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MBA General Management

DissertationLCMB7020_LON

2023

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**The role of data-driven marketing tactics in
controlling competition in the e-commerce sector:
Walmart as a case study**



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Abstract

This dissertation focuses on analyzing the role of data-driven marketing strategies in managing the E-commerce industry, with a specific focus on Walmart. The research study is divided into five chapters to ensure its effectiveness. The first chapter serves as an introduction, providing an overview of the research topic, background, rationale, aim, and objectives. The second chapter presents a literature review, examining the research variables and their connection to the research topic and objectives. It also identifies any research gaps and discusses the conceptual framework. Moving on to the third chapter, the research methodology is discussed, where the researcher adopts an interpretivism philosophy, an inductive approach, an exploratory research design, a case study strategy, and utilizes secondary data collection methods. The fourth chapter presents the results of the study, including a detailed plan of analysis, information collected from various sources, and analysis discussions. Additionally, this chapter explores the implications of the case study. Finally, the last chapter concludes the dissertation by providing an overall summary of the research, discussing its limitations, and offering recommendations for future research. Throughout the dissertation, the researcher delves into the effectiveness of data-driven marketing strategies in the e-commerce industry, using Walmart as a prime example. The research study aims to shed light on the importance of leveraging data-driven approaches to enhance marketing strategies and drive success in the rapidly evolving landscape of online commerce.

Acknowledgement

I am Adith Kunimmal, I would like to express my sincere gratitude to all those who have contributed to the completion of this research study. First of all, I want to express my gratitude to my supervisor Jia Miao for all of their help, encouragement, and constructive criticism during the entire process. I also want to thank my friends and family for their support and compassion throughout this challenging path. I also thank the community of scholars and the pertinent literature, both of which served as the basis for my study. This dissertation would not have become possible without the combined efforts of these people and their resources.

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Chapter 1: Introduction

1.1 Introduction

Data-driven marketing is the process of deciding on a business or organization's marketing tactics rather than relying on speculative hypotheses to guide the organization's overall operations. The e-commerce sector's tremendous rise has completely changed how companies conduct company as well as compete online. Companies have the issue of effectively overseeing competitors while maintaining an edge over others as the amount of websites and choices for customers increase. Data-driven marketing tactics have become increasingly important in this environment for handling the complex e-commerce sector. Businesses can learn important information about consumer behaviour, tastes, and trends by utilising huge amounts of customer data and advanced analytics approaches (Wu et al., 2023).

1.2 Research Background

Data-driven marketing tactics in managing competition within the ecommerce business, particularly in Walmart's case, have received a lot of attention due to the rapid expansion and increased competition in the online retail sector. As the ecommerce market grows, businesses are increasingly resorting to data-driven tactics to achieve a competitive advantage. The use of data analytics, insights, and metrics to guide and optimize marketing choices and actions is a component of data-driven marketing strategy (Nanda et al., 2021). Companies may obtain a better knowledge of consumer behaviour and preferences by collecting and analysing massive volumes of customer data from multiple sources such as internet interactions, purchase history, demographic information, and social media participation.

From the observation of (Hu et al., 2023), improved consumer comprehension and personalisation is one of the most important effects of data-driven marketing techniques in the ecommerce business. Companies like Walmart may gain significant insights into customer requirements, preferences, and purchasing habits by analysing the acquired data. With this information, they may design personalised marketing strategies that are more likely to resonate with their target demographic. Personalization is critical for increasing consumer engagement, creating brand loyalty, and increasing conversion rates. Companies that send relevant and

targeted messaging to their clients may create a distinct and personalised experience that distinguishes them from their competition.

Data-driven marketing techniques also help to increased marketing efficiency and effectiveness. Companies may use data analytics to discover the most successful channels, marketing, and timing to reach their target audience. This optimisation helps businesses to better deploy their resources and maximise their return on investment. Walmart, for example, may utilise data-driven insights to identify the most effective advertising platforms, customise promotions to client preferences, and provide personalised suggestions (Du et al., 2021). Walmart can considerably increase its marketing effectiveness and preserve a competitive edge in the ecommerce sector by targeting the appropriate audience with the right message at the right time.

Despite the widely accepted value of data-driven marketing techniques, there remains a research vacuum that has to be filled. More in-depth study is required to comprehend the unique data-driven marketing tactics and approaches that have proven beneficial for corporations such as Walmart in controlling competition in the ecommerce industry. It is also critical to study the constraints and limits of applying data-driven marketing tactics, such as data privacy problems and ethical considerations. Researchers and practitioners may obtain a better knowledge of the importance of data-driven marketing strategies in managing competition in the ecommerce business by filling these research gaps.

1.3 Rationale of the study

Businesses have to constantly change and reinvent their marketing techniques to stay in advance of other businesses in the extremely competitive e-commerce marketplace. Walmart, has been active in the e-commerce business for a while, but it has struggled to control competitors and successfully apply data-driven marketing techniques. Walmart faces substantial challenges in the e-commerce sector, including fierce competition from online merchants like Amazon, eBay, and other specialised e-commerce platforms. Those competitors are adopting data-driven approaches to advertising, delivering individualised experiences, targeted promos, and frictionless shopping experiences utilising cutting-edge analytics and customer insights. Walmart has had to deal with the necessity for seamless offline and online operational integration while also battling with these technologically native businesses due to its extensive physical retail business (Gleim et al, 2023).

The increasing significance of customer-centricity in the e-commerce environment is another crucial concern for Walmart. Today's consumers need individualised service, specialised product recommendations, and simple buying processes. Walmart may develop a thorough grasp of consumer preferences, purchasing trends, and engagement behaviour by utilising data-driven marketing methods. Nevertheless, inability to successfully use this data can lead to missed possibilities, decreased consumer satisfaction, and revenue loss. In the world of e-commerce, Walmart must also overcome the difficulty of streamlining its supply chain and inventory control. Data-driven marketing methods can assist Walmart in streamlining its inventory, predicting customer demand, and improving order fulfilment due to its enormous product catalogue and sophisticated logistics operations. Walmart may have trouble keeping inventory levels under control, resulting in situations where stocks are unavailable or a surplus of stock, that can affect customer loyalty and profits (Khoa and Huynh, 2023).

Furthermore, the physical store presence of Walmart presents an opportunity for unique data integration. Employing information from retail sales, web surfing patterns, and customer loyalty initiatives, Walmart can develop a thorough understanding of its customers and develop marketing initiatives that are very focused. To effectively combine these data sources and link to various data-driven marketing efforts, nonetheless requires careful planning and innovative technological resources. This study will use a case study of Walmart to identify the particular difficulties the company faces in the e-commerce sector and investigate how data-driven marketing techniques can help. This research aims to offer ideas and suggestions on utilising data-driven tactics to handle competition successfully and strengthen Walmart's standing within the e-commerce business with a comprehensive evaluation of Walmart's marketing practises, data utilisation, and competitive environment (Fulgoni., 2018).

1.4 Research Aim, Objectives & Question

1.4.1 Research Aim

This research aims to examine the Role of data-driven marketing strategies in managing competition in the e-commerce industry, focusing on the case study of Walmart.

1.4.2 Research Objectives

- To examine the significance of data-driven marketing strategies in the e-commerce industry.
- To identify the factors affecting competition in the E-commerce industry.
- To evaluate the Role of data-driven marketing strategies in managing competition in Walmart .
- To recommend measures to improve data-driven marketing strategies for managing competition in the Walmart

1.4.3 Research Question

- What are data-driven marketing strategies, and how are they used in the e-commerce industry?
- What are the significant factors affecting competition in the e-commerce industry?
- How has Walmart implemented data-driven marketing strategies to manage competition in the e-commerce industry?
- Mention the Role that data-driven marketing strategies plays in managing competition in Walmart .

1.5 Overview

This study examines data-driven marketing tactics in the e-commerce business using an interpretivism research methodology. The selected study technique emphasises secondary data collecting as the best strategy. Through an exploratory methodology, the researcher uses an inductive technique to investigate the issue and discover significant aspects impacting management practises in the e-commerce market. The case study research strategy was used, in which the researcher investigated pertinent topics relating to the topic. Secondary data will be gathered from a variety of sources, including books, journals, news reports, and websites, saving money and time. The technique of data collecting used is a significant aspect, and descriptive analysis is used in this study as the data analysis strategy to offer an overall

assessment of the study's validity and reliability. Overall, the goal of this study is to improve our knowledge of the influence of data-driven marketing tactics on competitiveness in the e-commerce business.

1.6 Limitations of the research

The use of secondary data only for data gathering, which eliminated the use of primary data, was one of the major limitations of the present study. The researcher was unable to collect first-hand information and viewpoints due to the lack of primary data. The researcher also had to deal with time and financial restrictions. It is not practical for this research project to collect primary data because doing so can be a time-consuming and expensive process. The potential absence of context is another issue with secondary data. To make accurate and trustworthy conclusions, one must have a complete comprehension of the sources and context of the data.

1.7 Research structure

Chapter	Description
Chapter 1: Introduction	Background and rationale for the research Problem statement and research questions Significance and objectives of the study Overview of the dissertation structure
Chapter 2: Literature Review	Definition and conceptualization of data-driven marketing strategies The role of data-driven marketing in the e-commerce industry Competition in the e-commerce industry and its management Theoretical frameworks and models related to data-driven marketing and competition management
Chapter 3: Research Methodology	Research philosophy (interpretivism) and justification Research approach (inductive) and its suitability Data collection methods (secondary data collection) and their rationale Data sources and their selection criteria Data analysis plan (descriptive analysis) and its application
Chapter 4: Results	Descriptive analysis of collected data Identification and interpretation of key findings

Chapter 5: Conclusion and recommendations	Summary of key findings and contributions Practical implications and recommendations for practitioners
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1.8 Summary

The present chapter of the research study mainly provided a detailed information regarding the research background as well as the research rationale in relation to the research topic. Apart from that, this chapter provided the aim, objectives, and the research question of the current research study. An overview of the research methodology along with the limitations encountered by the researcher was also mentioned in this section. Finally, the researcher provided a structure of the overall research study.

Chapter 2: Literature review

2.1 Introduction

The current section of the study focuses primarily on exploring and reviewing prior evidence that is connected to the research subject. The goals, models, and crucial elements of the research are all described in this chapter. With the aid of earlier studies, the current part of the study will investigate the significance of data-driven marketing strategies in the e-commerce industry. The role of data-driven marketing strategies in managing competition will be significantly examined in this chapter. Additionally, this chapter will create a conceptual framework based on the research. The study's gaps will be also discussed in the chapter in order to assess their relevance and value.

2.2 Marketing strategies

Marketing strategies are a vital component of any business's success. They help companies to identify and reach their target audience, build brand awareness, and increase sales. In this article, we will explore the advantages of marketing strategies in detail.

Increased Sales

One of the primary advantages of marketing strategies is that they can help to increase sales. By targeting the right audience, businesses can create campaigns that resonate with their customers and lead to more sales. Effective marketing strategies can also help to build customer loyalty, which can result in repeat business and long-term revenue growth.

Brand Awareness

Another benefit of marketing strategies is that they can help to build brand awareness. By creating a strong brand identity and communicating it effectively to customers, businesses can establish a reputation for quality, reliability, and innovation. This, in turn, can lead to increased brand recognition and a competitive edge in the marketplace.

Competitive Edge

Marketing strategies can also give businesses a competitive edge. By understanding their competitors and the needs of their target audience, companies can develop unique selling propositions and differentiate themselves from the competition. This can help to position the business as a leader in the market and attract new customers. The marketing strategies of

Walmart have aided the firm to attain competitive benefits over other retailers. By providing low cost, wide range of goods, convenient locations, Walmart has become a go-to-place for all the shoppers.

Improved Customer Engagement

Marketing strategies can also improve customer engagement. By creating campaigns that speak directly to the needs and desires of their target audience, businesses can foster deeper connections with their customers. This can lead to increased customer loyalty, positive word-of-mouth, and ultimately, more sales. The marketing strategies of Walmart have aided the firm to build and improve customer's engagement.

Cost-Effective

Marketing strategies can also be cost-effective. By using targeted advertising and promotional tactics, businesses can reach their desired audience without wasting resources on ineffective marketing channels. This can help to maximize the return on investment and increase profits over time.

Increased Online Visibility

Marketing strategies can also help to increase online visibility. By optimizing their website for search engines and using social media and other digital marketing channels, brands can reach a wider audience and attract more visitors to their website. This can lead to increased brand awareness, more leads, and ultimately, more sales. Walmart has built a positive and strong brand that is globally recognised. Further, the online visibilities have aided the firm to enhance the brand awareness and make a positive image of the firm in the customers mind.

Better Understanding of Customer Needs

Marketing strategies can help businesses to gain a better understanding of their customers' needs. By conducting market research and evaluating customer data, businesses can identify trends and patterns in customer behaviour. This can help to inform product development, pricing strategies, and other business decisions that can lead to increased sales and profitability. The Wal-Mart's marketing strategies have enabled the firm to segment the marketplace effectively. By targeting diverse customers groups with particular promotions and products,

Wal-Mart has been capable to understand the customer's wants, enhance sales and attract the novel customers.

Marketing strategies are essential to the success of any business. They help businesses to identify and reach their target customer, build brand awareness, and increase sales. By taking advantage of the benefits of marketing strategies, businesses can position themselves for long-term growth and success in the marketplace. In the case of Wal-Mart, the marketing strategies have contributed significantly to its success and growth.

2.3 Managing competition

Marketing strategies are a set of tactics and activities that companies use to promote their products or services to their target audience. Marketing strategies are crucial for companies looking to create brand awareness, generate leads, and drive revenue growth. In this essay, we will discuss the different types of marketing strategies that companies can use to achieve their marketing objectives.

Content Marketing: This is a marketing strategy that involves making and distributing valuable, relevant, and consistent content to get and retain a clearly defined audience. The goal of content marketing is to provide the audience with information that is helpful, educational, and entertaining, with the ultimate aim of converting them into customers. Content marketing can take many forms, which includes blog posts, social media posts, infographics, videos, podcasts, and whitepapers. By creating high-quality content that resonates with their target audience, companies can introduce themselves as thought leaders in their sector and build a loyal following.

Social Media Marketing: Social marketing is a tool that involves the use of social media platforms such as Facebook, Twitter, Instagram, and LinkedIn to promote a company's products or services. Social media marketing can take many forms, including sponsored posts, influencer marketing, social media advertising, and organic social media posting. Social media marketing is particularly effective for reaching younger audiences who spend a significant amount of time on social media platforms. By creating engaging and shareable content, companies can create brand awareness, drive website traffic, and create leads.

Search Engine Optimization: Search engine optimization (SEO) is a marketing strategy that involves optimizing a website's content and structure to rank higher in search engine results

pages (SERPs). The aim of SEO is to enhance organic traffic to a website by improving its visibility in search results. SEO includes a variety of tactics, like keyword research, on-page optimization, link building, and content creation. By optimizing a website for search engines, companies can improve their visibility online and attract more organic traffic to their website.

Pay-Per-Click (PPC) Advertising: Pay-per-click (PPC) marketing is a marketing tool which includes placing ads on search engines, social media platforms, and other websites. With PPC advertising, companies only pay when someone clicks on their ad, making it a cost-effective way to reach their target audience. PPC advertising can be highly targeted, allowing companies to reach accurate audiences based on factors such as location, interests, and demographics. By creating compelling ad copy and targeting the right audience, companies can generate leads and drive revenue growth with PPC advertising.

Email Marketing: Email advertising is a marketing strategy that involves sending commercial messages to a company's email users. Email promoting can take many forms, including newsletters, promotional emails, and event invitations. Email marketing is highly effective for building relationships with customers and keeping them informed about new products, services, and promotions. By segmenting their email list and personalizing their emails, companies can improve open rates, click-through rates, and conversion rates.

Overall, marketing strategies are a crucial component of any successful marketing campaign. By leveraging the right marketing strategies, companies can create brand awareness, generate leads, and drive revenue growth. Whether through content marketing, social media marketing, SEO, PPC advertising, or email marketing, companies must understand their target audience and create engaging content that resonates with them.

2.4 Significance of data driven marketing strategies

The importance of data-driven marketing strategies cannot be overstated in today's business landscape. With the advancement of digital technologies and the explosion of data, companies that are able to leverage data to inform their marketing decisions are better positioned to succeed in the marketplace. The data-driven marketing strategies are significant to the success and attainment of Walmart.

One of the primary benefits of data-driven marketing strategies is that it allows companies to gain a better understanding of their customers. By analysing data from different sources such

as website analytics, customer feedback, and social media, companies can get insights into customer behaviour, preferences, and needs. This allows companies to create more targeted marketing messages that resonate with their customers and increase the likelihood of conversion (Milutinovic and Salom, 2016). Walmart gathers and examines a sizable amount of customer data, which offers insightful information about consumer behaviour and preferences. Walmart may create marketing strategies and promotions that connect with its target market by knowing their requirements and wants, which will improve sales and boost client loyalty.

Moreover, data-driven marketing strategies allow companies to segment their audience into smaller groups based on their behaviour and preferences. This enables them to create more personalized marketing messages that speak directly to the needs and desires of each group. By doing this, companies can increase the likelihood of conversion and retain customers in the long run. Walmart has successfully segmented the market owing to its marketing strategies. Walmart has been able to boost sales and draw in new customers by targeting various client segments with particular products and incentives.

Data-driven marketing strategies also enable companies to identify new market opportunities and threats. By analysing market data, companies can identify trends and shifts in consumer behaviour, allowing them to adjust their marketing strategies accordingly (Johnson et al., 2019). This allows companies to stay ahead of changes in the market and maintain their competitive edge. Walmart gathers and examines a sizable amount of customer data, which offers insightful information about consumer behaviour and preferences. Walmart may create marketing initiatives and promotions that resonate with its target market by knowing their requirements and wants, which will improve sales and boost client loyalty.

In addition, data-driven marketing strategies provide competitive intelligence. By collecting and analysing data about competitors, companies can collect insights into their strengths and weaknesses, as well as their marketing strategies. This data can be used to create more effective marketing campaigns that capitalize on competitor weaknesses and differentiate the company's offerings from those of its competitors.

Data-driven marketing strategies also enable more efficient resource allocation. By analysing customer data, companies can identify the channels and tactics that are most effective in reaching their target audience. This allows companies to allocate their marketing budget more

effectively, focusing on the channels and tactics that are most likely to result in conversions (Timoumi et al., 2022).

Finally, data-driven marketing strategies allow companies to analyse the effectiveness of their marketing campaigns more accurately. By setting up key performance indicators (KPIs) and tracking metrics such as click-through rates, conversion rates, and customer lifetime value, companies can assess the impact of their marketing efforts and make adjustments as necessary.

Data-driven marketing strategies are crucial for companies looking to succeed in today's highly competitive business environment. By leveraging data to inform their marketing decisions, companies can gain a better understanding of their customers, identify new market opportunities, and allocate their resources more effectively (Shah and Murthi 2021). Ultimately, this can lead to increased customer engagement, higher conversion rates, and greater revenue growth.

2.5 Factors affecting managing competition

Managing competition is a crucial aspect of any business. It is developing and implementing strategies that allow a business to compete effectively in the market. Competition is an essential component of a market economy, as it helps to ensure that businesses provide quality products and services at reasonable prices. However, managing competition is not an easy task, as it involves various factors that can affect the success of a business.

Industry Structure: The structure of the industry is one of the primary factors that affect managing competition. The level of competition in the sector can influence the strategies that companies use to drive competition. For instance, in a monopolistic industry, there is only one dominant company that controls the market. In such an industry, managing competition involves creating barriers to entry to prevent new companies from entering the market. On the other hand, in an oligopolistic industry, there are a few dominant companies that control the market. In such an industry, managing competition involves developing strategies that allow a business to compete effectively with the other dominant companies (Keddy, 2023).

Market Demand: Market demand is another critical factor that affects managing competition. The level of demand for a particular product or service can affect how companies manage the competition. When the demand for a service or product is high, companies focus on increasing production and expanding their market share (Al Mehrzi and Singh, 2016). In contrast, when

the demand is low, companies focus on mitigating costs and enhancing efficiency to remain profitable. Therefore, companies such as Walmart need to understand the level of demand for their products or services to develop effective strategies to manage the competition.

Consumer Preferences: Consumer preferences are also a crucial factor that affects managing competition. Companies such as Walmart need to adapt to changing consumer preferences and offer products and services that meet their needs. They also need to differentiate themselves from their competitors by offering unique products or services that appeal to their target market. Companies that fail to understand the preferences of their target market are likely to lose their market share to their competitors. Walmart has already come under fire for offering subpar customer service. Walmart needs to deliver exceptional customer service in order to manage competition because it can draw in and keep customers.

Resources: The resources that a company has available can affect how it manages the competition. For example, a company with limited financial resources may focus on reducing costs and improving efficiency. Such companies may also explore partnerships and collaborations to expand their market share (Booth, 2015). On the other hand, a company with more financial resources may focus on expanding its market share through marketing and advertising. Therefore, companies need to identify their available resources and develop strategies that maximize their potential to manage competition effectively. While Walmart has a large selection of goods, it is up against other stores that sell comparable goods. In order to manage competition, Walmart must distinguish itself from rivals by providing distinctive goods or services.

Legal Environment: The legal environment can also affect how companies manage the competition. Companies must comply with laws and regulations related to competition, such as antitrust laws. Violating these laws can result in severe legal consequences and damage the reputation of a business. Companies need to be aware of the potential legal consequences of their actions to avoid legal issues that can negatively affect their ability to manage the competition (Pantano et al., 2020).

Technological Advancements: Technological advancements can disrupt industries and change the way companies compete. Companies must stay up-to-date with the latest technologies and adapt their strategies accordingly to remain competitive. For example, the rise of e-commerce has changed the way companies compete in the retail industry. Companies that fail to adopt e-

commerce strategies are likely to lose their market share to their competitors (Albrecht et al., 2015). Therefore, companies need to monitor technological advancements and adopt strategies that allow them to leverage technology to manage competition effectively. The use of e-commerce platforms, inventory management systems, and data analytics can help Walmart better understand its customers' needs and preferences, increase operational effectiveness, and react quickly to changing market conditions. Walmart must continue to invest in technology to improve its operations.

Managing competition is a crucial aspect of any business. Companies need to develop effective strategies that allow them to compete effectively in the market. However, managing competition is not an easy task, as it involves various factors that can affect the success of a business.

2.6 Online shopping experience

Online shopping experience refers to the process of purchasing goods or services through the internet, without the need to physically visit a brick-and-mortar store. With the rise of e-commerce, online shopping has become increasingly popular and is now a common method of purchasing for many consumers.

One of the main advantages of online shopping is convenience (Chen & Barnes, 2018). Consumers can shop from anywhere, at any time, as long as they have an internet connection. This allows them to avoid the hassle of traveling to a physical store, finding a parking spot, and waiting in line. Online shopping also allows consumers to easily compare prices and products from different retailers such as Walmart, which can help them find the best deals and save money.

Another advantage of online shopping is the wide range of products and services that are available (Ali & Zhou, 2018). Online retailers can offer a larger selection of products than physical stores, as they are not limited by shelf space. This means that consumers can find products that may not be available in their local stores, or that may be sold out. Online shopping also allows consumers to easily find niche or specialized products, which may not be available in physical stores. On its website, Walmart offers a huge selection of things, including food, home goods, electronics, clothing, and more. It is more convenient to purchase online because of the range of products available, which guarantees that customers can find everything they require in one location.

However, there are also some disadvantages to online shopping. One of the main concerns is the lack of physical interaction with the product before purchase (Zeng & Gerritsen, 2017). Consumers cannot touch, feel, or try on the product, which can make it difficult to determine its quality, size, or fit. This can be especially problematic for clothing, shoes, or other items that require a certain level of fit or comfort. Online retailers have attempted to address this issue by providing detailed product descriptions, photos, and reviews, but this may not always be sufficient.

Another concern with online shopping is security (Zeng & Gerritsen, 2017). Consumers may be hesitant to provide personal and financial information online, as they fear that it may be stolen or misused. Online retailers have implemented various security measures, such as encryption and two-factor authentication, to protect their customers' information. However, consumers should still be cautious and only shop on trusted and secure websites.

New technologies and trends have also impacted the online shopping experience in recent years. For example, mobile shopping has become increasingly popular, as consumers can now shop on their smartphones and tablets (Chen & Barnes, 2018). Social media platforms have also become a key part of the online shopping experience, as retailers such as Walmart can use them to showcase products, engage with customers, and offer personalized recommendations (Ali & Zhou, 2018). Artificial intelligence and machine learning are also being used to improve the online shopping experience, by providing personalized product recommendations, chatbots, and virtual assistants (Park & Lee, 2018).

The online shopping experience has become an integral part of modern consumer culture. It offers convenience, a wide range of products, and the ability to easily compare prices and deals. Based on a customer's browsing and purchase history, Walmart employs data analytics to offer tailored recommendations. This can enhance the whole shopping experience by assisting clients in finding products that are pertinent to their needs and interests. However, it also has some disadvantages, such as the lack of physical interaction with the product and security concerns. With the continued development of new technologies and trends, the online shopping experience is likely to evolve and improve in the coming years.

2.7 How technology has improved shopping experience

Technology has significantly improved the shopping experience for consumers with the introduction of new technologies and innovations that have transformed the way people shop.

One of the most important ways in which technology has improved the shopping experience is through the use of artificial intelligence (AI). AI is being used to provide personalized product recommendations, chatbots, and virtual assistants, among other applications (Park & Lee, 2018). These AI-driven systems can analyze consumer behaviour and preferences, as well as past purchase history, to provide recommendations for products and services that are most relevant to the individual.

Augmented reality (AR) is another innovation that has improved the shopping experience for consumers. AR helps consumers to visualize products in a real-world setting before making a purchase. For example, furniture retailers such as Walmart can use AR to allow customers to see how a specific type of furniture would look in their house before buying it (Koskela-Huotari et al., 2018). This helps to eliminate uncertainty and increase confidence in the purchase decision.

Mobile apps have also transformed the shopping experience for consumers. Retailers such as Walmart are now offering mobile apps that allow customers to search and purchase products from their mobile devices. These apps also offer features such as personalized product recommendations, price comparisons, and the ability to track orders in real-time (Chen & Barnes, 2018). Mobile apps have also enabled retailers such as Walmart to offer location-based services, such as in-store navigation and targeted promotions.

In addition to these innovations, technology has also improved the overall efficiency and convenience of the shopping experience. Online shopping has become increasingly popular, allowing consumers to shop from anywhere at any time (Chen & Barnes, 2018). The use of self-checkout kiosks in physical stores has also reduced wait times and eliminated the need to interact with a sales associate. To improve the online shopping experience for its customers, Walmart has made considerable investments in its online shopping and e-commerce capabilities.

Despite these advancements, there are also some concerns with the use of technology in the shopping experience. For example, some consumers may be hesitant to provide personal and financial information online as they fear that it may be stolen or misused (Zeng & Gerritsen, 2017). Retailers, such as Walmart have attempted to address this issue by executing various security measures, such as encryption and two-factor authentication.

Technology has significantly improved the shopping experience for consumers with the introduction of new technologies such as AI, AR, and mobile apps. These innovations have transformed the way people shop, making it more personalized, efficient, and convenient. However, there are also some concerns with the use of technology in the shopping experience, such as security concerns. As technology continues to develop, it is likely that the shopping experience will continue to evolve and improve.

Walmart is one of the largest retail organisations in the world and has made significant investments in technology to improve the shopping experience for its customers. Walmart has been making significant investments in technology to enhance the shopping experience for its customers. For example, Walmart has introduced a mobile app that allows customers to make purchases, track orders, and receive personalised suggestions based on their purchase history (Walmart, 2022). Walmart has also introduced a range of new technologies, such as in-store robots that help customers find products and self-checkout kiosks that reduce wait times (Walmart, 2022). These innovations have helped Walmart to compete with other e-commerce companies in the sector, such as Amazon and Target. Low costs are a hallmark of Walmart, and the corporation has carried this philosophy over to its online products. On the website, customers can frequently find affordable prices, which can play a significant role in their decision to shop at Walmart.

Amazon is known for its aim on customer experience and has made significant investments in technology to enhance the shopping experience for its customers. Amazon has introduced a range of innovations, such as Amazon Go stores that use AI and computer vision to allow customers to check out without stopping at a traditional register (Amazon, 2022). Amazon has also launched a range of new technologies, such as Alexa-powered devices that allow customers to make purchases using voice commands (Amazon, 2022). These innovations have helped Amazon to stay ahead of its competitors in the e-commerce sector.

Target has also been making significant investments in technology to improve the shopping experience for its customers. Target has introduced a mobile app that allows customers to make purchases, track orders, and receive personalised recommendations based on their purchase history (Target, 2022). Target has also introduced a range of new technologies, such as in-store robots that help customers find products and self-checkout kiosks that reduce wait times (Target, 2022). These innovations have helped Target to compete with other e-commerce companies in the sector, such as Walmart and Amazon.

In conclusion, Walmart, Amazon, and Target have all made significant investments in technology to improve the shopping experience for their customers. Walmart has introduced a range of new technologies, such as mobile apps, in-store robots, and self-checkout kiosks, to help customers find products, make purchases, and track orders. Amazon has focused on innovations such as Amazon Go stores and Alexa-powered devices to stay ahead of its competitors in the e-commerce sector. Target has also introduced mobile apps, in-store robots, and self-checkout kiosks to compete with other e-commerce companies in the sector. Overall, these companies have demonstrated the importance of technology in improving the shopping experience for customers.

2.8 Improvements brought by technologies in online shopping

The e-commerce sector has grown significantly and has widespread technology adoption. E-commerce companies use technology in various ways to improve online sales and provide a better shopping experience for their customers.

In the opinion of Anwari et al. (2010), e-commerce companies use technology to create user-friendly websites that are easily controlled, visually experienced, and optimized for mobile devices. This is crucial because customers are more likely to purchase if they have a positive user experience. By leveraging technology such as website builders and web design tools, e-commerce companies can create aesthetically pleasing websites optimized for mobile devices. The technology adopted by e-commerce companies to personalize the shopping experience for individual customers. This can include product recommendations based on past purchases, targeted marketing messages, and customized pricing. Walmart has made investments in its online ordering, mobile apps, and website infrastructure. Customers now find it simpler to purchase from the comfort of their homes thanks to this, which also offers a practical substitute for conventional in-store purchasing.

Learning and data analytics, e-commerce companies can analyze customer behaviour and tailor their offerings to individual preferences. This makes the shopping experience more engaging and increases the likelihood of making a sale. Optimizing web technologies for search engines makes it easier to identify required products online. This is known as search engine optimization (SEO), and it involves optimizing website content, using targeted keywords, and building high-quality backlinks. By doing so, e-commerce companies can rank higher on search engine results pages, increasing their visibility to potential customers.

E-commerce companies use social media platforms to reach potential customers and promote their products. By improving technology to analyze social media data, companies can target their marketing efforts to specific demographics and interests. It will increase brand awareness and increase the likelihood of making a sale. Mobile technology to create mobile-friendly websites and apps that allow customers to shop on the go is another technology adopted by e-commerce companies. This includes mobile payment options, push notifications, and in-app messaging. By providing a seamless mobile shopping experience, e-commerce companies can reach a wider audience and increase sales (Hänninen et al. 2021).

Companies in e-commerce use technology to track and analyze website traffic, customer behaviour, and sales data. This is done through analytics and metrics tools, which provide insights into customer behaviour and help identify improvement areas. Using data, e-commerce companies can optimize their website and marketing strategies, leading to increased online sales. E-commerce companies use virtual and augmented reality to offer customers a more immersive shopping experience. For example, some furniture retailers (such as Walmart) use AR technology to show customers how the chosen products would look in their homes before purchasing (Toubes et al., 2021).

Many e-commerce companies now offer live chat as a way for customers to get real-time support and assistance. This technology can help customers with their inquiries and concerns while shopping, increasing the likelihood of making a sale. Additionally, live chat can provide customers a personalized shopping experience, increasing loyalty and repeat business. E-commerce companies adopt technology to offer a variety of payment options to their customers. By providing various payment options, e-commerce companies can increase the probability of making a sale. The website for Walmart is made to be simple to use and navigate. Customers can easily identify the goods they need, add them to their shopping carts, and finish the checkout procedure.

As noted by Erjavec and Manfreda (2021), predictive analytics is another technology companies use to anticipate customer behaviour and tailor their offerings. By analyzing data on customer behaviour, e-commerce companies can predict future purchases and adjust their marketing and sales strategies accordingly. This can help to increase online sales and improve customer satisfaction. E-commerce companies use technology to improve their supply chain management processes. This can include using software to manage inventory levels and streamline the ordering and shipping. By enhancing their supply chain management, e-

commerce companies can ensure that products are delivered on time and in good condition, which can increase customer satisfaction and loyalty. Walmart uses data analytics to comprehend client preferences and behaviour, enabling the business to offer individualised advice and niche marketing initiatives. This can enhance the whole shopping experience by assisting clients in finding products that are pertinent to their needs and interests.

The technology of collecting reviews and monitoring is also beneficial to e-commerce companies. This can increase customer trust and confidence in a product or brand, increasing online sales. Additionally, e-commerce companies can use these reviews and ratings to improve their offerings and customer service, increasing customer satisfaction and loyalty (Yap et al., 2021).

In conclusion, technology is vital in improving online sales for e-commerce companies. By creating user-friendly websites, personalizing the shopping experience, optimizing for search engines, leveraging social media, providing a seamless mobile experience, and tracking and analyzing data, e-commerce companies can increase sales and provide a better shopping experience for their customers. As technology improves to evolve, it will be exciting to see how e-commerce companies use it to improve their online sales further.

2.9 Impact of data driven marketing strategies on managing competition

Data-driven marketing strategies have become increasingly popular among businesses in recent years. This approach to marketing involves using data to inform and guide marketing decisions, including target audience selection, messaging, and channel selection. Data-driven marketing strategies have had a significant impact on managing competition, as they enable companies to make more informed decisions and better understand their customers. In this part, the impact of data-driven marketing strategies on managing competition will be discussed.

Improved Customer Understanding: One of the primary ways in which data-driven marketing strategies have impacted managing competition is by improving customer understanding. With the rise of digital technologies, customers leave a trail of data wherever they go online. This data can be collected and analysed to attain insights into customer behaviour, preferences, and needs. By analysing customer data, companies can identify patterns and trends in customer behaviour, which can be used to create more effective marketing campaigns. This allows companies to better understand their customers and create more personalized marketing messages that resonate with them (Hartmann et al., 2016).

Moreover, data-driven marketing strategies help companies to segment their audience into smaller groups based on their behaviour and preferences. By doing this, companies can create more targeted marketing messages that speak directly to the needs and desires of their customers. This, in turn, can result in higher engagement and conversion rates, as customers are more likely to respond to messages that are tailored to their specific interests.

Competitive Intelligence: Another way in which data-driven marketing strategies have impacted managing competition is by providing competitive intelligence. By collecting and analysing data about competitors, companies can get insights into their strengths and weaknesses, as well as their marketing strategies. This information can be used to create more effective marketing campaigns that capitalize on competitor weaknesses and differentiate the company's offerings from those of its competitors (Baker, 2017).

For example, companies can use social listening tools to monitor what their competitors are saying and how their customers are responding to their messages. They can also use tools to monitor competitor pricing and promotions, allowing them to adjust their own pricing and promotions in response. This allows companies to stay ahead of their competition and gain a competitive advantage. Further, data-driven marketing strategies allow companies to identify new market opportunities and threats. By analysing market data, companies can identify trends and shifts in consumer behaviour, allowing them to adjust their marketing strategies accordingly. This allows companies to stay ahead of changes in the market and maintain their competitive edge.

Improved Targeting: Data-driven marketing strategies have also improved targeting, allowing companies to reach their target audience more effectively. By analysing customer data, companies can identify the characteristics of their ideal customer and target their marketing efforts towards that audience. This allows companies to create more targeted messaging that resonates with their audience, resulting in higher engagement and conversions. Moreover, it also allows companies to identify new market segments that they may not have previously considered (Akter et al., 2016). By analyzing data from different sources, such as social media, website analytics, and customer feedback, companies can identify new market segments that are interested in their products or services. This allows companies to expand their customer base and revenue streams, which can help them to stay ahead of their competition.

More Efficient Resource Allocation: Data-driven marketing strategies have also enabled more efficient resource allocation. By analyzing customer data, companies can identify the channels and tactics that are most effective in reaching their target audience. This allows companies to allocate their marketing budget more effectively, focusing on the channels and tactics that generate the highest return on investment. Moreover, data-driven marketing strategies allow companies to optimize their campaigns in real-time, adjusting their strategy based on the performance of each channel and tactic. This results in a more effective use of resources, as companies can focus their efforts on the channels and tactics that generate the highest ROI. To provide a seamless shopping experience across several channels, including online and in-store, Walmart has made use of data-driven marketing. In order to boost brand loyalty, Walmart has been able to provide a uniform and unified experience across many touchpoints by leveraging data to understand how people shop and interact with the brand. Walmart has been able to manage competition by using data-driven marketing strategies that have given the company insights into customer behaviour, the ability to personalise experiences, the ability to maintain competitive pricing, the ability to provide a seamless shopping experience across channels, and the ability to optimise inventory management. Walmart has been able to set itself apart from rivals and keep its position as the industry leader by utilising data to understand customer demands and preferences.

2.10 Research gap

The current study examines the role of data-driven marketing strategies in managing rivalry in the e-commerce industry by focusing on the example of the Walmart Company. When evaluating the efficiency of marketing strategies in handling competition, it was acknowledged that numerous earlier studies had been conducted using data-driven marketing strategies and the market. For instance, Sultana et al. (2022) looked at how the ability to innovate using data is influencing market agility and competing success in the future. On the other hand, Reddy and Prasad (2021) examined the role of business analytics in e-commerce. Kui (2022) researched on the Application of Big Data analysis in E-Commerce. Saura et al. (2021) investigated Digital marketing in SMEs using data-driven strategies after reviewing the status of the study at the time. It was found that no studies had been conducted to see if marketing tactics improved the Walmart Company's rivalry management. Numerous studies that use data from various nations only concentrate on marketing tactics and rivalry. Thus, it can be concluded that the present research topic is suitable.

2.11 Conceptual framework

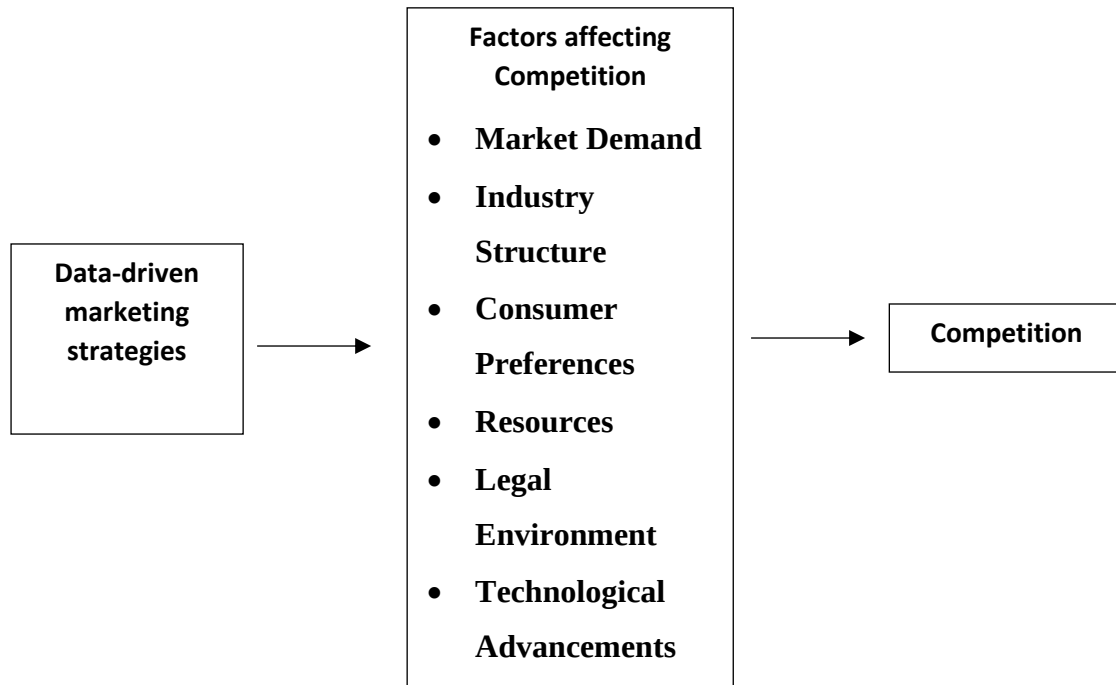


Figure 2.1: Conceptual Framework

Source: Created by the author

2.12 Conclusion

The current chapter sought to accurately portray the present scenario of the literature related to the research subject by carefully analysing the literatures produced throughout the study's scope. The chapter also included a preliminary conceptual framework that was developed using data gathered from the literature and that uses diagrams to show how the different components related to one another in the context of the study. The chapter also addressed the research gap that this particular study is trying to fill by explaining the state of the literature.

Chapter 3: Research design and methodology

3.1 Introduction

This is the third of the dissertation and this chapter provides an overall idea about the different method of data collection in order to analyse the Role of data driven marketing strategies on managing competition in Ecommerce industry with reference to the case study of Walmart. This chapter include research philosophy, research approach, research design, research strategy, data, data collection method and data analysis plan. Moreover, research limitation and accessibility issues and finally ethical issues are also will mentioned in the current research study. This aims to provide a clear and detailed clarification of how the Research was approved out and delivers an outline for interpretation the consequences.

3.2 Research philosophy

As per the observation of HR and Aithal (2022), A research philosophy could also be considered as a trust about the method in which data that is used for the research about the research topic should be collected, analysed and also used. Research philosophy are mainly four kinds such as interpretivism philosophy, positivism philosophy, realism philosophy and pragmatism philosophy. In order to get an effective and efficient understanding of the role of data-driven marketing strategies in managing competition in the e-commerce industry is analysed in this study using interpretivism research philosophy. The researcher utilised interpretivism philosophy because, this research philosophy involves the activities that helps the researcher in observing the society in a better manner to analyse the role of data driven marketing strategies on managing competition in e-commerce industry. The researcher chose to use the interpretivism research philosophy over other research philosophies like positivism etc because the researcher was able to improve the accuracy of the study results. The Main reason for the researcher not at all utilises the other kinds of research philosophies such as positivism, pragmatism and realism because which is mainly used in qualitative data. The interpretivist research philosophy involves using an observable social reality to generate generalisations that resemble laws. This is the main reason for choosing interpretivism philosophy for the current research study. Moreover, it is also qualitative data also. So, in order to analyse the role of data driven marketing strategies on managing competition in e commerce industry, interpretivism research philosophy is more suitable.

3.3 Research approach

As per the observation of Parker (2022), research approach could be defined as the processes and strategies that are used by the researchers for conducting research in a better way. The

research approach aids the researcher to conducting the research as well as in gathering data from general ideas to exact techniques for meeting, analysing, and interpreting data. For the efficiency and competence of the current research study, the researcher utilised inductive approach. Mainly, there are three kinds of research approach mainly inductive research approach and deductive research approach and abductive approach. The main reason for the researcher preferred inductive approach because, inductive research approach is a method of attaining the final result by going from the precise to the general. Inductive research approach is also called inductive logic or bottom-up reasoning. As per the findings of Mulisa (2022), the inductive research approach will help the researcher in identifying the data in a humanistic way and also will help the researcher in examining the data from the point of view of others. The researcher not at all utilised deductive approach because, it is mainly used in the quantitative data collection method and the current study is qualitative, thus, the researcher opted inductive research approach for the effectiveness and the efficiency of the current research study. Through the inductive research approach, the researcher can easily able to identify the role of data driven marketing strategies on managing in E commerce industry.

3.4 Research design

According to Abbott and McKinney (2013), the research design is an overall strategy and plan adopted to conduct the research study and gather data. This method includes the decisions concerning the techniques, practices, and procedures to be adopted in the research study. The explanatory, descriptive and exploratory designs are three common types of research designs adopted for conducting research studies. Barker and Milivojevic (2016) mentioned that descriptive designs are appropriate when the researcher is familiar with the research questions and when the research objective is to examine the relationship between both independent and dependent variables. When using an explanatory design, the researcher examines the causes, consequences, and connections between the research variables and the research's problems. Nevertheless, one important technique that helps with completing a thorough study on the subject and that helps the researcher develop a special perspective on it is the exploratory design (Ridder, 2017).

The exploratory research method was identified as the suitable method for guiding the current research study in an effective way. By adopting the exploratory design, the researcher has capable of analysing the link that exists between the data-driven marketing strategies and competition in the e-commerce sector by linking the cases of Walmart. According to

Ranganathan and Aggarwal (2018), exploratory design aids the researcher in exploring and attaining a better comprehension of the research study issue or problem. Further, it is usually adopted when there is little comprehension regarding the issue, or else there is a want to make new concepts and ideas. With the aid of the exploratory design, the researcher was capable of analysing the role of data-driven marketing strategies in managing competition in Walmart.

3.5 Research Strategy

Research strategy is a process of collecting data connected to the research study issues in a systematic manner. Rashid et al. (2019) mentioned that case study, survey and interview are three commonly used research strategies for gathering adequate qualitative and quantitative data, and these strategies are structured and organised methods for gathering the relevant information's in meeting the research objectives and also resolving the questions. In this research study, the researcher has adopted a case study strategy for analysing the role of data-driven marketing strategies in managing competition in the E-commerce sector. According to Malhotra (2017), the case study strategy is adopted for examining the issues and problems in a real-life context. One of the main reasons for choosing the case study strategy was that it incorporated both quantitative and qualitative data and also did not need primary data and information for conducting the research.

For the current research study, the researcher has gathered cases relevant to Walmart for analysing the significance of data-driven marketing strategies in the e-commerce industry. The secondary data for the case study strategy was gathered from the existing research studies available on the research topic, while data cornering data concerning data-driven marketing strategies on managing competition was gathered from the existing case study available on Walmart and the internal documents of Walmart that are available in the public domain like promotional materials, annual reports together with published case study descriptions. The criterion adopted for choosing the different samples was that the cases that emphasised the marketing strategies and competition in the e-commerce sector that were published after 2013 were chosen.

3.6 Data collection methods

Data collection methods are considered crucial while conducting research, in which the researcher will select the appropriate method for data collection to increase the quality and reliability of the study. In simple words, data collection methods can be defined as the practices and procedures that are employed by the researcher for collecting required data for research

purposes (Pandey and Pandey 2021). Data collection methods require the researcher to be able to effectively complete the task as it involves many methods. Through proper data collection methods, the researcher will be able to gather the required information to reach the desired conclusion for the objectives of the research study. The two variants of data collection methods that researchers commonly use are known as primary and secondary data collection methods (Sileyew 2019).

According to the studies of Mazhar et al., (2021) it can be stated that the primary data collection method is in which the collected data is considered to be raw or direct data that has not been used in the previous studies. Interviews, surveys and questionnaires are the major types of data collection techniques that are involved in the primary data collection methods. In contrast, the secondary data collection methods allow the researcher to collect data from existing sources. In secondary data collection methods, the researcher can collect data from various sources like books, journals, articles, newspapers, websites etc.

The researcher has adopted secondary data collection methods to analyse the role of data-driven marketing strategies in managing competition in the E-commerce industry by taking the case study of Walmart. By properly utilising the available secondary sources, the researcher was able to examine the significance of data-driven marketing strategies in the e-commerce industry and determine the factors affecting competition in the E-commerce industry. Through the adoption of secondary data collection methods researcher was able to make the study more reliable and complete the task promptly.

3.7 Data analysis plan

As per the observations of Mengist et al ., (2020) a data analysis plan can be defined as a systematic method that involves an in-depth analysis of the collected data to reach desired conclusions; a data analysis plan allows the researcher to interpret and examine the data collected through various methods in order to achieve a conclusion for the formed objective of the study. By doing so, the researcher will be able to get a more precise and structured form of the collected data. Siedlecki (2020) has opined from his studies that the different types of data analysis that are present in the literature are thematic, descriptive and case study analysis. A descriptive data analysis plan has been used by the researcher for the current study in order to evaluate the role of data-driven marketing strategies in managing competition in E-commerce by taking the case study on Walmart. By selecting a descriptive data analysis plan researcher

was able to provide a detailed explanation of the significance of data-driven marketing strategies in the e-commerce industry and the factors affecting competition in the E-commerce industry based on the e-commerce giant Walmart. Compared to thematic analysis and case study analysis, a descriptive data analysis plan will be more suitable for the current study for obtaining valid information regarding the research topic.

3.8 Research limitation and accessibility issues

While conducting the research study, the researcher encounters a lot of limitations and which restricts the researcher from the smooth conduction of the research study. The absenteeism of primary data, which has decreased the probability of leading a detailed study on the research topic, is the primary limitation that the detective faced for conducting this study. due to the consumption of time, this study is not at all considered the primary data collection method. The time and cost constraints are the limitation that the researcher faced during the conduction of the research of the role of data driven marketing strategies on managing competition in E commerce. In addition, when conducting secondary data research, some limitations are also may influence the aptitude to analyse the data in the anticipated manner.

3.9 Ethical issues

In the present research study, the researcher has strictly followed all the ethical guidelines, procedures and policies during the data collection. The researcher has provided a higher emphasis on maintaining a reference list on the collected secondary data and avoiding plagiarism issues while conducting the secondary data. Further, there is a huge data and information collected from Wal-Mart, and it must go under security and privacy. Besides, the researcher has also given more care to collecting the data without escaping to third parties. Further, to maintain the privacy and confidentiality of the gathered data, the researcher has followed Data Protection Act 2018.

3.10 Summary

Through this chapter, the researcher has adopted different methods for examining the role of data-driven marketing strategies in managing competition in the e-commerce sector by considering the case of Walmart. The researcher has adopted an interpretivism philosophy, inductive approach, and exploratory strategy for analysing the research study issue. Further, the case study strategy and secondary data collection method are adopted by the researcher for collecting secondary data related to the research study issue. Moreover, the case study data analysis method was adopted in this study for analysing the collected secondary data. Further,

the research limitations, accessibility issues and also ethical concerns related to the research study issues were also discussed in this chapter.

Chapter 4: Results

4.1 Introduction

This chapter, which includes the analysis and conclusions from the data obtained from the case study, is essential to the research project. The information from the case study is provided in the context of relevant literature in order to address the research objectives and questions. The chapter offers a comprehensive examination of all the data gathered.

4.2 Plan of analysis

A plan of analysis is an organized and structured approach used to evaluate a specific topic or issue. It encompasses the procedures, methods, and approaches employed to collect data, analyze information, and generate meaningful insights (Clark and Bryman, 2019). In this study, a case study strategy and secondary data collection method were utilized to examine the role of data-driven marketing strategies in managing competition in the E-commerce industry, specifically focusing on Walmart. Secondary data was obtained from reliable sources such as company websites, records, journal articles, and newspapers. Descriptive analysis was employed to analyze the information derived from the Walmart case study. By adopting this approach, the researcher gained comprehensive insights into the significance of data-driven marketing strategies in effectively managing competition in the E-commerce industry (Clark and Bryman, 2019). This study contributes to the existing body of knowledge by providing practical implications and highlighting the importance of data-driven approaches in maintaining a competitive edge in the dynamic landscape of E-commerce.

4.3 Case studies

Case study 1: - Significance of data-driven marketing strategies in Walmart & Target

Retail behemoths like Walmart and Target have found great success in large part to data-driven marketing techniques. Both businesses recognise the value of utilising data to better understand consumer behaviour, target marketing campaigns, enhance the customer experience, and spur corporate expansion (Roggeveen and Rosengren, 2022). They approach and implement data-driven marketing tactics differently, though, which is noticeable. To remain competitive in the market, Walmart, a leader in data-driven retailing, has made large investments in analytics and technology. Walmart collects a lot of information from a variety of sources, including in-store transactions, loyalty programmes, internet interactions, and even social media, thanks to its sizable consumer base and huge network of physical locations. This information provides insightful information on consumer preferences, purchasing trends, and shopping habits.

Walmart can apply efficient pricing strategies, streamline supply chain operations, and improve inventory management by analysing this data. Walmart can maintain adequate stock levels and use price techniques that increase sales by comprehending which products are popular and analysing demand patterns (Pandey et al., 2021). Walmart also uses data-driven marketing strategies to segment its consumer base and deliver individualised promotions, offers, and recommendations, increasing customer loyalty and revenue.

Contrarily, Target has made large investments in this area and has recognised the value of data-driven marketing. Target collects information through a variety of channels, including in-store purchases, internet interactions, and their loyalty programme, dubbed Target Circle (Roggeveen et al., 2021). This data is analysed to glean important information about consumer preferences, purchasing patterns, and new product trends. By utilising data, Target hopes to produce a more engaging and personalised shopping experience that will ultimately increase consumer loyalty and boost sales. Target and Walmart both use data-driven marketing, yet there are significant disparities between the two companies' strategies. Walmart, which has a large physical store network, gathers information from online interactions as well as in-store sales and foot traffic (Gauri et al., 2021). Walmart now has a thorough understanding of customer behaviour across both physical and digital channels thanks to this. Despite maintaining a physical storefront, Target has prioritised its online capabilities and digital marketing initiatives. Target makes excellent use of data to improve the online shopping experience, personalise product recommendations, and target particular client segments.

Target focuses on a more affluent market, emphasising individualised advice and luxury items, while Walmart caters to a wider client base and prioritises value-driven promotions (Bawack et al., 2022). Both make use of data-driven marketing to comprehend customer behaviour and improve the buying experience. Walmart gains from having physical locations, whereas Target places more of an emphasis on its internet capabilities. Both Walmart and Target can grow their businesses while maintaining their competitiveness by utilising data properly.

Case study 2: Factors affecting competition in the Ecommerce industry on Walmart and Target

According to Asperti et al. (2020), The grocery retail e-commerce industry has experienced significant growth in recent years, with companies like Walmart and Target competing to capture a larger market share. Various factors influence the competition between these two retail sectors. Several factors affecting competition in the groceries retail e-commerce industry

for Walmart and Target are brand recognition and customer base, online presence and technology pricing a discount, variety of products and fulfilment, and customer service and loyalty. Carpio-Aguilar et al. (2019) stated Both Walmart and Target are well-established brands with a strong presence in the retail industry. Walmart has heavily invested in its online platform, offering a wide range of grocery products through its website and mobile app. It has also introduced features like same-day delivery and online service pickup to enhance the shopping experience. On the other hand, Dube et al. (2022), Target has made significant initiatives to improve its online platform, leveraging its physical stores as fulfilment centres to offer convenient and efficient grocery delivery services. Moreover, Both Walmart and Target are known for their competitive pricing strategies. Walmart has built its reputation on offering everyday low prices, and it has extended this approach to its e-commerce operations. The company's economies of scale enable it to negotiate favourable pricing with suppliers, which it passes on to customers. Meanwhile, Target highlights a chosen variety of groceries, with an emphasis on organic and premium items. As per the finding of Etumnu and Widmar (2020), the variety and availability of products play a significant role in the competition between these retailers. Walmart offers an extensive range of grocery items, including fresh produce, pantry staples, and household essentials. With its vast network of physical stores, it can fulfil orders through multiple channels, such as in-store pickup and local delivery. Walmart offers services like free two-day shipping and a loyalty program called Walmart. However, Target has introduced its loyalty program called Target Circle, providing customers with personalised deals, discounts, and exclusive offers (Sheth, 2022).

Case study 3: Role of data driven marketing strategies on managing competition in Walmart and Target

Data driven marketing strategies plays an important role on managing competition in every organisation. Data driven is important because it helps to improve decision making within the organisation. In Walmart, the data driven marketing strategies plays an important role on managing competition. Moreover, in Walmart, the data-driven strategies allow companies to inspect and organise their data with the goal of better serving their clients and consumers. As per the observation of Cadei et al. (2019), Data-driven marketing is the approach of optimising brand communications based on customer information. Data-driven marketers use customer data to forecast their requirements, needs and upcoming behaviours. In addition, an increase in data-driven methods as technology, computing competences, and access to large data sets have better.

As per the observation of Dube et al. (2022), Walmart may use data-driven marketing to assess the efficacy of its marketing campaigns, promotions, and consumer engagement activities. Apart from that, Walmart may discover areas for improvement and optimise its marketing tactics by measuring key performance indicators (KPIs) such as customer acquisition, retention rates, sales conversion rates, and ROI and this iterative method promotes continual development and assists Walmart in remaining competitive in the ever-changing retail sector. Bawack et al. (2022) mentioned that Walmart can obtain competitor knowledge and undertake extensive market analysis with the aids of the data-driven marketing techniques.

The data driven marketing strategies helps the Target to create user friendly websites, personalising the shopping experience, enhancing for search engines, leveraging social media, providing a unified mobile experience, and tracking and analysing data, e-commerce companies which can enhance the sales and provide a better shopping experience for their clients. As per the findings of Bai et al. (2022) in Walmart, the data driven marketing strategies helps the companies to segment their audience into smaller groups based on their behaviour and preferences. In target, by analysing customer data, companies can classify the stations and strategies that are most effective in reaching their target audience. This allows companies to allocate their marketing budget more efficiently, concentrating on the channels and strategies that make the uppermost return on investment.

As per the findings of Jeoung et al (2021), the data-driven marketing strategies have impacted handling competition is by providing modest intelligence. By collecting and analysing data about competitors, businesses can get visions into their strengths and weaknesses, as well as their marketing strategies. The data driven management strategies improve the decision making within the organisation and both the organisation such as and target, the data driven management strategies helps to increase the accountability, better efficiency and transparency within the organisation. In addition to that, Walmart can detect gaps, developing trends, and chances to differentiate itself by monitoring and analysing competition strategy, pricing, promotions, and consumer information and this intelligence enables Walmart to make educated decisions and respond effectively to the competition, allowing them to stay ahead of the competition (Bawack et al., 2022). General, these companies have established the significance of technology in enhancing the shopping experience for customers. Both the organisations such as Walmart and Target are used data driven strategies in order to improve their customer experience and productivity of the organisation.

4.4 Case study analysis

The case study emphasises the importance of data-driven marketing tactics in the achievement of retail behemoths like Walmart and Target. Further evidence of the significance of these tactics in the current corporate environment may be found in the literature study. Insights into consumer behaviour and preferences are valuable from data-driven marketing initiatives. Companies may comprehend customer wants and develop marketing messages that are specifically tailored to their audience by analysing data from a variety of sources. With the aid of their massive data collection, Walmart creates marketing techniques that resonate with their target audience, boosting sales and patronage (Roggeveen et al., 2021).

Another important advantage of data-driven marketing is segmentation. Companies can customise marketing messages and boost conversion rates by segmenting the audience into smaller groups based on behaviour and preferences. With the use of specialised items and incentives, Walmart is able to target various customer demographics, increasing sales and luring in new clients (Bawack et al., 2022). Companies can also find market challenges and opportunities with the aid of data-driven marketing tactics. Companies can notice patterns and changes in consumer behaviour by analysing market data, which gives them the opportunity to modify their strategy and remain competitive. With the aid of consumer data analysis, Walmart is able to develop marketing campaigns that appeal to its target audience, increasing sales and patronage.

Understanding consumer behaviour, focusing marketing messaging, spotting market openings, and allocating resources efficiently are all made possible by data-driven marketing techniques. In the very competitive retail sector, businesses like Walmart and Target use data to improve their marketing strategies, driving customer engagement, raising conversion rates, and generating revenue growth.

The case study analyses the factors that affect the competition of Walmart and Target in the grocery retail e-commerce industry based on the finding of several researchers. The grocery retail e-commerce industry witnessed substantial growth, and both companies are striving to capture a large market share. Moreover, the case study highlights various factors that influence competition in this industry. Brand recognition and customer base play a crucial role, with Walmart having an advantage due to its extensive network of physical stores and larger customer base. However, Target has leveraged its brand loyalty and rapidly expanded its e-commerce capabilities. Online presence and advanced technology are vital for success in e-

commerce. Walmart has heavily invested in its online platform, offering an all-over area of grocery products and introducing features like same-day delivery. Target has improved its online platform and utilises its physical stores as fulfilment centres for efficient grocery delivery services. Competitive pricing is another aspect that impacts competition. Walmart's reputation for everyday low prices extends to its e-commerce operations. Target focuses on a curated selection of groceries, emphasising organic and premium items. The variety and availability of products are significant factors as well. Walmart offers an extensive range of grocery items, including fresh produce and household essentials, and fulfils orders through multiple channels. Target focuses on a curated selection, emphasising organic and premium offerings. Exceptional customer service and loyalty programs differentiate the two companies. Walmart offers services like free two-day shipping and a loyalty program called Walmart+, while Target provides a loyalty program called Target Circle with personalised deals and discounts.

From the literature review, it is clear that data driven marketing strategies plays in important role among the business. Data-driven marketing strategies have had an important influence on handling rivalry in the organisation. In addition, the data-driven marketing strategies help companies to section their spectators into lesser groups based on their behaviour and favourites and the data-driven marketing strategies allow companies to identify new market opportunities and threats (Baker, 2017). By analysing market data, companies can recognise the trends and shifts in consumer behaviour, letting them to regulate their advertising strategies accordingly.

Data-driven marketing strategies have also enabled more efficient resource allocation. By analysing customer data, firms can classify the stations and strategies that are greatest effective in attaining their target audience (Yap et al., 2021). The data driven strategies allows the companies to companies to enhance their movements in real-time, regulating their policy based on the performance of each channel and method. By identifying the customer data, companies can find patterns and trends in client behaviour, which can be used to make more real marketing movements. This lets businesses to better comprehend their clients and create more personalized marketing messages that vibrate with them (Hartmann et al., 2016). As per the case study, it is understood that, data driven approaches is crucial for the organisation and which help the organisation to improve the decision making within the organisation, so it can easily manage the competence in the organisation also.

4.5 Discussion

In this section, the researcher mainly focuses on dealing with the deep analysis and interpretation of findings obtained from the literature review and case study analysis. The primary focus of this study is to determine the role of data-driven marketing strategies in managing competition in the E-commerce industry by taking the case study of Walmart and Target, both being US-based grocery retailers. The significance of data-driven marketing strategies is increasing daily due to the accelerated advancement of technology. Many companies that utilise data-driven strategies to collect data are more likely to have a competitive advantage over other companies in the industry. By using data-driven marketing strategies, companies will be able to collect data like previous purchase history, preferences, social media history, and website analytics (Milutinovic and Salom 2016). This allows them to tailor their products and services according to the needs and demands of their customers. From this collected data, companies can also understand the patterns and purchase behaviour of different customers, which allows them to customise the products and service messages accordingly. By adopting data-driven marketing strategies, companies can also gather information about the competitors in the market, like their customer base, strength, weaknesses and even their marketing strategies (Johnson et al., 2019). After the examination of the data collected from the literature, it has been found that there are various factors that affect the competition in the E-commerce industry. Some of the factors that affect the competition in the E-commerce industry are the industry structure, market demand, consumer preferences, resources, legal environments and technological advancements. All these factors have a huge importance in maintaining the success of the company in the market. So companies need to address these factors and take essential measures to reduce their impact on the business of the company (Keddy 2023). In return, companies will have a competitive edge in the market and build a solid customer base. It can also be seen that data-driven marketing strategies also have a significant impact on managing competition as it allows companies to better understand their customers, provides competitive intelligence, improve attracting the target audience and efficiently allocate resources based on customer demands. Unlike the old days with the emergence of data-driven marketing strategies, companies can now easily access more data about their customer needs, insights into the rivals in the same market and other factors that are needed for success in the market industry (Baker 2017). So it can be said that data-driven marketing strategies play an essential role in managing competition among companies.

Based on the case study analysis of this study, it can be seen that both Walmart and Target have understood the significance of data-driven marketing strategies in the competitive market. Both Walmart and Target have made huge investments in this area to develop the latest technologies. By understanding the significance of data-driven strategies and by investing in this area, Walmart and Target have been able to collect data from their customer through various means like feedback, purchase history, social media, loyalty programs etc. This allowed them to understand the current trends of the market, customer needs and purchase patterns. With this data, both Walmart and Target have been able to attract their target audiences through tailored products based on customer needs and effective pricing strategies. There have also been various factors that affected the e-commerce retailers Walmart and Target in managing their competition. Some of the significant factors that affected Walmart and Target may include brand recognition, customer base, technology, online presence, pricing strategies, variety of products and customer service. All these factors had a significant impact on both companies in managing their competition in the industry (Sheth, 2022). From the insights of the case study analysis, it can be stated that data-driven marketing strategies have played a huge role in managing and gaining a competitive edge in the market for both Walmart and Target. Both companies have utilised data-driven marketing strategies to increase the number of customers by developing user-friendly websites providing a great shopping experience for the users.

So it can be seen that data-driven technologies play a huge role in allowing companies to develop marketing strategies in order to manage their competition in the e-commerce industry. It has been understood that through data-driven marketing strategies, companies will be able to reduce their marketing costs by focusing on targeted advertisements and promotional campaigns. According to the studies of Shah and Murthi (2021), it can be stated that with the help of these strategies, companies will also be able to retarget their previously lost customers. In other words, companies can hugely benefit from data-driven strategies as there are a lot of ways to collect information regarding customer preferences and purchase patterns. By understanding the proper ways to interpret the collected data, companies will be able to develop strategies that are tailored according to the current marketing trends and consumer demands. This will offer a competitive advantage for companies against rivals and improve the growth of their revenue margin. With the proper understanding of these factors in every possible manner, companies will be able to take effective decisions in times of any problems that may arise in the market industry. From the perspective of Wassouf et al . (2020), it can be explained

that it is also possible for companies to develop a predictive system for monitoring their customers by determining the purchasing patterns of the customers. Through this, companies can understand the changes in the behaviour and purchase patterns of customers, which paves an opportunity to introduce products considering consumer demands. This will allow companies to deliver products to their customers much quicker than other companies.

From the finding of Freudenreich et al . (2020), it can be discussed that one of the most critical aspects or key elements in every business is customers. So it is vital to keep them happy by providing them with high-quality products and a great shopping experience. Compared to the traditional day's majority of the latest generations are mostly engaged in smartphones and the online platforms available to them. Companies will have a significant advantage if they are able to harness their marketing strategies, focusing on e-commerce platforms. Nowadays, it is the most simple and advanced method in increasing the brand reputation of a company. As per the observation of Teng et al . (2021), it can be stated that so adoption of data-driven technologies will aid companies in every aspect of their business growth and gain a competitive edge in the market. By implementing data-driven strategies, companies will be able to get insights from customers about certain products much faster than in the old days. It is just a matter of words in the comment box of the website or app of the company. Through this data, companies will be able to recognise the improvements that are required for product development. So it has been understood that data-driven technologies act as a pillar for companies regardless of the size of their growth and increasing the customer base. Every business should consider opting for data-driven marketing strategies to get a firm stand in the market sector.

4.6 Judgement of findings

The researcher conducts the study based on the topic of the role of data-driven marketing strategies in managing competition in the E-commerce industry with the case study of Walmart. The second chapter of this study described the details of the variables, such as marketing strategies and managing competition. The second also contains the significance of data-driven marketing strategies, factors affecting managing competition, the online shopping experience, and how technology has improved the shopping experience. Improvements brought by technologies in online shopping and the impact of data-driven marketing strategies on managing competition. From the literature review, marketing strategies are termed a vital component of any business's success and marketing strategies are some practices used by companies to promote their product or services. Increased sales, brand awareness, competitive

edge, improved customer engagement, cost-effectiveness, increased online visibility, and a better understanding of customer needs are termed as the advantages of marketing strategies. They support businesses in locating and connecting with their ideal consumer base, enhancing brand recognition and revenue. Businesses are able to position themselves for long-term growth and success in the market by utilizing the advantages of marketing techniques. In the case of Walmart, marketing strategies have greatly helped in the company's expansion and success. Content marketing, social media marketing, search engine optimization, pay-per-click advertising, and Email marketing are the different types of marketing strategies that companies use to attain their marketing objectives.

The success and goals of Walmart are significantly impacted by data-driven marketing techniques. Companies can gain insights into the behaviour, preferences, and demands of their customers by studying data from several sources, including website analytics, customer feedback, and social media. This enables businesses to develop more individualised marketing messages that connect with consumers and raise conversation rates. Additionally, using data-driven marketing techniques enables a business to divide its target market into smaller groups according to their behaviour and interests. As a result, they are able to develop more tailored marketing messages that speak to the wants and needs of each demographic. Companies are also able to recognise new market opportunities and challenges by employing data-driven marketing methods. Companies can discover patterns and changes in consumer behaviour by examining market data, which enables them to modify their marketing tactics as necessary. Data-driven marketing techniques also offer competitive insight. Companies can learn about their competitors' strengths and shortcomings as well as their marketing tactics by gathering and analysing data about them. Resource allocation is also made more effective by data-driven marketing techniques. Companies may more properly assess the efficacy of their marketing campaigns thanks to data-driven marketing tactics. An essential component of any business is managing the competition. . The convenience of online shopping, which allows customers to do their shopping from anywhere, at any time, as long as they have an internet connection, is one of its key benefits, according to the literature review. There are some drawbacks to online shopping, though. Online shoppers can easily compare prices and items from many merchants, like Walmart, which can help them locate the greatest bargains and save money.

After reviewing the study, I am in a strong position to recognise the critical part that marketing plans and data-driven marketing tactics play in the e-commerce sector. The results reaffirm the importance of marketing tactics as the main forces behind commercial success, allowing

businesses to accomplish a variety of goals, including increased sales, better brand recognition, and competitive advantage. The in-depth case study of Walmart provides a powerful illustration of how efficient marketing tactics directly contribute to the business's growth and market dominance. Businesses may learn a lot about consumer behaviour, tastes, and market trends by utilising data from a variety of sources. With the use of this abundance of data, highly customised marketing messages and targeted advertising campaigns can be created, which boosts consumer engagement and increases conversion rates. Marketing activities are made more effective when the target market can be precisely segmented based on customer behaviour and interests. The significance of marketing plans and data-driven marketing strategies in the e-commerce sector is confirmed by my own investigation. In order to gain a competitive edge and experience sustained success in the fast changing digital environment of today, the study offers persuasive evidence that organisations must adopt these tactics.

4.7 Conclusion

This chapter is the fourth chapter of this dissertation which deals with the results of the overall study. This chapter included the plan of analysis, and explanation of three cases studies along with their case study analysis. Discussion and judgement of findings are also provided in this chapter.

Chapter 5: Conclusion & Recommendation

5.1 Introduction

This fourth chapter, conclusion and recommendation interpret the research's total summary. This chapter will conclude the total output of the study. After the conclusion, recommendations for the research will be provided. After the evaluation, there will be the main limitation of the research that the researcher faced during the research. Moreover, the study will also provide a future recommendation to improve future research.

5.2 Conclusion

Objective 1: To examine the significance of data-driven marketing strategies in the e-commerce industry.

In-depth analysis of the importance of data-driven marketing tactics in the e-commerce sector is the study's initial objective. The study helped to learn a lot about the use of data to drive marketing decisions through a literature analysis and case studies of large retailers like Walmart and Target. These techniques give businesses a better understanding of their clients, enabling more tailored messaging, higher conversion rates, and increased client loyalty. Segmenting audiences, personalising communications, and enhancing client interaction are other benefits of data-driven marketing. Additionally, by analysing market data and patterns in consumer behaviour, it aids in the identification of market possibilities and dangers. Companies benefit from data-driven marketing tactics because they enable them to adjust their strategy, gather competitive knowledge, optimise resource allocation, and assess the success of campaigns (Johnson et al., 2019). In the e-commerce sector, these techniques give businesses the ability to comprehend their clients, personalise messaging, find opportunities, allocate resources effectively, and assess the success of campaigns. By making a solid relationship between the case study analysis and the literature, the study was able to accomplish its goal. In this manner, the basic goal is achieved by keeping a close relationship between the literature and the case study.

Objective 2: To identify the factors affecting competition in the E-commerce industry.

Finding important factors that have an impact on competition in the e-commerce sector, with a focus on Walmart and Target in particular, was the second goal of the research project. Several important elements that affect competition in this industry were identified by the case study

investigation. Given that both businesses had well-known names and a significant presence in the retail sector, brand awareness and customer base were deemed to be important factors. Walmart has made significant investments in its online store, which now offers a variety of groceries items as well as conveniences like same-day delivery and online service pickup(Booth, 2015). For effective grocery delivery, Target, on the other hand, has enhanced its online platform and made use of its physical stores as fulfilment centers. The importance of competitive pricing cannot be overstated. Walmart is well known for its consistently low prices and its power to bargain with suppliers on favourable terms. Target concentrates on a particular selection of foods, placing a strong emphasis on organic and high-quality products. The diversity and accessibility of products also play a big part, with Walmart offering a wide selection of supermarket products and different methods for order fulfilment, while Target launched its loyalty programme, Target Circle, to provide customers individualised promotions and discounts(Sheth, 2022). In general, organisations need to comprehend and successfully address these elements if they want to achieve a competitive edge in the e-commerce sector.

Objective 3: To evaluate the Role of data-driven marketing strategies in managing competition in Walmart.

This study examined the impact of data-driven marketing tactics on Walmart and Target's handling of retail rivalry. The literature research and case study analysis emphasised the value of data-driven marketing in enhancing customer comprehension. Companies may develop personalised advertising and improve customer engagement by analysing consumer data, which raises conversion rates (Hartmann et al., 2016). Additionally, data-driven techniques offer audience segmentation, enabling businesses to customise communications to particular clientele groups, resulting in increased efficacy. By examining competition data, data-driven marketing techniques offer useful competitive knowledge. This enables businesses to pinpoint their advantages and disadvantages, resulting in modifications to their marketing plans. A further benefit of customer data research is the discovery of untapped market groups, which allows for improved targeting by identifying ideal client profiles. The customer experience, personalization of messaging, pricing optimisation, ensuring easy shopping, and improved inventory management have all been achieved with data-driven marketing strategies by Walmart and Target. They are able to outperform rivals, comprehend customer preferences, and hold onto their leading positions thanks to these techniques. Data-driven marketing is essential for managing competition since it offers insights into customer behaviour, enhances targeting, compiles competitor knowledge, and optimises resource allocation (Bai et al., 2022).

Companies like Walmart and Target are able to accommodate shifting consumer expectations and remain competitive by utilising data.

5.3 Recommendation

The following actions can be taken in order to enhance data-driven marketing strategies for controlling competition at Walmart:

Personalization and Participation of Customers: Walmart should give increased consumer involvement through individualised experiences top priority in order to boost customer loyalty and differentiate itself from rivals. With the help of data insights, Walmart is able to tailor its promotions, offers, and advice to each individual customer (Sanders, 2014). Through the creation of a distinctive and unusual purchasing experience, this strategy will not only increase consumer connections but also their engagement.

Advanced Analytics and Segmentation: To analyse the obtained data and identify patterns and trends, Walmart might make use of advanced analytics techniques like machine learning and predictive modelling. With the use of this study, Walmart will be able to divide its consumer base into groups based on their interests, demographics, and shopping habits. The development of personalised marketing campaigns and the successful targeting of particular client segments can be accomplished using these insightful data (Huang and Rust, 2021). Walmart may improve customer targeting and increase the effectiveness of their marketing campaigns by using this strategy.

5.4 Limitation

The research project ran across some obstacles that slowed it down. One such restriction was the extensive reliance on secondary data sources which, in comparison to primary sources, have some drawbacks for data collecting. Due to the limits of secondary sources, getting the precise information needed for the study region proved difficult. The quality of secondary data might vary, and these sources do not offer up-to-date, first-hand knowledge. Furthermore, it was challenging to confirm the reliability of secondary data sources found online. It was difficult to find the right information from dependable sources. The researcher was unable to collect

primary data using survey and interview techniques because of the reliance on secondary sources.

5.5 Recommendation to future researchers

Primary data collection is the best way to collect trustworthy and reliable data related to the research topic. The recommendation for future researchers is to implement other research designs such as interviews, surveys and other methods in the study. For the success of the research, the researcher must use primary data collection rather than secondary data collection for the study's efficiency to enhance the work's quality. Primary data collection helps the researcher to advance knowledge, skills and aptitude since the recommendation for future researchers is to use primary data collection for the productivity of the study.

Reflection

My experience as a researcher has changed significantly due to starting this research journey. I can explore my path more thoroughly and learn insightful things using the Gibbs reflective framework. I have met difficulties with secondary data sources and resource allocation throughout this process, in addition to developing important abilities in literature analysis, data analysis, and time management. I may find areas for personal growth by reflecting on these events, such as honing my primary data collection techniques, encouraging multidisciplinary cooperation, and developing my academic writing and communication skills. This reflection process reaffirms my dedication to lifelong learning and professional growth as a researcher.

Throughout the study process, I picked up some crucial skills that have significantly improved my capacity as a researcher. I learned how to perform in-depth literature analyses, one of the most important skills I acquired. To do this, it was necessary to look for pertinent sources, evaluate the data critically, and combine it into a logical framework. With the aid of this ability, I was able to pinpoint knowledge gaps that needed to be filled as well as develop a thorough understanding of the research issue. Data analysis was another crucial ability I developed. Whether it was quantitative techniques or qualitative case studies, I learnt how to successfully gather and analyse data. This meant using various analytical methods and tools to get actionable insights from the data. My proficiency with statistical software and other research tools also substantially accelerated data processing.

The reliance on secondary data sources was one of the main difficulties I encountered while conducting my research. The trustworthiness, timeliness, and region-specificity of secondary sources were constrained, which made them less useful for the study. Collecting the most recent information while ensuring the data's accuracy and relevancy was difficult. This experience brought home the value of primary data-gathering techniques, such as surveys and interviews, for acquiring more accurate and focused data in upcoming research projects. Effective time and resource management was another difficulty I encountered. I became aware of the importance of setting realistic deadlines, allocating resources effectively, and maintaining a systematic approach to the research process because research projects frequently need meticulous preparation and organisation. It was difficult to balance the research with my other responsibilities and to finish the assignment successfully, and I had to establish good time management and prioritisation skills.

I have noted a number of important factors that should be taken into account as my research career develops. I want to improve my primary data collection abilities most of all. It would be possible for me to conduct a more thorough analysis if I used techniques like surveys and interviews, which would provide me with direct access to accurate data. I also hope to explore cutting-edge statistical methods and tools for data visualisation in order to hone my analytical abilities even more. In doing so, I would be able to draw out more nuanced insights from the data and effectively share my results with a larger audience.

I also understand the value of interdisciplinary cooperation in research. Having conversations with authorities in many industries helps extend my perspective and provides insightful information that I might have missed otherwise. I would be able to approach research from a more all-encompassing perspective if I actively sought out chances for collaboration and knowledge exchange. Last, but not least, I am dedicated to always honing my communication and academic writing abilities. For research to be shared and to be engaged with by the scholarly community, effective communication is essential. To improve my writing and presentation skills, I want to go to workshops, get mentor input, and participate in peer review procedures.

Pursuing this subject has been challenging and enjoyable. I've improved my capacity for statistical research, literature analysis, and time management. I have also seen problems with the dispersal of resources and supplementary data sources. In order to further my individual development as a researcher, I wish to foster multidisciplinary collaboration, improve my academic writing and communication abilities, and enhance my capabilities in primary data collection. Overall, I believe that this research experience has really improved my capacity for research, and I am eager to use what I have learned in my upcoming projects. I have developed as a researcher as a result of this research experience. In order to continue pursuing my enthusiasm for research and positively impact the development of knowledge in my profession, I am excited to put the knowledge and expertise I have gained to use in upcoming initiatives.

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