

DISSERTATION

LCBB6000

BA (Hons) Business Management

University of Wales Trinity Saint David (London Campus)

*“The Impact
of artificial intelligence
in enhancing customer experience
within the retail industry”*

Name: George Tivga

Student Number: 2024060

Submission date: 30.12.2023

Abstract

This research work is developed with a focus on the research phenomenon “The Impact of artificial intelligence in enhancing customer experience within the retail industry”. The introduction chapter of this study has presented the main reasons to conduct this study which involves the growth of Artificial Intelligence implementation across the global sectors. Moreover, the literature review section of this study has highlighted the role, impact, challenges and strategies related to AI application in retail businesses for further knowledge on the research topic.

In the methodology section highlighting the approach, methods and philosophical stance of the research, it has been mentioned that primary qualitative and quantitative information has been collected using interviews and surveys as suitable modes. Based on the collected data from interviews and surveys, a detailed analysis of the findings in alignment with the gathered knowledge from the literature section has been included in the data analysis chapter. Finally, the conclusion chapter has included recommendations to develop culture so that the application of AI and derived results from it could be fruitful for retail businesses in the UK. Further recommendations have been provided for the enhancement of the cultural provisions and communicational propositions within brands. This can be stated to be important for the enhancement of the future performance and implementation of AI.

Table of Contents

<i>Abstract</i>	2
<i>1. Introduction</i>	5
<i>1.1 Introduction</i>	5
<i>1.2 Background of the study</i>	5
<i>1.3 Problem Statement</i>	7
<i>1.4 Aims, Objectives and Research Questions</i>	7
<i>1.5 Rationale</i>	8
<i>1.6 Methodology</i>	10
<i>1.7 Scope of the Study</i>	10
<i>1.8 Structure of the Dissertation</i>	10
<i>1.9 Chapter Summary</i>	11
<i>2. Literature Review</i>	12
<i>2.1 Introduction</i>	12
<i>2.2 Conceptual Framework</i>	12
<i>2.3 Importance of artificial intelligence in retail business</i>	13
<i>2.4 Relation between artificial intelligence and customer experience</i> <i>in the retail sector</i>	14
<i>2.5 Issues Faced in AI Implementation in retail Sector to meet customer needs</i>	15
<i>2.6 Strategic AI solutions to improve customer experience in the retail industry</i>	17
<i>2.7 Theoretical proposition</i>	18
<i>2.8 Literature Gap</i>	19
<i>2.9 Chapter Summary</i>	19
<i>3. Methodology</i>	20
<i>3.1 Introduction</i>	20
<i>3.2 Research Philosophy</i>	21
<i>3.3 Research Approach</i>	21

3.4 Research Design	21
3.5 Research Methods	22
3.6 Data Collection Tools	22
3.7 Data Sampling	23
3.8 Data Analysis Method	23
3.9 Ethical Consideration	24
3.10 Chapter Summary	24
4. Findings and Analysis	25
4.1 Introduction	25
4.2 Analysis and Discussions of findings/data	25
4.2.1 Findings on the manager's interviews	25
4.2.2 Analysis and discussions on the manager's interviews	30
4.2.3 Findings and Analysis on Primary Quantitative Data.....	32
4.2.4 Primary Quantitative Data Discussion	36
4.3 Chapter Summary	37
5. Conclusion and Recommendations	38
5.1 Summary of the Study	38
5.2 Linking with the Objectives	38
5.3 Recommendations	39
5.4 Limitations of the Study	40
5.5 Future Implications	41
5.6 Chapter Summary	41
References	42
Terms of Glossary	48
Appendix	49

1. Introduction

1.1 Introduction

The chapter of the introduction is a synopsis of the research accounting for the aims and objectives which guide the development of the study. It has included a brief background to the study, a problem statement and a rationale for conducting the study. In this chapter, research questions are formed which are answered throughout the study to evaluate and develop suitable solutions to the identified research problem. A short description of the methodology is also included to provide an understanding of the methods applied for data analysis and draw effective conclusions to the study.

1.2 Background of the study

Artificial intelligence technology that has completely is the disruptive innovation transformed operations in the retail industry in multiple ways. The retail sector is one of the largest contributors to the United Kingdom economy whereby sales value reaching 495.71 billion British pounds in 2022 (Statista, 2023, a). In the retail industry, food, oil and gas, clothing and hardware are included. Compared to 2021, there has been a major increase in the sales rate of the retail sector by 35 million British pounds. Retail trading includes food stores, clothing and accessories, fuel and electronics. Although it faced a major setback in 2020 due to the coronavirus and pandemic, considerable changes have set it with time to adapt to newer modes of business operations.

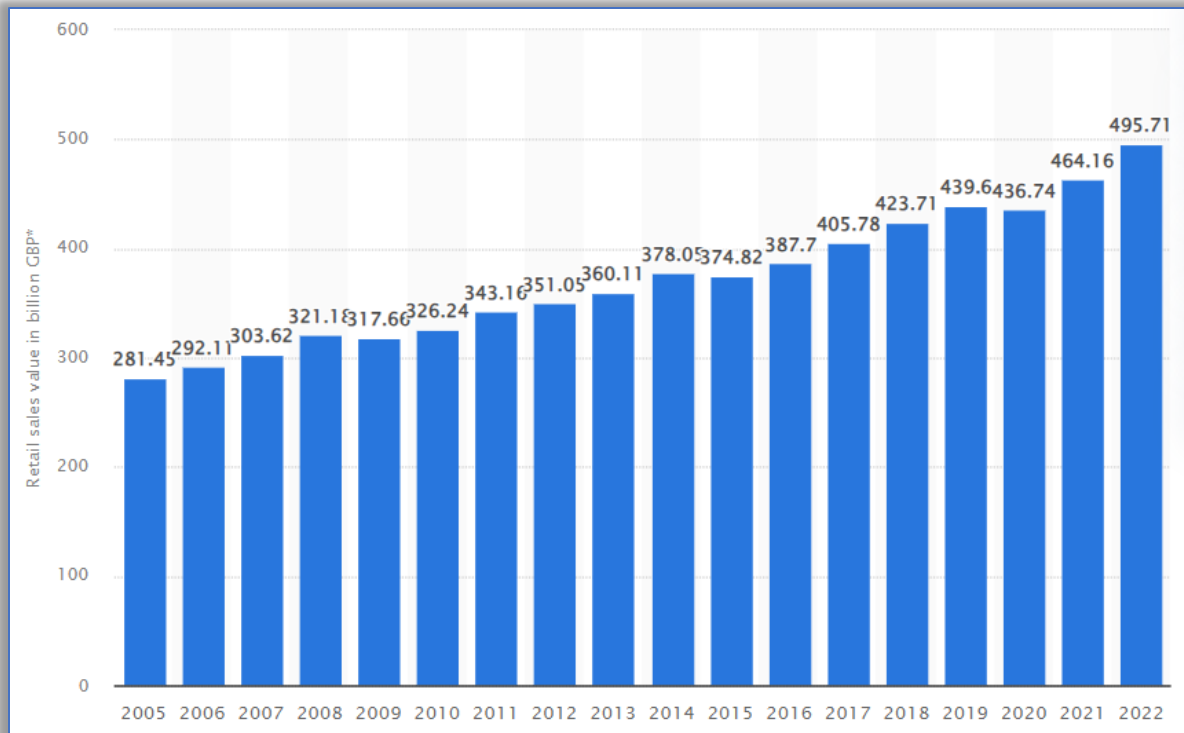


Figure 1.1: Retail sales volume in the UK

Source: Statista, 2023, a

Retail technologies have helped to obtain increased customer satisfaction and boost profitability in business. By implementing AI technologies, the most useful and effective operations in the retail sector are visual search, voice search and AR. Around 45% of the retailers ensured that visual search is extremely helpful whereas 27% of businesses in retail accounted that voice search has been an effective tool (Statista, 2023, b). Effectively, the retail industry has been able to utilise the benefits of AI and obtain heightened satisfaction from customers by resolving their problems 24/7 and meeting their demands on time. AI is used in marketing to draw accurate market forecasts and identify retail trends which are used to develop customer satisfaction strategies. Moreover, the use of chatbots has helped to resolve customer pain points 24/7 and increase loyalty.

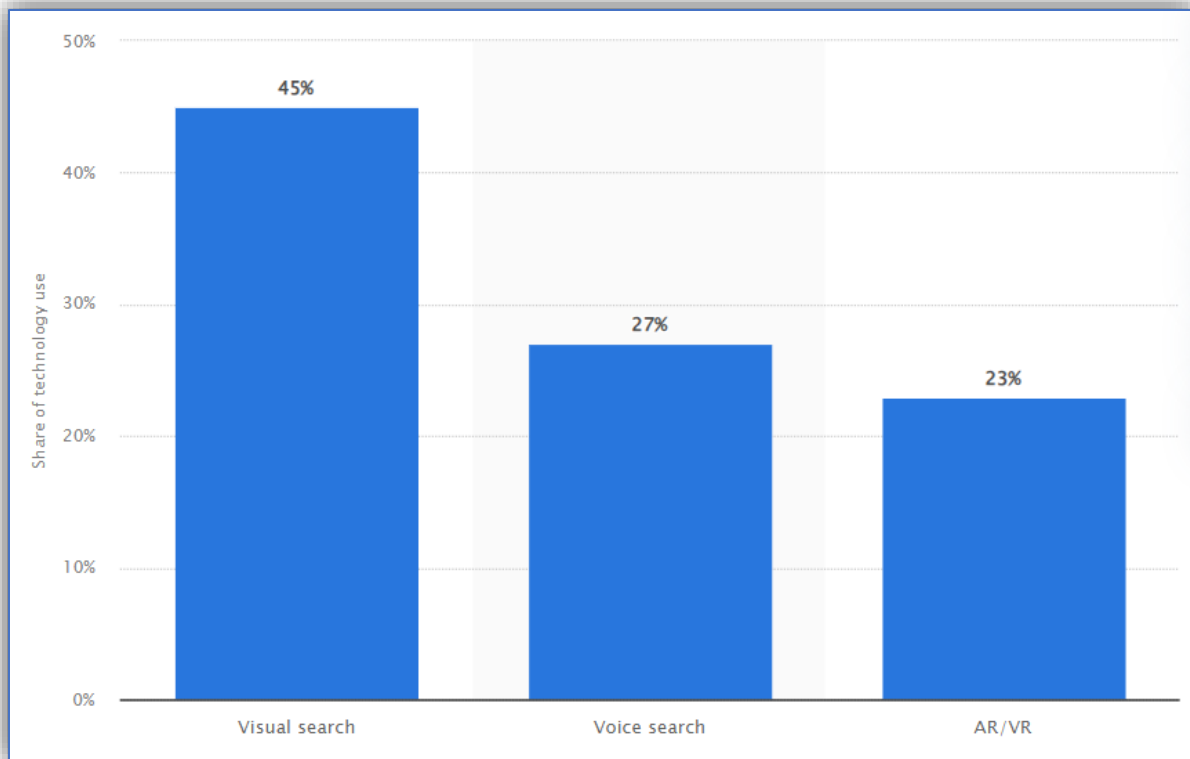


Figure 1.2: Effective retail technologies in the UK

Source: Statista, 2023, b

1.3 Problem Statement

The problem in research identifies the customer experience issues faced by the retail sector and the use of artificial intelligence to address its mitigation.

1.4 Aims, Objectives and Research Questions

The study aims to explore “The Impact of artificial intelligence in enhancing customer experience within the retail industry”.

Four objectives have been set to address the study effectively:

- “To understand the concept of artificial intelligence and customer experience within the retail sector”
- “To investigate the impact of artificial in developing better customer experience in the retail industry”
- “To evaluate the challenges faced by the companies in the retail industry for implementing artificial intelligence for enhancing customer experience”
- “To recommend strategies that will mitigate the issues faced in implementing artificial intelligence and improve customer experience in retail organisations”

Four questions were set to guide the conduction of research:

- “What is the main concept of artificial intelligence and customer experience in the retail industry?”
- “What is the impact faced by companies in the retail sector for developing customer experience with the help of artificial intelligence?”
- “What are the challenges that are seen in the retail industry for implementing artificial intelligence and enhancing customer experience?”
- “What are the strategies that can be recommended to the retail industry for utilizing customer experience and developing positive customer experience?”

1.5 Rationale

The research topic is important since AI integration has become an important strategic approach to improve customer relations and increase sales rates. During a pandemic, the retail industry contributed to gross domestic product which was more than 100 million British pounds in 2020 (Statista, 2023, c). Since the 2020 crisis, retail businesses have adopted digital tools and

online modes of business to facilitate the growth of sales and profitability, changing the commercialisation and trading sector.

AI integration is the area of discussion in this research which has effectively improved customer experience and boosted the rate of sales in the retail industry. Currently, AI is the most effective technology which is leveraged in business operations by businesses to adopt competitive advantage in various ways and increase work efficiency. AI solutions in retail operations are valued at 4.84 billion U.S. dollars in 2021 which is estimated to reach at least 31.18 billion U.S. dollars by 2028 (Statista, 2023, d).

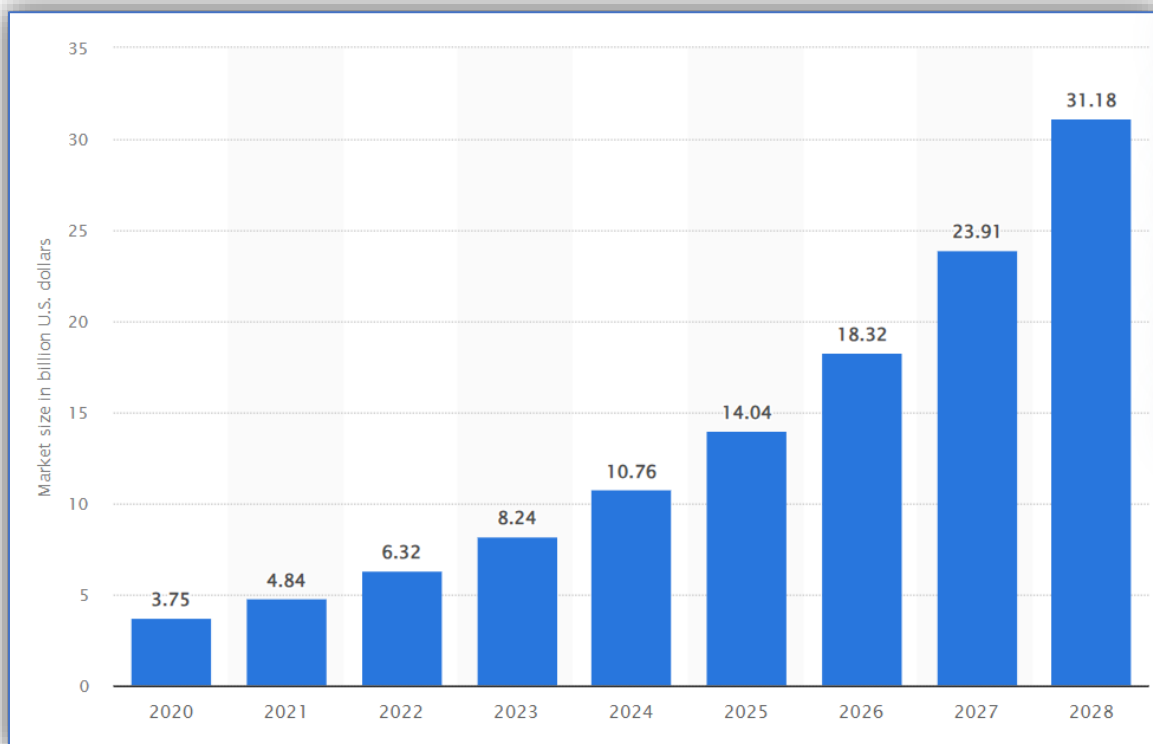


Figure 1.3: Global AI in retail market size 2020 - 2028

Source: Statista, 2023, d

1.6 Methodology

The study has required the identification of the impacts of AI on enhancing customer experience in the retail industry of the UK. It is important to find out the problems faced by the retailers to ensure customer satisfaction and address the problem areas, how AI integration has addressed the issues and transformed customer experience. The chosen philosophy for the study is positivism philosophy and the approach for the study acquired is deductive reasoning. To meet the above objectives, the study has been conducted with the collection of quantitative data from primary sources. A survey method was chosen for data collection and analysis was conducted using a constant comparison technique. The survey was conducted as part of the study among 100 customers in the retail industry.

1.7 Scope of the Study

The study's scope is limited to the United Kingdom since the retail of Britain has been explicitly considered in the study. It has been important to focus on the essential integration of artificial intelligence in the retail sector to reflect on heightened customer satisfaction. The sales rate of the retail sector has increased due to the effective marketing conducted with the help of AI tools. As per the views of Theodoridis and Gkikas (2019), predictive analysis and AI provide accurate data which helps to develop personalised content which gains customer attention and increases sales. Moreover, AI integration helped the development of voice assistants and chatbots which provide 24/7 customer support services and attend to the issues for providing personalised solutions (Li et al., 2023).

1.8 Structure of the Dissertation

Five chapters comprise the structure of the dissertation including introduction, literature review, methodology, findings and discussion, and conclusion and recommendations. The first chapter of the introduction addresses the research aim, rationale and objectives. The second chapter consists of analysing variables with existing literature and methodology. The third

chapter deals with methodology and addresses the selection of techniques for collecting data. The fourth chapter addresses the analysis of data and the last chapter includes the concluding results of the study.

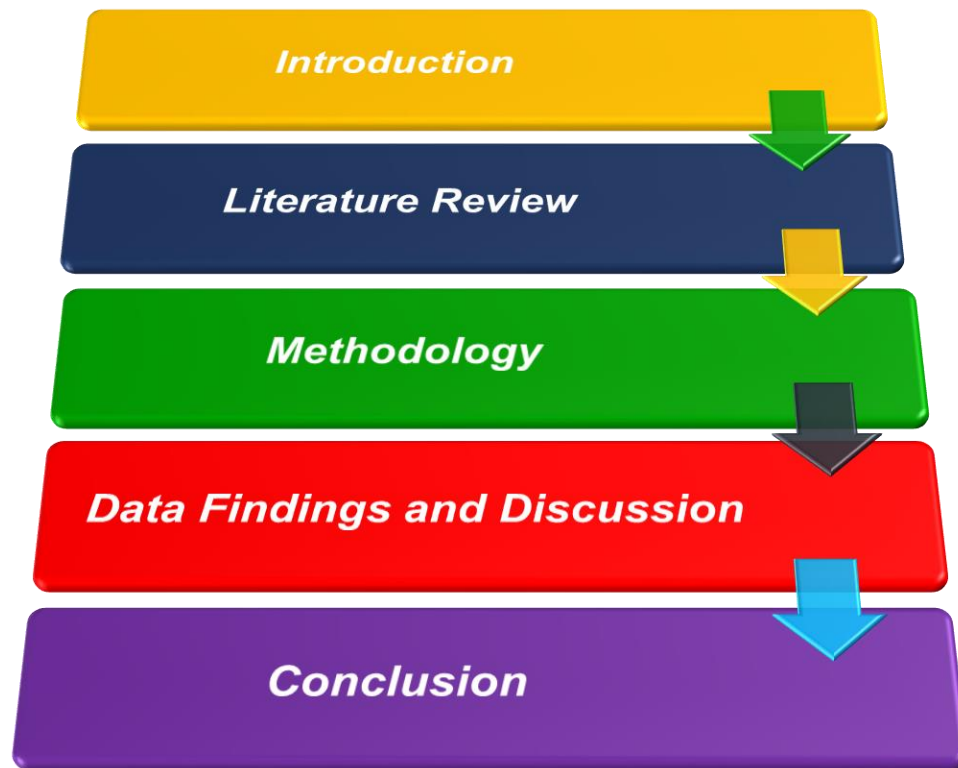


Figure 1.3: Structure for the study

Source: Created by the researcher

1.9 Chapter Summary

The chapter has addressed the main aspects which are needed to proceed with the dissertation such as a short detailing of the background to the research issue, aim and objectives. Hereby, research questions, structure of the study, rationale and short account of the methods chosen for the study have been included. It has been ensured that research has been conducted with the help of quantitative data which has helped to draw effective conclusions to the problem.

2. Literature Review

2.1 Introduction

This chapter of the literature review has addressed the elements of the research topic, focusing on critical analysis of the variables to address the problem area. Using theoretical perspectives, the research problem has been evaluated and discussed to develop critical insights into the research. Also, the gap in the literature and study has been addressed explicitly along with a well-defined conceptual framework for showing the dependant and independent variables.

2.2 Conceptual Framework

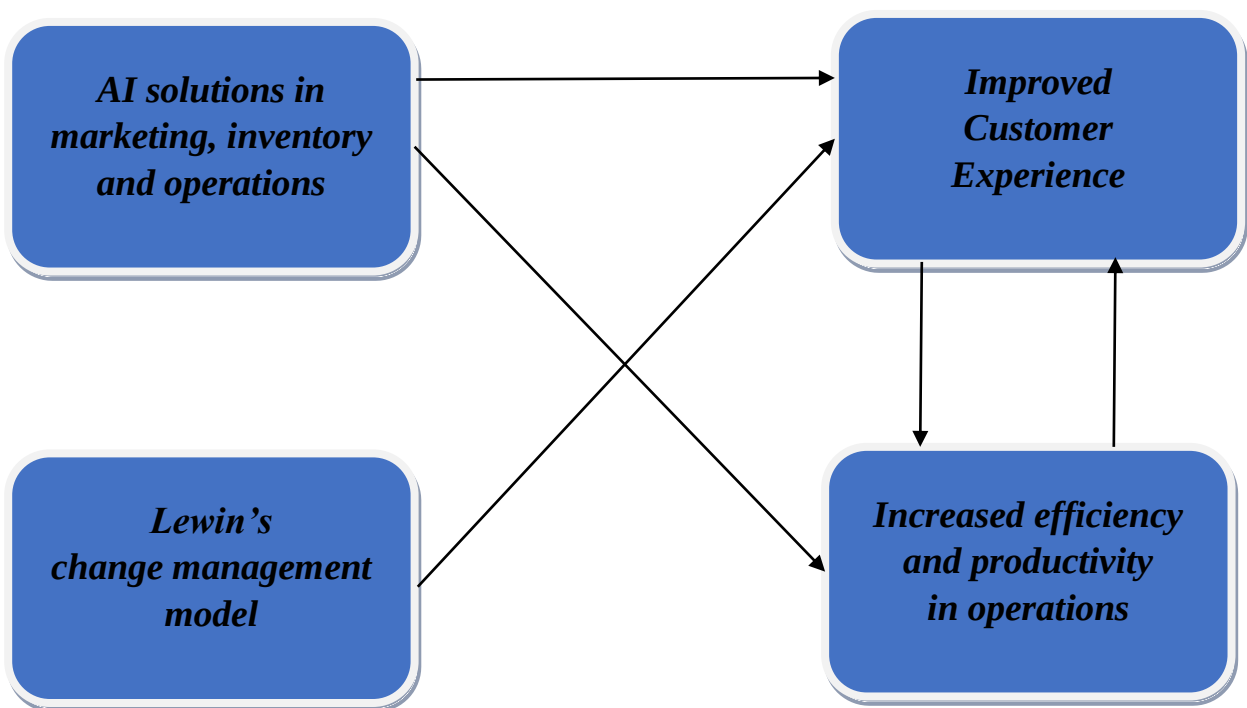


Figure 2.1: Conceptual Framework

Source: Created by the researcher

2.3 Importance of artificial intelligence in retail business

A drastic transition process was undergone by the retail sector over the past few years, especially due to the COVID crisis. Since the COVID-19 pandemic, retail businesses have been changing their operations to cater to the needs of customers and upscale business dynamics. AI integration has been a major driver and element in the digital transformation process which helped the retail sector to enter e-commerce and adopt digital marketing to boost company performance. According to Jain and Aggarwal (2020), AI has provided demand forecasting and merchandising scope to retailers whereby customer behavioural information and trend data are easily gathered. With the help of AI, market analysis has become easier to conduct based on which informed pricing decisions can be made and optimise product placements.

The AI solutions and tools have proven to be extremely valuable due to easy access to data-driven insights which can help to produce personalised marketing content and reduce the cost of operations (Camilleri, 2020). Other than that, operational efficiency has been improved by AI as repetitive tasks are conducted by computerised programs and the workforce is utilised for high-intelligence tasks. This has helped in avoiding the scope of making human errors and inducing the rate of productivity at the workplace. Another aspect and use of AI which has completely boosted the operational productivity in the retail sector is supply chain efficiency. With a specific focus on inventory and warehouse management, AI implementation has helped in identifying the adequate flow of customers and sales requirements which caters to the issue of stocks. On the other hand, Loureiro et al. (2021) depicted that, artificial intelligence has uncovered a lot of societal aspects where the business organisation may focus on some altered experiences and shareholder relationships. To be more precise, artificial intelligence can develop some sort of expert system which can proliferate business objectives to the stakeholders through which they can spread the novel sustainability measures of the company globally. Human resource management might be an aligned aspect as the aforementioned thing can be envisaged in recruitment processes also.

The role of AI applications in the retail sector is broad and effective since it is innovative and provide retailers with various methods to improve operations. Using AI has proved to be advantageous and profitable for most companies as it helped to reduce the cost of operations and

make informed decisions. Managers of different organisations are considering artificial intelligence as a thing, supporting the reduction of human effort and eventual error in management practice. As opined by Chernov and Chernova (2019), the main considerable areas are coordination and control of systems, decision-making, problem-solving, strategic project management, resource allocation, data analysis and reporting people development. It also allowed businesses to keep consistency across the channels, conduct personalised marketing and develop content which can address the target market. With retail businesses adopting the e-commerce medium, AI has helped in developing brands and establishing a relationship with clients or customers which boosts the sales rate (Rosário and Raimundo, 2021). One of the biggest issues of retail trading was to identify customers' behaviour which can be easily studied with the implementation of AI tools and leverage the insights into potential strategies and increase rate of profits for the business.

2.4 Relation between artificial intelligence and customer experience in the retail sector

Customers are the most important element in business, stakeholders who need to be satisfied for long-term business sustainability and success. Customer loyalty matters extremely to retail companies the most for which various strategies are applied to relieve their pain points. Over the years, retail companies have been struggling to identify customer behaviour and improve the overall shopping experience. It is important for companies to draw customers' attention and facilitate sales rates effectively to maintain proper performance. However, with the implementation of AI, retail companies have been able to provide a personalised shopping experience to customers which increases customer loyalty (Ameen et al., 2021). Heightened customer loyalty provides the company security towards the boost of company performance.

The relationship between AI and customer experience can be explored as a tool used by retail companies to gain efficiency in operations to meet customer demands. In retail trade, there are many operations such as product manufacturing, marketing, inventory and warehouse management and delivery and logistics. Over the years, customer behaviour has changed drastically which has required essential market research and identifying the need to develop and

position products properly. With the help of AI, market forecasts, customer data accessibility, efficiency in inventory management and logistics operations have improved effectively (Helo and Hao, 2022). Using AI, customer preferences are identified earlier which allows the companies to meet the requirements on time and ensure satisfaction.

In the process of determining the customer pain points and improving operations, the retail sector has effectively benefitted from AI tools and solutions. Recognising the touch points and relevant insights AI can bring more customer interaction in an automated way and this can uplift workforce efficacies. As opined by Daqar and Smoudy (2019), chatbots can reduce customer waiting time and usage of customer data can influence customer developing triggering promotional elements to ensure customer satisfaction by enclosing their needs in one go. Moreover, by using all customer data, the companies adapt their marketing content and promotional strategies to the identified customer preferences. The optimisation of data harvesting has been achieved with the help of AI whereby the marketers leverage forecasting and accuracy obtained (Hicham, Nassera and Karim, 2023). Improved customer experience can be viewed as a result of the integrated feedback and resolution procedure followed with the help of chatbots and voice assistants. It has been analysed that AI is a revolutionary tool which is being used in various components of retail operations. AI implementation in marketing and repetitive tasks has allowed the company to utilise the workforce for more cognitive work.

2.5 Issues Faced in AI Implementation in retail Sector to meet customer needs

The AI implementation seems to provide massive benefits to the retail business and facilitates the growth of company performance. However, two particular challenges are faced by retailers in the implementation of AI in business operations. Every retail business aims to achieve customer satisfaction and improve experience to develop a positive brand experience. The retail industry is highly competitive and companies need to obtain AI to acquire a competitive advantage (Abrardi, Cambini and Rondi, 2022). One of the biggest challenges is the high cost of AI solutions which can act as a barrier to the company for using it. Small retail

businesses may be affected by the high cost of AI tools which restricts from implementation process.

The second issue which affects the AI implementation process is the lack of skilled employees and personnel to manage AI operations and utilise its benefits. Although AI is beneficial for the business, the company must hire skilful employees who can use it to draw benefits and leverage the efficiency into workplace. In order to optimise business operations with AI tools and solutions, it is extremely important for the business to have capital resources and effective talent for its management. Other than that, the issues with AI integration in the retail business are the lack of data security and the threat of cyberattacks (Tao, Akhtar and Jiayuan, 2021). A company's sensitive information can be lost due to lack of proper security or customer information can be breached.

There are significant issues faced in retail AI technology which can affect the operations in business. As per the views of Mahmoud, Tehseen and Fuxman (2020), a lack of investment in research and development affects the utilisation of AI to facilitate innovation which is currently affecting the slow growth of retail businesses. AI is evolving highly with the current pace of time and compared to other industries, retail companies are unable to leverage the benefits of AI solutions effectively to improve services. There is incredible scope for retail businesses to facilitate the growth of business and induce a rate of sales. The skill gaps of employees are another factor which is affecting the efficiency of the retail companies and hindering the completion of the digitalisation process. On the other hand, Lockey et al. (2021), mentioned some other trust challenge that can be acquire by the AI such in accuracy and reliability, transparency and explainability, in automation and lastly in mass data extraction. For instance, taking reliability into context accuracy matrix is not sufficient alone, however the transparency and fairness of processes also need to be emphasised.

2.6 Strategic AI solutions to improve customer experience in the retail industry

AI customer experience solutions are extremely important for the growth of business in the retail industry. Due to high competition in the retail market, it is significant for businesses to leverage AI solutions to gain customer loyalty and boost the rate of sales. According to the views of Huang and Rust (2021), AI's data processing capabilities can be utilised to address target audiences through personalised marketing content. Predictive analysis provides businesses with insights into customer needs and behaviour which can be used for identifying customer buying behaviour and improving company performance. The use of chatbots, voice assistants and smart technology can be used to improve client services and facilitate the growth of sales in the retail market. In this regard, Verganti et al. (2020), opined that artificial intelligence has amalgamated the utilities of digital sensors, software-based automation and networks which can transfer the economic model and can help any venture to sustain itself in this new era of industrialisation. Through the involvement of automation, customer experience can be enhanced by shortening response time, faster issue mitigation and optimum quality support.

AI solutions have been implemented by multiple retail market leaders till now to meet customer requirements and leverage the growth of performance. For example, recently, Tesco, a British Supermarket giant had implemented a "just walk out" strategy in its store to increase efficiency and gain customer satisfaction effectively at the GetGo store in Holborn, London. Weight sensors have been implemented in the shelves which are computerised with AI solutions to ensure tracking of an individual's movement across the store (Butler, 2021). By downloading the Tesco app, the shoppers will be able to scan the QR and pick items they want. This has helped Tesco to address one of the biggest pain points of shoppers which is to stand in long queues at billing counters. By innovating and leveraging AI, Tesco has been able to draw customer attention and facilitate the growth of sales rate effectively. On the other hand, the example of another retail tycoon, Morrisons is intrigued more a process, organisational replenishment in current times. According to demand forecasting the refurbishment is a cloud-based operation which can bring more scalability and AI can help the venture mitigate the execution gap and optimise availability (microsoft.com, 2018). Customer experience can be

better in a certain mean as the cloud-based solution supports the organisation in quickly responding to customer demand and connecting with the broader market.

2.7 Theoretical proposition

“Lewin’s Change management theory” is the model used for business transformation to address the adoption of new elements into the operations for facilitating growth and development (Islam, Furuoka and Idris, 2020). A business is dynamic and requires evolution to adapt to new environments and tackle external forces. The process of change must be systematic so that it can address the development of business operations and ensure the effective settlement of new elements. Lewin's process of change model consists of three stages, that is "unfreezing, changing and refreezing”. Using this model, retail businesses can address the changes of digital adoption into traditional operations which can boost the growth of sales and company performance. The retail business environment has undergone a pandemic crisis which affected its stability largely, causing massive monetary losses (Chang et al., 2022). However, technological advancements such as AI solutions were an effective way to address mitigation and recovery from the losses generated during a pandemic.

The concept of transformational leadership can embark on radical innovation within any organisation and on a similar note knowledge-based view (KBV) theory can bring employee efficacy in knowledge management capabilities. Organisational agility and innovation can be mentioned as two cognitive developments which can uplift the economic cycle of business (Asbari et al., 2020). On the other hand, transformational leadership within any retail establishment can emphasise individual beliefs and values through which people can be motivated and trigger the intellect, innovation can be embarked on. Apart from technological upliftment, the leadership can also focus on the execution of new ideas in manufacturing and offering lucrative services that can reshape organisational structuration (Nabi et al., 2022). As a whole, radical innovation ensuring synergy with transformational leadership can build more resilience among the people through engraved knowledge acquisition capabilities.

Technology and AI implemented helped businesses upgrade marketing content and operations, inventory management and logistics. Each of these elements was managed by AI and

efficiency was increased which helped to achieve customer satisfaction. Increased performance of retail organisations using AI explicitly boosted the customer experience and performance. AI helped to personalise marketing messages sent to the target audience which helped to gain the attention of customers and boost the rate of sales (Jain and Aggarwal, 2020). Understanding AI benefits, predictive analysis provides accurate market forecasts to retail companies which facilitates proper product positioning and management of inventory. Warehouse management is an important part of the supply chain operations which became efficient due to the implementation of AI solutions. Moreover, AI integration helped companies improve direct customer relations and services through the implementation of chatbots and voice assistants (Patel and Trivedi, 2020).

2.8 Literature Gap

The literature has addressed the importance of artificial intelligence in the retail sector and its impact on facilitating improvement in customer experience. All the various areas improved with the help of AI that contributed to the enhancement of customer experience have been covered. The gap in the study includes additional digital tools such as big data and cloud computing which has helped in optimising retail operations to a large extent as well.

2.9 Chapter Summary

The literature review has focused on the relationship between AI and customer experience in the retail sector. It has been explored and found that AI has improved data accessibility which helped the companies to use customer data-driven insights in product positioning and meet demands. Moreover, with the help of AI, retail businesses can provide explicit personalised services and develop content in such a way that sales rate is induced.

3. Literature Review

3.1 Introduction

The study has required the identification of the impacts of AI on enhancing customer experience in the retail industry of the UK. It is important to find out the problems faced by the retailers to ensure customer satisfaction and address the problem areas, how AI integration has addressed the issues and transformed customer experience. The chosen philosophy for the study is positivism philosophy and the approach for the study acquired is deductive reasoning. To meet the above objectives, the study has been conducted with the collection of quantitative data from primary sources. The survey method has been chosen for collecting quantitative data and analysis has been conducted using a constant comparison technique.

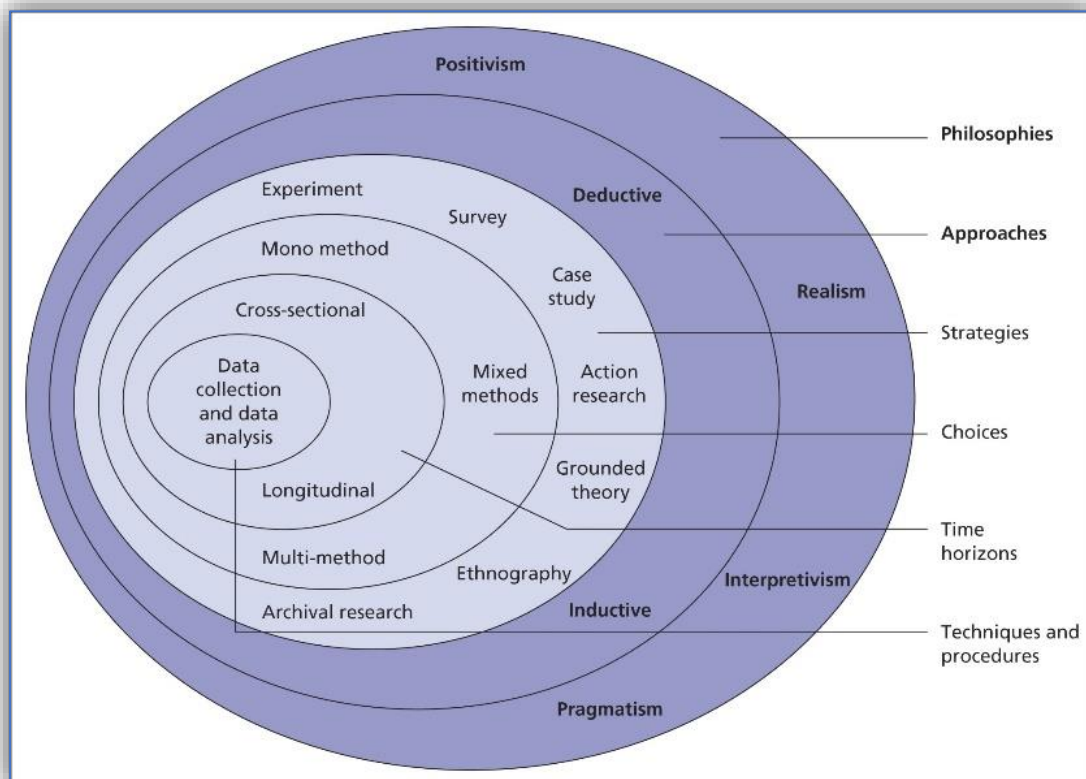


Figure 3.1: Research Onion

Source: Inspired by Saunders et al., 2007

3.2 Research philosophy

Positivism and Interpretivism are considered two key philosophical paradigms of the research process. The concept of positivism discusses the focus on generalisations through the philosophical stance of researchers based on the observable realities of society. This research philosophy focuses on the analysis of pure data to free the research from human bias (Alharahsheh and Pius, 2020). Whereas, Interpretivism focuses on wider contexts of social realities such as culture, timeline and circumstances. This philosophy generalises the outcomes of the research and provides universal facts and laws that are applicable to all irrespective of the variables and factors. In order to understand the relation of a generalised concept with its variables and derive abstract conclusions, positivism has been made the philosophical core of this research.

3.3 Research Approach

The deductive approach of research refers to the development of hypotheses depending on the existing concepts and theories alongside devising research strategies for testing the hypotheses. Adopting this research approach helps to identify the causal relationships between research variables and concepts through the use of quantitative approaches to measurement. Whereas the inductive approach elaborates on the collection and analysis of concepts and theories by focusing on observations and patterns of existing data. According to Armat, Assarroudi, and Rad (2018), the inductive approach in the analysis of quantitative information is adopted when there is a lack of existing research. Artificial Intelligence is a highly discussed topic among researchers in the current times due to which a deductive approach has been chosen to collect existing theories and test them based on gathered observations.

3.4 Research Design

Research design plays an important role as it is the initial step of choosing between quantitative and qualitative research methods. The descriptive approach is one of the notable

research designs which focuses on determining the variables of a certain research topic and elaborates on them (Atmowardoyo, 2018). However, this design is highly compatible with a topic that involves non-quantified information collection and analysis. On the other hand, exploratory research design explains the in-depth analysis of a research phenomenon in order to get detailed insights into the topic rather than providing conclusive statements (Casula, Rangarajan, and Shields, 2021). Surveys are compatible with this research design and were chosen as the design of this research.

3.5 Research Methods

The quantitative research method focuses on the collection and analysis of data that involve numerical figures, calculations and statistical information. Whereas, the focus of the qualitative research method lies on descriptive language-based information gathering and analysis to create new observations. Quantitative data analysis has been the primary focus in order to interpret information using mathematical figures and present them using graphs. This research has focused on quantitative data collection and analysis from primary sources so that research conclusions can be justified using numbers and figures.

3.6 Data Collection Tools

Survey questionnaires are effective tools for collecting quantitative information from the primary sources. Moreover, surveys are an effective tool to gather a large pool of information within a short span of time which makes the data collection process convenient for the researchers. On the other hand, a focus group is a data collection tool that involves gathering a selected group of individuals to discuss or provide views on a social issue (Nyumba et al., 2018). Including focus groups would not be relevant to the topic of this research due to which it has been avoided as a data collection tool. A survey on retail industry customers have been performed in this research. The survey was conducted using Microsoft Forms, a tool to create online surveys and to every participant was asked the same questions. The survey responses are

available online. Data were also collected from management employees in the retail industry through structured interviews. The interviews were recorded through the use of a mobile device.

3.7 Data Sampling

Random data sampling is the simplest, convenient and time-efficient approach to sampling a large amount of data collected from participants. The core advantage of selecting the random data sampling method is that it creates an equal probability for data samples to be selected for the sampling process which lowers the process bias (Sarstedt et al., 2018). Adopting this technique is the approach to reduce the bias from data sampling during the sampling process. Whereas, the stratified sampling method divides the data samples into different segments based on certain characteristics such as age, gender, income group and others. Based on the topic, this sampling process would have created selection bias due to which the random sampling method has been selected. The survey was conducted with 100 data samples of 100 consumers associated with the UK retail industry.

3.8 Data Analysis Method

Constant comparison is the approach to code and compare information across categories to identify information patterns and refine patterns to acquire new data or information. As per the views of Williams and Moser (2019), coding is the process of assembling data, classifying them and sorting thematically to construct an organised meaning of data. Constant comparison helps to analyse information and sort it effectively to create new themes. On the other hand, Frequency distribution is the data analysis method that reflects observation counts with respect to each potential value of a variable. This helps the information to be sorted in a tabular or graphical format for better visualisation of the data findings. Frequency distribution has been selected as the key approach using which quantitative information will be processed and interpreted as well as presented through charts.

3.9 Ethical Consideration

Collection of personal data from participants during surveys and interviews requires obtaining their consent. The Data Protection Act (2018) states that personal information must be collected and processed with consent and users must handle and manage information in a confidential way. Participants of the surveys have been provided with consent forms using Microsoft Forms and all the participants have given consent by selecting “Yes” at the first question. They are anonymous individuals because no data about them are stored. Participants of the interview have been provided with consent forms using e-mail and all of them have given consent by replying to the e-mail.

3.10 Chapter Summary

This chapter has structured the methods applied for conducting the research, collection of data and analysis them. Discussion on the design, approaches of research and tools and techniques to collect information have been included in this section. Moreover, ethical considerations related to this research have been discussed in this chapter.

4. Findings and Analysis

4.1 Introduction

This chapter aims to present the findings of the research work through analysis of the collected data from different sources. In order to highlight the main findings primary and secondary data will be analysed in this section and will be compared with the key findings attained earlier through review of literature.

4.2 Analysis and Discussions of findings/data

4.2.1 Findings on the manager's interviews

<i>Section 1: Demographics</i>			
<i>Questions</i>	<i>Manager 1 (M1)</i>	<i>Manager 2 (M2)</i>	<i>Manager 3 (M3)</i>
<i>1. What is the name of the company and what is the main business activity?</i>	The name of the company is BaxterStorey Plc and the business activity is independent foodservice provider.	The name of the company is H&M and the business activity is to sell clothes, accessories, and home décor products through its stores and online platforms.	The name of the company is Specsavers Optical Group Ltd and the business activity is to offer optometry and optician services for eyesight testing and sell glasses, sunglasses, contact lenses and hearing aids.

2. What position do you currently hold in the company?	General manager.	Department manager in the flagship store.	Operational Compliance Manager
3. How many years of experience do you have in this position?	One Year.	Three Years.	One-and-a-half-year.
4. How many years of experience do you have in the retail sector	Ten Years.	Five and a Half Years.	Three Years.
Section 2: AI Adoption			
Questions	Manager 1 (M1)	Manager 2 (M2)	Manager 3 (M3)
5. Has your organization implemented any AI technologies? (Yes/No)	Yes.	Yes.	Yes.
6. Give me an example of AI which impacts customer satisfaction.	The company developed an app which offers access to payroll, training resources, and team member incentives for	On our website there is if the customer is looking for an item with a specific size, the interface will suggest to him that the	The company launched in 2018 an in-store virtual styling app that uses AI to help customers find the best glasses frames for their

	supermarkets, gyms, and suppliers.	next item searches the same size. Also, on the phone app available for iPhone and Android, we have a Store Mode section which will show customers which store is available for the item and what sizes are in stock.	face shape and style.
Section 3: AI Impact on Customer Experience			
Questions	Manager 1 (M1)	Manager 2 (M2)	Manager 3 (M3)
7. How does your company handle AI technologies while aiming to ensure a better customer experience?	My company aim to deliver a better customer experience through an intense focus on value creation for the customers before, after and during the times of sales. The use of an AI Chatbot makes it easier for the business, as we can answer the queries of consumers and provide them with	Being customer service, one of the main focuses of the company, AI has been used for several purposes such as forecasting market conditions so that the right operational measures can be taken such as forecasting market demand for maintaining an efficient supply chain.	AI technologies within my company are used to personalise offers for consumers and reach them through the use of relevant marketing channels with personalised offers and rewards. In this personalised consumer service providing, AI plays the key role as it automates the process through analysis of individual consumer

	their needs and preferences as well as work on consumer complaints.		needs and purchase behaviour.
8. Do you think that artificial intelligence is essential for the growth of retail businesses? Why?	Service improvisation is crucial in retail as the market involves similar products and competitive rivalry among businesses. Using AI Chatbot, our company makes the customer service processes efficient and easy to avail for the customers which increases customer loyalty to a higher extent.	AI forecasting helps us in strategic decision-making related to operational activities so that productivity levels can match the existing demand in the market.	I believe that it is necessary to cope with the change in consumer behaviour and deliver them with exact needs in retail which makes use of AI to analyse consumer behaviour, a necessary aspect.
9. What are the challenges faced by your business in using artificial intelligence?	Handling AI technologies is increasing the cost of business and has increased expenses on customer service than other competitors.	AI Forecasting is based on many variables which leaves a chance of inaccuracy of demand probability due to which chances of overstocking or understocking exist.	AI technologies analyse the previous purchase orders and customer queries to personalise offers and any dynamic change in the market can affect the process as consumers may feel personalised offers irrelevant to their

			needs.
10. What are the strategies that your company uses to mitigate the challenges related to the use of artificial intelligence in retail activities?	Achieving higher sales and profits is the strategy for the business to address these cost-related challenges and stay competitive within the market.	The use of cloud-based technologies alongside AI is the strategy to meet the execution gap making the predictive analysis more accurate.	The use of other technologies alongside AI can be beneficial to make accurate offers and rewards for consumers and integrated use of big data analytics in this context is the most relevant strategy.
Section 4: Future of AI in Retail			
Questions	Manager 1 (M1)	Manager 2 (M2)	Manager 3 (M3)
11. On a scale of 1-10, how crucial do you believe AI will be for the future of the retail sector? (1 signifies not crucial and 10 signifies very crucial)	I think that will have a low impact on the future of the retail sector. My answer is 4.	I believe that will have a huge impact on the future of the retail sector. My answer is 9.	I think that will have a big impact on the future of the retail sector. My answer is 8.
12. What sectors do you believe AI will most significantly impact in the future of the retail	Inventory management – artificial intelligence can improve customer	Inventory management – AI can help H&M optimize inventory levels, reduce waste, and	Customer intelligence – to understand the customer behaviours and to personalise the

<i>industry?</i>	engagement.	improve forecasting and replenishment.	offerings.
------------------	-------------	--	------------

Table 4.1: Interview Transcript

Source: Created by the Learner

4.2.2 Analysis and discussions on the manager's interviews

Interviewing the managers from retail sector businesses such as BaxterStorey Plc, Specsavers and H&M answers critical knowledge on the AI application within retail sector businesses. The general manager of BaxterStorey Plc which is an independent food retailer has mentioned that AI has been implemented within the organisation through the development of an application that automates employee management practices. The company provides employees with rewards and incentives as well as training resources. This helps the business to engage employees in focusing on enhanced customer service so that improved customer experiences can be attained. According to Prentice and Nguyen (2020), AI as well as employee service has direct and indirect impacts on customer loyalty. In addition, H&M's Flagship store manager mentioned that the organization has integrated AI into its online site so that clients have a better customer experience when making purchasing decisions. Forecasting market demands is another means for the company to enhance customer experience as the company tends to manage supply chain networks efficiently and increase its product availability for customers. Specsavers Optical Group Ltd's Operational compliance manager also spoke about the virtual styling app introduced by the company in 2018, which also offers customer engagement.

As per the views of Silvestri (2020), certain features of AI such as virtual reality and augmented reality are influencing customer experiences and creating sensory stimuli in the fashion industry. The application of AI services to develop a virtual fashion environment by H&M and Specsavers shows the aim of providing over-the-top customer experiences. Whereas, focus of BaxterStorey Plc lay in developing the employee motivation to contribute toward better

customer service and experiences which shows diverse approaches to AI application within the retail sector.

From the interviews of managers from different retail businesses, it has been identified that businesses have different purposes for using AI in the competitive retail industry. Based on the interviews, it can be stated that AI influences different business activities such as marketing, operations and customer service. In a similar way, Davenport et al. (2020), have stated that AI influences marketing strategies, customer service, and sales processes alongside consumer behaviour. Efficiency brought by AI technologies has an impact on different areas of business and certain tools such as AI Chatbot and predictive analysis facilitate achieving competitive advantage for retail businesses.

On the importance of AI in customer experience development in retail, managers have stated its different benefits. Service improvisation, increase in productivity and efficiency in meeting consumer needs are the key benefits that make use of AI crucial in the retail sector. Managers have mentioned that customer service improvisation such as replying to customer queries on time, and providing customers with personalised offers and rewards leads to better customer experience and satisfaction levels. In this same context, Har et al. (2020), have mentioned that higher customer satisfaction is the factor that enhances customer loyalty and retention. For this reason, delivering better customer experiences for achieving enhanced customer satisfaction is necessary for retail businesses to attain key benefits of AI implementation.

In the context of key issues of artificial technology implementation, it has been identified that managers are claiming that probabilities of wrong forecasting of market demand and consumer behaviour create challenges for retail businesses as they may find a gap in stock or overstocking challenges. Manager 2 mentioned that predictive analysis is dependable on different variables existing in the business environment. Similarly, Oosthuizen et al. (2021), have mentioned that navigation of a complex business environment is difficult for businesses due to changes in pace in economic and technological factors, market competition and government legislation. Consideration of these factors makes AI implementation a difficult task for retail business organisations.

It has been noticed that the implementation of AI is leading to certain challenges such as an increase of business expenses and chances of supply inefficiency. As per the views of Akter et al. (2022), manufacturers through the use of cloud and analytics are effectively reducing waste and maximising input, improving supply chain networks as well as enhancing efficiency. Based on the views of managers, integrated use of big data analytics and cloud technologies can help mitigate the operational and economic challenges of the business.

4.2.3 Findings and Analysis on Primary Quantitative Data

Question 1: *Does better customer experience influence your retail purchase decision?*

Findings:

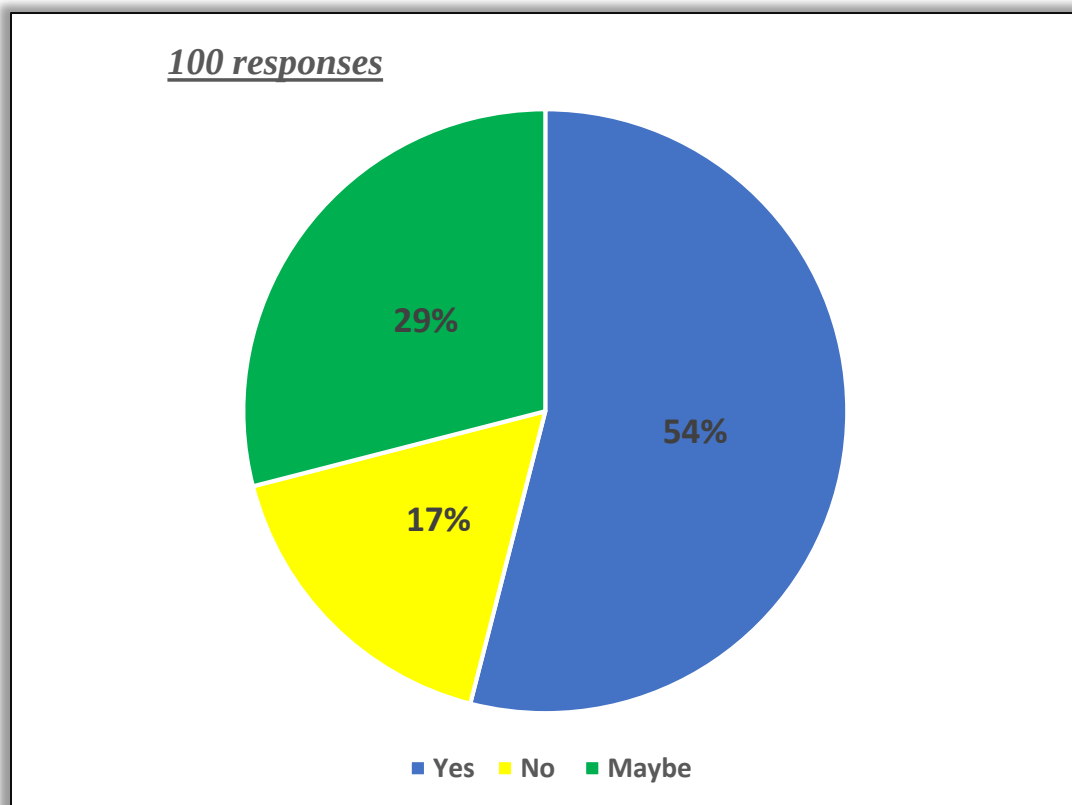


Chart 4.1

Source: Created by the Learner

Analysis: It has been noticed that a large number of respondents such as 54% have claimed that they consider their customer experience while making purchase decisions from retail businesses. However, 29% of the respondents have a neutral opinion and a low 17% of respondents have stated that they do not think consumer experience has an impact on their buying decision.

Question 2: *In your opinion, what aspects of AI improve consumer experience more during the purchase of retail products?*

Findings:

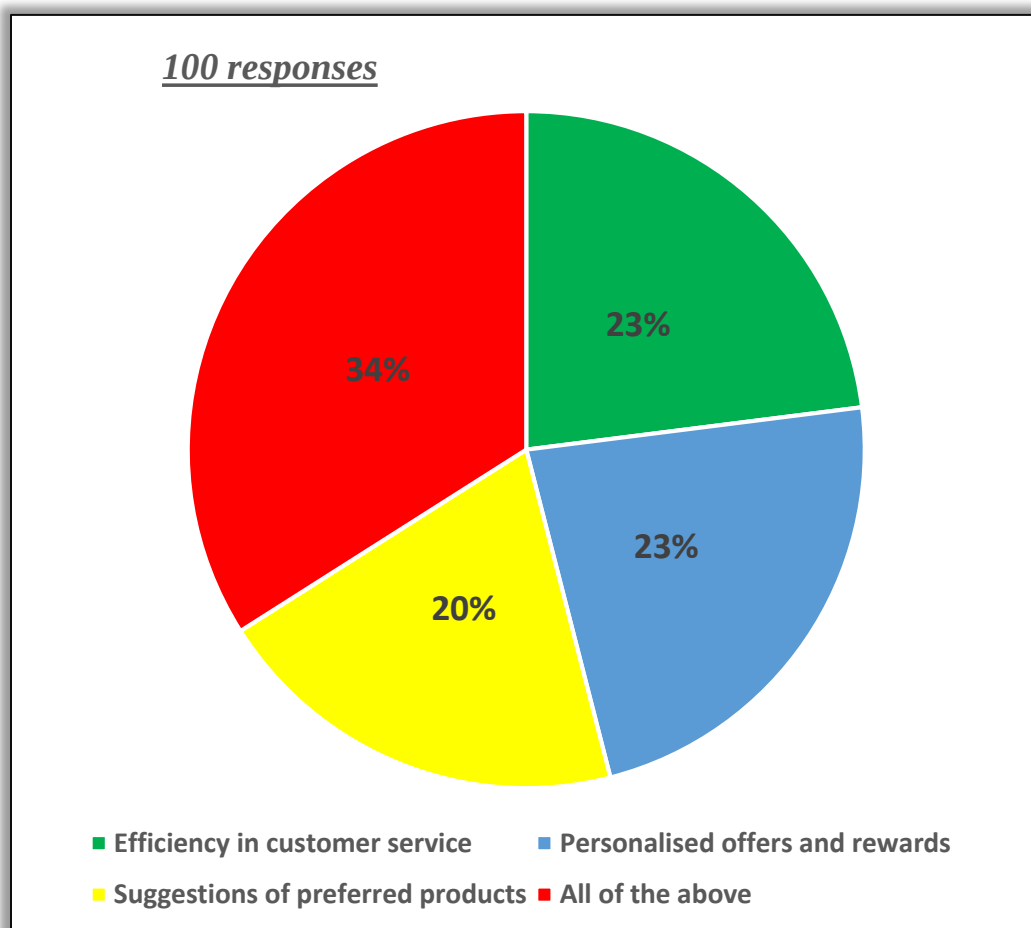


Chart 4.2

Source: Created by the Learner

Analysis: From the above figure, it can be stated that customer service efficiency, personalised rewards and offers and suggestions based on consumer preference have gained similar importance as benefits of AI services with scores of 23%, 23% and 20%, respectively. Whereas, 34% of respondents have mentioned that in terms of AI benefits regarding customer experience all of the options have equal importance.

Question 3: *AI-based retail offers and rewards are often irrelevant and do not make sense with the exact needs.*

Findings:

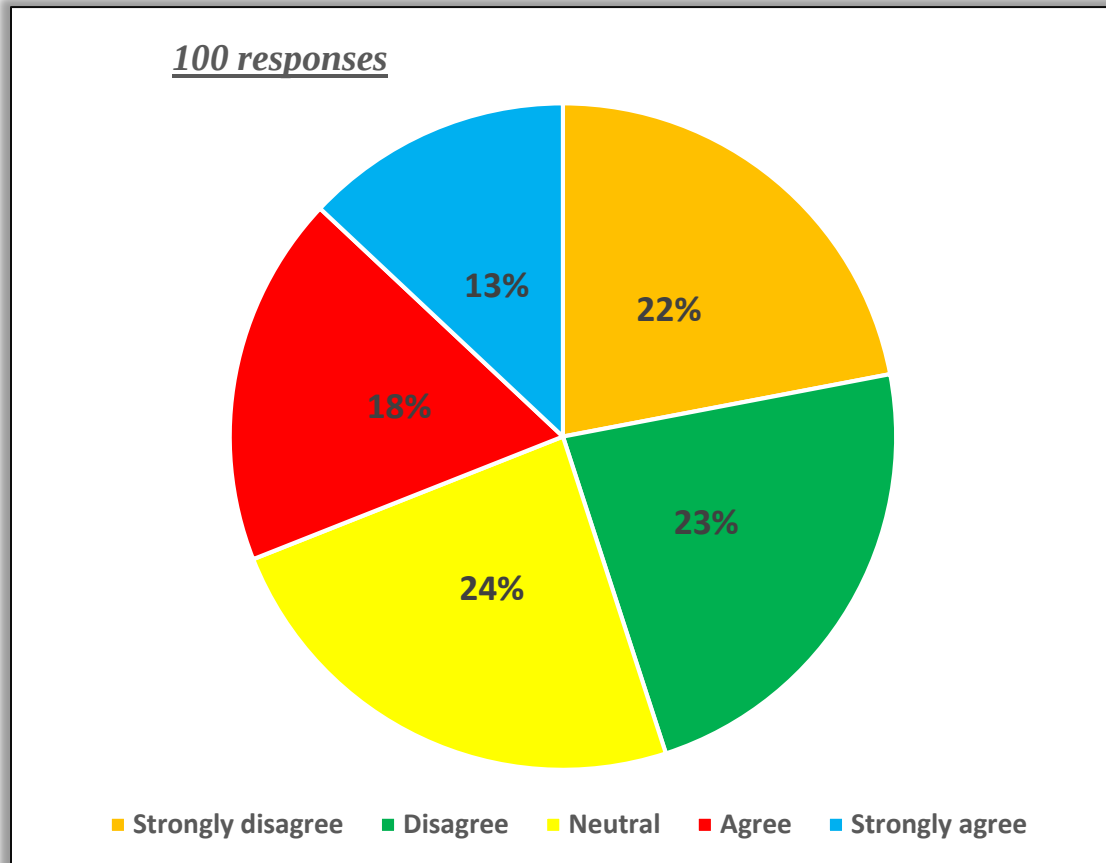


Chart 4.3

Source: Created by the Learner

Analysis: The above image reflects that a combined 45% of respondents have disagreed and strongly disagreed the statement that AI provides with irrelevant offers and rewards. Moreover, almost a quarter or 24% of the participants have claimed that they have no strong opinion about the same. The percentage of participants agreeing and strongly agreeing with the statement was almost 18% and 13%, respectively.

Question 4: Are you satisfied with the use of AI chatbots while communicating with retail businesses regarding your purchases or queries?

Findings:

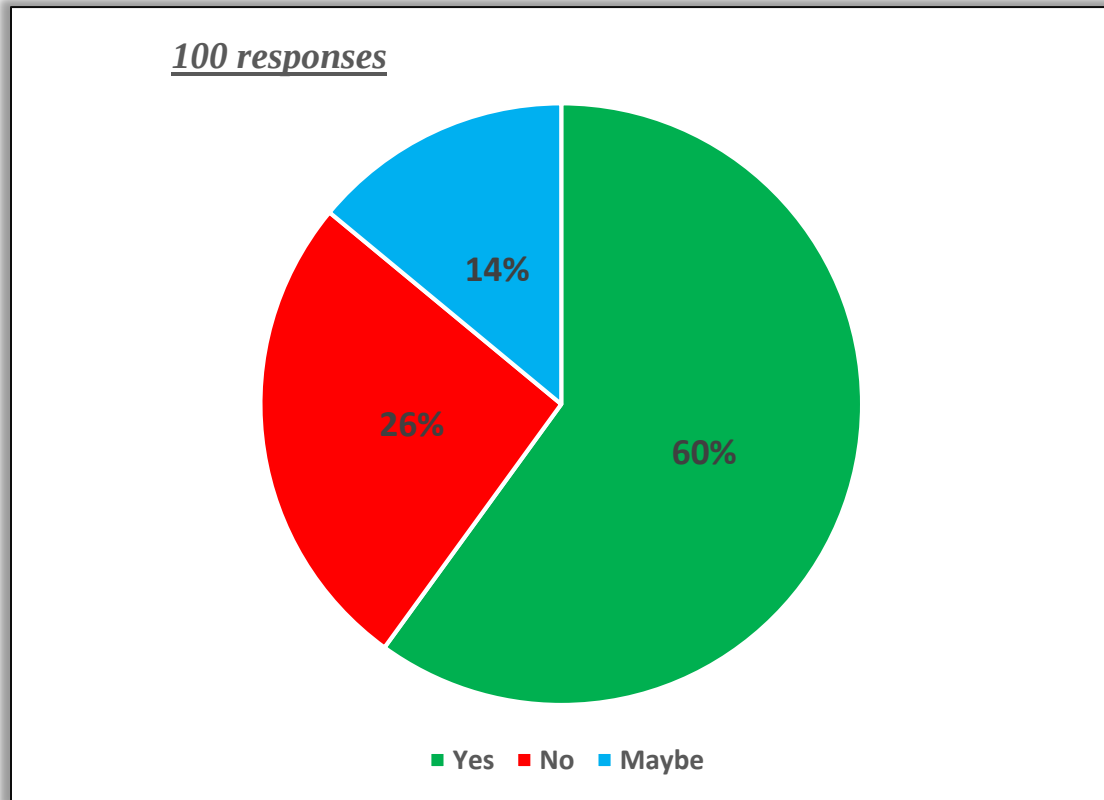


Chart 4.4

Source: Created by the Learner

Analysis: The above image shows that 60% of the survey respondents are satisfied with using AI chatbots for communicating with retail businesses. 14% of the survey respondents had no idea

related to the influence of AI technology whereas, 26% denied any customer satisfaction attained.

4.2.4 Primary Quantitative Data Discussion

From the above survey findings and analysis, it has been noticed that consumer experience is highly related to purchase decisions among retail industry consumers. According to Pei et al. (2020), differentiation of consumer experiences through the use of modern technologies such as AI and big data influences customer satisfaction positively and ensures long-term competitive advantage for retailers. This shows consumer experience differentiation enables higher consumer loyalty and facilitates engagement and re-engagement with the customers. An in-depth analysis in this context elaborates on the fact that survey respondents have significantly voted for better customer service, product recommendations and personalisation of rewards and offers as the main benefits of AI in terms of consumer experience. On the contrary, Grewal (2020), has mentioned that service convenience through technology implementation improves consumer experience and satisfaction. This shows that AI has several benefits including service convenience when it comes to consumer experience development in the retail sector which makes it necessary for businesses to implement to attain competitive advantage.

Besides that, 60% of the survey respondents claimed that AI chatbots have made communication easier and boosted their consumer satisfaction levels. Similarly, Cheng and Jiang (2020) have mentioned that the satisfaction of users and their intention to use continuously provides long-term benefits of chatbot services. It reflects that the use of chatbots and engaging effectively with consumers can help retail businesses to find a better position in the competitive markets. However, based on the survey responses, it is shown that AI implementation has certain challenges such as wrong suggestions regarding preferred offers and rewards. Irrelevant offerings by the business are incapable of attracting existing and new consumers and attaining better sales as well as profitability for which development of mitigation strategies are important for retail organisations.

4.3 Chapter Summary

Chapter 4 of this paper presents the findings of the research, analysing data from various sources. The chapter includes interviews with managers from three different companies: BaxterStorey Plc, H&M, and Specsavers Optical Group Ltd. The interviews explore the companies' use of AI technologies, their impact on customer satisfaction, and the challenges faced in their implementation. The chapter also includes a quantitative data analysis based on a survey, which reveals that customer experience significantly influences purchase decisions in the retail industry. The survey respondents highlighted the benefits of AI in improving customer service, providing personalized rewards and offers, and making product recommendations. However, the survey also revealed challenges in AI implementation, such as irrelevant offers and rewards.

5. Conclusion and Recommendations

5.1 Summary of the Study

With an aim to answer the research questions related to the topic “The Impact of artificial intelligence in enhancing customer experience within the retail industry”, literature reviews data collection and analysis chapters have presented abstract knowledge in this study. The literature review section has included a discussion on the importance of artificial intelligence, its relation with customer experience, challenges in implementation and mitigation strategies in relation to the retail sector. Apart from this, theoretical frameworks such as Lewin’s change management and transformational leadership theories have been stated in the section to gather knowledge on the role of employees in contributing toward AI implementation in the retail sector. The methodology section has highlighted the approaches and methods for collecting relevant information from primary sources which included conducting surveys and interviews. Collected data from interviews and surveys have also been presented in this research and also been evaluated and analysed using appropriate data analysis techniques.

5.2 Linking with the Objectives

In order to meet the research objectives, the researcher has presented relevant themes in the literature review section. Discussion on the themes by using relevant literature has also been performed considering the link with the research objectives.

- “To understand the concept of artificial intelligence and customer experience within the retail sector” has been discussed through “Importance of artificial intelligence in retail business”. This section has highlighted that AI technologies make business practices fast-paced by enhancing operational efficiency. Moreover, AI incorporates the pre-determination of market demand and behaviour among consumers and their changing needs so that businesses can effectively engage in decision-making.

- “To investigate the impact of artificial in developing better customer experience in the retail industry” has been analysed through “Relation between artificial intelligence and customer experience in the retail sector”. Through this section, it has been shown that retail businesses implementing AI technologies can analyse customer preferences and previous purchase details to offer them personalised products and rewards to enhance their customer experience and loyalty. Besides that, certain AI services such as AI chatbots facilitate better communication between customers and the business which is beneficial to deliver better customer experience through improved customer service.

- “To evaluate the challenges faced by the companies in the retail industry for implementing artificial intelligence for enhancing the customer experience” has been evaluated through “Issues Faced in AI Implementation in retail Sector to meet customer needs”. This section has mentioned that meeting customer needs through AI implementation by retail businesses is prevented by issues like lack of skilled employees, cybersecurity issues as well as reliability of AI implementation.

- “To recommend strategies that will mitigate the issues faced in implementing artificial intelligence and improve customer experience in retail organisations” has been mitigated through “Strategic AI solutions to improve customer experience in the retail industry”. In order to mitigate issues regarding customer needs fulfilment and customer service, highly developed AI services have been suggested for implementation by retail businesses such as predictive analysis, chatbots and voice assistants. Apart from this, the Just-walk-in strategy used by UK retail industry leader Tesco Plc has been marked as an effective strategy.

5.3 Recommendations

In order to meet the mentioned benefits of the implementation of AI technologies in retail activities, it is necessary to implement the technology in an appropriate way. Here few recommendations to enhance AI adaptation outcomes –

- Culture plays a significant role in bringing change within organisations as it influences the outcomes of the performed change (Waddell et al., 2019). The United Kingdom organisations

have a monochronic culture that involves the focus of employees and managers in meeting deadlines. Whereas, polychronic culture facilitates focus on flexibility and makes employees highly adaptable to changes (Khan, 2018). Effective implementation of AI technologies will require developing a polychronic culture within the organisation by retail sector businesses.

- The type of communication with the customers also determines customer service efficiency and the use of AI in this context should be appropriate. Retail businesses while communicating with customers through the use of AI tools such as voice assistants and chatbots can perform contextualisation. It can be stated as the addition of explicit contextual information so that the communication process can be effective (Ågerfalk, 2020). Providing relevant information to their faced situation or confusion through the contextualisation of AI-generated messages can help to solve their queries, confusions and challenges so that consumer needs can be met and customer service can be enhanced.

- Apart from this, the integration of other technologies alongside AI can support businesses in offering better solutions to customers in terms of consumer needs, experiences and satisfaction. Big Data analytics is an effective solution that can be integrated with AI services to enhance product and service personalisation and accuracy predictive analysis features. Big Data and AI are used to tackle cybersecurity challenges through three machine learning processes such as "Intrusion Detection, Phishing Detection and Malware Analysis" (Ghirire et al., 2020).

5.4 Limitations of the Study

This research has highly focused on literature review and data collection to identify the relation between artificial intelligence and customer experience within the retail industry. During the research financial constraints have affected the research process as free access to literature available from Google Scholar and other online sources have been used to complete the task. The researcher could not use premium books, journals, articles and industry reports relevant to the topic and that is a key limitation of this research. Apart from this, lower networks within the industry and a shortage of time have also limited the number of interviews of retail industry managers.

5.5 Future Implications

This research currently possesses some limitations which are intended to be removed in future by the researcher. One of the key actions for future improvement of this research work involves the use of premium literature from online sources such as ProQuest, Statista and Mintel Reports. This will help to enhance the comprehensiveness, reliability and validity of the research further. Users who want to explore topics like the contribution of AI chatbots in developing business communication, the role of technological advancement on customer behaviour and innovative approaches to scale the retail market can find this research useful.

5.6 Chapter Summary

The last chapter concludes the study on "The Impact of Artificial Intelligence in Enhancing Customer Experience within the Retail Industry." It summarizes the research, linking the findings to the literature review and theoretical frameworks such as Lewin's change management and transformational leadership theories. The chapter discusses how AI technologies improve operational efficiency and customer engagement by anticipating market demands and consumer behaviour. It also examines the relationship between AI and customer experience, showing that AI can personalize products and rewards, enhancing customer loyalty and service through tools like chatbots. Challenges in AI implementation, including skill gaps and cybersecurity, are evaluated, and strategic solutions like predictive analysis and the Just-walk-in strategy are suggested. Recommendations for effective AI adoption include developing a polychronic culture within organizations, contextualizing AI communications, and integrating Big Data analytics for improved personalization and cybersecurity. The chapter acknowledges limitations due to financial constraints and time, affecting the breadth of literature and number of interviews. Future research directions are proposed, including accessing premium literature and exploring related topics.

References

- Abrardi, L., Cambini, C. and Rondi, L., 2022. *Artificial intelligence, firms and consumer behavior: A survey*. Journal of Economic Surveys, 36(4), pp.969-991.
- Ågerfalk, P.J., 2020. *Artificial intelligence as digital agency*. European Journal of Information Systems, 29(1), pp.1-8.
- Akter, S., Michael, K., Uddin, M.R., McCarthy, G. and Rahman, M., 2022. *Transforming business using digital innovations: The application of AI, blockchain, cloud and data analytics*. Annals of Operations Research, pp.1-33.
- Alharahsheh, H.H. and Pius, A. 2020. *A review of key paradigms: Positivism VS interpretivism*. Global Academic Journal of Humanities and Social Sciences, 2(3), pp.39-43.
- Ameen, N., Tarhini, A., Reppel, A. and Anand, A., 2021. *Customer experiences in the age of artificial intelligence*. Computers in Human Behavior, 114, p.106548.
- Armat, M.R., Assarroudi, A. and Rad, M., 2018. *Inductive and deductive: Ambiguous labels in qualitative content analysis*. The Qualitative Report, 23(1).
- Asbari, M., Santoso, P.B. and Prasetya, A.B., 2020. *Elitist and antidemocratic transformational leadership critics: is it still relevant? (A literature study)*. International Journal of Social, Policy and Law, 1(1), pp.12-16.
- Atmowardoyo, H., 2018. *Research methods in TEFL studies: Descriptive research, case study, error analysis, and R & D*. Journal of Language Teaching and Research, 9(1), pp.197-204.

Butler, S., 2021. *Tesco takes on Amazon Fresh with launch of 'just walk out' store*
<https://www.theguardian.com/business/2021/oct/19/tesco-takes-on-amazon-go-with-launch-of-just-walk-out-store>

Accessed: 11 November 2023

Camilleri, M.A., 2020. *The use of data-driven technologies for customer-centric marketing*. International Journal of Big Data Management, 1(1), pp.50-63.

Chang, S.E., Brown, C., Handmer, J., Helgeson, J., Kajitani, Y., Keating, A., Noy, I., Watson, M., Derakhshan, S., Kim, J. and Roa-Henriquez, A., 2022. *Business recovery from disasters: Lessons from natural hazards and the COVID-19 pandemic*. International Journal of Disaster Risk Reduction, 80, p.103191.

Cheng, Y. and Jiang, H., 2020. *How do AI-driven chatbots impact user experience? Examining gratifications, perceived privacy risk, satisfaction, loyalty, and continued use*. Journal of Broadcasting & Electronic Media, 64(4), pp.592-614.

Chernov, A. and Chernova, V., 2019. *Artificial Intelligence In Managemnet: Challenges And Opportunities*. Economic and Social Development: Book of Proceedings, pp.133-140.

Daqar, M.A.A. and Smoudy, A.K., 2019. *The role of artificial intelligence on enhancing customer experience*. International Review of Management and Marketing, 9(4), p.22.

Davenport, T., Guha, A., Grewal, D. and Bressgott, T., 2020. *How artificial intelligence will change the future of marketing*. Journal of the Academy of Marketing Science, 48, pp.24-42.

Ghimire, A., Thapa, S., Jha, A.K., Adhikari, S. and Kumar, A., 2020. *Accelerating business growth with big data and artificial intelligence*. In 2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC) (pp. 441-448). IEEE.

- Grewal, D., Noble, S.M., Roggeveen, A.L. and Nordfalt, J., 2020. *The future of in-store technology*. Journal of the Academy of Marketing Science, 48, pp.96-113.
- Har, L.L., Rashid, U.K., Te Chuan, L., Sen, S.C. and Xia, L.Y., 2022. *Revolution of the retail industry: from perspective of retail 1.0 to 4.0*. Procedia Computer Science, 200, pp.1615-1625.
- Helo, P. and Hao, Y., 2022. *Artificial intelligence in operations management and supply chain management: An exploratory case study*. Production Planning & Control, 33(16), pp.1573-1590.
- Hicham, N., Nassera, H. and Karim, S., 2023. *Strategic framework for leveraging artificial intelligence in future marketing decision-making*. J. Intell Manag. Decis, 2(3), pp.139-150.
- Huang, M.H. and Rust, R.T., 2021. *A strategic framework for artificial intelligence in marketing*. Journal of the Academy of Marketing Science, 49, pp.30-50.
- Islam, M.N., Furuoka, F. and Idris, A., 2020. *Employee championing behavior in the context of organizational change: a proposed framework for the business organizations in Bangladesh*. Journal of Asia Business Studies, 14(5), pp.735-757.
- Jain, P. and Aggarwal, K., 2020. *Transforming marketing with artificial intelligence*. International Research Journal of Engineering and Technology, 7(7), pp.3964-3976.
- Khan, I., 2018. *Culture may eat your AI strategy*
<https://www.linkedin.com/pulse/culture-may-eat-your-ai-strategy-imran-khan/>
 Accessed: 11 November 2023
- legislation.gov.uk, 2023. *Data Protection Act 2018*
<https://www.legislation.gov.uk/ukpga/2018/12/contents/enacted>
 Accessed: 22 November 2023

Li, C.Y., Fang, Y.H. and Chiang, Y.H., 2023. *Can AI chatbots help retain customers? An integrative perspective using affordance theory and service-domain logic*. Technological Forecasting and Social Change, 197, p.122921.

Lockey, S., Gillespie, N., Holm, D. and Someh, I.A., 2021. *A review of trust in artificial intelligence: Challenges, vulnerabilities and future directions*.

Loureiro, S.M.C., Guerreiro, J. and Tussyadiah, I., 2021. *Artificial intelligence in business: State of the art and future research agenda*. Journal of business research, 129, pp.911-926.

Mahmoud, A.B., Tehseen, S. and Fuxman, L., 2020. *The dark side of artificial intelligence in retail innovation*. In *Retail Futures* (pp. 165-180). Emerald Publishing Limited.

microsoft.com, 2018. *Store Replenishment at Morrisons*
<https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE3oAKl>
Accessed: 11 November 2023

Nabi, M.N., Zhiqiang, L. and Akter, M., 2022. *Transformational leadership and radical innovation for sustainability: mediating role of knowledge management capability and moderating role of competitive intensity*. Innovation & Management Review, (ahead-of-print).

Nyumba, T. O., Wilson, K., Derrick, C.J. and Mukherjee, N., 2018. *The use of focus group discussion methodology: Insights from two decades of application in conservation*. Methods in Ecology and evolution, 9(1), pp.20-32.

Oosthuizen, K., Botha, E., Robertson, J. and Montecchi, M., 2021. *Artificial intelligence in retail: The AI-enabled value chain*. Australasian Marketing Journal, 29(3), pp.264-273.

Patel, N. and Trivedi, S., 2020. *Leveraging Predictive Modeling, Machine Learning Personalization, NLP Customer Support, and AI Chatbots to Increase Customer Loyalty*. Empirical Quests for Management Essences, 3(3), pp.1-24.

Pei, X.L., Guo, J.N., Wu, T.J., Zhou, W.X. and Yeh, S.P., 2020. *Does the effect of customer experience on customer satisfaction create a sustainable competitive advantage? A comparative study of different shopping situations*. Sustainability, 12(18), p.7436.

Prentice, C. and Nguyen, M., 2020. *Engaging and retaining customers with AI and employee service*. Journal of Retailing and Consumer Services, 56, p.102186.

Rosário, A. and Raimundo, R., 2021. *Consumer marketing strategy and E-commerce in the last decade: a literature review*. Journal of theoretical and applied electronic commerce research, 16(7), pp.3003-3024.

Sarstedt, M., Bengart, P., Shaltoni, A.M. and Lehmann, S., 2018. *The use of sampling methods in advertising research: A gap between theory and practice*. International Journal of Advertising, 37(4), pp.650-663.

Saunders, M., Lewis, P.H.I.L.I.P. and Thornhill, A.D.R.I.A.N., 2007. *Research methods for Business Students*. 4th edition Pearson Education Limited, England, 6(3), pp.1-268.

Silvestri, B., 2020. *The future of fashion: How the quest for digitization and the use of artificial intelligence and extended reality will reshape the fashion industry after COVID-19*. ZoneModa Journal, 10(2), pp.61-73.

Statista, 2023a. *Retail sales value in Great Britain 2005-2022*
<https://www.statista.com/statistics/287912/retail-total-annual-sales-value-great-britain/>
Accessed: 11 November 2023

Statista, 2023b. *Retail technology use by UK retailers 2019*
<https://www.statista.com/statistics/287912/retail-total-annual-sales-value-great-britain/>
Accessed: 11 November 2023

Statista, 2023c. *Retail trade in the UK - statistics & facts*

<https://www.statista.com/topics/8671/retail-trade-in-the-uk/#topicOverview>

Accessed: 11 November 2023

Statista, 2023d. *Global AI in retail market size 2020-2028*

<https://www.statista.com/statistics/1256646/ai-in-retail-market-size/>

Accessed: 11 November 2023

Tao, F., Akhtar, M.S. and Jiayuan, Z., 2021. *The future of artificial intelligence in cybersecurity: A comprehensive survey*. EAI Endorsed Transactions on Creative Technologies, 8(28), pp.e3-e3.

Theodoridis, P.K. and Gkikas, D.C., 2019. *How artificial intelligence affects digital marketing*. In Strategic Innovative Marketing and Tourism: 7th ICSIMAT, Athenian Riviera, Greece, 2018 (pp. 1319-1327). Springer International Publishing.

Verganti, R., Vendraminelli, L. and Iansiti, M., 2020. *Innovation and design in the age of artificial intelligence*. Journal of Product Innovation Management, 37(3), pp.212-227.

Waddell, D., Creed, A., Cummings, T.G. and Worley, C.G., 2019. *Organisational change: Development and transformation*. Cengage AU.

Williams, M. and Moser, T., 2019. *The art of coding and thematic exploration in qualitative research*. International Management Review, 15(1), pp.45-55.

Terms of Glossary

AI – Artificial Intelligence

AR - Augmented reality is the real-time use of information in the form of text, graphics, audio and other virtual enhancements integrated with real-world objects

chatboot - At the most basic level, a chatbot is a computer program that simulates and processes human conversation (either written or spoken), allowing humans to interact with digital devices as if they were communicating with a real person

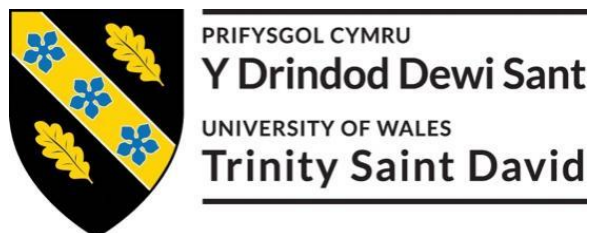
digital tools - Digital tools (DT) can be defined as programs, websites, applications, and other internet and computerized resources that facilitate, enhance and execute digital processes and overall digitization efforts

resolution procedure - method of resolving a conflict between parties

retail industry - The retail industry consists of all companies that sell goods and services to consumers. There are many different retail sales and store types worldwide, including grocery, convenience, discounts, independents, department stores, DIY(do-it-yourself), electrical and speciality

Appendix

Participant Information Sheet



University of Wales Trinity Saint David (London Campus)
Winchester House
11 Cranmer Road
London – SW9 6EJ
Tel: +442075667600
Email: info.london@uwtsd.ac.uk
londonstudentservice@uwtsd.ac.uk

Rhif Adnabod Cyfranogwr:

Participant Identification Number:

M1

FFURFLEN GANIATÂD CYFRANOGIAD

SAMPLE PARTICIPANT INFORMATION SHEET

Project Title: The Impact of artificial intelligence in enhancing customer experience within the retail industry

Dear Sir/Madam,

My name is George Tivga, and I am a student in the School of Business, Finance and Management (London Campus), Faculty of Business and Management in University of Wales Trinity Saint David, United Kingdom. At present, I am conducting research on the impact of artificial intelligence in enhancing customer experience in the UK.

I would like to invite you to participate in my research project by answering the attached short questions developed by the researchers. Those questions will assess your opinions, experiences, knowledge, suggestions and views. Through your participation in the interviews, I hope to ascertain my research purpose to get the best opinion from you. I believe your opinion will be extremely helpful to me to carry out this research.

All questions will be kept strictly confidential to the researchers involved and at **NO** time will individual questions will be released to the general public. This gives you a chance to

express your views on your programme a confidential and anonymous forum and still be able to make a difference. Your participation in this study is completely voluntary so you can withdraw from the questionnaire at any stage.

Please note, questionnaire should take no more than 30 minutes to complete but however, there is no time constraint. There are also no right or wrong answers. Attached to this letter along with the questionnaire there is a consent form where you will better understand researchers intention. As this is a new project, your feedback is also important to me and I would be much obliged if you could also complete the feedback sheet along with the questionnaire. I understand that your time is at a premium, but your opinions are very valuable to me.

After careful and precise analysis of the data obtained from this questionnaire/interview, I will be happy to provide you with a copy of the findings at your request. The results of this questionnaire/interview will hopefully enhance my understanding of current level of knowledge and future findings. The results of the research will be feedback to Director of Studies, Supervisor, University and British Library.

I thank you in advance for your time and participation. If any questions do arise, feel free to contact me at your convenience.

George Tivga 2024060

University of Wales Trinity Saint David (London Campus)

Winchester House

11 Cranmer Road

London – SW9 6EJ

Tel: +442075667600

Email: info.london@tsd.ac.uk

londonstudentservice@tsd.ac.uk

Participation Consent Form



PRIFYSGOL CYMRU
Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

University of Wales Trinity Saint David (London Campus)
Winchester House
11 Cranmer Road
London – SW9 6EJ
Tel: +442075667600
Email: info.london@uwtsd.ac.uk
londonstudentservice@uwtsd.ac.uk

Rhif Adnabod Cyfranogwr:

Participant Identification Number:

M1

FFURFLEN GANIATÂD CYFRANOGIAD

PARTICIPANT CONSENT FORM

Project Title: The Impact of artificial intelligence in enhancing customer experience within the retail industry

Enw'r Ymchwilydd / Name of Researcher: George Tivga 2024060

1	I confirm that I have read and understand the information sheet dated 18/12/2023 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	YES
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	YES
3	I understand that any information given by me may be used in future reports, articles or presentations by the research team.	YES
4	I understand that my name will not appear in any reports, articles or presentations.	YES
5	I agree to take part in the above study.	YES

Name of Participant	<i>Cristina Lupu</i>	Signature <i>Cristina Lupu</i>
Researcher	<i>George Tivga</i> <i>2024060</i>	Signature <i>George Tivga</i>

You may decline to participate in this study. You may end your participation in this study at any time. If you decide to remain anonymous, maintaining your anonymity will be a priority and every practical precaution will be taken to disguise your identity. If you prefer anonymity, there will not be any identifying information on audiotapes or transcripts of this or any interview. No one will hear any audiotapes or see any transcripts without your prior consent. All materials generated from this or any interview will remain confidential.

When completed please return in the envelope provided. One copy will be given to you and the original to be kept on the file of the research team at:

George Tivga 2024060

University of Wales Trinity Saint David (London Campus)

Winchester House

11 Cranmer Road

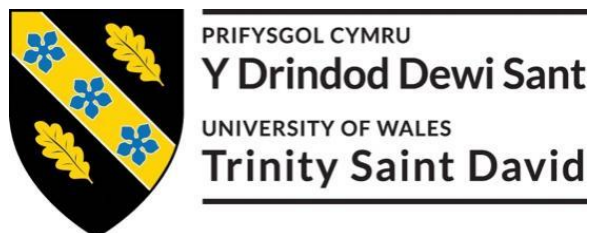
London – SW9 6EJ

Tel: +442075667600

Email: info.london@uwtsd.ac.uk

londonstudentservice@uwtsd.ac.uk

Participant Information Sheet



University of Wales Trinity Saint David (London Campus)
Winchester House
11 Cranmer Road
London – SW9 6EJ
Tel: +442075667600
Email: info.london@uwtsd.ac.uk
londonstudentservice@uwtsd.ac.uk

Rhif Adnabod Cyfranogwr:

Participant Identification Number:

M2

FFURFLEN GANIATÂD CYFRANOGIAD

SAMPLE PARTICIPANT INFORMATION SHEET

Project Title: The Impact of artificial intelligence in enhancing customer experience within the retail industry

Dear Sir/Madam,

My name is George Tivga, and I am a student in the School of Business, Finance and Management (London Campus), Faculty of Business and Management in University of Wales Trinity Saint David, United Kingdom. At present, I am conducting research on the impact of artificial intelligence in enhancing customer experience in the UK.

I would like to invite you to participate in my research project by answering the attached short questions developed by the researchers. Those questions will assess your opinions, experiences, knowledge, suggestions and views. Through your participation in the interviews, I hope to ascertain my research purpose to get the best opinion from you. I believe your opinion will be extremely helpful to me to carry out this research.

All questions will be kept strictly confidential to the researchers involved and at **NO** time will individual questions will be released to the general public. This gives you a chance to

express your views on your programme a confidential and anonymous forum and still be able to make a difference. Your participation in this study is completely voluntary so you can withdraw from the questionnaire at any stage.

Please note, questionnaire should take no more than 30 minutes to complete but however, there is no time constraint. There are also no right or wrong answers. Attached to this letter along with the questionnaire there is a consent form where you will better understand researchers intention. As this is a new project, your feedback is also important to me and I would be much obliged if you could also complete the feedback sheet along with the questionnaire. I understand that your time is at a premium, but your opinions are very valuable to me.

After careful and precise analysis of the data obtained from this questionnaire/interview, I will be happy to provide you with a copy of the findings at your request. The results of this questionnaire/interview will hopefully enhance my understanding of current level of knowledge and future findings. The results of the research will be feedback to Director of Studies, Supervisor, University and British Library.

I thank you in advance for your time and participation. If any questions do arise, feel free to contact me at your convenience.

George Tivga 2024060

University of Wales Trinity Saint David (London Campus)

Winchester House

11 Cranmer Road

London – SW9 6EJ

Tel: +442075667600

Email: info.london@tsd.ac.uk

londonstudentservice@tsd.ac.uk

Participation Consent Form



PRIFYSGOL CYMRU
Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

University of Wales Trinity Saint David (London Campus)
Winchester House
11 Cranmer Road
London – SW9 6EJ
Tel: +442075667600
Email: info.london@uwtsd.ac.uk
londonstudentservice@uwtsd.ac.uk

Rhif Adnabod Cyfranogwr:

Participant Identification Number:

M2

FFURFLEN GANIATÂD CYFRANOGIAD

PARTICIPANT CONSENT FORM

Project Title: The Impact of artificial intelligence in enhancing customer experience within the retail industry

Enw'r Ymchwilydd / Name of Researcher: George Tivga 2024060

1	I confirm that I have read and understand the information sheet dated 18/12/2023 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	YES
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	YES
3	I understand that any information given by me may be used in future reports, articles or presentations by the research team.	YES
4	I understand that my name will not appear in any reports, articles or presentations.	YES
5	I agree to take part in the above study.	YES

Name of Participant	<i>Ana Finta</i>	Signature <i>Ana Finta</i>
Researcher	<i>George Tivga</i> <i>2024060</i>	Signature <i>George Tivga</i>

You may decline to participate in this study. You may end your participation in this study at any time. If you decide to remain anonymous, maintaining your anonymity will be a priority and every practical precaution will be taken to disguise your identity. If you prefer anonymity, there will not be any identifying information on audiotapes or transcripts of this or any interview. No one will hear any audiotapes or see any transcripts without your prior consent. All materials generated from this or any interview will remain confidential.

When completed please return in the envelope provided. One copy will be given to you and the original to be kept on the file of the research team at:

George Tivga 2024060

University of Wales Trinity Saint David (London Campus)

Winchester House

11 Cranmer Road

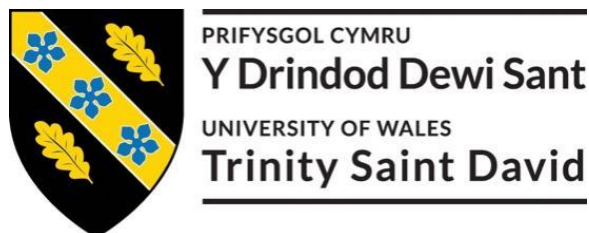
London – SW9 6EJ

Tel: +442075667600

Email: info.london@uwtsd.ac.uk

londonstudentservice@uwtsd.ac.uk

Participant Information Sheet



University of Wales Trinity Saint David (London Campus)
Winchester House
11 Cranmer Road
London – SW9 6EJ
Tel: +442075667600
Email: info.london@uwtsd.ac.uk
londonstudentservice@uwtsd.ac.uk

Rhif Adnabod Cyfranogwr:

Participant Identification Number:

M3

FFURFLEN GANIATÂD CYFRANOGIAD

SAMPLE PARTICIPANT INFORMATION SHEET

Project Title: The Impact of artificial intelligence in enhancing customer experience within the retail industry

Dear Sir/Madam,

My name is George Tivga, and I am a student in the School of Business, Finance and Management (London Campus), Faculty of Business and Management in University of Wales Trinity Saint David, United Kingdom. At present, I am conducting research on the impact of artificial intelligence in enhancing customer experience in the UK.

I would like to invite you to participate in my research project by answering the attached short questions developed by the researchers. Those questions will assess your opinions, experiences, knowledge, suggestions and views. Through your participation in the interviews, I hope to ascertain my research purpose to get the best opinion from you. I believe your opinion will be extremely helpful to me to carry out this research.

All questions will be kept strictly confidential to the researchers involved and at **NO** time will individual questions will be released to the general public. This gives you a chance to

express your views on your programme a confidential and anonymous forum and still be able to make a difference. Your participation in this study is completely voluntary so you can withdraw from the questionnaire at any stage.

Please note, questionnaire should take no more than 30 minutes to complete but however, there is no time constraint. There are also no right or wrong answers. Attached to this letter along with the questionnaire there is a consent form where you will better understand researchers intention. As this is a new project, your feedback is also important to me and I would be much obliged if you could also complete the feedback sheet along with the questionnaire. I understand that your time is at a premium, but your opinions are very valuable to me.

After careful and precise analysis of the data obtained from this questionnaire/interview, I will be happy to provide you with a copy of the findings at your request. The results of this questionnaire/interview will hopefully enhance my understanding of current level of knowledge and future findings. The results of the research will be feedback to Director of Studies, Supervisor, University and British Library.

I thank you in advance for your time and participation. If any questions do arise, feel free to contact me at your convenience.

George Tivga 2024060

University of Wales Trinity Saint David (London Campus)

Winchester House

11 Cranmer Road

London – SW9 6EJ

Tel: +442075667600

Email: info.london@tsd.ac.uk

londonstudentservice@tsd.ac.uk

Participation Consent Form



PRIFYSGOL CYMRU
Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

University of Wales Trinity Saint David (London Campus)
Winchester House
11 Cranmer Road
London – SW9 6EJ
Tel: +442075667600
Email: info.london@uwtsd.ac.uk
londonstudentservice@uwtsd.ac.uk

Rhif Adnabod Cyfranogwr:

Participant Identification Number:

M3

FFURFLEN GANIATÂD CYFRANOGIAD

PARTICIPANT CONSENT FORM

Project Title: The Impact of artificial intelligence in enhancing customer experience within the retail industry

Enw'r Ymchwilydd / Name of Researcher: George Tivga 2024060

1	I confirm that I have read and understand the information sheet dated 18/12/2023 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	YES
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	YES
3	I understand that any information given by me may be used in future reports, articles or presentations by the research team.	YES
4	I understand that my name will not appear in any reports, articles or presentations.	YES
5	I agree to take part in the above study.	YES

Name of Participant	<i>Ionela Dan</i>	Signature <i>Ionela Dan</i>
Researcher	<i>George Tivga</i> <i>2024060</i>	Signature <i>George Tivga</i>

You may decline to participate in this study. You may end your participation in this study at any time. If you decide to remain anonymous, maintaining your anonymity will be a priority and every practical precaution will be taken to disguise your identity. If you prefer anonymity, there will not be any identifying information on audiotapes or transcripts of this or any interview. No one will hear any audiotapes or see any transcripts without your prior consent. All materials generated from this or any interview will remain confidential.

When completed please return in the envelope provided. One copy will be given to you and the original to be kept on the file of the research team at:

George Tivga 2024060

University of Wales Trinity Saint David (London Campus)

Winchester House

11 Cranmer Road

London – SW9 6EJ

Tel: +442075667600

Email: info.london@uwtsd.ac.uk

londonstudentservice@uwtsd.ac.uk

The Artificial Intelligence Impact on Customer Experience Survey

Section 1: Terms & Conditions and Demographics

1. Have you read and agree to the consent form provided and do you live in the UK? If you do not meet these conditions, please close this webpage.

- ☐ Yes
- ☐ No

2. How often do you shop online in a month?

- ☐ Rarely
- ☐ Occasionally
- ☐ Frequently
- ☐ Very frequently

Section 2: Artificial Intelligence Knowledge

3. How would you rate your understanding of artificial intelligence in the context of the retail industry?

- ☐ Very knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Neutral
- ☐ Not very knowledgeable
- ☐ Not knowledgeable at all

4. Have you actively sought information about how artificial intelligence is used in the retail industry?

- ☐ Frequently
- ☐ Occasionally

- ☐ Rarely
- ☐ Never

5. Please indicate which, if any, of the following AI applications in the retail industry are you familiar with:

- ☐ Chabot's for customer support
- ☐ Personalized product recommendations
- ☐ Virtual assistants for shopping assistance
- ☐ AI-powered pricing optimization
- ☐ Facial recognition for personalized in-store experiences
- ☐ Other (please specify)

Section 3: AI in Retail Experience

6. Have you personally experienced AI-driven features while shopping online or in physical stores?

- ☐ Yes
- ☐ No
- ☐ Not sure

7. How satisfied are you with the AI-driven features you have experienced?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Dissatisfied
- ☐ Very dissatisfied

Section 4: Impact on Customer Experience

8. Do you believe that AI enhances your overall shopping experience in the retail industry?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

9. *What specific AI features do you believe have positively impacted your retail experience?*

- ☐ Chatbot's for customer support
- ☐ Personalized product recommendations
- ☐ Virtual assistants for shopping assistance
- ☐ AI-powered pricing optimization
- ☐ Facial recognition for personalized in-store experiences
- ☐ Other (please specify)

Section 5: Future Expectations

10. *How likely are you to continue shopping with a retailer that employs AI to enhance customer experience?*

- ☐ Very likely
- ☐ Likely
- ☐ Neutral
- ☐ Unlikely
- ☐ Very unlikely

11. *Does better customer experience influence your retail purchase decision?*

- ☐ Yes
- ☐ No
- ☐ Maybe

12. In your opinion, what aspects of AI improve consumer experience more during the purchase of retail products?

- ☐ Efficiency in customer service
- ☐ Personalised offers and rewards
- ☐ Suggestions of preferred products
- ☐ All of the above

13. AI-based retail offers and rewards are often irrelevant and do not make sense with the exact needs.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly agree

14. Are you satisfied with the use of AI chatbots while communicating with retail businesses regarding your purchases or queries?

- ☐ Yes
- ☐ No
- ☐ Maybe

Source and responses:

<https://forms.office.com/Pages/AnalysisPage.aspx?AnalyzerToken=L4QXPtE8ONsXrWARPLW1JA46lTngPwDG&id=-REPTm4EBUWcuNshUjEeIcfc8iNvfDFNob7T9EDKrHtUQk1JUzZBR0dFVUkzNlRQVUhQNTVKVThWQy4u>

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	George Tivga (2024060)			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☒	Taught Postgraduate Student	☐	Postgraduate Research Student
3	Institute/Academic Discipline/Centre:	University of Wales Trinity Saint David			
4	Campus:	London			
5	E-mail address:	2024060@student.uwtsd.ac.uk			
6	Contact Telephone Number:	07552772262			
For students:					
7	Student Number:	2024060			
8	Programme of Study:	Faculty of Business and Management			
9	Director of Studies/Supervisor:	Md Sadeque Shaikh			

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
					Date
2	If Yes, please indicate source of approval (and date where known): Approval in principle must be obtained from the relevant source prior to seeking ethical approval	Research Degrees Committee	☒	30.08.2023	
		Institute Research Committee	☒	30.08.2023	
		Other (write in)	☐		

SECTION C: Internal and External Ethical Guidance Materials

	Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.
1	UWTSD Research Ethics & Integrity Code of Practice ☒
2	UWTSD Research Data Management Policy ☒
3	[List any other relevant documents here] ☒

SECTION D: External Collaborative Research Activity

If there are external collaborators, then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators, then leave this section blank and continue to section E.

1	Institution	
2	Contact person name	
3	Contact person e-mail address	
4	Is your research externally funded?	YES ☐ NO ☐
5	Are you in receipt of a KESS scholarship?	YES ☐ NO ☐
6	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary YES ☐ NO ☐
7		Employed YES ☐ NO ☐
8	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)?	If YES then the permission question below does not need to be answered. YES ☐ NO ☐
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue. YES ☐ NO ☐

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES ☐ NO ☐

	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).
--	---

SECTION E: Details of Research Activity

1	Indicative title:	The Impact of artificial intelligence in enhancing customer experience within the retail industry		
2	Proposed start date:	1.09.2023	Proposed end date:	02.01.2024
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how Existing Research has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>			
3	Purpose of Research Activity The main issue in the corporate world is to enhance the customer experience and obtain loyal customers. It is an issue for companies in the retail industry as their performance is based on consumer acknowledgement. According to the research, it has been identified that the about 64.2% of the bosses in the retail industry have stated that performance is better with the assistance of AI implementation. Therefore, it is justified that the research commencement is necessary to unfold the needs of the retail organisations within the UK market.			
4	Research Question • What is the main concept of artificial intelligence and customer experience in the retail industry?" • "What is the impact faced by companies in the retail sector for developing customer experience with the help of artificial intelligence?" • "What are the challenges that are seen in the retail industry for implementing artificial intelligence and enhancing customer experience?" • "What are the strategies that can be recommended to the retail industry for utilizing customer experience and developing positive customer experience?"			
5	Aims of Research Activity The study aims to explore "The Impact of artificial intelligence in enhancing customer experience within the retail industry".			
6	Objectives of Research Activity • "To understand the concept of artificial intelligence and customer experience within the retail sector" • "To investigate the impact of artificial in developing better customer experience in the retail industry" • "To evaluate the challenges faced by the companies in the retail industry for implementing artificial intelligence for enhancing customer experience"			

	“To recommend strategies that will mitigate the issues faced in implementing artificial intelligence and improve customer experience in retail organisations”
	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here but should instead describe how you intend to collect the data necessary for you to complete your project.
7	The study use the quantitative research methodology to describe the Impact of artificial intelligence in enhancing customer experience within the retail industry in UK. Positivism and Interpretivism are considered two key philosophical paradigms of the research process. The concept of positivism discusses the focus on generalisations through the philosophical stance of researchers based on the observable realities of society. The deductive approach of research refers to the development of hypotheses depending on the existing concepts and theories alongside devising research strategies for testing the hypotheses. Adopting this research approach helps to identify the causal relationships between research variables and concepts through the use of quantitative approaches to measurement. Constant comparison is the approach to code and compare information across categories to identify information patterns and refine patterns to acquire new data or information.
	Location of research activity Identify all locations where research activity will take place.
8	The research activity takes place in the United Kingdom.
	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this.
9	There aren't any additional specific ethical issues. I live in United Kingdom where I will conduct the research.

10	Use of documentation not in the public domain: Are any documents NOT publicly available?	NO	☒
		YES	☐
11	If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales. <i>(this box should expand as you type)</i>		

	Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?	YES	NO
12	A prosperous Wales	☒	☐

13	A resilient Wales	☒	☐
14	A healthier Wales	☐	☐
15	A more equal Wales	☒	☐
16	A Wales of cohesive communities	☒	☐
17	A Wales of vibrant culture and thriving Welsh language	☐	☐
18	A globally responsible Wales	☐	☐
19	If YES to any of the above, please give details:		
	The research on the impact of artificial intelligence (AI) in enhancing customer experience within the retail industry in the UK is related to several aims of the Well-being of Future Generations (Wales) Act 2015. The act aims to improve the social, economic, environmental, and cultural well-being of Wales. The use of AI in the retail industry aligns with the act's goals by contributing to economic prosperity, innovation, and sustainable development. AI technologies can enhance customer experiences, leading to increased satisfaction and potentially contributing to the economic well-being of the retail sector. Additionally, the use of AI networks in retail can revolutionize customer experiences, contributing to the cultural and social well-being of the population by enhancing connectivity and engagement. Therefore, the research aligns with the aims of the Well-being of Future Generations (Wales) Act 2015 by addressing economic, social, and cultural well-being through the application of AI in the retail industry.		

SECTION F: Scope of Research Activity

	Will the research activity include:	YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☒	☐
3	Use of focus groups?	☐	☒
4	Use of participant diaries?	☐	☒
5	Use of video or audio recording?	☒	☐
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☒	☐
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒

17	Other primary data collection methods. Please indicate the type of data collection method(s) below.	☐	☒
	Details of any other primary data collection method: (this box should expand as you type)		

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

Who are the intended participants:		YES	NO
1	Students or staff at the University?	☐	☒
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☐	☒
5	Prisoners?	☐	☒
6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.	☐	☐
	Details of any other participant groups: (this box should expand as you type)		

Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?		
10	How many participants are expected?	100 - 110
11	Who will the participants be?	Individuals in management roles and retail industry customers.
12	How will you identify the participants?	Random data sampling is used to select participants who represent a large number of customers and management employees from retail industry.

	Information for participants:	YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☒	☐	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
17	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
22	If NO to any of above questions, please give an explanation			
	<i>(this box should expand as you type)</i>			

	Information for participants:	YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			
	<i>(this box should expand as you type)</i>			

SECTION H: Anticipated Risks

	Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.		
1	Full risk assessment completed and appended?	Yes ☐ No ☐	☐ ☐
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information		
	Risk to participants: Sensitive organisational data.	<i>Secure confidentiality and use secure communication channels when interacting with participants or storing/transferring sensitive data.</i>	

3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities		
	<i>(this box should expand as you type)</i>		
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest		
	Risk to the investigator: Risk of accusation of harm/impropriety, conflict of interest.	<i>How you will mitigate the risk to the investigator:</i> Maintain ethical standards and transparency throughout the research process. Obtain informed consent from all participants involved in the research. Clearly explain the purpose of the study, potential risks, and benefits, how their data will be used, and their rights as participants. Implement measures to protect the well-being and privacy of research participants.	
5	University/institutional risks For example: adverse publicity, financial loss, data protection		
	Risk to the University: Data protection	<i>How you will mitigate the risk to the University:</i> Adhere to the university's data protection policies, guidelines, and procedures.	
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems		
	Risk to the environment: Waste	<i>How you will mitigate the risk to environment:</i> Minimise waste generation by using digital documentation and data storage instead of paper whenever feasible.	

Disclosure and Barring Service				
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
7	Does your research require you to hold a current DBS Certificate?	☐	☐	☒
8	If YES, please give the certificate number. If the certificate number is not available, please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.			

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when?
	Share the outcomes of the research with participants, allowing them to understand how their participation contributed to the study. The feedback will be provided after the research findings have been analysed and validated.

2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation.
	Prepare detailed information sheets outlining the purpose, procedures, potential risks, and benefits in clear and understandable language. The information on data handling, confidentiality measures, will be provided. Written consent will be obtained from participants before data collection begins. Provide consent forms that clearly outline the key points covered in the informational materials.
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.
	Data aggregation or grouping will be used wherever possible to present findings without singling out individuals. Adhere to ethical guidelines and legal requirements concerning confidentiality and anonymity as per prevailing data protection legislation. Clearly communicate to participants the measures taken to ensure their information remains confidential and anonymised.

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
1	"Personal data" means any information relating to an identified or identifiable natural person ('data subject'). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.	☒	☐
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	The use of audio recording for the interviews is in line with the research methodology. The research activity involve the use of interviews as a data collection method. The use of audio recording is a common and valuable practice in qualitative research, as it allows for accurate and comprehensive data capture, ensuring that the content of the interviews is fully and accurately documented.		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	"Special category data" means sensitive personal data consisting of information as to the data subjects' – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes),	☐	☒
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	(this box should expand as you type)		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☐	☒
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☒	☐
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☐	☒
10	"Cloud" storage or websites?	☒	☐
11	Other – specify: smartphone for audio recording	☒	☐
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation:		
	<i>Access to stored data is restricted to authorised personnel involved directly in the research.</i>		

Data Protection			
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☐	☒
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
18	Publication of data that might allow identification of individuals?	☒	☐
19	Use of data management system?	☐	☒
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate):		
	Participants of the surveys have been provided with consent forms using Microsoft Forms and all the participants have given consent by selecting "Yes" at the first question. They are anonymous individuals because no data about them are stored. Participants of the interview have been provided with consent forms using e-mail and all of them have given consent by replying to the e-mail.		
22	List all who will have access to the data generated by the research activity:		
	Access to stored data is restricted to authorized personnel involved directly in the research.		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	Researcher: George Tivga (2024060)		
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		

	The data from the survey is stored on the Microsoft Forms website secured with password. The data from the interviews is transcript on the research paper. The data will be kept until after the research will be analysed and validated.		
25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. <i>(Most relevant to academic staff)</i>		
26	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☐
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/		
1	Signature of applicant:	<i>George Tivga</i>	Date: 30.08.2023

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Md Sadeque Imam Shaikh	Date: 30.08.2023
3	Signature:		

For STAFF Submissions:

4	Academic Director/ Assistant Dean:		Date:
5	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☒	I have attached a copy of final/interim approval from external organisation (where appropriate)
☒	I have attached a full risk assessment (where appropriate) ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
☒	I understand that it is my responsibility to ensure that the above-named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS AND STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.
 You will be informed of the outcome of your claim by email; therefore, it is important that you check your University and personal email accounts regularly.



STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

This form is available electronically from the Academic Office web pages:
<https://www.uwtsd.ac.uk/academic-office/appendices-and-forms/>