Faculty of Business Economics

Master of Management

Master's thesis

Data driven customer engagement

HENRY OJO-KOLAWOLE

Thesis presented in fulfillment of the requirements for the degree of Master of Management, specialization Business Process Management

SUPERVISOR :

Prof. dr. Koenraad VANHOOF

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PREFACE

Customer engagement describes how companies or organisations connect with their customer community to cultivate brand loyalty and enhance brand recognition. Studies have illustrated and buttressed the importance and relevance of data-driven customer engagement in organisations. As crucial as these explorations are, there is still a need to exhaust and unravel the other imperative aspects of data-driven customer engagement, which promotes customer retention. Hence, this study examined how relevant customer experience to customer engagement can be consistently attained and understood.

The study adopted a systematic literature review method in conducting the research. The search strategy and selection criteria were limited to published peer-reviewed articles and journals. The UHASSELT Library database was used to gather relevant journals for the review. The database comprises a widespread pool of journals relating to customer engagement, Data-driven customer engagement, and customer experience and engagement. A total of 80 scholarly journals were critically reviewed.

The findings show that the key indicators to describe customer experience and engagement can be attained and understood through customer satisfaction with the brands and products of businesses. Further, the study also shows that through sophisticated data-driven engagements, customers can be better engaged and understood; however, the use of Sophisticated data-driven engagements is dependent on some series of factors such as how well an organisation embraces the practice, ethical issues, managerial and technical considerations, and some substantial variations in the usage of a data-driven approach. The findings suggested that an organisation that identifies its customers' needs and attempts to understand and improve the satisfaction derived from using its products or services through continuous customer engagement will be more profitable than organisations that do not. Since customer experience and customer engagement can be attained and understood through customer satisfaction with the brands, services, and products of businesses, business owners and managers should ensure that they produce and develop products, brands, and services that engage the customer to be profitable.

Keywords: Customer engagement, Data-driven engagement, and Customer satisfaction.

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EXECUTIVE SUMMARY

In a world of ever-changing customer needs, the enterprise realised the need for an agile way to adapt to meet these needs. However, meeting the needs of the customer requires consistent interaction and engagement of the customers (Vivek et al., 2012). This led many companies to be customer-centric in their way of doing business. There are different ways of engaging customers, but the reengineering of companies with changes in communication technology and increasingly innovative computer systems that generate data in real-time necessitated a rethink of how companies' strategies for retaining their customers (Hammer et al., 2009; Hsieh, 2010). The reengineering of businesses allows unstructured data to be available more across the business processes. Data-driven customer engagement involves using customer data to create personalised and meaningful interactions, resulting in enhanced customer relationships and business success. This project work, however, explores about 80 scholarly articles to examine the trend of customer engagement using systematic literature. The study concludes that understanding customer satisfaction can be derived by consistently engaging customers and maximising the information generated from the interactions. However, this depends on how strategic customer data are used by an enterprise to enhance and optimise interactions between businesses and their customers.

TABLE OF CONTENT

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Customer engagement is a means whereby a company or an organisation develops a relationship with its customer base to foster brand loyalty and awareness. Customer engagement is also conceived as a marketing approach and strategy that is intentional and consistent. Companies use it to provide value to their customer, resulting in customer loyalty and higher company profit. According to Kunz et al. (2017), customer engagement is one of the primary drivers of a firm's financial success. Jaakkola and Alexander (2014) argue that customer engagement aggregates ways customer behaviours influence businesses. Vivek et al. (2012); Bilro and Loureiro (2020) opine that customer engagement relates to "the intensity of an individual's participation in and connection with an organisation's offerings or organisational activities, which either the customer or the organisation initiate". An organisation's long-term competitive advantage depends on its ability to retain, sustain, and nurture its customer base (Van Doorn et al., 2010).

Studies[1] such as Razmus (2021); Habib et al. (2022); Shang & Lin (2010); and Yu et al. (2013) have illustrated the importance of customer satisfaction in an organisation's growth. According to Vivek et al. (2012), customer engagement in businesses became increasingly imperative after the Marketing Science Institute (MSI) advocated for a better understanding of engagement due to the changes in communication technology. These changes informed and necessitated a rethink of how companies, Chief Executive Officers (CEOs) and Chief Marketing Officers (CMOs) view marketing. They assert that relying on product quality and value as a business driver or an organisation's performance became limiting in sustaining and nurturing the customer base. Understanding customers' behaviours became imperative in ensuring and maintaining competitive organisational advantages.

Data-driven customer engagements enable companies and businesses to forecast and manage the needs of their clients. Olszak and Zurada (2019) explain that big data has a high business value and help businesses and organisations to achieve competitive advantage. Similarly, Forbes (2015), in their marketing software and analytics platform, reported that data-driven marketing delivered remarkable results relating to customer loyalty, customer engagement, and market growth. The increasing trend in data-driven customer engagement is attributed to the advancement in innovative technologies, new channels, and new gadgets, and on the other, to satisfy customers while maintaining remaining competition in the marketplace. Despite the immense importance and contributions of data-driven customer engagements to businesses and organisational growth, adopting data-driven marking remains problematic due to a lack of tools and knowledge about the value of customers' data (Olszak & Zurada, 2019). Similarly noting this problem, Forbes (2015:15) stated, "*While many organisations have some form of data-driven marketing in place, strategies are*

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[1] Also other studies such as Khulani and Musundire (2020); Shirazi et al., 2021 and Eigenraam et al., 2020 have buttressed the importance of social media marketing on customers and its influence on organizational growth

being implemented in piecemeal fashion, within siloed business units, without fully taking advantage of the available resources".

In line with the above, this research aims to determine how businesses can adequately and consistently understand customer experience and engagement.

1.2 Statement of the Problem

This study examines how relevant customer experience and engagement can be attained and understood in recent years. Studies such as (Pugna et al.,2022); Madhala et al.,2022); Gallup, 2014); Harmeling et al.,2017); Vivek et al., 2012); Van Doorn et al., 2010); Hossain et al., 2020 and So et al., 2014) have all illustrated and buttressed the importance and relevance of data-driven customer engagement in organisations. As crucial as these explorations are, they do not exhaust and unravel the other imperative aspects of data-driven customer experience and engagement, especially regarding how relevant customer experience and engagement can be attained and understood.

Studies such as Forbes (2015) and Olszak & Zurada (2019) have identified some issues relating to the implementation of data-driven customers engagements outcomes. De Vries et al. (2014) noted that "current[2] research in this area is mostly hypothesis-driven and much debate about the concept of customer engagement and its related constructs have not been well explained in the literature". With few exceptions, current research on the subject matter has explained and emphasised the benefits of customer engagement to organisations and businesses[3]. These perspectives are limiting as they do not adequately explain how relevant customer experience and engagement can be attained and understood. Van Doorn (2011) argues that more investigation is required to enhance and conceptualise customer engagement and identify its precursors, outcomes and, from a managerial standpoint, strategies for directing and overseeing customer engagement.

In line with the above, this study fills this gap and researches how relevant customer experience and engagement can be attained and understood. Through an extensive literature review, this thesis addresses this question.

1.3 Research Questions

Specifically, the study answers the following questions in respect of its case study:

1. How can relevant customer experience and engagement be attained and understood?
2. How have customers been better engaged through sophisticated data-driven engagements?
3. How can customer engagement contribute to sustained business growth?

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[2] It means in the area of data driven and customer engagement in firms or organizations.
[3] Kunz, et al., 2017 is an example of research that tries to balance both views.

1.4 Objectives of the Study

The general objective of this study is to examine how we can understand and consistently attain relevant customer experience and engagement, especially as it relates to customer data. Specifically, the study aims:

1. To examine how relevant customer experience and engagement can be attained and understood.
2. Identify how customers have been better engaged through sophisticated data-driven engagements.
3. To know how customer engagement can contribute to sustained business growth.

1.5 Significance of the Study

The three aspects of this study are justified and accounted for through reviewed literature. First is the importance of using customer data to facilitate firm or organisational growth. Relevant data obtained from firms' engagements with their customers tend to address customers' needs, which in turn relates to profit and the company's growth. Through data from online surveys, emails, and phone calls, companies assess customers' views on their products and how they can be improved.

The second significance of this study is the importance and acknowledgement of the role of customers in business growth. This study shows how customers determine an organisation's market competitive market advantage. The actions and behaviours of customers towards a product or service determine the success or failure of a product (UKEssays, 2018). Certain brands have been affected by the behaviours[4] of certain persons toward their products.

Lastly, this study is critical because it discusses the use and immense contributions of social media and modern communication technologies in business and organisational growth. Modern communications technologies such as Zoom, Google Hangouts, Skype etc., are used by companies and organisations to facilitate interaction with customers quickly and faster, unlike the conventional ways of conducting business. Also, social media platforms such as Instagram, Twitter, YouTube, and Facebook are now used for adverts and targeting customer bases.

1.6 Scope of the Study

A systematic review of scholarly works on customer engagement and customer roles, customer behaviours and activities that affect and influence businesses, brands, and products was conducted. Thus, the activities and roles of consumer behaviours on distinct brands, products, sectors of the economy, and organisations were studied based on scholarly research and findings from the literature to enable a holistic review of how relevant customer engagement can be attained and understood.

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[4] During a press briefing, Cristiano Ronaldo (Cr7) reacted a certain way to coca cola and this reaction of his led to the loss of sales for coca cola.

1.7 Conceptual Clarifications and Specifications

Customer Engagement

There are many conceptions of the term customer engagement. Scholars have viewed it from different perspectives. Practitioners view it as a set of activities "facilitating interactions that strengthen the emotional, psychological or physical investment a customer has in a brand" (Sedley, 2010). In contrast, academics conceive customer engagement as engagements between customers and organisation members that lead to the knowledge exchange process. Harmeling et al. (2017) define customer engagement as **"**a firm's deliberate effort to motivate, empower, and measure customer contributions to marketing functions—marks a shift in marketing research and business practice". Van Doorn et al. (2010) define customer engagements in behavioural terms as a customer's behavioural manifestations other than purchases towards a brand or product.

1.8 The Outline of Chapters

Chapter One provides the introduction and background to the study. It also provides the significance, research objectives, scope of the study and definition of terms. Chapter two extensively reviews relevant literature on understanding and consistently attaining relevant customer experience and engagement. It also discusses the theoretical framework. Chapter three gives a detailed explanation of the research methodology. The research design, sources of and methods of data collection and the method of data analysis will be adequately discussed. Chapter four discusses the findings of the study from the extensive review. Finally, the fifth and last chapter concludes, discusses, and summarises the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examines how relevant customer experience and engagement can be understood in different sectors of the economy. It discussed the factors and conditions more likely to determine and influence the emotional connection and interaction between a customer and a brand from the literature.

2.1 Understanding Customer Experience and Engagement in Business

Organisations have recognised the importance of customer engagement in fostering business growth and development. Scholars have thoroughly explored the comprehensive understanding of customer engagement. Matute et al. (2021) attempted to study customer engagement; they proposed and empirically tested a model of antecedents and consequences of customer brand engagement for user-initiated online brand communities. They concluded that organisations' online activities positively impact and influence customers' experiences in a particular brand. Moliner et al. (2018) studied customer engagements in the banking sector and argue that marketing activities developed at the operational level influence the brand; thus, each branch implements the commercial and marketing activities that lead to the best match between the brand's personality and the customers' self-concept. Dolan et al. (2019) used the social media engagement behaviour of customers and found that rational content rather than emotional, social media content stimulates more active engagement among social media followers.

Roy et al. (2020) explored customer experience, commitment, and engagement behaviour and concluded that to achieve positive customer engagement; managers should consider service convenience as a potentially critical factor in determining firms' success in creating customer engagement. This implies that organisational managers have a role in ensuring good customer experiences.

Moliner-Tena et al. (2019) explored customer behaviours in two Spanish banks, and their finding suggested that the creation of physical spaces within the bank's atmosphere and the type of interactions with contact personnel have a vast and positive impact on customer behaviour and loyalty. Martisiute et al. (2010), in their research on Customer Satisfaction and Customer Loyalty on brands, conclude that the satisfaction derived from a brand positively impacts the customer's loyalty. Similarly, Mostert et al. (2016) and Rasheed & Anser (2017), in their study on smartphone users in South Africa and Pakistan respectively, found a direct positive relationship between customer satisfaction and brand loyalty to smartphone brands among consumers. Therefore, they concluded that there is a direct positive relationship between customer satisfaction and brand loyalty to smartphone brands among Generation Y consumers. Sari and Wijaya (2019), in their study on customer engagement in Beauty Clinics in Surabaya, Indonesia, revealed that a positive experience for the customers has an impact on customer loyalty. They further concluded that the strong emotional attachment that the customers have towards the beauty clinics brand is based on the continual relationship between the service provider and its consumers. Loureiro et al. (2012)

explored the relationship between brands and customer loyalty and concluded that brand attachment is positively related to brand love, reinforcing trust and interest in continuing a relationship. Their study further revealed that men identify socially with brands while women place more importance on dyadic relationships. Ala et al. (2021) examined enhancing consumers' loyalty to Islamic banks. The researchers found that adherence to Shariah principles is a significant indicator of consumer behaviour and purchasing choices, as customers perceive Islamic banks as being compliant with Shariah regulations. As a result, the customers pledge loyalty and obedience to Islamic principles and practices. Hence, Islamic Banks have and enjoy a strong and growing customer base because of their Islamic principles. In their study on customer purchasing behaviour, Nabi et al. (2015) reveal that customer satisfaction also affects brand loyalty.

On the contrary, Torres-Moraga et al. (2008) argue that customers' engagements are based on the product type and not the brand; by so doing, Customers derive value from products on their own merits, regardless of the brand associated with them. This self-sufficiency leads to satisfaction and the cultivation of product loyalty.

Yang et al. (2021) studied how online brand community experience affects customer behaviour, concluded that customer community experience substantially impacts customer voice behaviour. Among these impacts, information experience and sociability remain essential factors affecting customer voice behaviour, which is vital for maintaining brand community and improving products or services. Based on their findings, they recommend that the Brand community managers regularly create different information presentations and interaction channels to enhance community members' information and social experience. Singh et al. (2017), in their research on social, corporate responsibility and consumer behaviours in India and concluded that a company's corporate social responsibility performs a crucial role in influencing the choice to purchase a product or service. Thus, in India, consumers' buying behaviour is influenced by the social corporate responsibility of an organisation. Sofi et al. (2018) examined the impact of subliminal messages in TV advertisements on consumer behaviour. The study found that subliminal exposure has had a significant effect on the overall buying behaviour of young consumers.

Sofi (2020) examined personality as an antecedent of the impulsive buying behaviour of young Indian consumers. The study found that personality significantly determines the cognition and affection of a young consumer. To be exact, three elements, namely, emotional stability, conserving propensity and conscientiousness, are positive indicators of personality that influence consumer's buying behaviour. The study further revealed that more expressive consumers tend to achieve unmatched product combinations; therefore, it would be easy for a seller to identify highly expressive consumers and match them accordingly. Based on these findings, she concluded that varied product combinations could be an excellent strategy to entice this consumer class and leverage higher sales. Retailers could mostly tap the expressiveness for an increase in sales.

Karami et al. (2017) studied cultural values and customer behaviours in Iran. Their findings reveal that out of seven of the preceding value factors, cosmopolitanism was the most influential, and faithfulness was the least influential in consumers' behaviour. They concluded that although Iranian

society is religious, religion is not especially meaningful regarding Iranian consumer behaviour. Akkucuk & Esmaeili (2016) researched the factors behind the smartphone purchase decisions of consumers and concluded that most smartphone buyers' decisions are mainly influenced by brand loyalty and brand awareness.

Haryanto et al. (2019) researched the relationship between product quality, price, and convenience with a positive attitude and intention to buy traditional food. The result suggested that the positive attitude and purchase intention are impacted by factors such as price and quality. Sukendi et al. (2021) conducted examined the correlation between e-service quality, customer" experience, customer" engagement, and customer" loyalty within B2C e-commerce.

Sashi (2012) examined customer engagement, buying–selling relationships and social media. Their findings showed how influential the quality of e-service is on the use of B2C e-commerce by customers' experience, which is in turn influenced by website design, fulfilment/reliability, customer service, and security/privacy. The research concluded that social media helps shift control of decisions customers make. By changing how sellers and customers connect and interact, social media enables customers to participate in making strategic choices jointly with sellers and co-create value with them. Tu's (2004) study on the impact of emotions and service experience on customers suggested that the customer's total service experience is the primary determinant of his/her satisfaction.

Siitonen et al. (2023) researched customer perspectives on demand response in Europe and found that motivation, interaction and communication, and feedback influence customer engagement in demand-response programs. They further argued that social interaction and support, as well as the importance of customer education and easily interpretable information, are significant based on these discoveries; they concluded that more focus should be on building customer relationships and integrating customer perspectives into the design of demand-response programs.

Harris & Dennis (2011) researched emerging interactions between young consumers and consumer products or services on social networks. They concluded that recommendations from friends appear to have a significant influence on altering online shopping behaviours; it is suggested that a hierarchy of trust, depicted on an ordinal scale among recommenders or reviewers, ranging from close personal contacts at the highest level to reviews posted on retailers' websites, could potentially correlate positively with purchase intentions.

Suh & Yi (2006) investigated how customer satisfaction and brand attitudes influence brand loyalty and what processes underlie this influence. Their study revealed an indirect route from customer satisfaction to brand loyalty through brand attitudes and a direct link from customer satisfaction to brand loyalty. Hence, they recommended that firms should focus on corporate and brand advertising to increase repurchase rates, gain market share in high-product involvement cases, and improve product quality because this determines purchasing rate.

Budiastari (2016) study on the effect of product quality, price perception, and brand image on satisfaction and customer loyalty ready mix concrete in Jakarta concluded that product quality impacted customer satisfaction.

Chen et al. (2022) examined the impact of customer engagement and service evaluation on hotel customer behaviour intention. Their findings concluded that customer engagement has a direct positive effect on brand trust. They further argued that identification, enthusiasm, attention, absorption, and interaction directly affect brand trust. Their findings suggested that hotel companies can gain consumers' trust in the brand by paying attention to them.

Chatzoglou et al. (2022) investigated the factors affecting consumer repurchase intentions in retail stores. Their findings found customer satisfaction, merchandise value (quality), customer loyalty, and perceived value as four factors with the highest effect on repurchase intention. Méndez-Aparicio et al. (2020) examined Customer Experience and Satisfaction in Private Insurance Web Areas. A sample of 4,178 registered customers was analysed using the partial least-squares technique. From their findings, they concluded that perceived digital quality is what delivers an authentic customer experience.

Loureiro et al. (2012) examined brand emotional connection and loyalty. The research consisted of consumers who bought one of three car brands: Toyota, Ford, and Renault and lived in three regions of Portugal. Their findings suggested that brand attachment is positively related to brand love. Brand love, in turn, reinforces trust, interest in continuing a relationship, and faith in the brand's future. The result also found that women exhibited trust and placed more importance on dynamic relationships than men who identified socially with the brands. Moliner et al. (2018) examined the impact of customer engagement and customer self-brand connection on customer advocacy and firms' financial performance. The research findings reveal that customer engagement generated in bank branches is essential and has emotional and financial repercussions for the individual branch. Hence, they concluded that in the branch environment, customer engagement directly and significantly impacts the branch's financial performance.

Yang et al. (2021) examined the mediation effect of community engagement between community experience and customer's voice and the moderation role of community commitment. Their research reveals that customers' community experience substantially impacts customer voice behaviour. They further argued that information experience and sociability are essential factors affecting customer voice behaviour, which is vital for maintaining brand community and product or service improvement. He et al. (2013) conducted a comprehensive case study that utilised text mining techniques to analyse unstructured text content found on the Facebook and Twitter pages of three major pizza chains: Pizza Hut, Domino's Pizza, and Papa John's Pizza. They concluded that these pizza chains actively engaged their customers on social media, and they used the platform to promote their services and bond with their customers. The results also reveal that social media is essential in sustaining a positive customer relationship.

Sahoo & Pillai (2017) examined the potential influence of mobile banking servicescape on customer attitude and engagement. A web-based survey of 345 mobile banking users was conducted to gather data. The research findings revealed that Mobile banking servicescape strongly predicts customer attitude towards mobile banking and influences customer engagement. Thus, customer attitudes mediate the mobile banking servicescape and engagement.

Kim & Kim (2014) investigated what values luxury customers may seek to fulfil during their interaction with salespersons and how perceived value fulfilment may impact salesperson loyalty and store loyalty. Their findings revealed that fulfilling self-oriented values significantly influenced store loyalty, and fulfilment of stimulation positively influenced salesperson loyalty.

Torres Moraga et al. (2008) examined customer satisfaction and loyalty concerning products and brands. Their findings reveal that customer satisfaction and loyalty can be achieved by either emphasising the product or the brand, depending on the level of development of the product or product line in the markets. In line with Torres Moraga et al. (2008), Mostert et al. (2016) examined the interrelationships between customer satisfaction, brand loyalty and the relationship intentions of Generation Y smartphone users living in Gauteng, South Africa. Self-administered questionnaires were fielded among 395 Generation Y smartphone users. The findings of the research revealed that there is a direct positive relationship between customer satisfaction and brand loyalty to smartphone brands among Generation Y. Thus, the study recommended that smartphone marketers should segment their customers based on their relationship intentions, thereby ensuring that optimal resources are invested in building relationships with customers who show high relationship intentions.

Rather (2019) examined the interrelationships among consumer engagement and higher-order marketing constructs, including trust, satisfaction, commitment and customer loyalty within the hospitality industry. The result shows that consumer engagement increases satisfaction, commitment, trust, and loyalty. Marcos & Coelho (2022) examined the intermediary function of perceived value and satisfaction in connecting service quality (both in terms of facility and interaction) with loyalty within the insurance sector. The results revealed that service quality directly relates to perceived value and satisfaction. In turn, perceived value directly affect satisfaction. Perceived value and satisfaction influence loyalty and word of mouth.

Siitonen et al. (2023) investigated associated customer experiences and attitudes to understand the factors influencing customer engagement in residential demand-response programs. The research results indicated that motivation, social interactions, customer education, interaction and communication influence customer engagement in demand-response programs.

Ling et al. (2021) examined the factors influencing users' adoption and use of intelligent conversational agents (ICAs) through a literature review. Their results revealed that factors found to influence human-machine cognitive engagement were categorised into usage-related (performance), agent-related (the designed appearance, movement, likability), user-related (psychological and demographic factors), attitude and evaluation.

2.2 How Customers Have Been Better Engaged Through Sophisticated Data-Driven Management

Zdolsek Draksler et al. (2023) examined the integration of new digital technologies to assess process optimisation potential in the postal sector. Their results demonstrate integrating new digital technologies for process optimisation in real-time to manage changes. The utilisation of CA demonstrated potential for future implementation in the postal and logistics sector. It offers a dynamic approach to handling disruptions in the logistics chain by employing advanced optimisation and predictive analytics techniques.

Werder et al. (2020) examined how Ubisoft's Ghost Recon Wildlands Live Unit Uses Data for Continuous Product Innovation. The study concluded that through the creation of procedures and competencies for these methods and by integrating them using a portfolio approach to product design, they optimise the potential for generating value from the available data.

Stone et al. (2019) reviewed the progression of thoughts regarding the information requirements of companies for effectively assessing their customer engagement. The review spanned three decades, highlighting the evolution of thinking and practices in this domain, ultimately leading to data-driven customer engagement. Their findings reveal that companies can accurately understand how well they manage customer engagement, provided a careful assessment approach is used.

Kunz et al. (2017) examined customer engagement in a Big Data world. In their study, they recognised the challenges in balancing the needs of customers and firms while performing the engagement activities so that both parties receive a positive impact. According to the author's argument, the long-term viability of data-driven customer engagement relies on a dynamic and iterative value creation process. This process entails customers acknowledging the value of their engagement behaviours and the firm's capacity to capture and reciprocate value back to customers.

Cardell-Oliver & Olaru (2022) examined the data-driven approach for classifying the long-term engagement of public transport riders at multiple temporal scales. Their study found that transport planners can no longer address urban transport issues using only one or a few days of data or apply blanket measures without accounting for these substantial temporal variations.

Islam et al. (2019) investigated how banking online presence can activate customer engagement (CE) to enhance customer interaction, trust and retention. Data was collected from 598 customers of various (public and private) banks in India. Their findings show that online presence se such as websites can start customer engagement (CE).

Kadiyala et al. (2021) examined the Data-Driven Approaches to Targeting Promotion emails. The findings show that their data-driven approach targeting policies improve the promotion's profitability by 5.57% and email CTR by 472.57%, on average, compared to our partner retailer's current email policy. Liu &

Liu (2021) applied a data-driven decision-making strategy via Advantage Actor-Critic (A2C) and Deep Q-Learning (DQN) for electricity retailers. This study verified that data-driven methods can handle the decision-making problem and promote retailers' profitability in the electricity market.

In their research, Kumar et al. (2013) provided pathways to the benefits of data-driven services marketing. Their findings point to data's importance and untapped potential in its ability to inform tactical and strategic marketing decisions.

Chiang (2021) examined urban coffee shops in Taiwan using a data-driven marketing strategy for customer relationship management. Their study showed that these found markets and discovered rules could be applied to marketing information or customer relationship management (CRM) systems for identifying valuable customers and target markets.

Liu et al. (2020) examined Cloud-based big data analytics for customer insight-driven design innovation in SMEs by focusing on manufacturing SMEs in the UK's South Wales and Greater Manchester industrial areas. Their results found that while SMEs possess some product and customer data and use them in one way or another, they are not necessarily utilising what they already have effectively, as 67% of the respondents do not even use customer relationship management CRM. Thus, the inability of a firm to fully utilise the benefits associated with big data analytics raises some concerns. Their findings concluded that managerial and technical considerations are required for SMEs implementing big data and customer analytics.

Chiang et al. (2019) examined high-value markets for data-driven customer relationship management systems in Taiwan airline travelling agencies. Their research results show that businesses can discover customer values in their large-scale (big) CRM or marketing systems database.

Sutisnawati & Maulani (2019) examined Big Data's Impact on E-Commerce Development. Their findings show that Big Data improved shopping experiences, customer satisfaction, and increased sales.

Islam (2020) investigated how banking websites can activate customer engagement (CE) to enhance customer trust. Online data were collected from 598 customers of various (public and private) banks in India. The study finds that the vital website attributes, viz. website interactivity, website aesthetics, customisation, ease of use, and telepresence, positively affect CE.

Verbraken et al. (2013) formalised a cost-benefit analysis framework to define performance measures that are aligned with the primary objective of the end users, which is profit maximisation. Based on this, they suggested that when evaluating a classification technique to be used in a business context, it is imperative to establish any evaluation criterion on the end user's goal. Hence, from their finding, it is understood that companies rely more than ever on data mining techniques to support their decision-making processes.

Lau et al. (2016) examined a hybrid multi-criteria decision model for supporting customer-focused profitability analysis using an airline company as a case study. Their findings showed that the airline management uses the ranking results to enhance customer profitability; they aim to restructure marketing initiatives, design integrated schedules, allocate fleets, determine maintenance routing, schedule crews, and dynamically optimise schedule recovery during and after disruptions or anomalies.

Peng & Bai (2022) examined the prospects for improving shipping companies' profit margins by quantifying operational strategies and market focus approach through Automatic Identification System (AIS) data. Their findings showed that using AIS data, the profitability of LSCs is positively related to speed choice but negatively related to service frequency, capacity allocation, and idle capacity ratio.

Wong & Wei (2018) examined Customer online shopping experience data analytics to analyse their online purchasing behaviour and predict subsequent purchases from an online air travel corporation. Their findings show that the number of purchases in the tested panel data could be extended from the traditional analysis of two weeks before the departure date to the daily purchase number over the two weeks before the departure date.

Rahman et al. (2023) examined the significant pathway and effects of AI-powered digital assistance toward customers' luxury brand online shopping experience. The study's findings show that artificial intelligence (AI)-powered digital assistance (AIPDA) is one of the critical antecedents in the luxury brand retail industry to influence engagement. Their findings recommended that luxury brands integrate APDA into their online platform for personalisation at all stages of the customer shopping journey.

Prentice, Weaven, & Wong (2020) examined the moderating effect of AI preference and its influence on customer engagement in the hotel context. Information was gathered from a group of hotel patrons in Australia who had prior experience with AI tools or services. The research revealed that the preference for AI demonstrated a noteworthy moderating impact on both information quality and satisfaction.

Breidbach & Maglio (2020) examined, analysed, and explained the ethical considerations arising from transforming services into data-driven formats. The study observed that ethical issues might arise in using AI data. As such, they suggested that firms only implement algorithmic decision-making tools whenever the outcome of their decisions does not affect customers or other stakeholders in an unethical manner. Thus, the study concluded that to achieve and maintain the trajectory toward ethical analytics, service firms should, first and foremost, establish an ethical data culture.

Malodia et al. (2022) examined customers' willingness to meaningfully engage in service interactions enabled by artificial intelligence (AI) controlled voice assistants (VA). The study's results demonstrated that convenience and status-seeking are enablers and positively influence trust in VAs. In contrast, the risk barrier acts as an inhibitor and negatively impacts trust in Vas.

In their research, Nayak Kinin & Basri (2022) tested the influence of customer-based antecedents such as emotions, moral identity, self-concept, communal focus, perceived cost and perceived benefits on non-transactional experiential customer engagement behaviours (CEBs) and CEBs' effect on customer advocacy in the FinTech industry. Results indicate that customer engagement behaviours fully mediate the relationship between self-concept and customer advocacy. Positive customer engagement behaviours (CEBs) get formed through customer predispositions leading to referral/advocacy behaviours.

Bilder et al. (2020) examined the increasing Consumers' Willingness to Engage in Data Disclosure Processes through Relevance-Illustrating Game Elements. Their study suggests that retailers can leverage consumers' willingness to enter disclosure processes by designing their data requests.

Magee et al. (2016) examined the impact of data visualisation on user engagement and sales results. Their findings illustrate that a data-driven approach to the sales engagement cycle can fundamentally improve performance. However, data initiatives require considerable transformation effort to be successful. As such, a range of technical, organisational, and cultural issues must be addressed before a solution can deliver results.

Kliestik et al. (2022) explored data-driven machine learning (DML) and neural network algorithms in retail. Their findings show that customer brand perception and satisfaction can be measured using machine learning algorithms and big data.

Dawson (2022) systematically reviewed research on data-driven consumer engagement, virtual immersive shopping experiences, and blockchain digital assets in the retail metaverse. The study concluded that customised production could improve virtual retail and augmented shopping experiences by deploying consumer behaviour data throughout Web3-powered metaverse worlds.

Daneshvar Kakhki & Nemati (2022) examined the Value-based view of firms enabled by data analytics through aligning suppliers for customer value creation. Their Findings illustrate that Data Analytics (DA) capabilities improve customer-centric focus orientation (CCFO) and the creation of value through Strategic Supplier Partnerships (SSPs) and the utilisation of leverage for value generation introduce a novel perspective on how a company serves as a value-creating entity for its customers. Thus, the study concludes that deploying data analytics resources improves a firm's performance and value creation.

Preuveneers et al. (2017) examined Trustworthy data-driven networked production for customer-centric plants. Their research findings indicate that private blockchains can secure the Internet of Things (IoT) enabled dataflow-oriented networked production processes across the trust boundaries of the Industry 4.0 manufacturing enterprise. Despite this, there are also disadvantages regarding cost and managerial overhead for the other archetypes of next-generation plant models.

Chweidel et al. (2022) examined how digital consumer signals reshape the customer journey. They concluded that firms that are successful in collecting and acting on consumer digital signals would gain a considerable and lasting advantage over competitors.

Cai et al. (2022) examined Customers' perceptions of hotel AI-enabled voice assistants. Their study concluded that customers perceive a high level of usefulness, ease of use, and anthropomorphism when an AI-enabled voice assistant is branded (vs off-brand). Thus, Perceived usefulness positively affects customers' intention to use AI-enabled voice assistants and to spread positive word-of-mouth.

Kritzinger & Petzer (2021) explored relationships between motivational factors, customer engagement, and loyalty for WhatsApp subscribers in South Africa and the moderating effect of

application usage. The study reveals that utilitarian and hedonic motivation impact customer engagement positively in using WhatsApp, which, in turn, impacts loyalty.

Chen et al. (2019) examined how unstructured data from users can offer significant value for innovation. Their study identified a suite of methodologies for facilitating company co-innovation via engaging with customers and external data with cognitive computing technologies.

Tarute et al. (2017) examined mobile application-driven consumer engagement. Their findings illustrate that consumer engagement positively influenced users' intention to continue using mobile applications.

Florez Ramos &Blind (2020) used Spotify to examine data effects on data-driven innovation of online platforms. Their study illustrates that Data portability has the potential to impact competition by decreasing switching costs between online platforms in competitive markets; online platforms in competitive markets, like Spotify, will increase investments into exploiting data-driven innovation such as artificial intelligence to improve users' engagement. Moreover, online platforms facing no real competition will not have a substantial need to increase investments in data-driven innovation due to the risk and opportunity of increased churners given by data portability.

Castillo et al. (2021) examined social media-driven customer engagement and movie performance. Their findings suggest that personal and interactive engagement are positively related to movie performance, and the positive effects of individual and interactive engagement on movie performance are mutually reinforcing.

Niebel et al. (2019) analysed the relationship between firms' use of big data and their performance regarding product innovations. They concluded that big data analytics is a determinant for a firm becoming a product innovator and for the market success of product innovations.

Bag et al. (2022) examined the function of AI technologies in enhancing user engagement and driving conversions. Their result shows that deploying AI technologies positively correlates with user engagement and conversion.

Grandhi et al. (2020) examined Data-driven marketing (DDM) for growth and profitability. The study concluded that DDM's success relies on how well an organisation embraces the practice.

Khan et al. (2016) examined how customer-brand engagement influences brand satisfaction and loyalty in an online banking context. The online survey results show that customer-brand engagement positively influences online brand experience.

2.3 Summary of the Review

The literature under review demonstrated that optimum customer engagement using sufficient data about customer behaviour helps to understand the customer better to give them the satisfaction they look towards in products and services companies offer to these customers. Modern-day data-driven engagements help businesses or organisations to understand their customer; however, the use of Sophisticated data-driven engagements is dependent on some series of factors, such as how

well an organisation embraces the practice, ethical issues, managerial and technical considerations, and some substantial variations in the usage of a data-driven approach.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Method

The study examined how relevant customer experience and engagement can be attained and understood. The following research questions were formulated: What were the extent and dominant representations about how relevant customer experience and engagement can be attained and understood in current research? 2. How can relevant customer experience and engagement be attained and understood? 3. To what extent did current research depict the knowledge of customer experience and engagement?

3.2 Research Design

This study utilised a systematic literature review approach, drawing on prior research by Bueno et al. (2019), Mustak (2014), Siitonen et al. (2023), Rosado-Pinto et al. (2020), and Hao (2020). The research design adhered to established literature review guidelines.

3.3 Search Strategy and Selection Criteria

The search is limited to published peer-reviewed articles in journals, in line with what has been done in other studies on customer engagements and in other systematic literature reviews. Thus, only articles published in journals have been included in this study.

Electronic databases that have large numbers of highly reputable scientific publications were employed. These publications were selected based on the following criteria:

1. The database comprises a widespread pool of journals relating to customer engagement, Data-driven customer engagement, and customer experience and engagement.
2. The articles that enabled the understanding of attaining relevant customer experience and engagement.
3. Those databases contain clear and precise search functions and provide accurate and error-research results (for example, google scholar, UHASSELT Library). These databases provided comprehensive coverage of the subject under review.

Some of the databases that were selected and used include:

1. ScienceDirect (Elsevier).
2. Emerald Journals.
3. Total Quality Management Journal
4. Journal of Travel & Tourism Marketing
5. Journal of Brand Management
6. International Journal of Information Management
7. Marketing Intelligence & Planning
8. Global Marketing
9. ProQuest Central
10. The Journal of Consumer Marketing

11. Journal of Consumer Psychology

12. Global Business Review

13. Sustainability: Science, Practice, & Policy

14. Journal of Strategic Marketing

15. Frontiers in Psychology

Furthermore, keywords were used to search for relevant articles in their abstract, title or keywords sections. The keywords used include CUSTOMER ENGAGEMENT, CUSTOMER EXPERIENCE, CUSTOMER LOYALTY, CUSTOMER, AND A BRAND. These keywords produced many articles, and the non-relevant articles were excluded. Hence, only articles published in journals were included in the research. Thus, chapters of books or papers published in congresses were excluded from the research.

Table I. Summary of the Selection Criteria (Google et al. Library)

Filter	Description	Results
Relevance	All articles with customer engagement, customer experience, and customer loyalty in their abstracts, keywords, or title *over the years*	167,000
Relevance	All articles with keyword customer data engagement in the title, keywords or abstract	2,200,000
Relevance	All articles relevant to the research since 2019	16,300
Substantial	A random search and selection of articles with at least one keyword must appear in the title, keywords, or abstract	90
Substantive Methodology	Selecting and reading of the remaining articles to verify substantial Methodological relevance and scales used to understand how to attain relevant customer experience and engagement	85
Investigated Articles	Articles critically reviewed for the thesis	**80**

3.4 Sources of Data

The sources of data were secondary sources that were extracted from journals. The following journal publications were used for the research**.**

Method of Data Collection

Data was collected through the systematic analysis of the works of selected authors reviewed in the literature.

Table 2: Summary of Findings from included studies

Author(s)	Year of publication	Summary of Findings on how we can understand and consistently attain relevant customer experience and engagement
Matute et al.	(2021)	Organisations' online activities positively impact and influence customers' experiences in a particular brand.
Moliner et al.	(2018)	Marketing activities developed at the operational level influence the brand.
Dolan et al.	(2019)	Rational rather than emotional, social media content stimulates more active engagement among social media followers.
Roy et al.	(2020)	To achieve positive customer engagement, managers should consider service convenience as a potentially critical factor in determining firms' success in creating customer engagement.
Moliner-Tena et al.	(2019)	The creation of physical spaces within the bank's atmosphere and the type of interactions with contact personnel have a vast and positive impact on customer behaviour and loyalty.
Martisiute et al.	(2010)	The satisfaction of a brand impact consumer loyalty.
Mostert et al.	(2016)	There is a direct positive relationship between customer satisfaction and brand loyalty to smartphone brands among Generation Y consumers.
Sari and Wijaya	(2019)	A positive experience for customers has an impact on customer loyalty. They further concluded that the strong emotional attachment that the customers have towards the beauty clinics brand is based on the continual relationship between the service provider and its consumers.
Loureiro et al.	(2012)	Brand attachment is positively related to brand love, reinforcing trust and interest in continuing a relationship.
Ala' et al.	(2021)	Their study on Islamic banking and enhancing customer loyalty concluded that compliance is a valuable predictor of consumer behaviour and consumer purchasing decisions because customers believe that Islamic banks are Shariah compliant. As a result, the customers pledge their loyalty and obedience to Islamic principles and practices. Hence, Islamic Banks have and enjoy a strong and growing customers.
Nabi et al.	(2015)	Their study on customer purchasing behaviour reveals that customer satisfaction also affects brand loyalty.
Torres-Moraga et al.	(2008)	customers' engagements are based on the product type and not the brands; hence, customers appreciate products independently of the brand. Thus, they get satisfaction and develop loyalty to the product.
Yang et al.	(2021)	customer community experience has a substantial impact on customer voice behaviour. Among these impacts, information

		experience and sociability remain essential factors affecting customer voice behaviour.
Singh et al.	(2017)	cooperate social responsibility of a company is one of the determining factors while purchasing any product or service. Thus, in India, consumers' actual buying behaviour is influenced by the social cooperation responsibility of an organisation
Sofi et al.	(2018)	Subliminal exposure has had a significant effect on the overall buying behaviour of young consumers.
Sofi	(2020)	Personality significantly determines the cognition and affection of a young consumer.
Karami et al.	(2017)	In Iran, cosmopolitanism was the most influential, and faithfulness was the least influential in consumers' behaviour. The research concluded that although Iranian society is religious, religion is not especially meaningful in terms of Iranian consumer behaviour.
Akkucuk & Esmaeili	(2016)	In their research on the factors behind the smartphone purchase decisions of consumers, they concluded that most smartphone buyers' decisions are mainly influenced by brand loyalty and brand awareness.
Sukendi et al. 2021	(2021)	Their findings showed how influential the quality of e-service is on the use of B2C e-commerce by customers' experience, which is in turn influenced by website design, fulfilment/reliability, customer service, and security/privacy.
Sashi (2012)	(2012)	The research concluded that social media helps shift control of decisions customers make. By changing how sellers and customers connect and interact, social media enables customers to participate in making strategic choices jointly with sellers and co-create value with them.
Tu	(2004)	The study on the impact of emotions and service experience on customers concluded that the total service experience of the customer is the primary determinant of his/her satisfaction.
Siitonen et al.	(2023)	factors, such as motivation, interaction and communication, and feedback, influence customer engagement in demand-response programs. They further argued that social interaction, support and the importance of customer education, and easily interpretable information are very important.
Harris & Dennis	(2011)	They concluded that recommendations from friends appear to be influential in changing online shopping behaviour. A hierarchy of trust ordinal scale in recommenders/reviewers ranging from 'real' friends at the top down to reviews on retailers' websites may be positively associated with the purchase.
Suh & Yi	(2006)	Their study revealed that there exists an indirect route from customer satisfaction to brand loyalty through brand attitudes, along with a direct link from customer satisfaction to brand loyalty. Hence, they recommended that firms focus on corporate and brand advertising to increase repurchase rates, gain market

		share in high-product involvement cases, and improve product quality.
Budiastari	(2016)	The study on the effect of product quality, price perception, and brand image on satisfaction and customer loyalty ready mix concrete in Jakarta concluded that product quality impacted customer satisfaction.
Chen et al.	(2022)	Their findings on the impact of hotel customer engagement and service evaluation on customer behaviour intention concluded that customer engagement has a direct positive effect on brand trust. They further argued that identification, enthusiasm, attention, absorption, and interaction all directly affect brand trust.
Chatzoglou et al.	(2022)	They investigated the factors affecting consumer repurchase intentions in retail stores. Their findings showed that customer satisfaction, merchandise value (quality), customer loyalty, and perceived value have the highest effect on repurchase intention.
Méndez-Aparicio et al.	(2020)	They concluded that perceived digital quality is what delivers an actual customer experience.
Loureiro et al.	(2012)	Brand attachment is positively related to brand love. Brand love reinforces trust, interest in continuing a relationship, and faith in the future of the brand. Their result also found that women exhibited trust and placed more importance on dyadic relationships than men who identified socially with the brands.
Moliner et al.	(2018)	Their study on the impact of customer engagement and customer self-brand connection on customer advocacy and firms' financial performance concluded that customer engagement generated in bank branches is essential and has emotional and financial repercussions for the individual branch. Hence, they concluded that, in the branch environment, customer engagement has a direct and significant impact on the branch's financial performance.
Yang et al.	(2021)	In their study on the mediation effect of community engagement between community experience and customer voice and also the moderation role of community, commitment concludes that customer's community experience significantly impacts customer voice behaviour. They further argued that information experience and sociability are important factors affecting customer voice behaviour, essential for maintaining brand community and product or service improvement.
He et al.	(2013)	Their study describes an in-depth case study that applies text mining to analyse unstructured text content on the Facebook and Twitter sites of the three largest pizza chains: Pizza Hut, Domino's Pizza and Papa John's Pizza. They concluded that these pizza chains actively engaged their customers on social media, and they used the platform to promote their services and bond with their customers. The results also reveal that social media is essential to sustaining a positive customer relationship.

Sahoo & Pillai	(2017)	They examined the potential influence of mobile banking (M banking) servicescape on customer attitude and engagement. The research findings revealed that Mobile banking servicescape is a strong predictor of customer attitude towards M banking, which then influences customer engagement.
TorresMoraga, et al.	(2008)	Their findings reveal that customer satisfaction and loyalty can be achieved by either emphasising the product or the brand, depending on the level of development of the product or product line in the markets.
Mostert et al.	(2016)	The findings of the research revealed that there is a direct positive relationship between customer satisfaction and brand loyalty to smartphone brands among Generation Y. Thus, the study recommended that smartphone marketers should segment their customers based on their relationship intentions, thereby ensuring that optimal resources are invested in building relationships with customers who display high relationship intentions.
Rather	(2019)	He examined the interrelationships among consumer engagement and higher-order marketing constructs including trust, satisfaction, commitment, and customer loyalty within the hospitality industry. The result concluded that consumer engagement increases satisfaction, commitment, trust, and loyalty.
Marcos & Coelho	(2022)	Their study examined the mediating role of perceived value and satisfaction in the relationship between service quality (facility and interactive) and loyalty in the insurance industry.
Siitonen et al.	(2023)	The research results indicated that customer engagement in demand-response programs is influenced by factors such as motivation, social interactions, customer education, interaction and communication.
Ling et al.	(2021)	Their results revealed that factors found to influence human-machine cognitive engagement were categorised into usage-related (performance), agent-related (the designed appearance, movement, likability), user-related (psychological and demographic factors), attitude and evaluation.

Table 3: Summary of Findings from included studies on how customers Have been better engaged through Sophisticated data-driven engagements

Author(s)	Year of publication	Summary of Findings on How Customers Have been better engaged through Sophisticated Data-driven Engagements
Zdolsek Draksler et al.	(2023)	The Cognitive Advisor has shown great potential for the future of logistics by enabling a dynamic approach to manage supply chain disruptions using sophisticated data analytics for process optimisation based on the existing delivery infrastructure and improving business processes.
Werder et al.	(2020)	The study concluded that by establishing processes and capabilities for these practices and blending them in a portfolio approach to product design, they maximise the value generation potential of the data at their disposal.
Stone et al.	(2019)	Their findings reveal that companies can accurately understand how well they manage customer engagement, provided that a careful assessment approach is used.
Kunz et al.	(2017)	Their findings suggest that the sustainability of data-driven customer engagement requires a dynamic and iterative value-generation process involving customers recognising the value of engagement behaviours and the firm's ability to capture and pass value back to customers.
Cardell-Oliver & Olaru	(2022)	Their study found that transport planners can no longer address urban transport issues using only one or a few days of data or apply blanket measures without accounting for these substantial temporal variations.
Islam et al.	(2019)	Their findings show that websites can activate customer engagement (CE).
Kadiyala et al.	(2021)	The findings show that their data-driven approach targeting policies improve the promotion's profitability by 5.57% and e-mail CTR by 472.57%, compared to our partner retailer's current e-mail policy.
Liu & Liu	(2021)	This study verified that the applied data-driven methods can handle the decision-making problem and promote retailers' profitability in the electricity market.
Kumar et al.	(2013)	Their findings point to data usage's importance and untapped potential in its ability to inform tactical and strategic marketing decisions.
Chiang	(2021)	Their study showed that these found markets and discovered rules could be applied to marketing information or customer relationship management (CRM) systems for identifying valuable customers and target markets.
Liu et al.	(2020)	Their results found that while SMEs possess some product and customer data and use them in one way or another, they are not necessarily utilising what they already have effectively, as 67% of the respondents do not even use CRM. Thus, the inability of a

		firm to fully utilise the benefits associated with big data analytics raises some concerns. Their findings concluded that managerial and technical considerations are required for SMEs considering implementing big data and customer analytics.
Chiang et al.	(2019)	Their research results show that businesses can discover customer values in their large-scale (big) CRM or marketing systems database.
Sutisnawati & Maulani	(2019)	Their findings show that Big Data improved shopping experiences, customer satisfaction, and increased sales.
Islam	(2020)	The study's findings showed that the key website attributes, viz., website interactivity, website aesthetics, customisation, ease of use, and telepresence, positively affect CE.
Verbraken et al.	(2013)	Their findings illustrate that companies rely more than ever on data mining techniques to support their decision-making processes. Based on this, they suggested that when evaluating a classification technique for a business context, it is imperative to base any evaluation criterion on the end user's goal.
Lau et al.	(2016)	Their findings showed that the airline management uses the ranking results to optimise customer profitability by reconfiguring marketing programs, integrated schedule design, fleet assignment, maintenance routing, crew scheduling, and real-time optimisation of schedule recovery in the aftermath of disruptions or irregularities.
Peng & Bai	(2022)	Their findings showed that using AIS data, LSCs' profitability is positively related to speed choice but negatively related to service frequency, capacity allocation, and idle capacity ratio.
Wong & Wei	(2018)	Their findings show that the number of purchases in the tested panel data could be extended from the traditional analysis of two weeks before the departure date to the daily purchase number over the two weeks before the departure date.
Rahman et al.	(2023)	The study's findings show that artificial intelligence (AI)-powered digital assistance (AIPDA) is one of the key antecedents in the luxury brand retail industry to influence engagement. Based on their findings, they recommended that luxury brands integrate APDA into their online platform for personalisation at all stages of the customer shopping journey.
Prentice, W., & Wong	(2020)	The study found that AI preference has a significant moderation effect on information quality and satisfaction.
Breidbach & Maglio	(2020)	The study observed that ethical issues might arise in using AI data. As such, they suggested that firms only implement algorithmic decision-making tools whenever the outcome of their decisions does not affect customers or other stakeholders in an unethical manner. Thus, the study concluded that in order to achieve and maintain the trajectory toward ethical analytics, service firms should, first and foremost, establish an ethical data culture.

Malodia et al.	(2022)	The study's results demonstrated that convenience and status-seeking are enablers and positively influence trust in VAs. In contrast, the risk barrier acts as an inhibitor and negatively influences trust in Vas.
Nayak Kinin & Basri	(2022)	Results indicate that customer engagement behaviours fully mediate the relationship between self-concept and customer advocacy. Positive customer engagement behaviours (CEBs) get formed through customer predispositions leading to referral/advocacy behaviours.
Bilder et al.	(2020)	Their study suggests that retailers can leverage consumers' willingness to enter disclosure processes by designing their data requests.
Magee et al.	(2016)	Their findings illustrate that a data-driven approach to the sales engagement cycle can fundamentally improve performance. However, data initiatives require considerable transformation effort to be successful. As such, a range of technical, organisational, and cultural issues must be addressed before such a solution can genuinely deliver results.
Kliestik et al.	(2022)	Their findings show that customer brand perception and satisfaction can be carried out according to machine learning algorithms and big data.
Dawson	(2022)	The research concluded that customised production could improve virtual retail and augmented shopping experiences by deploying consumer behaviour data throughout Web3-powered metaverse worlds.
Daneshvar Kakhki & Nemati	(2022)	Their Findings illustrate that Data Analytics (DA) capabilities improve customer-centric focus orientation (CCFO) and strategic supplier partnership (SSP) value generation and leverage value creation giving rise to a fundamentally new way of viewing a firm as a value-generating entity for its customers. Thus, the study concludes that deploying data analytics resources improves a firm's performance and value creation.
Preuveneers et al.	(2017)	The findings of their study indicate that private blockchains can secure the Internet of Things (IoT) enabled dataflow-oriented networked production processes across the trust boundaries of the industry 4.0 manufacturing enterprise. Despite this, there are also disadvantages regarding cost and managerial overhead for the other archetypes of next-generation plant models.
Chweidel et al.	(2022)	They concluded that firms that are successful in collecting and acting on consumer digital signals will gain a considerable and lasting advantage over competitors.
Cai et al.	(2022)	Their study concluded that customers perceive a higher level of usefulness, ease of use, and anthropomorphism when an AI-enabled voice assistant is branded (vs off-brand). Thus, Perceived usefulness positively affects customers' intention to use AI-enabled voice assistants and to spread positive word-of-mouth.

Kritzinger & Petzer	(2021)	The study reveals that utilitarian and hedonic motivation impact customer engagement positively in using WhatsApp, which, in turn, impacts loyalty.
Chen et al.	(2019)	Their study identified a suite of methodologies for facilitating company co-innovation via engaging with customers and external data with cognitive computing technologies.
Tarute et al.	(2017)	Their findings illustrate that consumer engagement positively influenced users' intention to continue using mobile applications.
Florez Ramos &Blind	(2020)	Their study illustrates that Data portability has the potential to impact competition by decreasing switching costs between online platforms in competitive markets; online platforms in competitive markets, like Spotify, will increase investments into exploiting data-driven innovation such as artificial intelligence to improve users' engagement.
Castillo et al.	(2021)	Their findings suggest that personal and interactive engagement are positively related to movie performance, and the positive effects of personal and interactive engagement on movie performance are mutually reinforcing.
Niebel et al.	(2019)	They concluded that big data analytics is a relevant determinant for the likelihood of a firm becoming a product innovator and for the market success of product innovations.
Bag et al.	(2022)	Their result shows that deploying AI technologies positively correlates with user engagement and conversion.
Grandhi et al.	(2020)	The study concluded that the Success of Data-driven marketing (DDM) depends upon how well an organisation embraces the practice.
Khan et al.	(2016)	The online survey results show that customer-brand engagement positively influences online brand experience.

3.4   Method of Data Analysis

These articles were analysed using descriptive analysis and categorised according to their contents. The descriptive analysis was conducted using a deductive approach in which papers were classified according to year, journal, and research findings.

## CHAPTER FOUR

DISCUSSION OF FINDINGS

4.0 Discussion and Findings

The analysis section presents the descriptive analyses of the findings from the systematic literature review. The findings of the research were presented following the research objectives.

4.1 Publication by year on how relevant customer experience and engagement can be attained and consistently understood

The literature review shows how relevant customer experience and engagement can be attained and consistently understood. Forty articles were reviewed, and (6) were published in 2019, representing 15% of the total articles reviewed. 2016 and 2021 followed, respectively, with five publications representing (12%) of the total articles reviewed. The year 2020 and 2022 followed with four publications, each representing (10%) of the total publications. In the year 2017, 3 publications (7%). The year 2018 and 2012, two publications, each representing (5%) and Years 2004; 2006; 2008; 2010; 2011; 2013; 2014; 2015; and 2023, one publication, each representing (2%) of the total articles (40) reviewed in this category.

Figure 1: Graphical Representation of the Number of Reviewed pieces of literature by year on how we understand and consistently attain relevant customer experience and engagement
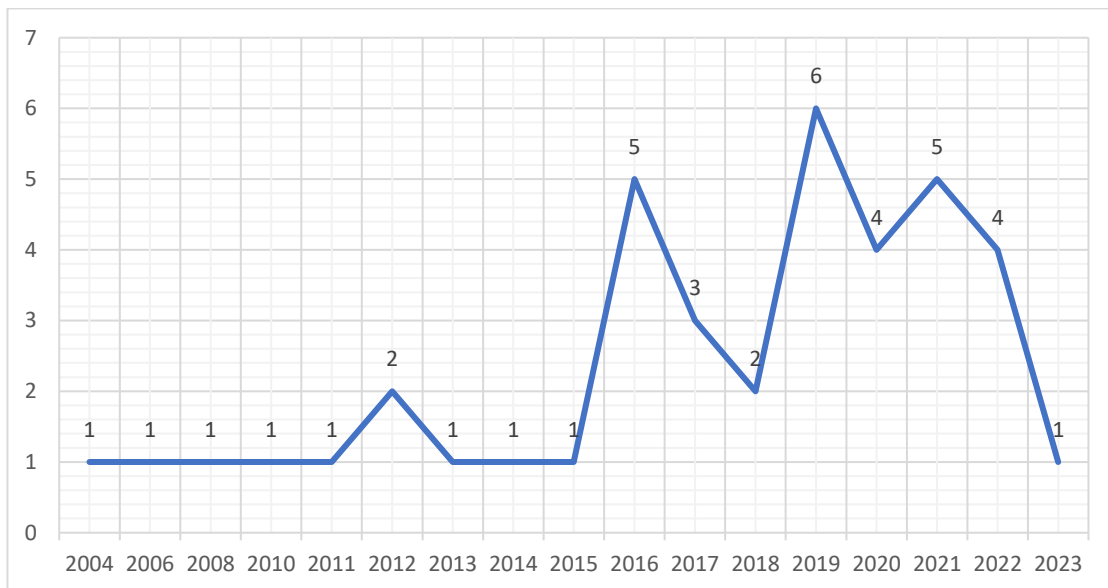
4.2 Publication by year on how Customers have been better engaged through Sophisticated data

The literature review shows how relevant customer experience and engagement can be attained and consistently understood. Forty articles were reviewed and out of the articles, the majority (9) was published in 2022, representing (22%) of the total articles reviewed. Eight publications in the year (2020) were reviewed, representing (20%) of the total articles reviewed. The year 2021 followed with six publications representing (15%) of the total publications. In the year 2019, five publications (12%). Year 2017 publications representing (10 %). In the Years 2016 and 2023, three publications each represented (7%) of the total articles reviewed. In 2013 and 2018, one publication was reviewed, representing (2%) of the total articles (40) reviewed in this category. The graphical representation of the statistics is presented in Figure 2

Figure 2: Number of Studies by Years of Publications on how Customers Have been better engaged through Sophisticated Data-driven Engagements
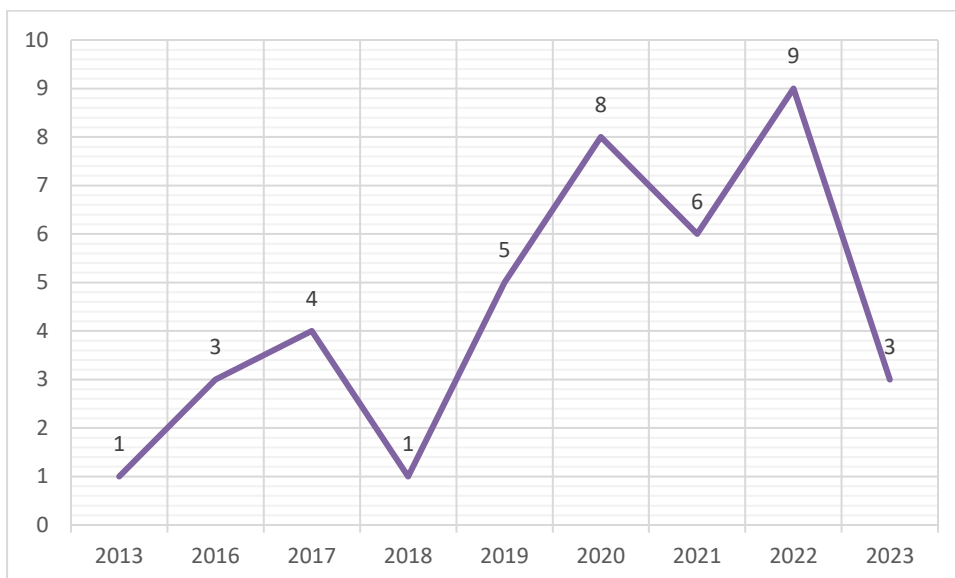
4.2 Publishing Activity by Journals

The journals that were selected and used for the review were done majorly through Google Scholar and UHasselt University Library. From the 80 articles reviewed, with three (3) publications each, the majority of published journals were from the International Journal of Bank Marketing, Global Business Review, International Journal of Contemporary Hospitality Management, and The Journal of Services Marketing. Other journals with two (2) publications include Frontiers in Psychology, Industrial Management & Data Systems, Industrial Management & Data Systems, International Journal of Hospitality Management, and Journal of Strategic Marketing.

4.3 How relevant customer experience and engagement can be understood and consistently attained?

From the systematic literature review, relevant customer experience and engagement can be understood and consistently attained through customer satisfaction with the brands and products of businesses. Therefore, brand type, nature, and quality determine how customer experience and engagement can be enhanced better. Hence the type of experience a customer has with a brand determines brand loyalty. The reviews literatures on customer experience and engagement relate to the experience, service, convenience, type of interactions, customer satisfaction, brand satisfaction, positive experience, and brand love. Works such as (Kumar et al., 2021); (Vakulenko et al., 2019); (Li et al., 2019); (Evanschitzky et al., 2010) have all acknowledged the role and impact of service and product quality on customer satisfaction. This finding is supported by research conducted by Wahyono (2020) that the satisfaction of customers can influence loyalty because the consequences of customer satisfaction/dissatisfaction are crucial to the business and consumers themselves.

Similarly, in their research, Sharma & Singh (2021:6) noted, "*Customer engagement influences repeat purchase behaviour of the consumers; however, the effect becomes more significant when customers are also satisfied with the offerings. Thus, it implies that managers should strive to design engagement strategies that attract the customers and satisfy them alike, thereby persuading them to engage in repeat purchases*". Thus, satisfied customers are more likely to repeat their purchases with the same firm or product, which illustrates the positive relationship between customer satisfaction and customer engagement, also supported in the existing extant literature (Majeed et al., 2022; Thakur, 2018; Hashmi et al., 2021 Engaging customers through various activities and policies might be insufficient and inadequate unless customers are satisfied with their usage of product offerings

4.4 How have customers been better engaged through sophisticated data-driven engagements?

The reviews illustrated that customers were engaged better through Sophisticated data-driven Engagements (Big Data, Artificial intelligence, Data Disclosure Processes, data visualisation), resulting in increased sales, value creation, loyalty, investments, and profit. However, the use of sophisticated data-driven engagements depends on factors such as how well an organisation embraces the practice (Grandhi et al., 2020), ethical issues, managerial and technical considerations, and some substantial variations in the usage of a data-driven approach. Similarly, Magee et al. (2016) explained that data visualisation's impact on user engagement depends on technical, organisational, and cultural issues.

4.5 How can customer engagement contribute to sustained business growth?

The review shows that customer engagement can sustain business growth by creating good brands and products that enable customer satisfaction. On the other, customer engagement can sustain business growth through the use of sophisticated data-driven engagements while taking cognisance of particular ethical issues and managerial and technical considerations.

CHAPTER FIVE

SUMMARY, DISCUSSIONS OF FINDINGS, CONCLUSION, AND RECOMMENDATION

5.0 Introduction

This chapter provides a summary, contribution to the study, recommendations, suggestions for further research, and conclusion.

5.1 Summary

This study examined how relevant customer experience and engagement can be attained and understood. The background information discussed the importance of customer engagement in business. It also shows that studies have all illustrated and buttressed the significance and relevance of data-driven customer engagement in organisations. However, as crucial as these explorations are, they still need to exhaust and unravel the other imperative aspects of data-driven customer experience and engagement, especially regarding how relevant customer experience and engagement can be attained and understood in the ever-changing technology world. Therefore, based on this identified gap, this study examined how relevant customer experience and engagement can be attained and understood through an extensive and systematic literature review.

The second chapter reviewed the literature on understanding the customer experience and business engagement and how customers have been better engaged through sophisticated data-driven Management. The third chapter examined the discussed the research methods used in carrying out the systematic literature review. Chapter four discussed the findings of the systematic literature review, while the last chapter summarised and concluded the study.

5.2 Discussions of Findings and Implications

This research examines how we can understand and consistently attain relevant customer experience and engagement, especially regarding customer data. There is established literature on the importance of customer engagement as one of the primary drivers of a firm's financial success (Kunz et al., 2017); Eigenraam et al., 2021); Marbach et al., 2016); O'Brien et al., 2015); Fang et al., 2020). This research dived deeper to examine relevant customer experience and engagement can be attained and understood. The systematic literature review shows that relevant customer experience and engagement can be attained and understood through customer satisfaction with the brands and products of businesses. This finding is consistent and supported in the existing literature (Agyei et al., 2021); Naqvi et al., 2021); Fernandes & Moreira, 2019) that on the one hand, there is a positive relationship between customer satisfaction and customer engagement, and the other, customers with higher levels of satisfaction are likely to engage more with brands and products. Most of the works reviewed buttressed that customer engagement can be further understood with customer satisfaction with brands, products, or services. Further, the study also shows that through sophisticated data-driven engagements, customers can be better engaged and understood; however, the use of sophisticated data-driven engagements is dependent on some series of factors, such as how well an organisation embraces the practice (Grandhi et al., 2020); ethical issues, managerial and technical considerations, and some substantial variations in the usage of a data-driven approach. Hence, in using a sophisticated data-driven approach to understanding customer and consumer

behaviours, businesses should take cognisance of some of the ethical issues, and managerial and technical considerations, associated with using sophisticated data-driven engagements.

5.2.1 Managerial and Practical Implications

The outcome of the present study has some imperative insights for the managers and owners of companies and businesses who design and implement customer engagement strategies. Since relevant customer experience and engagement can be attained and understood through customer satisfaction with businesses' brands, services, and products, business owners and managers should ensure that they produce and develop sound and quality products, Brands, and services that will further profit and enhance customer engagement better. Also, in the quest for understanding and enhancing customer engagement, managers should take cognisance of some of the ethical issues, and managerial and technical considerations, associated with using sophisticated data-driven engagements. This will ensure that the data collected are accurate and reflect the opinions and views of the customers.

5.2.2 Theoretical Implications

Theoretically, this study contributes significantly to the customer engagement literature and data data-driven engagement literature in several ways. First, this study linked customer engagement and data-driven engagements. Despite the growing importance of customer engagement in businesses, existing studies do not exhaust and unravel the other imperative aspects of data-driven customer experience and engagement, especially regarding how relevant customer experience and engagement can be attained and understood. This current study offers empirical evidence through a systematic literature review on how relevant customer experience and engagement can be attained and understood. Moreover, by doing this, this research replied to the call by Van Doorn (2011: 281) that **"***additional research is needed, not only to refine further and conceptualise customer engagement but also to derive its antecedents, consequences, and, from a managerial perspective, paths to guide and manage customer engagement"*.

Second, this study also contributes to the business growth, marketing, and development literature. The findings of this research show that business growth and an increase in sales can be achieved through understanding consumer and customer behaviours by optimising data. The research discovered that customer satisfaction is imperative for brands to engage with customers.

5.3 Recommendations

Consistent with the studies mentioned above, the study advocates that business owners and managers should ensure that they produce and develop sound and quality products, brands, and services that will further profit and enhance customer engagement. Also, in the quest for understanding and enhancing customer engagement, managers should take cognisance of some of the ethical issues, and managerial and technical considerations, associated with using sophisticated data-driven engagements to analyse the satisfaction derived from their products or services.

5.4 Suggestions for Further Research

Subsequent research should focus on quantitative research to further ascertain how relevant customer experience and engagement can be quantified numerically by measuring how business

owners satisfy their customers through various customer data or information mining tools. There could also be research to compare the effect of data generated by engaging customers via different social media platforms. In recent years and after COVID-19, many customers have shifted to doing business online; there is a need for a study to see the trend in business growth and the rate at which customers have shifted to online purchases for the past years. There is a need to research how enterprises deal with data protection and security in the face of increasing cybercrime and attacks from their competitors. There is also a need for research on the comparison between the different social media platforms, such as Instagram, Snapchat etc., using selected organisations to see how they contribute to their business growth.

5.5 Conclusion

This thesis concludes that customer engagement can be understood and attained with customer satisfaction with brands, products, or services. Moreover, understanding customers' satisfaction in recent years depends on strategically using customer data to enhance and optimise interactions between businesses and their customers. This is termed data-driven customer engagement, which involves collecting, analysing and interpreting customer information to tailor marketing, sales and service to create individual preferences and behaviours. This approach aims to create personalised experiences that enhance customer satisfaction and loyalty, resulting in business growth in the long run. Data-Driven customer engagement is a customer-centric strategy of a business. More businesses need to focus on the concept of business process reengineering rather than traditional business functions (Hammer et al., 2009; Hsieh, 2010) by using data-driven engagement to understand customer needs, which leads to better customer satisfaction and retention.

5.6 Limitations

Despite its immense contributions, this study is also subject to limitations that offer additional research avenues. First is the fact that the scope of the research was limited to scholarly publications, which is excellent but future research may want to expand this scope and include interviews, reports, and conference proceedings. The study did not explore modern customer data engagement tools and how they influence customer engagement in different industries. The study was based on a systematic literature review, and this did not allow for a quantitative investigation that would enable the collection of data from respondents. This study also failed to explore the challenges of using unprecedented information from big data, such as data quality and accuracy, data privacy and security of customers to avoid data breaches, data integration problems since data is collected from different sources and all other issues relating to data exploration.

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