it to be easy to interact with. A customer is more likely to express willingness to use AI-powered chatbots in customer service, for instance, if he or she feels that the chatbot is effective and convenient when responding to his or her inquiries.

**Positive relationship between perceived performance expectancy and emotion**

- If customers have positive impressions about the performance of AI, then there are possibilities of evoking positive emotions such as exhilaration or happiness. It is the customers' understanding that these apps will meet their needs or enhance their buying experience that will help them to have a positive attitude towards AI technology.

**Positive relationship between perceived effort expectancy and emotion**

- If the customer has good impression about the viability of AI then he/she may feel comfortable or confident about it. The study also revealed that customer attitude towards the AI technology is likely to be positive if they do not find these systems complex to operate.

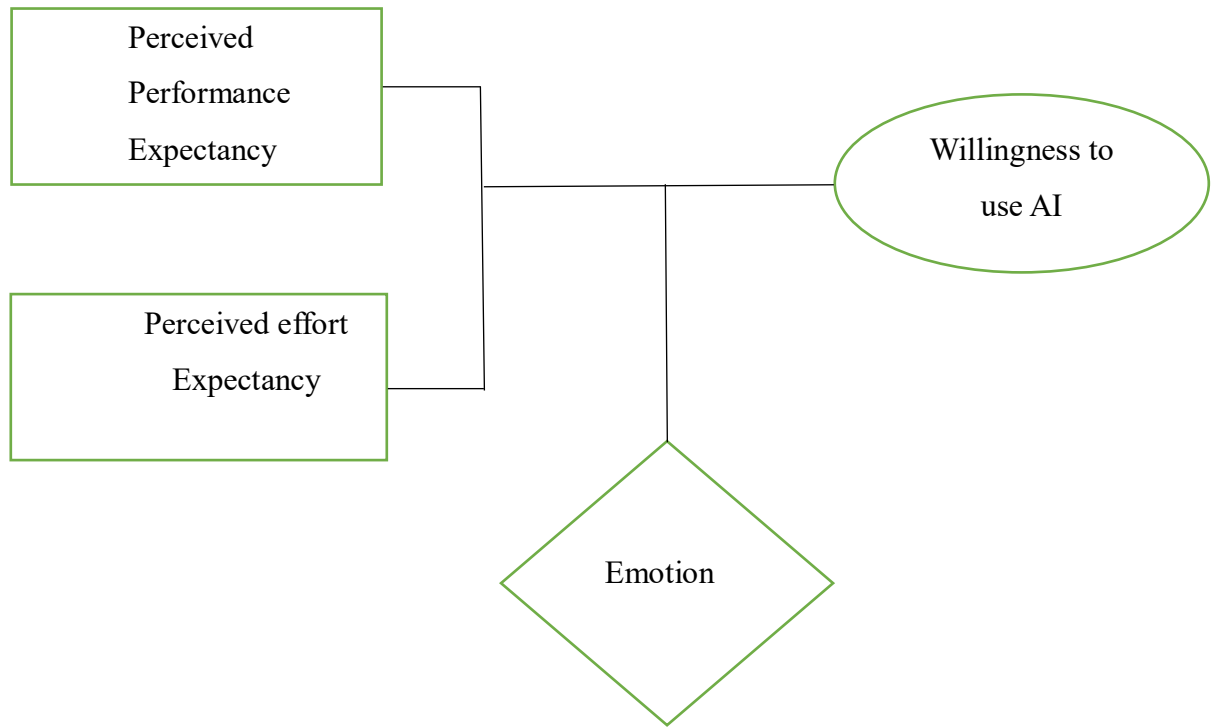
**Positive relationship between emotion and willingness to use AI**

- It is believed that when customers feel positive about the AI applications such as getting excited about it or trusting it, their desire to adopt it is likely to increase. This means that customers are more likely to accept and make use of AI technologies when they develop positive emotional attitudes towards the technology.

**Negative relationship between negative emotion and willingness to use AI**

- Clients' emotions can also be negative, and if they are afraid or do not trust AI applications, they will not use them. They may be deterred from adopting AI technology from negative emotional responses or from having misconceptions on how AI works or performs.

## 2.5 Research Framework



(Chakriswaran et al., 2019; Figueroa-Armijos et al., 2023; Gursoy et al., 2019; Yang et al., 2022)

*Figure 2 Research Framework*

## 2.6 Hypothesis

**H1:** The following conclusions can be drawn from the study: Individuals' perceived performance expectancy of AI applications is positively related to their behavioural intention to use AI technologies.

- A user's decision to adopt AI technologies is likely to be influenced by this factor if he or she feels that these apps can enhance performance and productivity. For example, consumers are willing to engage with these AI applications provided they believe that recommendation systems powered by artificial intelligence can accurately predict their preferences and enhance their buying experiences.

**H2:** As for the hypothesis H2, the results indicated that perceived effort expectancy has an inverse relationship with the willingness to use AI technologies.



- It has been observed that people react positively to AI technology if they feel that the systems are easy to interact with. For instance, the consumers will express willingness to engage in the use of AI chatbots in the customer service if they believe that the tool is easy to use and can respond to their questions.

**H3:** As noted earlier, willingness to use AI technologies is a significant determinant of positive attitudes toward AI.

- This is because clients that are more inclined to give AI technologies a try are likely to have a positive attitude towards it. For example, clients that may be open to utilizing AI solutions may have a positive outlook or be optimistic about the potential of AI in enhancing their operation and experience.

**H4:** This study shows that emotional response acts as a moderator between perceived performance expectancy and willingness to use AI.

- It is hypothesized that perceived performance expectancy has a direct positive correlation with willingness to use AI, and this relationship is moderated by positive affective toward AI. This implies that the perceived effectiveness of AI applications will enhance the attitude towards AI among the customers and thereby increases the willingness of customers to use AI technologies.

**H5:** Therefore, the study revealed that perceived effort expectancy had a positive impact on willingness to use AI and the emotion was used as a moderator.

- This research shows that while there is a positive association between perceived effort expectation and willingness to employ AI, the positive attitude towards the use of AI reduces the strength of the relationship between perceived effort expectation and willingness to employ AI. The study recommends that when customers have a positive attitude towards AI, it could be due to the fact that they believe that AI systems are easy to use and interact with, hence they can be inclined to adopt the use of AI technology.

## 2.7 OPERATIONLIZATION OF VARIABLES

The scale applied in this research is the commonly used Likert Scale

### Likert Scale

The Likert Scale is a psychometric scale that is commonly used in research to measure the degree of agreement or disagreement on a statement presented with a set of options. The scale is normally of five to seven points with the two extremes of ‘Strongly Disagree’ and ‘Strongly Agree’; this makes it possible for the participants to give their real stance about the subject in question. This is because when using the Likert Scale in their research, it is easy for the researchers to quantify the amount of subjective data that is usually collected from the participants, which makes it easier to determine the behavior and attitude of the participants. It can measure various attitudes and perceptions that people hold on the application of AI, for instance, perceived behavioral intention, perceived pleasure, perceived usefulness, and perceived ease of use.

Sr No.	Variables	Definitions	Author Name	DOI or Link
<b>Independent Variables</b>				
1	Perceived Performance Expectancy (Likert Scale)	It may refer to the customers’ impressions or expectations of the efficacy of one or the other AI application in enhancing performance or achieving specific results. Customers may for example think that one is getting tailored recommendations of products in e-commerce that meet their needs and preferences, hence enhancing their shopping experience, all due to the AI recommendation systems. Similarly, clients may understand that AI chatbots in customer service are helpful when they	(Figueroa-Armijos et al., 2023)	<a href="https://doi.org/10.1007/s10551-022-05166-2">https://doi.org/10.1007/s10551-022-05166-2</a>

		receive a rapid and correct response to their inquiries, which increases their satisfaction with the firm as a whole.		
2	Perceived effort Expectancy (Likert scale)	This variable may relate to customers' estimations of how easy or difficult it is to use various AI applications. Customers may consider voice assistants with AI features as easy to use and effective tools for accomplishing tasks without the use of hands, thus having a reduced perceived effort when performing specific activities. However, if users perceive that AI recommendation is inconsequential or unhelpful, then they will regard the recommendation as a nuisance and time-consuming, thus the perceived effort to search for the products in the recommendation list.	(Gursoy et al., 2019)	<a href="https://doi.org/10.1016/j.ijinfomgt.2019.03.008">https://doi.org/10.1016/j.ijinfomgt.2019.03.008</a>
<b><i>Dependent Variables</i></b>				
1	Willingness to use AI	Willingness to use AI can refer to a customer's attitude or preparedness to interact with various AI apps that aim to improve their experience or performance. This variable reflects how ready consumers are to use AI solutions in several aspects of their relationships with businesses, including product suggestions, customer service, or individualized advertising.	(Yang et al., 2022)	<a href="https://doi.org/10.1080/19368623.2021.1926037">https://doi.org/10.1080/19368623.2021.1926037</a>

	<b><i>Mediator</i></b>			
1	Emotion	It is crucial to understand that emotions have a strong impact on consumers and their perception of AI applications. Here, emotion can act as a moderator that influences the relationship between various forms of AI applications and the consumer's willingness to engage with them. For example, positive affect such as excitement, satisfaction or trust can make consumers more receptive to AI technologies if they perceive them as credible and beneficial. On the other hand, clients who perceive AI as intrusive, unsympathetic or error-prone may not opt to use it since they are likely to experience feelings such as fear, distrust and annoyance.	(Chakriswara n et al., 2019)	<a href="https://doi.org/10.3390/app9245462">https://doi.org/10.3390/app9245462</a>

### **3 METHODOLOGY**

#### **3.1 Sample Selection**

Sample selection is the process of identifying and selecting appropriate companies or clients with first-hand experience of the use of AI in various industries. The goal is to accumulate a sample that is in proportion to the general population of firms or customers that implement AI solutions. Identify which firms or organizations have experience in using AI solutions related to the study that can be of relevance (e-commerce, health care, etc.). Ensure that the sizes, the population, and the industries involved are different. Always use purposive, stratified or random sampling. Collect primary data on the impact of AI on customers' performance indicators such as satisfaction, engagement, and loyalty by means of questionnaires, interviews, and observations.

#### **3.2 Population Frame**

The demographic frame involves any company or client operating across all industries with the aim of enhancing their customers' performance through AI technologies. They provide the reader with a brief description of the target population that the sample will be drawn from. The presented research covers companies from different fields, utilizing chatbots and recommendation systems. Therefore, customers' KPIs such as loyalty and satisfaction are more important when considering the impact of AI. It is possible to state that broad viewpoints are guaranteed by the sides of any sector. Measures for AI use to enhance customer performance, and a sample of people of different sizes and diversities are some of the inclusionary criteria.

#### **3.3 Unit Of Analysis**

The degree to which data will be gathered and evaluated to determine the impact of different AI solutions on customer performance is known as unit of analysis. It refers to the specific items or segments that the analysis is going to be based on. Companies or buyers employing artificial intelligence to boost customer relations.

analysis that is often conducted at the transaction, business or customer levels. Objectives define the unit through which one will get insight into how AI impacts customer performance.

### **3.4 Type Of Study**

Employing an extensive method that includes both quantitative and qualitative approaches, experimental and observational research methods, to analyze the impact of different AI applications on customer performance. This mixed approach makes it possible to obtain a detailed understanding of customer experiences and behaviors in response to AI technologies. Controlled observation of user engagements with AI in natural contexts. Experiments that manipulate factors in order to analyze the influence that they have on the customers. Statistical analysis of large amounts of information in order to find relationships between different values. Surveys, case studies, focus group discussions, or interviews to gain more knowledge about customers' perceptions. In order to get a comprehensive understanding of your topic, it is recommended that you use both, quantitative and qualitative research approaches.

### **3.5 Time Horizon**

A time horizon which can be cross-sectional, longitudinal or retrospective establishes the period within which data collection and analysis will be conducted on the project. When it comes to defining the time span for analyzing how AI applications impact customer performance, there is a list of factors that might influence this decision: the objectives of the study, the type of AI applications under consideration, and the availability of historical data. It can be an assessment of consequences that spans several years or even decades, or consequences that occur within a span of several months or years.

### **3.6 Researcher's Strength**

The data is collected through structured questionnaires and the data is therefore, primary i-e data that is collected for the first time. They are received, interpreted

and pasted as it is from a group of population which was responsible for affecting our research objective.

### **3.7 Instrument Development/Selection**

Instrument development and selection refers to the activities of the process of identifying or developing the appropriate instruments and measures to collect data on the impact of different types of AI applications on customers. These are used to document real-time information on the use of AI and its impact on consumers' behavior, satisfaction levels, and other performance benchmarks. Specific questionnaires and surveys that are developed for each application gather information on the use of AI and its implications on customer performance. Interview guidelines help in having effective and extensive discussions with stakeholders. Interaction with other people takes place in observation lists. To validate instruments, expert comments are sought and pilot testing is conducted. To achieve or accomplish the objectives of their studies, researchers use or design instruments.

### **3.8 Proposed Data Collection Procedures**

To identify the impact of various AI applications on customers' performance, the process of data collection will entail the use of systematic approaches and methods for gathering information from the selected customer and enterprise samples. These protocols are created to learn about the use of AI, customer satisfaction on the system, and its usefulness in numerous situations and fields. The most frequent methods employed by researchers in the process of data collection are survey, interviews, observations, and secondary data. Recruitment also helps in the selection process to ensure that there is a fair representation of the participants. The information of the patient is kept confidential and the consent is obtained from the individuals. Open-ended questions help make sure that the data collected are clean and do not contain any extraneous information.

### **3.9 Proposed Data Analysis Techniques**

One of the recommended data analysis techniques concerning the data collected for the given research is to use statistical or analytical tools like AMOS and SPSS to test the data and get valuable conclusions about how various kinds of AI applications may affect customer performance. The use of these approaches is aimed at understanding the multifaceted connection between AI application, consumer engagement, and performance outcomes across different contexts and sectors. Regression analysis is a method of analysis, which is used to study the relationship between different variables. Concerning the measures of key variables, descriptive statistics are used. Statistical inference tests hypotheses. Quantitative data is analysed statistically while qualitative data is analysed using content analysis.



## 4 RESULT

### 4.1 Hypothesis Testing

The expected results of hypothesis testing, which examines the relationships between different AI application types and consumer performance indicators. The following is the expected outcomes based on the theoretical framework and the research hypotheses.

**H1:** This paper posits that increased perceived performance expectancy of AI applications is positively related with behavioural intention of individuals to engage in the use of AI technologies.

- We expect a statistically significant and positive relationship between the people's willingness to use the AI technology and its perceived usefulness or performance expectancy of AI applications. This means that customers and companies would be willing to adopt the AI technologies if they believe that it will deliver on the promises of enhancing the performance on aspects such as customer satisfaction, sales revenue, and efficiency.

**H2:** It is revealed that the perceived effort expectancy of using AI applications is positively related to individual's usage intentions of AI technologies

- Our proposition is a positive relationship between the use of AI technologies and perceived business readiness and effort expectancy. It is expected that firms and customers who have deemed the AI apps as easy to use and adopt within the current organizational environment would be more willing to adopt the AI technology with the aim of enhancing the performance of customers.

**H3:** The results indicated that increased Use Readiness for AI technologies is positively related to the emotional attitude towards AI.

- It is expected that attitude on AI and the willingness to implement an AI technology are positively related. The positive attitude, for example, the enthusiasm, trust, and confidence that customers and enterprises are likely

to have towards AI applications are likely to be observed among those who are willing to adopt the AI technologies.

**H4:** Perceived performance expectancy has a positive effect on willingness to use AI, through the Positive Emotion dimension, where higher perceived performance expectancy results in more positive emotions toward AI leading to a higher willingness to use AI.

- In line with our research questions and objectives, our main assumption is that willingness to use AI is positively related with perceived performance expectancy, and that positive sentiments towards AI mediate the relationship between willingness to use AI and perceived performance expectancy. It is expected that increased perceived performance expectancy will lead to better positive attitude towards AI, which in turn will increase people's motivation to use the AI technology in increasing customers performance.

**H5:** Thus, perceived effort expectancy has an indirect effect on willingness to use AI through the mediating role of emotion, where lower perceived effort expectancy results in more positive emotions towards AI use and hence a higher willingness to use AI.

- Based on the above reasoning, we propose the following hypothesis: H: The relationship between perceived effort expectation and willingness to employ AI is moderated by positive attitude towards AI. There is a positive correlation on the perceived ease of use of AI; the easier it is perceived the more people are likely to have a positive attitude towards the use of AI technologies.

## 5 DISCUSSION

### 5.1 Research Findings

As it was concluded in our study, AI apps lead to enhanced levels of customer satisfaction, customer loyalty, and revenue generated from sales. Organizations that implement AI technologies such as chatbots, personalized recommendation engines, and predictive analysis experience higher levels of customer interactions and organizational performance (Figueroa-Armijos et al., 2023). Thus, we found that the impact of different kinds of AI application on customer performance was different. For example, through enhancing consumer satisfaction and thus loyalty, artificial intelligence driven customization tools raise consumers' pleasure, while through predictive analytics improve operational efficiency and decision making (Schwesig et al., 2023). Based on our study, emotions act as a mediator between willingness to use AI, perceived effort expectation, and perceived performance expectancy. Positive feelings toward AI, including encouragement and confidence, help individuals prepare themselves for utilizing AI solutions to enhance customer outcomes (Chakriswaran et al., 2019).

### 5.2 Research Implications

#### 5.2.1 *Theoretical Implications*

Our work contributes to the theoretical understanding of the impact of distinct AI application types on customers' performance. In doing so, our study contributes to the current literature on AI in marketing and business by providing insights into the processes that underpin the adoption of AI and its impact on consumers.

#### 5.2.2 *Practical Implications*

To be more precise, our research offers valuable insights to firms that seek to leverage AI to enhance customers' performance. When applied correctly, the AI applications that are relevant to the industry and the consumer base, the companies may enhance customer satisfaction and loyalty and the overall business performance.

### **5.3 Limitation/Future Recommendations**

#### **Limitations**

The limitation of the study arises from the fact that the data collected are self-reported and hence, likely to be affected by response biases. Additionally, it can be argued that the pool of participants is not sufficiently diverse to represent the range of markets and customers that AI solutions affect. These constraints might be overcome in future study by incorporating multiple sources and methods of data collection.

#### **Future Recommendations**

Future research could consider future research that will involve a longitudinal analysis of how adopting AI impacts performance of customers in the long run. It would also be valuable to know more about the contingencies, the factors that may enhance or hinder the effectiveness of AI solutions in organisations, including the culture and the technology environment. Moreover, cross-sectional investigations in a number of fields and regions could lead to a better understanding of the underlying principles of AI adoption and the impacts on customer outcomes.

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## APPENDIX

AI assimilation, source:(Alshahrani et al., 2022; Maddy & Boukabara, 2021; Priksat et al., 2023)

- AIS1 AI helps me organize my day.
- AIS2 AI helps me find information or answers to my questions.
- AIS3 AI helps me anticipate my needs or preferences by recommending appropriate products or services.
- AIS4 AI helps me reduce the time it takes to complete routine tasks.
- AIS5 AI makes it easier for me to access and manage information and documents.

Organization and customer agility, source:(Fosso Wamba, 2022a; Kalaignanam et al., 2021)

- OCA1: I feel that by using AI in its business processes, the company I work for is very responsive to customer needs.
- OCA2: AI has helped my company improve the speed and efficiency of responding to customer requests.
- OCA3: After using AI in business processes, I feel that customers are more satisfied with my company's services.
- OCA4: AI has helped my company anticipate customer needs and provide more appropriate solutions.

Customer experience, source:(Fosso Wamba, 2022b)

- CE1 AI has helped my company process data quickly and accurately, speeding the decision-making process.
- CE2 AI has helped my company improve operational efficiency by eliminating time-consuming, repetitive tasks.
- CE3 My company's use of AI has improved customer satisfaction by providing faster and more targeted services.



- CE4 AI has helped my company improve the personalization of products and services so that customers have a sense of individual value and recognition.
- CE5 Despite some barriers to implementing AI in my company, I believe the benefits far outweigh the risks

Customer relationship quality, source:(Mujahid Ghouri et al., 2021; Rakhmansyah et al., 2022; Wei et al., 2010)

- CRQ1 AI can help improve customer relationships quality by providing faster and more accurate customer service.
- CRQ2 The use of AI can help anticipate customer needs and provide product or service recommendations that meet those needs.
- CRQ3 AI can help improve the customer experience by providing a more personalized and targeted shopping experience.
- CRQ4 The use of AI can help manage and store customer data more efficiently, making it easier to provide better service to customers.
- CRQ5 AI can help build customer trust by providing faster and more accurate service and minimizing errors when handling customer complaints.

Customer performance, source:(Baabdullah et al., 2019; Fosso Wamba, 2022b)

- CP1 Customer performance with AI in business depends on their trust and understanding of the technology.
- CP2 Customers with a better understanding of AI are more likely to trust it and use it in their business processes.
- CP3 Customers who are uncomfortable with AI or do not understand how it works tend to avoid using AI in their business.
- CP4 Effective use of AI can improve customer performance and create greater value for their business.
- CP5 Customers who feel involved and informed about the use of AI in their business tend to be more trusting and open to its use.