



Programme: Master of Business Administration

Module: Dissertation LCMB7035

**“THE ROLE OF AI-DRIVEN CUSTOMER INSIGHTS IN
ENHANCING COMPETITIVE STRATEGY: A CASE STUDY OF
AMAZON IN THE UNITED KINGDOM (UK)”**

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Declaration

I declare this dissertation is my own original work, and that it has not been submitted anywhere for any academic award before. Any sources of information, data and ideas used from published and unpublished resources have been properly referenced and acknowledged throughout the study. I declare that I have fulfilled the ethical standards and requirements of the academic institution in conducting this research.

I also affirm that no part of this dissertation has been copied from anyone without adequate acknowledgement and that all interpretations, discussions and conclusions that have been provided are my own and are based on my understanding.

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Acknowledgement

I would like to thank all those who helped make this dissertation a successful one. My first and foremost gratitude goes to the guidance and valuable feedback I received from my supervisor, throughout the process of my research. They were invaluable in both the development and completion of this study, and have provided very helpful suggestions.

I would also like to thank the faculty members and all the academic staff who helped in the knowledge and teaching which helped me in conducting this research. Their encouragement and support along the way in my educational life have been very valuable to me.

The authors and researchers whose publications, journal articles and reports gave insights and information for this study are gratefully acknowledged, as are those of industry practitioners. They have made important contributions to the artificial intelligence and customer analytics arena, aiding in the development of this research. I would like to express my appreciation to my family and friends for their patience, encouragement and emotional support in completing this dissertation. They were always encouraging me and kept me going on my research path.

Abstract

Artificial Intelligence (AI) has revolutionised modern eCommerce, allowing businesses to gather, process and leverage customer information to guide strategic decisions and gain an edge. This study examines the importance of customer insights using AI in the context of competitive strategy at Amazon UK with a critical analysis. The study investigates the application of AI technologies at Amazon to enhance customer personalisation, predictive analysis, efficiency and customer engagement in the UK eCommerce landscape. The study also explores the ethical, technological, operational and data privacy challenges that arise with AI-driven customer insight systems and offers strategic answers to enhance the effectiveness and sustainability of these systems.

This research employed a qualitative secondary research approach, drawing on various sources such as peer-reviewed journal articles, industry reports, company publications, market statistics and academic literature on the subjects of artificial intelligence, customer analytics, and e-commerce competitiveness. The findings show that Amazon has a huge presence in terms of AI technologies – machine learning, recommendation systems, predictive analytics, natural language processing, and automation technologies that they employ to gather and analyse customer behaviour data. These AI-powered solutions enhance customer engagement, streamline operations, optimise marketing efforts, manage logistics, and ensure strategic agility.

The findings also highlight the significant role that AI-powered customer insights play in Amazon's competitive edge, such as its ability to boost customer satisfaction, deliver personalised experiences, and optimise operations. The study, however, found significant challenges with customer privacy, algorithm bias, transparency, cybersecurity, and too much reliance on technology. The study also emphasises the importance of ethical governance, transparency, fairness, and responsible data management to trust and sustainability while leveraging AI technologies to enhance strategic competitiveness.

The research emphasises how important AI-generated customer insights are in today's e-commerce landscape. The potential of Amazon to use AI in various parts of their business gives them an edge in the UK market. But it's crucial to strike a balance between technology innovation and ethical responsibility, cybersecurity measures, and human-focused customer management practices to ensure long-term success.

Keywords:

Artificial Intelligence, Customer Insights, Amazon UK, E-commerce, Competitive Strategy, Machine Learning, Predictive Analytics, Customer Personalisation.

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Chapter 1: Introduction

1.1 Background of the Research

The early theoretical research in computational intelligence formed the basis for the development of AI in business decision-making. It recognises multiple stages of the development of AI from rule-based systems to the current deep learning applications. Over the years, there have been several technological advancements that have made AI's capabilities more aligned with the demands of businesses (Ghosh, 2025). Artificial Intelligence (AI): These are computer systems and algorithms that can mimic human thinking and perform tasks that are normally done by humans, such as learning, reasoning, decision-making, prediction and problem-solving.

AI technologies are those that rely on machine learning, natural language processing (NLP), predictive analytics, robotics, and deep learning systems, which enable organisations to process significant chunks of data at a rate much higher than traditional systems (Mah et al. 2022). AI is no longer just about automation; it has become a strategic asset for businesses, aiding in organisational innovation, customer engagement, and data-driven decision-making (Ghosh, 2025).

AI adoption has been accelerated by the significant growth in digital technologies, cloud computing and big data analytics, with 88 percent of respondents reporting they use at least one business function with AI, up from 78 percent a year ago (Mckinsey, 2025). AI is expected to have a massive impact on the global economy and is forecast to contribute about US\$15.7 trillion to global GDP in 2030 (Huawei, 2025). These are just some examples of the benefits that AI brings to businesses, showcasing the tool's increasing importance in today's digitally transformed economies.

AI is especially relevant in the e-commerce sector, where the vast amount of data generated from customer interactions is continually collected. When it comes to digital data, every product search, click, review, purchase and customer inquiry adds to the digital data. AI systems are used to gain insights into customer behaviour, forecast future customer actions, and enable strategic decision-making (Vudugula et al. 2023). AI technologies can handle both structured and unstructured data in real-time, which makes them more efficient at processing large amounts of data in real-time, unlike traditional analytical systems that cannot process unstructured data simultaneously in the same timeframe (Sunkar, 2025).

Therefore, customer insights management powered by AI has become a strategic tool that is vital for any e-commerce organisation. Customer insights management is the process of gathering, understanding and using customer information to enhance business decisions and customer experiences (Omowole et al. 2024). AI technologies enhance this process by predictive modelling, recommendation systems, customer segmentation, and sentiment analysis. AI can, for instance, anticipate customer purchases based on their past interactions with the machine, and NLP can analyse customer reviews and feedback to gauge their satisfaction.

But, while there are benefits to implementing AI, there are certain concerns to address around AI-powered customer management systems. Data privacy and consumer surveillance is one of the primary concerns. Personal customer data, such as browsing history, purchase behaviour, geographical location and behavioural tracking are crucial for the success of AI systems (Farrukh et al. 2024).

Another critique has to do with the algorithmic bias and transparency when dealing with AI systems. When trained with biased or incomplete data, machine learning models can inadvertently end up perpetuating discriminatory practices. This can have an impact on the recommendation systems, pricing policies, and customer targeting. Bracci (2023) states that if organisations are more concerned about efficiency and profitability than being ethically accountable, algorithmic systems can create socially unequal outcomes. As AI becomes more strategic, however, ethical governance, transparency and customer trust are issues that must be addressed to ensure sustainable implementation.

The UK is one of the most developed digital economies in the world, and an interesting place to explore how AI-powered customer insights could be applied in an e-commerce context. According to Deloitte (2025), UGC gaming platforms will have total payouts nearly reaching US\$1.5 billion to their content creators in 2024. Furthermore, the UK had a high level of internet penetration in 2024, with over 97% of the population being connected, meaning that there is widespread internet use and consumers are connected to the internet (Statista, 2025).

The United Kingdom is one of the developed e-commerce markets in the world. The UK ecommerce market is set to grow from the US\$312.48 billion it is projected to be in 2024 to reach around US\$431.12 billion by the end of 2029 (Yahoo, 2026). Furthermore, online shopping is used by approximately 92 percent of internet shoppers in the UK, indicating the high culture of digital shopping among consumers (Statista, 2026). This digital dependency has heightened the

role of technologies that enable organisations to learn consumer behaviour and offer an individual shopping experience.

Amazon is one of the businesses that has become dominant in the UK e-commerce economy due to its widespread application of digital technologies and analytics on an AI level. Amazon has been putting in a significant amount of investment in artificial intelligence to analyze customer data and enhance customer experience. The United States was the largest market of Amazon in 2025 in the UK alone, with 489.7 billion U.S. dollars in net sales. The country of Germany was two behind the US, joined by 45.9 billion U.S. dollars, ranking second, followed by the UK with 43.2 billion U.S. dollars (Statista, 2024). In addition, the UK platform of Amazon has over 320 million monthly visits to the site, which shows the high rate of consumer engagement in the platform.

Sellers at Amazon can tweak these workspaces and refine what they see, whether analyzing inventory levels, exploring customer traffic patterns, testing their ideas about when best to sell, or the AI-canvas delves deeper into the opportunities to grow- the AI-canvas reacts and delivers just what they require to make confident, data-driven choices (Aboutamazon, 2026). This is useful in the analysis of consumer behaviour and the creation of individual recommendations. The system of these recommendations examines customer browsing history, previous purchases, product ratings and search queries and recommends the customer products of interest.

On top of recommendation systems, Amazon relies on predictive analytics to predict consumer demand, dynamic pricing algorithms to change the prices of its products according to market factors, and AI-based logistical systems to streamline the efficiency of its delivery (Forbes, 2026).

Convenience, product discovery and personalised experiences are benefits of these AI technologies to the customer. Consumers are growing more demanding in terms of customized recommendations and quicker service on online platforms. Deloitte discovered that 8 out of ten consumers, when asked about their brand, stated they like brands that provide personalized experiences and doubled the amount they spend on personalized brands (Deloitte, 2026). It emphasizes the increased significance of AI-based customisation in online shopping.

The rise in digital shopping habits has further boosted the competitive landscape in the UK e-commerce sector. The surge in digital shopping habits has further heightened competition

among eCommerce organisations in the UK. Hence, companies are more and more investing in AI technologies to improve customer experience, boost operational efficiencies, and boost strategic competitiveness. Amazon UK is one of the most notable instances of the AI revolution in eCommerce happening in this context.

Why Amazon UK Was Selected as the Case Study

Amazon UK has been identified as the case organisation due to their being one of the most technologically advanced eCommerce companies within one of the world's biggest digital retail markets. The company has been investing heavily on the artificial intelligence, machine learning, predictive analytics and automation technologies to enhance the customer experience and operational efficiency. There's also a new team called agentic AI within Amazon Robotics working on creating an AI framework to help the company take the next step in its evolution to robots that can hear, understand, reason, and act out of their own volition (Aboutamazon, 2025). Amazon is thus a suitable and relevant organisation in which to look at how AI-driven customer insights can help develop competitive strategy.

The fact that Amazon UK is a market leader among eCommerce sites in the UK is one of the key factors in our choice. Amazon's total revenues from its operations in the UK reached over £29 billion in 2024, making it one of the biggest online retailers in the UK (Aboutamazon, 2025). The turnover of Amazon UK Services Ltd was more than 6.8 billion British pounds in 2023. The United Kingdom based company is operating the distribution centres of the e-commerce giant in the country (Statista, 2025). These interactions generate vast amounts of data, which can be used to run powerful AI-powered customer analysis and predictive modelling systems.

Another interesting facet of Amazon is that the company is continually innovating using AI in various parts of its business. Amazon's fulfilment centres are increasingly adopting robotics and AI-powered automation systems to enhance warehouse efficiency and minimise delivery times, for instance. Further, it applies predictive inventory management systems to accurately predict demand and improve inventory distribution around regional order fulfilment centres. In fact, Amazon's machine learning forecasting systems have helped to make its supply chain much more responsive and to minimise inefficiencies.

Lastly, the study holds significance since customer management is increasingly becoming a fundamental component of modern customers' behaviour and digital experience, driven by AI technology. Organisations have never had so much power to gather, analyse, and manipulate

customer behaviour with predictive technologies. The implications for business, policy, academia and consumers are thus important when dealing with the dominant digital organisations, like Amazon UK.

1.2 Research Aim

This research will examine how Amazon leverages artificial intelligence tools to process customer data and how it has been able to strategise its position in the UK e-commerce market.

1.3 Research Objectives

- To investigate the concept of AI-based customer insights and their strategic applicability in Amazon in the United Kingdom.
- To determine how Amazon uses artificial intelligence to collect, analyse, and utilise customer data to solidify its competitive strategy.
- To identify the key issues that Amazon faces in the use of AI-based customer insights, which are ethical, data privacy, technological, and operational issues.
- To propose strategic solutions to address the challenges detected and make AI-assisted customer insights more efficient in preserving the competitive advantage.

1.4 Research Questions

- What is the concept of AI-based customer insights and their strategic applicability in Amazon in the United Kingdom?
- How Amazon uses artificial intelligence to collect, analyze, and utilize customer data to solidify its competitive strategy?
- What are the key issues that Amazon faces in the use of AI-based customer insights, which are ethical, data privacy, technological, and operational issues?
- What are the strategic solutions to address the challenges detected and make AI-assisted customer insights more efficient in preserving the competitive advantage?

1.5 Research Rationale

The justification of the research is connected to the fact that the UK e-commerce market is growing at a very fast rate, and the use of AI-based technologies to study customer behaviour becomes more and more important. In the year 2025, the e-commerce market in the UK is expanding, and almost all adults shop on the internet, and the market size is almost 177 billion Euros. This situation demands that companies have advanced technology in order to compete with others in the market (Landmarkglobal, 2026). Over the last ten years, Amazon has registered impressive sales growth in the United Kingdom that saw net sales reaching about four billion to approximately 43.2 billion U.S. dollars in 2025 (Statista, 2026). It also mentions that

the significance of AI-driven customer insights to strategic advantage and better customer experiences is to be understood.

1.6 Research Significance

The study is relevant to the emerging scholarly debate on the significance of artificial intelligence in strategic management and online business. The research, through the analysis of the application of AI-driven customer insights in the UK operations of the Amazon company, can give us insight into the way in which big e-commerce companies use data analytics to enhance their competitive strategy. The implications could also be useful in practical terms to organisations that strive to gain information on the basic findings to adopt AI technologies to improve customer experience, decision-making processes, and competitive advantage in digital markets.

1.7 Problem Statement

Even though analytics using AI offer useful information about customer behaviour, organisations have difficulties in adopting the technologies successfully in their strategic procedures. The number of e-commerce users in the country is projected to reach approximately 52 million by 2025 - the non-digital buyers will have a minority in the overall population (Statista, 2026). Therefore, the data privacy risks, the information bias of algorithms, the complexity of technologies, and the issue of the millions of consumers of the UK e-commerce industry are topical.

1.8 Dissertation Structure

This dissertation is divided into six chapters. Chapter 1 presents the purpose of the research and its background. Chapter 2 is a review of the relevant literature. Chapter 3 describes the method of the research. Chapter 4 has the data analysis and findings. In chapter 5, the presentation of the discussion of findings is done to set the findings in relation to peer-reviewed article knowledge. Chapter 6 presents conclusions and recommendations.

Chapter 2: Literature Review

2.1 Introduction

The rapid development of artificial intelligence (AI) has greatly changed the way of managing customers, especially in the e-commerce industry. Customer insights based on AI can help companies to process vast amounts of structured and unstructured information and make better decisions and strategic planning. AI has developed from a supportive tool to a strategic asset in contemporary organisations. Its potential is not without its concerns over its implementation, effectiveness, and ethical implications. This chapter critically analyses the current literature on AI in customer management and its role in improving competitiveness, and how AI has been applied in creating actionable customer insights in e-commerce businesses.

2.2 Overview of Artificial Intelligence in Customer Management

In the last few decades, Artificial Intelligence (AI) has made great advances, moving from basic rule-based systems to highly sophisticated technology, with the ability to perform predictive analysis, automation and strategic decision making. The first AI systems of the 1960s and 1950s were mainly computational logic and mathematical problem-solving. In the past, the first AI systems of the 1950s and 1960s, were mainly computational logic and mathematics problem-solving. Businesses, however, didn't make full use of AI because of technological limitations and insufficient computing capacity as well as limited access to data. As digital technology, cloud computing and big data analytics evolved rapidly in the 2000's, it became more practical to use AI on a wider scale for various industries.

Today's AI systems can efficiently analyse both structured and unstructured data and adapt to new data via machine learning. As per the Kommisetty and Dileep (2022), big data is being utilised in a wide range of industries in various ways, and companies are utilising big data technologies to add value to their businesses. While putting these systems into place, a lot of challenges and options arise that have to be determined to maximise and optimise the use of these systems. Big data is the latest and emerging technology. AI is one of the most groundbreaking technological advancements of the modern business world due to its ability to automate complex tasks, enhance business efficiency and drive data-informed decision making. The e-commerce industry is also one of the major beneficiaries of AI implementation, given that the online platform generates huge volumes of data from customer interaction, which is continually generated. Digital data builds up as a result of each search query, product review,

purchase and browsing activity, providing a wealth of data that organisations can analyse strategically. AI systems also have the potential to transform the way companies interpret customer data by deriving actionable insights for creating personalised marketing, recommendation, inventory, and engagement strategies (Arinze, 2024).

Furthermore, the growing adoption of AI technologies in business operations is indicative of the overall digital transformation trends happening worldwide. Additionally, there is a great deal of debate in the academic and ethical circles regarding the implementation of AI. Relying more on AI technologies could lead to an overreliance on automation within the organisation and a decrease in the human role in decision-making (Al Masaeid et al. 2025). Algorithmic bias, customer surveillance, data privacy and transparency have grown in significance in the digital world of business. Thus, the contemporary literature has started to consider AI as a strategic challenge, an ethical and organisational issue and a technological innovation.

The use of artificial intelligence has enabled firms to automate, personalise, and optimise interactions with customers and become a fundamental element of customer management. Machine learning, natural language processing, and predictive analytics are AI technology that enables organisations to learn more about customer behaviour and preferences (Okeleke et al. 2024). The technologies assist in customer relationship management (CRM) systems through improving customer segmentation, targeting, and engagement strategies.

AI improves customer experience by providing real-time personalisation and effective service provision. As an example, Inavolu, (2024) believe that Artificial Intelligence, such as Natural Processing Language NLP workflow where a query is analysed by a customer, a response is provided and feedback is received. The figure displays the NLP process and how the raw text of the customer undergoes through the NLP pipeline to produce a response. Equally, Rainy, (2025) point out that AI-based analytics enhance the effectiveness of marketing by detecting trends that are not easily seen through conventional means.

Nonetheless, other researchers are not sure of the excessive dependence on AI in customer management. Liu-Thompkins et al. (2022) warn that AI systems are not human-sensitive, and this is very important when dealing with intricate customer relationships. In addition, Wang et al. (2026) suggest that too much automation can cause a decrease in customer confidence, in particular, when communication is impersonal. Thus, although AI can greatly enhance efficiency

and scalability in customer management, its efficiency lies in the ability to balance the technological possibilities and human-centred approaches.

2.3 Role of AI in Improving Competitiveness of E-commerce Business

AI is a key aspect that will improve the competitiveness of e-commerce companies through the ability to make decisions based on data and operational efficiency. According to Iyelolu et al. (2024), the new sources of competitive advantage is offered by smart connected technologies like AI, which enhance product offerings and customer engagement. In e-commerce, AI helps in competitiveness by use of recommendation systems, dynamic pricing and demand forecasting.

Ojika et al. (2022) argue that business processes rely on the collection, processing, and integration of data across various systems and applications. AI enables companies to streamline operations and save money, thus enhancing profitability. AI-powered personalisation strategies have been observed to enhance customer retention and conversion rates (Potla, and Pottla, 2024). Artificial intelligence does not always ensure its competitive advantages. AI usage is costly and technical, and thus might not favor smaller companies (Mohib et al. 2025). More so, AI-based competitive advantage might be temporary, as technologies can be made very accessible and easily copied. In such a way, AI can be used to improve the competitiveness of e-commerce, but its strategic importance will depend on the efficiency with which firms implement it as a part of their overall business strategies and maintain innovation.

While AI technologies offer significant benefits in customer management, the over-reliance on AI-driven systems can potentially have a negative impact on the customer relationship and organisational trust. While AI systems can enhance the efficiency and scalability of operations, they can also lead to a decrease in emotional intelligence and genuine human interactions as part of the customer engagement process.

Humans often have a superior ability to convey empathy, contextual understanding, and emotional responsiveness in communication, which is a challenge for AI technologies, as argued by Satria et al. (2025). This aspect is especially relevant in customer service settings where a customer might want emotional support, empathy and customisation. So, if companies heavily depend on automated customer service solutions and are trying to improve customer satisfaction, they could actually be making it worse.

Another big blow to AI customer analytics is the ethical aspect of it. Personal consumer information, such as browsing habits, purchasing data, social media engagement and

geographical location tracking, is crucial for AI systems (Theodorakopoulos et al. 2026). The age of surveillance capitalism has seen digital organisations acquire behavioural data to better anticipate and steer customer behaviour, sparking the debate about the extent of digital surveillance and consumer control.

Moreover, bias is a significant issue in AI-based customer management systems. Historical data is used to train machine learning algorithms, which can lead to biased or incomplete data, resulting in discriminatory outcomes. The biases can affect customer segmentation, dynamic pricing, recommendation systems, and targeted ads. In situations where organisations are driven by efficiency and profitability, rather than fairness and accountability, algorithmic systems can exacerbate social inequalities, as argued by Bahangulu and Owusu-Berko (2025).

There is also a lack of transparency regarding AI systems, as they are often referred to as “black-box” systems. Organisations are often faced with the challenge of explaining the decisions made by many advanced AI models. This presents issues of accountability, particularly where AI systems impact on pricing, recommendations, or targeting customers. Consequently, Meshram (2025) pointed out that the explainable AI (XAI) has become even more important to make the AI systems transparent and trusted in digital business contexts.

However, those who champion AI say that these issues can be addressed by establishing ethical governance mechanisms, transparency policies for data and collaboration strategies between AI and humans. AI systems should not replace the decision-making process entirely; they should augment it. It is not about replacing decision making totally, but the process should be supplemented by AI systems. As a result, the performance of AI in customer management is highly dependent on the organizations' ability to strike the right balance between automation and human-centered interactions.

Artificial Intelligence can be referred to as a strategic tool that can create competitive advantage in the digital markets. AI technologies add value to the organisational competitiveness in terms of operational efficiency, predictive analytics, customer personalisation and decision-making based on data. AI systems can help with inventory forecasting, automated logistics and management, customer segmentation, demand prediction, and recommendation engines in e-commerce industries.

Smart technologies change competition by allowing organisations to continuously gather and analyze real-time customer data, Immadisetty (2024) adds. This ability can enhance strategic

responsiveness and enable companies to offer a more customised product or service, offering a competitive edge over those that still depend on conventional systems. AI can therefore play a significant role in enhancing customer retention, boosting efficiency, and providing differentiation in the market.

But there are those who doubt that AI can create a sustainable long-term competitive advantage. A big issue is that AI technologies are becoming more and more available through cloud computing platforms and third-party AI software firms (Borra, 2024). This means that competing organizations can quickly adopt technological innovations, making them less sustainable, as for the other type of competitive advantage. For the other competitive advantage, they can be quickly adopted by competing organizations, which makes AI-based competitive advantage less sustainable.

Moreover, the adoption of AI systems can be costly, technologically demanding, and need highly trained staff. Powerhouses like Amazon have a better ability to deploy sophisticated AI systems, while smaller enterprises might not have the technological edge. This leads to digital inequality in the e-commerce markets where powerful companies continually build their power by implementing technological advancements.

Also, there could be employee resistance to AI implementation due to concerns about job loss and the automation process. Howcroft, (2023) and Taylor, (2023) argue that technological automation has the potential to restructure labour relations and generate an unclear sense of job security. Organisational resistance can have negative consequences for technology uptake processes and organisational culture.

Furthermore, competition is not all about technology adoption. Organisations need to embed AI creatively into their wider organisational skills, cultures and customer relationship approaches. Thus, AI should not be considered a standalone competitive advantage, but rather a strategic tool to help achieve it.

2.4 AI-Based Customer Insights and Applicability in E-commerce Business

AI-based customer insights can be defined as the application of sophisticated analytics and machine learning algorithms to the customer data to derive valuable patterns that can help firms make effective strategic decisions (Rane et al. 2024). These insights go beyond descriptive analytics by offering predictive and prescriptive capabilities.

Customer insights generated by AI can make a big difference in how consumers act in e-commerce systems. Typically, modern recommendation systems compute customer preferences, their browsing history, purchase data, and interactions with products to create highly personalized experiences (Alabi, 2024). These systems are used to shape purchasing behavior due to their visibility, convenience, and relevance of the product.

Customer segmentation and targeted marketing is also aided by AI-powered behavioural analysis (Davtyan, 2026). Traditional analytical systems aren't as effective as organisations can gain insights into high-value customers, predict their buying behaviour, and create personalised marketing campaigns. Moreover, AI technologies are capable of making decisions in real-time, letting businesses adjust quickly to change in customer preference and market trends.

However, the potential benefits of AI-powered customer insights have been criticised as potentially leading to “over-commercialisation”. Predictive algorithms can impact consumer behaviour in a variety of ways, including influencing purchase decisions, recommendation visibility and advertising exposure (Joans, and Sheila, 2024). Consumers might as a consequence, lose awareness of the effect of digital platforms on their choices in the context of behavioural targeting technologies.

Further, excessive personalisation could lead to diminished consumer autonomy and to the development of “filter bubbles” that would allow consumers to be exposed over and over again to the same products and content. This could help to further encourage consumer behaviour instead of expanding consumer discovery. While AI-based customer insights offer benefits in terms of business efficiency and customer engagement, organisations should also take into account the ethical aspects of behavioural influence and consumer autonomy when using AI.

Personalisation, customer segmentation, and predicting their behaviour are common AI-based insights in e-commerce. Bano et al. (2025) state that using AI can help businesses to gain customer insights, and organisations can also enhance the effectiveness of marketing and customer satisfaction by providing personalised experiences. As an illustration, recommendation systems use previous buying behaviour to forecast how customers will buy in future, further improving customer interaction.

Moreover, according to Balyan et al. (2026), AI-driven insights play a role in customer journey optimisation by defining the important touchpoints and enhancing interactions throughout the channels. This helps companies to create better customer-focused approaches. Although these

benefits exist, the strategic relevance of AI-based insights has been an issue of serious concern. Elgendy et al. (2022) opine that data-driven insights might not be capable of fully revealing the complexity of human behaviour resulting in oversimplified decision-making. Moreover, the dependence on past data may restrict innovation, where predictive models tend to support the current trends instead of new opportunities.

In addition to this, Farinu (2025) also brings up the question of the black box quality of AI systems, where there is no transparency in the decision-making process, and organisations can only partially trust and justify AI-based strategies. Thus, although AI-based customer insights have important strategic advantages in e-commerce, their efficiency relies on the quality of data, transparency, and the possibility of incorporating human judgment into the decision-making process.

2.5 E-commerce Businesses Use Artificial Intelligence for Competitive Strategy

Artificial intelligence has been widely applied by e-commerce businesses to gather, analyse, and apply customer data to enhance competitive strategies. The process of data collection is based on the interactions of multiple touchpoints such as the website, purchase history, social media activity, and customer feedback. AI technologies can help companies to handle this enormous data volume effectively and derive actionable information (Rachakatla et al., 2023).

Customer data is analysed with machine learning algorithms to determine patterns, trends and correlations. An example of this is predictive analytics that can predict customer behaviour and demand, enabling companies to maximise inventory control and marketing efforts (Nweje and Taiwo, 2025). Natural language processing can be used to sentimentally analyse the reviews of customers, which gives insights into customer satisfaction and preferences. As far as utilisation is concerned, AI-driven insights are used in recommendation systems, targeted advertising and dynamic pricing. Upreti et al. (2023) state that these applications provide better customer experiences and boost sales rates. Amazon, as an example, leverages the power of AI-based recommendation engines to make a big share of its revenues by providing users with personalised recommendations.

Nevertheless, AI is not without its difficulties in the utilisation of data. Alhitmi et al. (2024) suggest that too much data gathering for using AI might raise the issue of surveillance and exploitation, which will adversely affect customer confidence. Also, using algorithms can lead to biased results when the underlying data does not represent the population. Thus, even though AI

can assist e-commerce companies to utilise customer data successfully to gain a competitive edge, companies need to address ethical issues with great caution and transparency, to preserve the trust of customers and their sustainability in the long-term.

2.6 Key Issues in the Use of AI-Based Customer Insights

Although the application of AI-driven customer insights is becoming increasingly widespread, e-commerce companies have a number of pressing challenges, such as ethical, data privacy, technical, and operational challenges. One of the most significant concerns is data privacy. The systems that are based on AI are heavily dependent on massive amounts of personal data, which makes the issue of abuse and unauthorised access. Jaiswal, (2025) asserts that consumers are becoming more sensitive on how their information is gathered and utilized, which can directly affect trust and brand loyalty.

Bahangulu, and Owusu-Berko, (2025) asserts that discrimination can occur due to biased data set especially in pricing, recommendations, and target advertising and not through control of AI. On the same note, Hassija et al. (2024) point to the black-box characteristic of AI systems, which are difficult to interpret their decision-making processes, and therefore accountability is challenging. Technologically, installing AI systems involve heavy investment in infrastructure, human resources, and updating the systems. Larger e-commerce companies might be able to implement such technologies, and this results in the digital divide in the industry.

The operational issues can also be observed, specifically in terms of the integration of AI systems into the current business processes. As Akmal et al. (2022) observe, the failure of many organisations in meeting the desired results can be attributed to the ineffective implementation strategies of AI in business without understanding goal and organisational unreadiness. Nevertheless, according to some researchers, these difficulties can be reduced by the means of good governance and planning. Although AI poses serious risks, it can have more benefits than can be taken into consideration under proper management. Thus, these issues play a vital role in ensuring that AI-driven customer insights are adopted sustainably in e-commerce.

2.7 Strategic Solutions to Address the Challenges

The key to surmounting the problematic issues related to AI-based customer insights is to implement strategic solutions that would promote a balance between innovation and ethical and operational aspects of e-commerce businesses. The introduction of strong data governance systems is one of the main solutions. Oluoha et al. (2023) note that open data policy and explicit

consent procedures have the potential to increase customer confidence and adherence to data protection laws such as GDPR in UK.

A second important strategy is to enhance the transparency and accountability of algorithms. Explainable AI (XAI) has been suggested to help resolve the black box problem so that organisations can gain more insight into and have justification of AI-based decisions (Chinnararaju, 2025). This can assist in alleviating ethical issues and enhance confidence among stakeholders. It is also necessary to invest in the training of employees and organisational capabilities. Md, et al. (2025) underline that the successful implementation of AI demands not only technological infrastructure but also knowledgeable staff members who will be able to comprehend and use the insights obtained by AI successfully. Companies investing in digital skills development have higher chances of attaining competitive advantages.

Moreover, it is possible to implement a hybrid solution that is both human and AI-driven to improve the quality of the decisions. Mujtaba, (2025) opine that although AI is excellent in processing data, human judgment is essential in strategic and ethical aspects. Nevertheless, other researchers warn that the adoption of these solutions can lead to more complexity and cost in operations especially to the small firms. Nonetheless, the benefits of such investments are long-term, as they lead to increased efficiency, customer satisfaction, and competitive advantage.

2.8 Theoretical Implication

The application of AI-enabled customer insights to e-commerce strategies has important theoretical implications, especially those of resource-based view (RBV), dynamic capabilities, and data-driven decision-making. According to the RBV theory, companies can gain competitive advantage due to valuable, rare, inimitable, and non-substitutable resources (Zvarimwa, and Zimuto, 2022). In this regard, AI possibilities and customer data may be viewed as strategic assets that contribute to the better performance of the firms.

Hsiao, (2024) point out that technological resources should be integrated properly with processes and capabilities of the organisation to generate value. This is in line with the dynamic capabilities perspective, which puts an emphasis on the capability of a firm to alter, combine and restructure assets to meet the evolving environments.

The increasing literature of data-driven decision-making also involves AI-based customer insights. Tiwari, (2024) emphasises the change in decision-making by intuition towards prediction analytics that is more accurate and efficient. However, over-reliance on data may limit

creativity and strategic innovation. Moreover, the use of AI in customer management conflicts with the conventional theory of marketing by focusing on automation and individualisation on the large scale. Although this makes customer relationships more efficient, it begs the question of whether human interaction should be part of customer relationship.

Conceptual Framework

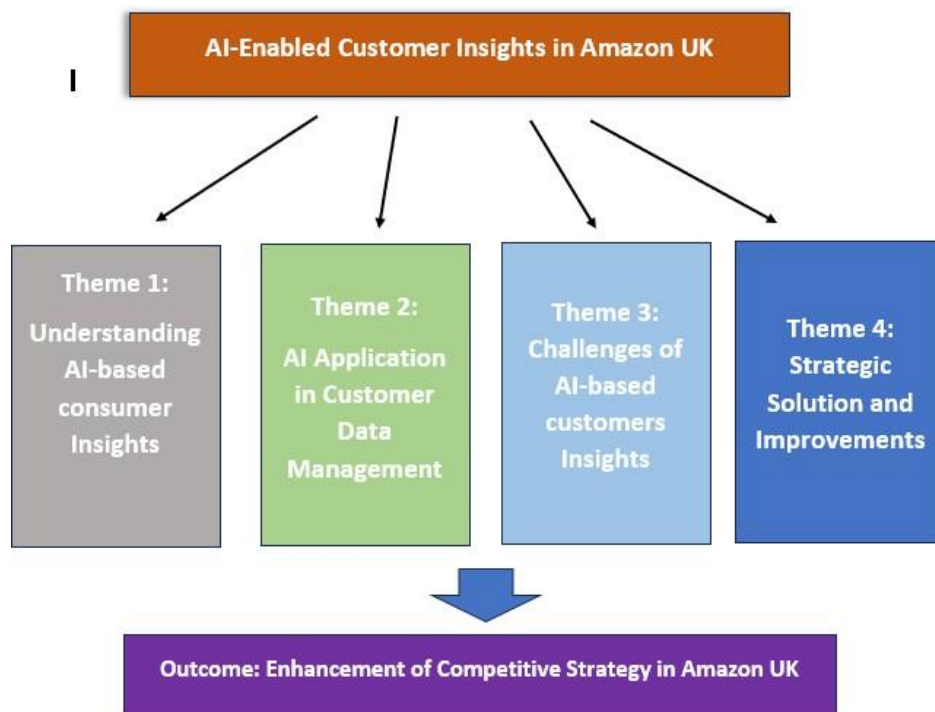


Figure 1: “Conceptual Framework”

(Source: Created by Author)

2.9 Literature Gap

Despite the fact that the current literature has been very thorough in examining AI-driven customer insights, there are still some gaps in the literature. The example of Roy, (2024) has addressed the application of AI to enhance customer insights in the fashion industry, but their analysis does not consider a detailed analysis of how AI influences strategies in the overall context of e-commerce. In the same vein, Sipola et al. (2023) concentrate on the use of AI but do not offer much information on how it is sustainable in terms of competition over time. Moreover, the literature does not provide enough studies to connect AI-based customer insights to the

firm-level competitive strategy in practical case studies like Amazon in the UK. This paper seeks to fill these gaps.

An in-depth look at the use of AI for customer analysis and digital transformation is found in both Oyekunle, and Boohene (2024), but there is little critical research on the application of AI customer insights to drive competitive strategy in established e-commerce platforms like Amazon UK. The majority of studies have concentrated on technological efficiency and operational automation, or on the overall implementation of general AI, but not specifically on the strategic embedding of customer insights gained with AI in the respective organisational context.

While highlighting the benefits of AI's use, Frank et al. (2023) focus relatively less on ethical issues, issues of customer trust, transparency of algorithms and the sustainability of such AI use. The balance of AI automation and customer relationship management that is human-centred is not fully considered in the existing body of academic research.

There is also a lack of in-depth studies for the UK e-commerce sector. The UK is one of the most mature digital retail markets in the world with a high level of internet penetration and penetration of e-shopping, and with robust data privacy regulations. But, there are few studies that specifically examine the contribution of AI enabled customer insights to strategic competitiveness in the context of UK. This study aims to fill these gaps by examining, critically, the opportunities and challenges of customer insights using AI in Amazon UK. The study provides theoretical, practical and strategic perspectives on the impact of AI technologies on customer management, organisation competitiveness and digital business strategy in the current e-commerce landscape.

2.10 Summary

This chapter has critically analysed the role of artificial intelligence in the management of customers and its strategic significance in e-commerce industry. The discussion also identified the way AI boosts competitiveness by providing information-driven insights, customisation, and efficiency. It additionally discussed major challenges such as ethical issues, privacy of data, and technological constraints and strategic ways to mitigate such challenges. Theoretical approaches, including resource-based view and dynamic capabilities were taken into account to comprehend the strategic role of AI. Lastly, the literature gaps were discovered, which explains the necessity

of conducting additional research on AI-based customer insights in e-commerce, specifically in terms of competitive strategy.

Chapter 3: Methodology

3.1 Introduction

The chapter presents the methodological framework of the research into the role of AI-driven customer insights in increasing the competitive strategy in the context of e-commerce, taking the example of Amazon UK. The research is informed by the Saunders Research Onion that offers a systematic approach to research design, philosophy, approach, strategy, choices, and time horizon (Mphale et al., 2024). This model is especially pertinent because it guarantees that research goals and methodological choices are coherent. The approach to the study is thoroughly guided by the logical and well-grounded methodology needed to study AI-driven strategic practices in a feasible business environment by sequentially moving through the layers of the onion.

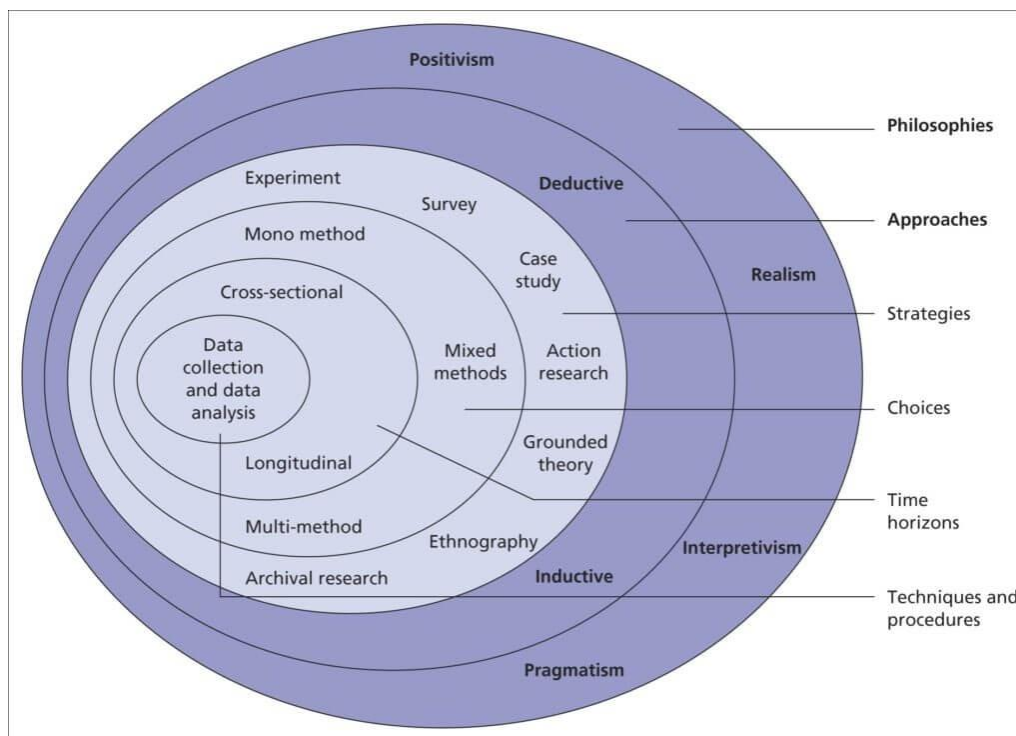


Figure 2: “Saunders’s Research Onion”

(Source: Mphale et al., 2024)

3.2 Research Philosophy

Research philosophy is the collection of beliefs about the reality and knowledge that forms the basis of research. This research embraces the interpretivist research philosophy that focuses on social phenomena interpretation via subjective interpretations (Pervin, and Mokhtar, 2022). The

interpretivism approach applies specifically to this study since it allows exploring the insights of the perception of AI-driven customer insights, their implementation, and strategic use in the processes of Amazon in detail.

Interpretivism enables the researcher to examine the intricate organisational practices and managerial decisions processes that cannot be encompassed completely using quantitative approaches. Since AI implementation in e-commerce is a matter of human judgment, organisational culture, and strategic intent, this philosophy is an appropriate prism through which these dynamics can be viewed.

The use of interpretivism is important for this research as AI tools generate customer insights that are subjective, organisationally practiced, socially constructed and managerial decisions (Chatzichristos, 2025). Instead of positivist methods which emphasize the objective measurement and the testing of hypothesis, interpretivism emphasizes understanding of meaning, experiences, and contextual realities.

Although AI technologies can be quantified, they are not all the same and there are many other factors, such as managerial decisions, customer expectations, technology and competitive pressures, that impact organisational strategies that cannot be quantified. Hence, interpretivism is useful for in-depth consideration of the contribution of AI technologies to the strategic competitiveness of real organisations.

Furthermore, interpretivism enables the critical analysis of ethical problems of AI-based customer management such as privacy, algorithm transparency, influence, etc. These issues are not statistically investigated, but understood qualitatively, as they may have personal and social interpretations.

Positivism, with its emphasis on objective measurement and testing of hypotheses, has been avoided, in turn (Ali, 2024). Although it can be helpful in testing causal relationships, positivism is not so effective in terms of capturing the contextual and interpretive side of AI implementation. As an illustration, the qualitative interpretation is needed to comprehend how Amazon uses AI to gain insights into customers, as opposed to a strictly statistical one.

Also, realism was taken into consideration but not chosen because it unites objective and subjective but lacks that depth of interpretation needed in this study. Thus, the most suitable philosophical approach is interpretivism since it is consistent with the purpose of the research to critically examine AI-driven strategies and not to assess their results.

3.3 Research Approach

Research approach defines the way theory is applied in the research, that is, whether it is deductive, inductive or abductive. The study takes the inductive approach, meaning that it builds insight and patterns based on available data instead of hypotheses (Yuwono, and Rachmawati, 2023).

The research should be based on an inductive approach since it seeks to address the question of how AI-based customer insights can help in competitive strategy in e-commerce as opposed to testing a particular theoretical model. Bihu, (2024) states that induction is especially applicable in exploratory research, where new information is derived through the use of qualitative data. This is in line with the purpose of the study to learn how Amazon strategically employs AI in a practical setting.

Conversely, a deductive approach has been evaded because it aims at testing the existing theories using structured hypotheses (Fife, and Gossner, 2024). As much as deduction can help in the quantitative study, it constrains the flexibility necessary to investigate the new themes like AI-driven innovation and customer insights.

An abductive method, a combination of induction and deduction, was also taken into consideration. But abduction is more appropriate when there is a necessity to pass back and forth between data and theory. Since this research is unlike the primary data and because of the extent of the study, an inductive methodology is more focused and clear. In this way, the inductive approach will allow the researcher to develop a detailed picture of AI-driven approaches in e-commerce and be open-minded to emerging and new information.

3.4 Research Strategy

The research strategy is the general plan to address the research questions. The current study uses a case study approach, with Amazon UK being one case to understand the importance of AI-based customer insights in optimising competitive strategy. Particularly, the case study approach will be most appropriate since it enables the analysis of multifaceted organisational phenomena in a more detailed and contextual manner (Mtisi, 2024). Since the implementation of AI is a multi-factorial process with various aspects (technology, strategy, and customer behaviour) being related, a case study approach allows one to comprehend these dynamics in a comprehensive manner. Amazon is the right case because it has been highly utilizing AI-based technologies like recommendation systems, predictive analytics, and dynamic pricing.

Conversely, survey strategy is shunned because it is mostly concerned with gathering quantitative data on large samples, which may not be as detailed as needed to comprehend strategic AI applications. On the same note, experimental approaches were not deemed appropriate because they are aimed at testing causal relationships in controlled conditions, which is not a possibility in this situation. Ethnography was also discussed yet dismissed as it is time-consuming and involves immersion into an organisation (Geddes, and Miller, 2025). Since secondary data will be used, a case study method will be more practical and efficient.

3.5 Research Choices

Research choices are concerned with whether the study is a mono-method, multi-method or mixed-method study. This study is mono-method qualitative research that concentrates on qualitative secondary data. The qualitative method is suitable since it enables exploring the insights of AI-driven customer in a thorough manner and understand their strategic consequences. Lim, (2025) said that qualitative research is practical in explaining complex phenomena especially when the researcher wants to explain meanings, experiences and practices within organisations. This is very applicable to the study, because it aims at examining how Amazon is using AI technologies to improve its competitive strategy.

Peer-reviewed journal articles, industry reports, and company publications are all secondary data that allows reaching a broad spectrum of credible and relevant information. Adeoye, (2024) notes that secondary data analysis is effective and enables researchers to add to the already existing knowledge without compromising on academic rigour. Conversely, a quantitative methodology has been shunned because it is interested in numerical data and statistical analysis, which might not help provide the level of strategic information needed in this study (Ismail et al. 2024). Likewise, a mixed-methods approach was also considered but not implemented because of the time-related and research scope issues, since the integration of both qualitative and quantitative methods needs more resources and intricacy.

3.6 Time Horizon

The time horizon is the temporal aspect of the study, which is whether the study takes place at one time point or a series of time points. The cross-sectional time horizon is adopted in this research because it will investigate the importance of AI-driven customer insights in optimising competitive strategy in a certain period of time.

A cross-sectional method as the researcher aims at examining existing information in secondary sources such as current academic publications, industry reports, and company publications on Amazon UK. Cross-sectional research can be useful in providing a picture of the state of practice and trends in a rapidly developing area like artificial intelligence and e-commerce.

Conversely, no longitudinal time horizon has been used, since a longitudinal time horizon would entail examination of changes over a long duration, and would demand ongoing data gathering. Although longitudinal studies may yield more information about the development of AI strategies, they are time-consuming and are not possible within the framework of the current study.

3.7 Techniques and Procedures

3.7.1 Data Collection

The research is based on the secondary data collection technique which utilizes peer-reviewed journal articles, industry reports and company publications. This research is specifically suited to secondary data since it will enable the researcher to access a vast amount of existing knowledge on AI-driven customer insights without necessarily having to collect primary data. Secondary data analysis allows researchers to expand on proven discoveries besides being efficient and academically rigorous.

Secondary data is applicable to this research since it deals with Amazon where internal organizational data is unavailable. Academic databases (e.g., Google Scholar), reports by organisations (e.g., Deloitte) and official publications by Amazon are credible sources of information about the implementation and strategy of AI.

Interviews or surveys were thought about as the major data collection techniques but eventually avoided. Primary data must be collected using a lot of time and access to participants which may not be possible when researching on large companies such as Amazon. Also, it might be difficult to get credible answers related to strategic AI practices because of the privacy issue.

3.7.2 Data Analysis

The data gathered in the study is analysed using thematic analysis. Thematic analysis is a process that entails the identification, analysis and interpretation of patterns or themes in qualitative data (Christou, 2022). This method is appropriate as it allows the researcher to systematically examine recurring themes related to AI-driven customer insights, such as personalization, predictive analytics, and competitive strategy. Thematic analysis is especially applicable to

interpretivist research, since it helps to explore meanings and interpretations in the qualitative data. It allows the researcher to evaluate critically the application of AI technologies in e-commerce and its role in competitive advantage.

Thematic analyses was chosen, as it can be used to systematically identify, interpret and evaluate the themes that emerge from the qualitative data sources. The method is very suitable to process AI-based customer insights in that it allows to explore patterns linked to customer personalisation, predictive analytics, ethical issues, competitive advantage, and strategic decision making.

The thematic analysis process consists of several steps: data familiarisation, coding, identification of themes, refinement of themes, and interpretation (Naeem et al., 2023). Academic publications, corporate reports, and industry newsletters were scanned multiple times to find common themes in the discussions about the use of AI in eCommerce.

Thematic analysis is very flexible, one of its great strengths. Thematic analysis can be used to interpret complex organisational phenomena while also being open to new themes and critical insights that arise, as opposed to rigid statistical approaches. This adaptability is significant in the context of AI research, as the use of technology and strategies keep changing.

Moreover, thematic analysis is helpful in interpretivist research since they will emphasize meanings, experiences and understanding of context, rather than only numerical measurement. This approach helps to more fully understand the positive and negative responses to AI-driven insights about customers within Amazon UK.

3.8 Ethical Consideration

Moral issues are fundamental to guaranteeing research integrity and credibility. This research is ethical as it is based on publicly accessible secondary data only and credible and reputable sources. It is concerned with how to make sure that one references and does not plagiarise in using secondary data. Moreover, this research does not deal with human subjects, which removes any risks associated with consent, confidentiality, and privacy. Nevertheless, to ensure moral responsibility, one has to be critical of the sources to prevent bias and misrepresentation. Transparency and academic honesty enhance the reliability and validity of research findings.

3.9 Summary

The chapter has described the methodological framework applied to explore the role of AI-supported customer insights in improving the competitive strategy in e-commerce. The

research utilised the philosophy of interpretivism, inductive methodology and case study design, backed by a qualitative mono-method design. The cross-sectional time horizon and secondary data collection were utilised and thematic analysis applied in order to interpret the results. Ethical issues were also considered to ensure research integrity. In general, the selected methodology corresponds to the research goals and offers a solid framework to examine the role of AI in Amazon's e-commerce of Amazon in the context of generating a competitive edge.

Chapter 4: Findings

4.1 Introduction

This chapter presents research findings and analysis on the role of AI-enabled customer insights in improving Amazon UK's customer competitive strategy. The secondary qualitative results of this study are drawn from secondary qualitative data that was obtained from peer-reviewed journal articles, industry reports, company publications and market statistics on artificial intelligence, customer analytics and e-commerce competitiveness (*Refer to Appendix 1*). The analysis explores the critical role of AI technologies in the collection, analysis and utilisation of customer data by Amazon to build its strategic advantage in the UK ecommerce market.

The Findings clearly show how valuable AI-based customer insights are to e-commerce, as they enhance customer personalisation, boost efficiency, enable predictive decision-making and boost market responsiveness. But the results also show that there are ethical, technological and data privacy issues that organisations have to navigate if they are to be increasingly reliant on the use of AI technologies. Hence, the chapter critically examines the opportunities and challenges of AI-based customer insight systems in Amazon UK.

4.2 Analysis

4.2.1 Theme 1

“Investigate the Concept of AI-Based Customer Insights and Their Strategic Applicability in Amazon in the United Kingdom”

According to Jhurani, (2024), AI technologies can substantially enhance the management of customer relations by enabling businesses to tailor their interactions to each customer, while also boosting the efficiency of their operations. The discovery highlights the importance of personalisation and predictive recommendation systems in Amazon UK's business approach.

The analysis proves that Amazon uses AI-powered customer insights to strategically leverage the whole customer journey. The most notable use case is in recommendation systems, where the analysis of customer behaviour can be used to forecast purchases (Wang, and Zhang, 2023). Amazon's recommendation system considers previous purchases, search history, browsing habits, ratings and preferences to come up with personalised recommendations.

For decades, Amazon has used machine learning and AI to serve customers with personalised product recommendations on its homepage and throughout the shopping journey, personalised

deals during its deals events and personalised emails with products the customers might want to shop (Aboutamazon, 2025).

The results also indicate that Amazon AI helps in customer retention and Customer Satisfaction (CSAT) schemes. AI-powered recommendation systems make things easier for customers by minimising the time they spend searching and making their products more relevant. AI technologies help companies move from reactive to proactive and predictive customer handling, as cited by Goswami (2022). This is true of Amazon, which can continually tailor home page displays, product suggestions, and targeted promotions, based on current customer behaviour.

Moreover, the results show that Amazon's customer data and insights based on AI play a crucial role in the operational efficiency and competitiveness of the UK e-commerce industry. Amazon Bedrock and Amazon large language models (LLMs) and multi-modal models can be used by retailers and consumer goods brands to achieve intelligent product analysis and description. These models can not only help maintain product accuracy but also optimise product descriptions for their potential use in online product portfolios (Amazon, 2025). The amount of customer data that Amazon has enables it to better predict customer demands, manage inventory, and plan for the future than many digital retailers competing with it.

The analysis also shows how predictive analytics systems are significant in Amazon's strategy. By analysing past buying trends, seasonal demand changes, and customer behaviour patterns, AI technologies can help optimise inventory distribution and logistics management. Predictive AI systems offer substantial benefits for enhancing operational performance, minimising forecasting inaccuracies, and boosting supply chain responsiveness, as noted by Kagalwala et al. (2025). By forecasting customer demand, Amazon can optimise delivery operations and minimise expenses, bolstering its competitive edge.

The results also indicate that AI-powered customer insights are enhancing strategic decision-making, allowing Amazon to adapt quickly to market trends and consumer preferences. As Amazon receives new customer data, machine learning algorithms can constantly update predictive models to enhance the effectiveness of marketing efforts and product visibility. Bano et al. (2025) also state that the rise of AI-driven personalisation has a marked impact on customer engagement as consumers are now more interested in relevant and customised online experiences.

The results are very strong to support the Resource-Based View (RBV) theory as discussed in the literature review. In the RBV theory, the sustainable competitive advantages of organisations are created by valuable, rare, and hard-to-imitate resources (El Nemar et al. 2025). The strategic intangible assets that Amazon has, such as its AI capabilities, behavioural data systems and predictive analytical infrastructure, are areas where competitors may not be able to replicate as fully. AI technology is foundational to the various recommendation systems, logistics, customer management and operational planning, bolstering Amazon's strategic market standing in the UK e-commerce space.

Furthermore, the results suggest that customer-centric AI insights play a crucial role in Amazon's business strategy. The company keeps monitoring the feedback from its customers, purchasing patterns, and satisfaction rates to enhance its services and customer experience. Based on this, Puneet et al. (2023) claim that AI-driven customer analytics are able to enhance customer satisfaction by providing highly personalised and targeted services to the customer. This is in line with Amazon's strategy of providing convenience, efficiency, and customer loyalty.

4.2.2 Theme 2

“Determine How Amazon Uses Artificial Intelligence to Collect, Analyse, and Utilise Customer Data to Solidify Its Competitive Strategy”

The results indicate that Amazon has collected a wide range of data on their customers from the many digital interactions they had including browsing, purchasing, searching, reviews, clickstream, voice interactions with Alexa devices, mobile application and customer service interactions. Each interaction with Amazon's customers yields behavioural data that helps power the company's predictive analytical systems. One of the important steps was the Dartmouth Conference in 1956, which marked the official birth of AI as an academic field (Inavolu, 2024). The 1990s were the golden age for the development of AI, as support vector machines (SVM) and a lot of progress were made in the area of natural language processing (NLP). AI technologies can do this by analysing vast amounts of behavioural data and handling it in real-time, which results in a much better understanding of customers.

Customer preferences are continuously analysed using machine learning algorithms, which in turn can predict customer purchasing behaviour and help personalise their experiences (Segun-Falade et al. 2024). Machine learning models are automatically updated as new customer data is fed into the system. Unlike analytical systems, machine learning models get better the

more data about customers they receive. The continuous learning capability helps Amazon's capacity to swiftly respond to evolving customer habits and market dynamics.

The results also confirm that recommendation systems are one of the most crucial applications of AI in Amazon. The recommendation system that Amazon uses is based on the history of past purchases, search queries, cart browsing, ratings and customer similarities to create extremely tailored product suggestions. Studies show that recommendation systems have had a profound impact in the commercial world, among those that use AI-driven personalisation (Jadiga, 2025).

The analysis also finds that Amazon implements collaborative filtering algorithms in order to gain better accuracy in its recommendations. Demonstrates collaborative filtering by studying the behaviour of customers in relation to each other to determine what a customer might want to buy. This provides Amazon with more opportunities to cross-sell and upsell products to customers and enhance the convenience of customers. AI-driven recommendation systems make the products more likely to be bought by customers who match their behavioural preferences and purchasing history, which means better customer engagement, according to Ding et al. (2025).

Additionally, the results suggest that Amazon uses natural language processing (NLP) approaches to gain insights into customers' opinions and sentiments. NLP systems analyse customer reviews and ratings, customer service communications, and comments to gauge customer satisfaction and detect product quality problems and new customer trends (Malik, and Bilal, 2024). These insights can help Amazon enhance its product suggestions, supplier management, and customer service response.

In the case of Amazon, for instance, their anticipatory shipping system involves predictive AI systems that predict customers' future orders even before they make them (Aboutamazon, 2025). This allows products to be optimally stored in fulfilment centres, nearer to expected customers, which helps to minimise delivery time and costs. These forecasts enhance the company's competitive edge by optimising delivery processes and boosting customer satisfaction.

The results also show that Amazon is leveraging AI technologies to help it implement dynamic pricing strategies. AI-powered pricing models offer numerous benefits, including the ability to adapt quickly to market dynamics and customer trends, enhancing strategic competitiveness for organisations and providing valuable insights for forecasting future pricing shifts (Awais, 2024). Moreover, the insights indicate that Amazon is using AI to inform their advertising and marketing strategies. AI algorithms analyse customer behaviour and preferences to provide

highly personalised ads and promotional material. This can boost efficiency in marketing efforts and enhance the conversion rate and customer engagement. The authors Bano et al. (2025) believe that the use of AI for targeted marketing greatly enhances the ability to retain customers, as customised advertisements resonate with customers and have greater value.

Moreover, the results support to a great extent the Dynamic Capability Theory that was explored in the literature. Dynamic Capability Theory proposes that the competitiveness of an organisation can be maintained by flexibility in resource and capability configuration, which is able to quickly change in response to external environmental changes (Sun et al. 2023). Amazon's AI-powered systems continually monitor market trends, customer demands, and operational efficiency to enhance their strategic agility and innovation. The flexibility will aid Amazon's capacity to stay a dominant presence in the swiftly changing UK ecommerce market.

4.2.3 Theme 3

“Identify the Key Issues That Amazon Faces in the Use of AI-Based Customer Insights, Which Are Ethical, Data Privacy, Technological, and Operational Issues”

The privacy of data and concerns of customer surveillance are one of the most important problems that emerged from the findings. Amazon gathers a large amount of data from its customers, such as their browsing habits, purchase history, geographical data, their search activities, their usage of Alexa devices, and their behaviours on various digital platforms (Aboutamazon, 2025). This type of data enhances the effectiveness of recommendations and streamlines the processes, but it also poses challenges in terms of data over-collection and privacy concerns for consumers.

The results corroborate the claims of Onikoyi (2025) that in today's digital era, behavioural data extraction is growing in its importance in modern digital organisations in predicting and guiding consumer behaviour. Amazon has a huge data system, which can be considered as one of the features of “surveillance capitalism” that consists of the use of customer data as a strategic commercial asset (Kienscherf, 2022). The level of monitoring of consumer behaviour for business purposes by organisations may then cause discomfort to the consumer.

In addition, the results reveal that the pressure on regulatory compliance with regard to customer data management is still on the rise. The United Kingdom has strict GDPR compliant data protection regulations that mandate transparency, consent, accountability and proper handling of customer data (Dlapiperdataprotection, 2025). Non-compliance with these regulations can incur

considerable financial punishment and reputational damages. Amazon is thus under constant stress to keep data governance ethical and to also optimize AI-based analytical tools.

One of the other key findings is related to algorithmic bias and discrimination. Historical data plays a crucial role in the training of AI systems, particularly when it comes to machine learning. Bias in training sets can lead to unintentional bias in the outcomes of AI systems in recommendation algorithms, targeted advertising, dynamic pricing, and customer segmentation. However, De-Arteaga et al. (2022) suggest that algorithmic systems can have the effect of perpetuating social and economic inequalities when organisations adopt an efficiency and profitability-driven agenda over one that is fairness and accountability driven. Bias risks have been identified for the algorithmic use of BA in service operations for assessing creditworthiness.

The findings also suggest that transparency issues have the potential to have a negative impact on customers' trust. Consumers are more and more demanding of organisations to demonstrate the ways in which their personal data is collected, analysed and used. Barlas et al. (2023) found that customer trust is vital in digital business sustainability as customers might have concerns about privacy issues and unethical data usage, which could negatively impact customer confidence and loyalty.

Another important issue that arose in the findings was technological dependency. The extensive use of AI systems in Amazon's operations leaves them vulnerable to potential disruptions in customer experience and operational efficiency. The use of AI systems at Amazon also raises concerns about potential disruptions in customer experience and operational efficiency if there are technical issues, inaccuracies in predictive models, or security breaches. AI systems need to be constantly updated, monitored, and technologically invested to ensure their accuracy and effectiveness (Qudus, 2025). This makes it difficult to sustain large-scale AI infrastructure, with significant financial and technological risks.

Howcroft and Taylor, (2023), show that technological automation is changing the nature of labour and can result in a sense of uncertainty about jobs in the digitalised sectors. However, Amazon's use of AI in its fulfilment centres, where automation is said to be used to monitor employee performance and operations at all times, has been criticised. These can have a detrimental impact on staff morale, trust within the organisation and employee satisfaction.

The results also show that AI-powered customer insight systems could diminish real-life human contact in customer relationship management (CRM) procedures. While AI chatbots and automated customer service systems can be efficient and quick, they might not be able to match the emotional intelligence, empathy and contextual understanding that comes with human interaction. When customers seek emotional support with a personalised approach, rather than a one-size-fits-all automated response, the overreliance on automation can have a negative impact on customer satisfaction, as suggested by Gavenja et al. (2023).

4.2.4 Theme 4

“Propose Strategic Solutions to Address the Challenges Detected and Make AI-Assisted Customer Insights More Efficient in Preserving the Competitive Advantage”

In order to tackle this problem, Amazon will be better able to make its data collection and decision-making based on AI more transparent. Recommenders should be made more aware of the nature of the recommender, how customer information is used, and the effects of the personalisation algorithms on the customer's buying experience. Darmawan, (2025) claim that transparency can have a major impact on customer trust and digital relationships between organisations and customers in the long term.

Moreover, Amazon needs to beef up its customer consent and data control features. Giving customers more control over how their data is shared and their personalisation settings will also make customers feel more at ease about the fairness and ethical use of data. Such strategies would also help with GDPR compliance in the United Kingdom, thereby minimising legal and reputational hazards that may arise due to the misuse of data from customers (Noah et al. 2024). The study further reveals that Amazon needs to implement more robust ethical guidelines for AI usage to minimise algorithmic bias and unfair outcomes. Machine learning systems are heavily reliant on training data, and skewed or incomplete information can lead to skewed recommendations, targeted advertising, or pricing. Cheong (2024) states that organisations need to be mindful to ensure accountability and fairness when deploying algorithmic decision-making systems.

Amazon should use ongoing algorithm auditing and monitoring procedures to combat algorithmic bias. AI models need to be regularly reviewed to detect biased outcomes and discriminatory patterns in the way customers are segmented, the visibility of recommendations,

or pricing decisions. A wide and diverse range of training data should also be included to enhance fairness and inclusivity in AI-driven systems.

The other critical strategic solution that came up in the findings is the enhancement of explainable AI (XAI) systems. The majority of advanced AI models have “black-box” attributes that aren't easy to understand or explain. The opacity of this situation raises questions about who is accountable and diminishes trust in AI-driven recommendations and pricing.

Organisations would be more transparent if they could offer easily understandable explanations of AI-generated results using explainable AI technologies. Patil (2024) argues that explainable AI enhances the accountability of organisations and promotes trust by making the decision-making processes of AI algorithms more transparent to customers and decision-makers. So, the need of the hour is to make explainability a key focus in Amazon's AI governance strategy.

The results also suggest that Amazon needs to use an approach that balances the use of AI and humans instead of over-automating. While AI systems are making customer service more efficient and scalable, they also have the potential to decrease emotional intelligence and human interaction in such workplaces. According to Chen et al. (2023), empathy, context-awareness and emotional responsiveness of human communication are often challenges for AI technologies.

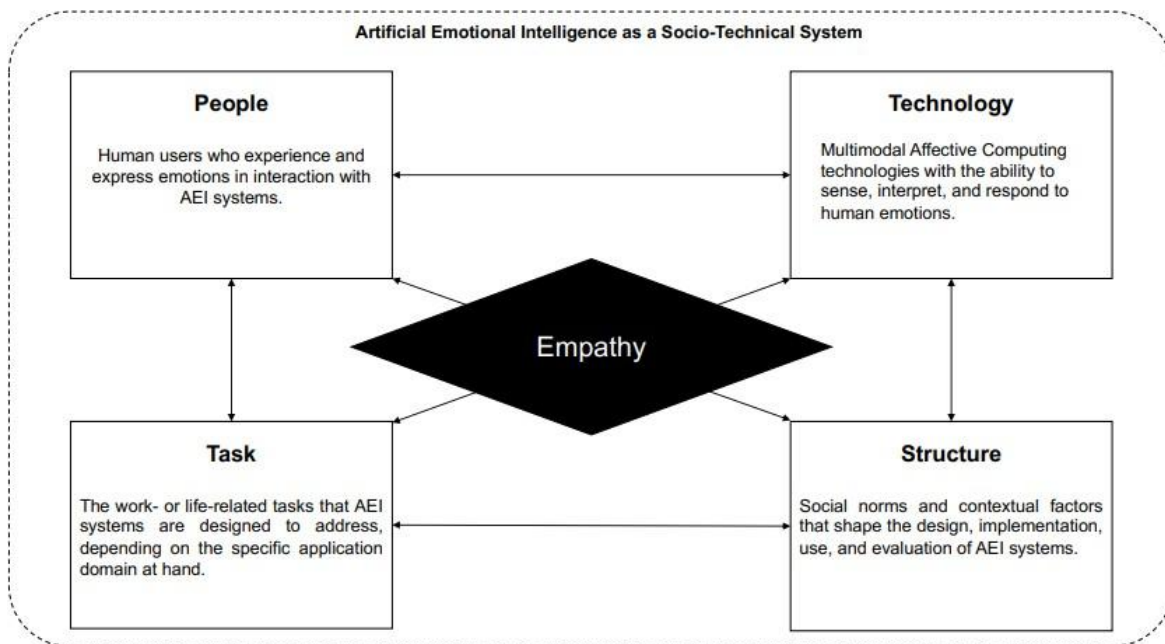


Figure 3: “Artificial Emotional Intelligence as a Socio-Technical System”

(Source: Chen et al. 2023)

To resolve this problem, Amazon could integrate AI-powered systems with their customer support staff to enhance the quality of its service and boost customer satisfaction. There may be a time when simpler tasks and repetitive customer queries can be automated and handled by systems, but more nuanced issues involving empathy and emotional intelligence, and contextual judgment should be dealt with by humans. The mixed strategy would boost users' confidence and ensure the smoothness of operations.

Improving cybersecurity was also identified as a key strategic recommendation in the results. With Amazon's massive amounts of customer data, the security of digital infrastructure is a must to safeguard that information. Just as humans can be the targets of cyberattacks and adversarial use, AI systems can be too. AI systems can be subject to cyberattacks or adversarial use that could impact their operational performance and/or customer privacy.

Amazon needs to improve its encryption measures, multi-layered security systems, and AI-based cybersecurity surveillance systems to mitigate the cybersecurity threats it faces. A continual risk assessment and testing should also be carried out to find digital infrastructure vulnerabilities. Good cyber governance would enhance customers' trust and mitigate potential operational disruption risks arising from data breaches and cyber threats (Folorunso et al. 2024).

Yadav et al. (2024) suggests that digital organisations are now influencing consumer behaviour, leading to ethical issues of consumer autonomy and informed choice due to behavioural prediction systems.

4.3 Summary

The chapter discussed the findings and analysis regarding how the use of AI-powered customer insights can improve the competitive strategy at Amazon UK. The results showed that AI technologies are vital in today's e-commerce landscape, enhancing customer personalisation, predictive decision-making, operational efficiency, and market responsiveness.

Chapter 5: Discussion on Findings

5.1 Introduction

This chapter critically reviews the results presented in Chapter 4, relating to the use of customer insights that enable the use of AI in strengthening competitive strategy within Amazon UK. The discussion brings together the empirical results and the existing academic literature, the theoretical frameworks and representations and the strategic management concepts presented in the literature review. The purpose of the chapter is to assess the results in relation to the existing literature on the topic of artificial intelligence, customer analytics, competitiveness of e-commerce, and digital business strategy.

AI technologies have emerged as a strategic necessity in today's e-commerce landscape, enhancing customer personalisation, predictive decision-making, operational efficiency, and organisational responsiveness. But the chapter also points to significant ethical and organisational issues, such as protecting customers' privacy, understanding algorithms, dependence on AI technologies, and consumer trust. Thus, the discussion critically assesses the opportunities and challenges of customer insight systems that are powered by AI within Amazon UK.

5.2 Discussion on Findings

5.2.1 Objective 1

“To Investigate the Concept of AI-Based Customer Insights and Their Strategic Applicability in Amazon in the United Kingdom”

The findings revealed that AI-powered customer insights are a strategic imperative for Amazon UK, as they have proven to be invaluable in enhancing customer personalisation, efficiency, predictive insights, and customer retention. This conclusion aligns well with Jhurani's (2024) claim that AI technologies benefit the management of customer relationships, allowing businesses to tailor customer interactions while also enhancing their efficiency. Amazon's incorporation of AI into its customer-focused business strategy is highlighted by its use of behavioural prediction systems and recommendation algorithms, which can impact various customer journey stages.

The results also showed that recommender systems are one of the most valuable applications of AI within Amazon UK. Amazon uses a variety of data to make personalised product recommendations, including browsing patterns, purchase history, search activity, customer

ratings, and behavior. This is consistent with Wang and Zhang (2023), who claimed that AI driven recommendation system facilitates strategic decision making by predicting customers' purchase intention and behavioral patterns. Thus, the discussion highlights that the recommendation systems are not just technologies of operation, but organizational assets that can have a direct impact on customer engagement, customer loyalty, and revenue generation.

The conversation also highlights the role of AI personalisation in Amazon's strategy for differentiating itself in the UK ecommerce market. Today's digital shoppers have a high demand for personalisation, customisation and highly relevant product suggestions. The ability of Amazon to display content, ads, promotions and products on the home page, based on real-time behaviour, further ensures customer convenience and buying efficiency. This aligns with Goswami (2022), who stated that AI technologies enable organisations to shift from reaction to engagement to a proactive approach to understanding their customers.

Furthermore, the results showed that AI customer insight systems enhance operational efficiency and organisational responsiveness. Predictive analytical systems analyse past demand trends, seasonal patterns and consumer behaviour to ensure that stock is managed optimally, orders are delivered on time, and logistics are planned efficiently. This aligns with Kagalwala et al. (2025) who stated that predictive AI systems help to enhance the efficiency of operations, minimise forecasting errors, and boost supply chain responsiveness. This means that AI customer insights provide strategic benefits beyond just marketing and throughout an organisation.

The results reflect a certain extent of the surveillance capitalism theory, which posits that digital organisations increasingly predict and influence user behaviour for commercial reasons. As a result, consumers will start to be even more suspicious of privacy, autonomy and behavioural surveillance in digital markets. Organisations that do not adhere to ethical governance and transparency in AI-driven customer analytics could find their customer trust and organisational reputation impacted in the long run.

Furthermore, it is proposed that the use of AI-powered Customer Insight systems could heighten the reliance of the organisation on technology. In addition to boosting scalability and strategic agility, predictive AI systems can lead to technical disruptions, cybersecurity risks, and inaccuracies in algorithms, potentially weakening critical decision-making processes for organisations that heavily depend on AI-driven systems. While these customer insights offer

great strategic benefits, organisations are also being pressured to augment their technological resilience and ethical governance.

5.2.2 Objective 2

“To Determine How Amazon Uses Artificial Intelligence to Collect, Analyse, and Utilise Customer Data to Solidify Its Competitive Strategy”

The results revealed that Amazon has implemented a wide range of AI technologies to gather, analyze, and leverage customer data across various departments such as product recommendations, predictive analytics, logistics, dynamic pricing, marketing, and customer service. The results are consistent with Inavolu's (2024) findings, which indicated that the technologies of artificial intelligence, machine learning, and natural language processing (NLP) have allowed organisations to process vast amounts of behavioural information quickly and in real-time.

The conversation reveals that Amazon's AI ecosystem relies heavily on its practices to collect vast amounts of customer data. Amazon always collects behavioural data from your browsing history, shopping history, search history, reviews, clickstream activity, voice commands via the Alexa device, customer service interactions, and through the use of its mobile app. This vast behavioural data platform greatly enhances Amazon's predictive analytics and customer profiling tools.

The results were in line with the findings of Segun-Falade et al. (2024), which described how machine learning technologies enhance the understanding of organisational customers' behaviour as predictive models are continually updated when new customer data is introduced. Amazon's ML systems then help the company be more responsive to the market, customers, and purchasing trends by enabling them to quickly adjust to market changes. Machine learning technologies can be optimised over time as more customer information is utilised, unlike traditional analytical systems.

Moreover, the results showed that Amazon uses collaborative filtering algorithms in a smart manner to enhance the recommendation accuracy and customer engagement. Collaborative filtering determines similarities between customer behaviours to forecast customer purchasing intentions. Customers are more likely to buy products that are in line with their behavioural preferences and purchasing history (Ding et al. 2025). Thus, recommendation systems are not

only enhancing customer satisfaction but also bolstering the profitability of any organisation by creating more opportunities for cross-selling and upselling.

Furthermore, the results illustrated that predictive analytics is another substantial strategic role in Amazon's AI play. By examining past buying patterns, seasonal demand changes, and market trends, predictive AI systems can help optimise inventory management, fulfilment processes, and logistics planning. Amazon's anticipatory shipping is just one example of the ways in which predictive analytics can enhance delivery efficiency by placing products where they are needed before they are ordered.

This discovery aligns with the belief of Awais (2024) that AI-based predictive systems provide strategic competitive advantages to organisations by allowing them to adapt quickly to market shifts and customer preferences. By successfully predicting customer demand, Amazon's operations become more agile, efficient, and responsive, which is crucial in the fast-paced UK e-commerce market.

Moreover, the results affirm the DCT, which was covered in the literature review. As stated by Sun et al. (2023), organisation's competitiveness relies on the ability to constantly adapt its competencies to market changes. By monitoring customer actions, business efficiency, and market trends, Amazon's AI systems continuously adapt their strategies and foster innovation. AI technologies thus bolster Amazon's position to continue its dominance in the fast-changing e-commerce landscape in the UK.

The discussion reiterates how Amazon strategically leverages AI technologies to gather, process and apply customer data to enhance customer engagement, operational efficiency, predictive decision making, and competitive advantage. The results reinforce previous research on recommendation systems with AI, predictive analysis, machine learning, and digital competitiveness, and raise concerns about technological dependence, customer privacy, and the ethical management of information.

5.2.3 Objective 3

“To Identify the Key Issues That Amazon Faces in the Use of AI-Based Customer Insights, Which Are Ethical, Data Privacy, Technological, and Operational Issues”

Amazon has a lot of behavioural data collected, such as browsing data, purchase history, geographical data, search history, and Alexa voice interactions. This reinforces the claim by Onikoyi (2025) that behavioural data extraction is now the mainstay of today's digital business

models. The conversation therefore, underscores the following aspect of Amazon's artificial intelligence system, which is indicative of widespread surveillance capitalism: Customer data is a strategic commercial asset.

The results also showed that raising regulatory expectations relating to data protection for customers brings significant challenges for the organisation. Under GDPR, UK laws mandate that organisations operate in a transparent, accountable, consensual, and secure way. Non-compliance with these regulations may lead to financial penalties and damage to reputation. Thus, Amazon will need to carefully consider their various laws and ethics issues while gathering so much behavioural data.

Algorithm bias and discrimination is another significant finding pointed out to be a problem. Historical training datasets heavily influence AI systems, which can lead to biased or incomplete information producing discriminatory outcomes in systems such as recommendations, targeted advertising and pricing structures. In line with De-Arteaga et al. (2022), who suggested that algorithmic systems can exacerbate social inequalities when efficiency is being prioritised over fairness and accountability by organisations.

In addition, the discussion uncovers the operational fragilities of Amazon's AI ecosystem as it becomes more reliant on technology. Cybersecurity protection, continued update and technology investments are essential for ensuring the reliability and effectiveness of AI systems. In Qudus (2025), the organisation is increasingly exposed to risks arising from the technology of artificial intelligence (AI) infrastructure maintenance, as well as the management of cybersecurity risks. As a result, customer service and productivity can be seriously impacted by technical failure or a cyber-attack.

In addition, the results also indicated issues with the implications for the workforce and over-automation. Howcroft and Taylor (2023) presented a discussion on how automation technologies are transforming employment structures and inducing employment uncertainty in the digital industries. Amazon has come under criticism for implementing AI-powered performance monitoring systems in their fulfilment centres, which has raised concerns about employee surveillance and wellbeing. Too much automation can consequently have a negative impact on employee trust, satisfaction and morale.

5.2.4 Objective 4

“To Propose Strategic Solutions to Address the Challenges Detected and Make AI-Assisted Customer Insights More Efficient in Preserving the Competitive Advantage”

The findings reveal that enhancing transparency in AI-driven decision making and customer data collection practices is one of the most crucial strategic solutions. For Darmawan (2025), transparency has a great impact in improving the trust of customers and customer relationships in the long term with digital. Amazon should thus give more clarity on the way recommendation systems work, how customer information is used, and how AI-powered personalisation can impact on the buying process.

The findings also indicated that Amazon needs to beef-up its data governance and customer consent systems. Noah et al. (2024) claimed that increased customer control over personal data increases their sense of fairness and ethical responsibility. Providing customers with more freedom in customisation options and consent to data sharing could thus help to strengthen corporate trust and GDPR compliance.

Another key strategic recommendation is to minimise algorithmic bias by implementing continuous auditing and monitoring systems. Organisations should be mindful of fairness and accountability when putting into practice AI-driven decision-making processes. Amazon needs to constantly reconsider the models used by AI to assess their potential for discrimination in pricing, segmenting customers, and making product recommendations visible to customers.

The results also highlighted the need for explainable AI (XAI) systems. Patil (2024) proposed that explainable AI enhances the accountability of an organisation by making the decision made by AI more understandable to the customer and management as well. As a result, Amazon needs to adopt the explainable AI technologies in its recommendation and pricing algorithms to enhance transparency and customer trust.

Improving cybersecurity also came across as a key strategic recommendation. According to Folorunso et al. (2024), well-established Cyber Security Governance has a positive impact on customer trust and business resilience. Amazon needs to invest more in the security of their customer data, AI-powered cyber-security surveillance, and regular hacking probing for vulnerabilities.

Last but not least, the results indicated that it is important to establish principles of responsible AI as central organisational priorities with a focus on fairness, accountability, transparency and consumer wellbeing. According to Yadav et al., (2024), behavioural prediction systems are

becoming more prominent and impacting on consumers' autonomy and digital decision making. As such, Amazon can't afford to ignore the need for ethical responsibilities in its customer engagement efforts that are powered by AI, even as its efforts aim to maintain customer trust and sustainable competitiveness over the long-term.

5.3 Summary

The results of this chapter critically examined the findings with regard to the role of customer insights in the context of AI in enhancing Amazon UK's competitive strategy. Overall, the conversation underscored the value of AI technologies for enhancing customer personalisation, streamlining operations, making predictions, and making organisations more responsive in today's e-commerce landscape.

The presentation also highlighted the ways in which Amazon has incorporated AI technologies into its various systems, such as its AI-powered recommendations, predictive analytics, logistics, targeted marketing, and dynamic pricing models, as a means of enhancing customer engagement and competitive edge. The study also uncovered key ethical, technological, and operational issues and concerns surrounding AI implementation as well as data privacy issues.

Chapter 6: Conclusion

6.1 Conclusion

The study explores the potential of using AI-driven customer insights for enhancing the competitive strategy for Amazon UK. The study delved into the role of AI technologies in enhancing customer personalisation, predictive analysis, business operations and strategic competitiveness in the e-commerce sector of the UK. The study also explored the issues and concerns of implementing AI, such as ethical concerns, data privacy concerns, algorithmic bias, technological dependence, and operational problems. The study also presented strategic solutions that can enhance the effectiveness and sustainability of customer insight systems with the help of AI, without compromising the competitive advantage.

The results of the study were consistent with the fact that AI has emerged as a crucial strategic tool in today's e-commerce landscape. AI technologies like machine learning, predictive analytics, recommendation systems, natural language processing, automation technologies and behavioural analytics are widely used by Amazon UK to gather, analyse and leverage customer data. By leveraging these technologies to analyse customer preferences, forecast buying patterns, streamline supply chain operations, tailor customer experiences, and enhance market responsiveness, Amazon is better positioned to achieve its goals. These technologies enable Amazon to gain insights into customer preferences, predict buying habits, optimise logistics, personalise customer experiences, and improve market agility.

The one major finding that comes out of this study is the importance of AI-based recommendation systems as one of the great assets that Amazon has as a strategic capability. The recommendations that Amazon makes based on the browsing and purchasing history of customers, their ratings and search activity, are very personalised due to the use of recommendation algorithms. All this adds up to a higher degree of personalisation that creates convenience for the customer, more engagement, greater customer loyalty, and higher conversion rates. AI-based recommendation systems are more than just tools; they are strategic resources within an organisation that can have a significant impact on business performance and competitiveness.

The study further revealed that predictive analytics has a significant impact on the efficiency and strategic agility of Amazon's operations. Using AI technologies, Amazon can predict customer buying trends, optimise its inventory distribution, manage its supply chain better and enhance its

logistics operations. AI systems that can predict customer needs and market trends also enable Amazon to act quickly when needs change. AI-powered customer insights are thus utilised not only for improving operations but also for making strategic choices.

In addition, the study validated Amazon's vast behavioural data infrastructure as a support to the business approach of the company, which is customer-centric. Amazon collects behaviour data by clicking, browsing, purchasing, reviewing, using mobile apps, voice interactions with Alexa, and collecting a ton of other information. Machine learning systems sift through this information on an ongoing basis, which enhances the accuracy of recommendations, targeted advertising and customer experience management. So, customer data is one of Amazon's most valuable organisational assets in the digital business environment.

The study also found algorithmic bias and the lack of transparency to be large organisational risks. AI systems rely on previous data, which can lead to biased or incomplete information, resulting in discriminatory results in recommendation algorithms, pricing, and targeted ads. Further, numerous sophisticated AI models follow 'black-box' decision making, which customers and even organisations might not be able to fully understand. The opacity of this can lead to less customer trust and accountability issues with AI-driven decisions.

A key finding is that overreliance on AI technologies could lead to vulnerabilities in technology and operations. The continuous updating, protection, monitoring and technology investment in AI systems are essential for their effectiveness and reliability. Potential technical issues and mispredictions, or even cyberattacks, can have a profound impact on the customer experience and performance of the business. Hence, there is a need for organisations to find a balance between technology innovation and robust risk management and cybersecurity governance.

Another key finding of the study was that excessive automation can have a detrimental effect on human interaction and emotional sensitivity in customer relationship management (CRM) systems. While AI tools and chatbots are useful for increasing efficiency and scalability, they cannot fully match the empathy, context and emotional intelligence of human communication. Thus, the need to develop an appropriate human-AI partnership model becomes crucial to keep customer satisfaction and customer relationships intact.

6.2 Recommendations

Amazon should be more transparent about the mechanisms of its AI used for decision-making, and about customer data being used. Customers must be better informed about the functioning of

a recommendation system, the collection of personal information and the impact of behavioural information on personalisation. Greater transparency can reinforce customers' trust and organisational accountability.

Secondly, Amazon needs to enhance its systems for handling customer information and safeguarding privacy. The personalisation setting and data sharing preferences should give customers more control over. With better adherence to GDPR guidelines and ethical data governance practices, legal and reputation risks linked to AI-powered customer data analysis will be mitigated.

Thirdly, Amazon needs to continuously audit their algorithms to reduce algorithmic bias and discriminatory outcomes. AI models should be monitored for possible unfair recommendations, pricing disparities, or skewed customer segmentation. A range of representative datasets should also be incorporated into machine learning systems to enhance fairness and inclusivity.

Fourthly, Amazon needs to continue spending more on explainable AI (XAI) technologies. An easily explained AI system would enhance transparency by allowing companies to provide clear explanations of AI-driven recommendations, rates, and predictive results. This can boost the customer's confidence and the responsibility of the organisation.

Fifth, Amazon should ensure equitable human-AI working methodologies in customer service. AI systems are great for responding to repetitive customer inquiries, but for those who have shown emotional sensitivity and/or a need for contextually understanding a customer issue, human employees should continue to respond to these concerns.

6.3 Limitations of Research

There are several limitations to this study, which should be noted. The research was conducted through complete secondary qualitative data which was sourced from the peer-reviewed journal articles, industry reports, market statistics and company publications. Since no primary data was collected, the study did not directly reflect the views of people working at Amazon, customers, or Managers related to the use of AI customer insights.

Secondly, the research concentrated only on Amazon UK in the e-commerce field. Thus, the results might not apply to other organisations in other industries or geographical markets under different technological, regulatory and/or customer behaviour settings.

Thirdly, the study was limited to focusing mainly on strategic, ethical and operational issues around customer insights, rather than technical analysis of the algorithms and system

architectures of AI. The study offers scant technical scrutiny of the performance of particular AI models Amazon employs.

Further, data regarding the operations of the company, including data specific to the company's internal AI systems, algorithms, and strategic analytics infrastructure, was restricted due to confidentiality and limited disclosure practices. Some findings were therefore based on sources of information available in the public domain and academic interpretations, rather than on internal organisational information.

6.4 Future Research

Comparative analysis between Amazon and other leading e-commerce companies, like Tesco, Alibaba or eBay, could be considered for further research to assess and understand the differences in their AI strategies for understanding customers, as well as the way they compare in competitiveness. Comparative studies might help to gain a wider perspective on the impact of AI technologies on strategic competitiveness in different digital retail sectors.

Future research could also explore customers' attitudes towards AI-driven personalisation, behavioural tracking, and recommendation systems in e-commerce sites. Knowing the customer's views on privacy, trust and ethical issues arising from the use of AI technologies would help in understanding the customer's acceptance of AI-driven business practices.

Finally, exploring the impact of AI Customer Insights on employee experiences in digitally automated workplaces could be studied in the future. Studies related to workforce adaptation, employee monitoring, anxiety about automation, and organisational culture could help gain insights into the human impact of implementing AI. Moreover, the potential of XAI systems in fostering customer trust, transparency and ethical responsibility in the digital business context could be a subject for further research. The study of the impact of explainable AI on customer trust and organisational legitimacy would greatly enrich the new governance literature of AI.

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Theme 2

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Appendices

Appendix 1: Secondary Qualitative thematic Table

“Theme	Author(s)	Year	Extract / Key Insight	Codes
Theme 1: Investigate the Concept of AI-Based Customer Insights and Their Strategic Applicability in Amazon in the United Kingdom	Jhurani, J.	2024	AI enhances customer relationship management through personalised interactions, predictive modelling, and service automation, improving operational efficiency and customer engagement.	AI-driven CRM, Personalisation, Predictive Modelling, Customer Engagement
	Wang, Y. and Zhang, C.	2023	AI-based behavioural analytics predict customer purchase intentions using browsing behaviour, search activity, and customer preferences in e-commerce platforms.	Purchase Prediction, Behavioural Analytics, Recommendation Systems
	About Amazon	2025	Amazon uses generative AI to personalise product search results, product recommendations, and customer shopping experiences across digital platforms.	Generative AI, Product Personalisation, Customer Experience

	Goswami, D.	2022	AI-driven business intelligence enables proactive customer management and improves operational decision-making through customer data analytics.	Business Intelligence, Predictive Customer Management, Data Analytics
	AWS Retail Blog	2025	Generative AI and customer data are redefining retail experiences through enhanced customer engagement and personalised recommendations.	Retail AI, Customer Data, AI Innovation
	Kagalwala et al.	2025	Predictive analytics and machine learning improve supply chain efficiency and demand forecasting within digital retail organisations.	Predictive Analytics, Supply Chain Management, Demand Forecasting
	Bano et al.	2025	AI-driven personalised marketing enhances customer experience, predictive targeting, and customer engagement within digital markets.	Personalised Marketing, Predictive Targeting, Customer Experience

	El Namar et al.	2025	Resource-Based View theory explains how valuable and difficult-to-imitate organisational resources create sustainable competitive advantage.	RBV Theory, Competitive Advantage, Strategic Resources
	Puneet, S.	2023	AI-driven personalisation improves customer satisfaction, customer loyalty, and user experience through targeted services.	Customer Loyalty, AI Personalisation, User Experience
Theme 2: Determine How Amazon Uses Artificial Intelligence to Collect, Analyze, and Utilize Customer Data to Solidify Its Competitive Strategy	Inavolu, S.M.	2024	AI technologies evolved through machine learning and NLP advancements, enabling organisations to process customer data in real time.	AI Evolution, Machine Learning, NLP
	Segun-Falade et al.	2024	Machine learning algorithms improve predictive analytics and organisational understanding of customer behaviour patterns.	Machine Learning, Predictive Analytics, Customer Behaviour
	Jadiga, S.	2025	AI-powered recommendation systems significantly influence customer purchasing	Recommendation Systems, Customer Engagement, AI Algorithms

			behaviour and digital engagement.	
	Ding et al.	2025	Personalised AI recommendations increase customer engagement and strengthen cross-selling opportunities.	Personalised Recommendations, Consumer Engagement, Cross-Selling
	Malik, N. and Bilal, M.	2024	Natural language processing analyses customer reviews, sentiments, and feedback to improve customer understanding.	NLP, Customer Sentiment, Review Analytics
	About Amazon Operations	2025	Amazon uses AI innovations in forecasting, robotics, and delivery optimisation to improve logistics and operational efficiency.	AI Logistics, Robotics, Delivery Forecasting
	Awais, M.	2024	AI-powered dynamic pricing systems improve competitiveness by adapting prices according to customer demand and market trends.	Dynamic Pricing, Market Responsiveness, AI Analytics
	Bano et al.	2025	AI-driven targeted marketing improves customer retention and	Targeted Marketing, Customer Retention, AI Marketing

			increases marketing effectiveness.	
	Sun, W., Chen, K. and Mei, J.	202 4	Dynamic Capability Theory explains how organisations sustain competitiveness through adaptability and innovation.	Dynamic Capability Theory, Strategic Adaptability, Innovation
Theme 3: Identify the Key Issues That Amazon Faces in the Use of AI-Based Customer Insights, Which Are Ethical, Data Privacy, Technological, and Operational Issues	Comedy Central Retail News	202 5	AI assistants such as Alexa increase behavioural data collection and customer interaction monitoring.	AI Surveillance, Alexa, Customer Monitoring
	Onikoyi, B.Q.	202 5	Machine learning and NLP technologies increasingly predict and influence consumer behaviour using behavioural datasets.	Predictive Behaviour, Consumer Analytics, Data Mining
	Kienscherf, M.	202 2	Surveillance capitalism explains how organisations use customer behavioural data as commercial assets for profit generation.	Surveillance Capitalism, Behavioural Data, Digital Monitoring
	DLA Piper Data Protection	202 5	GDPR regulations require organisations to maintain transparency, accountability, and ethical customer data management.	GDPR, Data Protection, Regulatory Compliance

	De-Arteaga et al.	2022	Algorithmic bias may reinforce discrimination and inequalities within AI-driven decision-making systems.	Algorithmic Bias, Fairness, AI Ethics
	Barlas et al.	2023	Customer trust and loyalty depend heavily on transparency, ethical governance, and responsible business practices.	Customer Trust, Ethical Governance, Loyalty
	Qudus, L.	2025	AI systems require continuous technological investment, monitoring, and process optimisation to maintain effectiveness.	Technological Dependency, AI Infrastructure, Process Control
	Howcroft, D. and Taylor, P.	2023	Automation technologies reshape labour structures and may create employment uncertainty within digital industries.	Automation, Workforce Challenges, Employment Impact
	Gavrila Gavrila et al.	2023	Excessive automation may negatively affect customer experience due to reduced human interaction and emotional responsiveness.	Customer Experience, Automation Risks, Human Interaction

Theme 4: Propose Strategic Solutions to Address the Challenges Detected and Make AI-Assisted Customer Insights More Efficient in Preserving the Competitive Advantage	Darmawan, D.	2025	Transparency and ethical data practices strengthen customer confidence, loyalty, and organisational resilience.	Transparency, Data Ethics, Customer Confidence
	Noah et al.	2024	Non-compliance with data protection regulations creates financial, legal, and reputational risks for organisations.	Data Governance, GDPR Compliance, Risk Management
	Cheong, B.C.	2024	Transparency and accountability are essential for ethical AI decision-making and organisational trust.	AI Accountability, Transparency, Ethical AI
	Patil, D.	2024	Explainable AI improves trust and informed decision-making by making AI systems more understandable.	Explainable AI, Transparency, Organisational Trust
	Chen et al.	2023	Emotional AI challenges human interaction because AI systems struggle to replicate empathy and emotional intelligence.	Emotional AI, Human-AI Collaboration, Empathy

	Folorunso et al.	2024	Strong cybersecurity governance is essential for protecting digital systems and maintaining customer trust.	Cybersecurity, Data Protection, Security Governance
	Yadav et al.	2024	Digital transformation and AI-driven behavioural targeting significantly influence consumer decision-making.	Digital Transformation, Consumer Behaviour, Behavioural Targeting”

Appendix 2: Ethics Form

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically.

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”.

This form must be completed and approved prior to undertaking any research activity.

SECTION A: About You (Principal Researcher)

1	Full Name:	Chiragkumar Somabhai Prajapati
2	Student Number:	2423111
3	Email address:	2423111@student.uwtsd.ac.uk
4	Programme of Study:	Master of Business Administration
5	Supervisor:	Mr Rexon Nting

SECTION B: 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 <u>also</u> 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	UWTSO Research Ethics & Integrity Code of Practice	☒
2	UWTSO Research Data Management Policy	☒

3		☐
4		☐

SECTION C: Details of Research Activity

1	Indicative title:	The Role of AI-Driven Customer Insights in Enhancing Competitive Strategy: A Case Study of Amazon in the United Kingdom (UK)"	
2	Proposed start date:		Proposed end date:
Introduction to the Research (maximum 300 words in each section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the three 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 <u>Existing Research</u> 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 research has aimed towards determining how AI (artificial Intelligence) is utilised through the business, especially Amazon in the UK, to identify customer behaviour and enhance its business strategies. Business leads to obtaining a large amount of customer data from online activities like searching, browsing, and purchasing. AI assist in identifying the data towards estimating the customer needs, improving decision-making, and providing personalisation. Amazon is a leading example of a business that utilises AI to improve its customer experience by its dynamic pricing, recommendation systems, and effective delivery systems. AI also offers many benefits while raising concerns over data privacy, technological challenges, and ethical use of customer data. Therefore, this research will help in examining how AI-driven customer insights can contribute to Amazon's competitive advantage in the United Kingdom. It will also evaluate the challenges that are associated with AI in business. Thus, the study will depend on existing published data and reports for presenting secondary qualitative insights.		

	The purpose of the research will be in providing the understanding of how AI can be utilised responsibly and effectively in E-commerce sectors while determining the areas where improvements are required.
4	Research Question • What is the application of AI-driven customer insights in the support of competitive strategy in the e-commerce business? • What is the role of AI technologies that Amazon employs to create customer insights in the UK market? • What are the issues that impede the application of AI-based customer insights in the operations of Amazon?
5	Aims of Research Activity 1. Investigate the concept of AI-based customer insights and their strategic applicability in Amazon in the United Kingdom. 2. Determine how Amazon uses artificial intelligence to collect, analyse, and utilise customer data to solidify its competitive strategy. 3. Identify the key issues that Amazon faces in the use of AI-based customer insights, which are ethical, data privacy, technological, and operational issues. 4. Propose strategic solutions to address the challenges detected and make AI-assisted customer insights more efficient in preserving the competitive advantage.
6	Objectives of Research Activity 1. To investigate the concept of AI-based customer insights and their strategic applicability in Amazon in the United Kingdom. 2. To determine how Amazon uses artificial intelligence to collect, analyse, and utilise customer data to solidify its competitive strategy. 3. To identify the key issues that Amazon faces in the use of AI-based customer insights, which are ethical, data privacy, technological, and operational issues. 4. To propose strategic solutions to address the challenges detected and make AI-assisted customer insights more efficient in preserving the competitive advantage.
	Proposed data collection methods (maximum 600 words)

	This research will utilise secondary data collection methods that indicate all information will be accumulated from existing sources rather than being directly from individuals. No primary data like surveys, interviews and observations, will be collected. The study has not involved any human participants and hence, not require the collection of any sensitive or personal data. The data will be obtained from a range of publicly available sources. These includes books, peer-reviewed academic journal articles, and reputable business publications. The academic databases like Google scholar will be utilised to determine the relevant research by using keywords "AI-driven customer insights", "Personalisation in e-commerce", "Amazon artificial intelligence strategy", and "data-driven competitive advantage" will be utilised towards searching for appropriate sources. Company-specific information will be further gained from publicly available document of Amazon including Annual report from the last 5 years, investors presentation and its official website content. This sources can help in gaining insights into how Amazon uses AI technologies like predictive analytics, recommendation systems, and logistics optimisation. Industry reports from organisations like Statista and Deloitte will also used to gain insights into the trends that are related to e-commerce and AI adoption. These sources can assist in supporting the analysis with evidence like consumer preference, growth rates, and impact of personalisation on purchasing behaviour. The secondary qualitative data will be organised and reviewed systematically. The information will be selected based on research topic relevance and publication date with preference over last five years data to ensure that the study reflects current practices. Lastly, thematic analysis will be used to gain insights into the key themes based the research objectives.
7	This should describe how you intend to collect data. It should not include a discussion of the theoretical basis for your data collection methods. Please note, that if you intend to collect any audio/video recordings of interviews with participants then these will be classified as Personal Data under GDPR/DPA2018. If you intend to use these then note this in section H. (this box should expand as you type)

SECTION D: 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?	☐	☒

ETHICS FORM – UNDERGRADUATE AND TAUGHT POSTGRADUATE COURSES ONLY

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 you have ticked NO to every question then the research activity is (ethically) low risk and you may skip section E and continue to section F.

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

SECTION E: Intended Participants

Who are the intended participants:	YES	NO
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1	Students or staff at the University?	☐	3
2	Adults (over the age of 18 and competent to give consent)?	☐	3
3	Vulnerable adults?	☐	3
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☐	3
5	Prisoners?	☐	3
6	Young offenders?	☐	3
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	3
8	People engaged in illegal activities?	☐	3
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.		
	Details of any other participant groups: Complete this only if your participants cannot give consent. This includes animals (this box should expand as you type)	☐	3

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?	Ballpark figures are fine but make sure that you explain how you will identify and contact your participants. Since the research will be <u>a Secondary Qualitative research</u>, there is no participant involvement.
11	Who will the participants be?	Since the research will be <u>a Secondary Qualitative research</u>, there is no participant involvement.

12	How will you identify the participants?	Since the research will be <u>a Secondary Qualitative research</u> , there is no participant involvement.
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	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			
	You should be able to tick YES for all of these questions. If not, then explain why not in this box. (this box should expand as you type)			

	Information for participants:	YES	NO	N/A
24	Will participants be paid?	☐	☐	☒

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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			
You should be able to tick NO for most of these questions. For any cases that you have ticked YES then provide details in this box. If you are using cameras/voice recorders to record interviews, then please state that in this box. <i>(this box should expand as you type)</i>				

SECTION F: 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.	
1	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information. If you have identified in section D that there are no participants, then enter N/A and go skip to question 3.	
	Risk to participants: Although, the research does not involve any participants, there is a minimal risk that may exist if secondary data includes sensitive information. There is small risk of misunderstanding of data that can evaluate affect organisation discussed in research.	How you will mitigate the risk to participants: All data will be obtained from publicly available sources. There will be no confidential or personal data used. Information will be presented in non-identifiable manner. Proper referencing will be followed in avoiding misrepresentation.
2	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	

	This research does not involve personal or sensitive topic like criminal activity, health, and personal behaviour. All information used will be from publicly available sources.	
3	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: Potential risk includes mental fatigue from data extensive data analytics, possible bias, academic misconduct.	How you will mitigate the risk to the investigator: The research will follow structured work to manage workload. All sources will be properly cited and avoid misconduct as per university requirement.
4	University/institutional risks For example: adverse publicity, financial loss, data protection	
	Risk to the University: There is potential risk of reputational damage if research tends to include inaccurate information, failure to follow ethical guideline, and misinterpretation of data.	How you will mitigate the risk to the University: The research will follow ethical and academic guideline. Only peer-reviewed and credible sources will be used. Proper referencing and data handling practices will also <u>maintained</u> to ensure integrity and accuracy.
5	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment: The research is desk-based and not involve any physical activities. Minor environmental effects might arise from electronic device or energy consumption.	How you will mitigate the risk to environment: The research will decrease the environmental impact by minimising unnecessary printing or depending on digital resources only.

SECTION G: Feedback, Consent and Confidentiality

If you have identified in section D that there are no participants, then enter skip this section and continue to section H.

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when?
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	You don't need to email your participants with your final report. A good alternative is to set up an email address that they will be able to contact for further details or results. The research does not involve any direct <u>participant</u>, thus Formal debriefing is not required. Any uninterested individual may request further information across the study or a summary of their findings by this contact. Feedback will be provided on request after the completion of the research.
2	Informed consent
	If you are using a paper questionnaire then you should have the participants sign an appropriate consent form. These forms will count as personal data and should be noted as such in section J. If you are using an online questionnaire, then you should have a screen before the questions start that acts as a consent form, informing participants that by clicking on the NEXT button they are providing consent. Not application, since the research will be secondary.
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. Not application, since the research will be secondary.

SECTION H: 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	<i>"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.</i>	☐	☒
	If YES, provide a description of the data and explain why this data needs to be collected:		

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2	This includes audio/video data of participants but can also include IP addresses and usernames. Names, addresses and emails also count, as do consent forms. Not application, since the research will be secondary.		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	<i>"Special category data" means sensitive personal data consisting of information as to the data <u>subjects'</u> –</i> <i>(a) racial or ethnic origin,</i> <i>(b) political opinions,</i> <i>(c) religious beliefs or other beliefs of a similar nature,</i> <i>(d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992),</i> <i>(e) physical or mental health or condition,</i> <i>(f) sexual life,</i> <i>(g) genetics,</i> <i>(h) biometric data (as used for ID purposes),</i>	☐	☒
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	What counts as 'sensitive' will differ between cultures. Any information on behaviour that is not in accordance with cultural norms would count as sensitive personal data. Not application, since the research will be secondary.		

	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:	☐	☒

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:
	If possible, save your data on computers that are secure and regularly backed up. Many cloud services only provide GDPR-compliant storage for business customers. An example of suitable text is given below. <i>All data will be kept in password protected cloud storage on the University Office 365 system which will not be shared. Audio/visual data will be transcribed and would be shown to participants to check accuracy of reporting. Any USB sticks used to store or transfer data will be password protected. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder.</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	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/or any international equivalent):		
	This includes data such as drafts of your thesis as well as experimental or survey data. An example of suitable text is given below. <i>All data will be encrypted and kept in password protected cloud storage on the University Office 365 system which will not be shared. Any USB sticks used to store or transfer data will be password protected. All data transfers will be encrypted and password protected. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder. The data will be stored until the completion of the project and then deleted. In accordance with the DPA2018, participants will have the right to ask to see what data is held relating to them, and this</i>		

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	data will be deleted immediately if the participant requests this, in which case the data will not be used in the project.		
20	List all who will have access to the data generated by the research activity:		
	Normally the principal researcher, possibly also the supervisor and, if the project has an industrial partner, a representative of that partner. Possibly also external examiner or second marker? Access to the data will be limited to the researcher and academic supervisor for guidance and feedback. In addition, the data may be accessed through internal examiner. No third parties or external organisation will have access.		
21	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	Usually the principal researcher. Researcher will act as main custodian of data and will be responsible for collection, management, and storage.		
22	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.		
	All data will be encrypted and kept in password protected cloud storage on the University Office 365 system which will not be shared. Any USB sticks used to store or transfer data will be password protected, and will be reformatted at the end of the project in order to destroy the data. The data will be stored until the completion of the project and then deleted. All data will be stored securely in password-protected files using University Office 365 cloud storage.		
22	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	☒	
23	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	☒	

SECTION I: Use of AI tools

Use of generative AI and other AI-based tools			
There are a number of ethical issues relating to the use of generative AI and other AI-based tools, including data security, output bias, and output errors. In general you should assume that any generative AI or other AI-based tool	YES	NO	N/A

that you pay to use is more secure and accurate than one which is free to use.				
Will the research use AI tools to do any of the following:				
1	Capture data?	☐	☒	☐
2	Generate and/or edit text?	☐	☒	☐
3	Generate graphics?	☐	☒	☐
4	Generate video?	☐	☒	☐
5	Generate sound/music?	☐	☒	☐
6	Generate code?	☐	☒	☐
7	Generate synthetic data?	☐	☒	☐
8	Analyse data?	☐	☒	☐
9	Analyse personal or sensitive data?	☐	☒	☐
10	Classify data?	☐	☒	☐
11	Do you intend to use the free version of any AI tools?	☐	☒	☐
If you have answered YES to any of questions Q1-Q11, please provide justification detailing why this is necessary for the research.				
12	State which AI tool or tools you will be using, and where they are based (or store their data – you may need to check their webpages or user agreement for this). If you are planning to use Copilot then say if you're using the UWTSD version of it or the public version. You should also show how you are complying with current UWTSD guidance/policy of the use of AI. Not Applicable.			

SECTION J: 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.
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	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:		Date: 19/03/2026
2	Supervisor:		Date:
3	Signature:		20/03/2026