TRENDS IN BUSINESS PROCESS MODELING AND DIGITAL MARKETING:
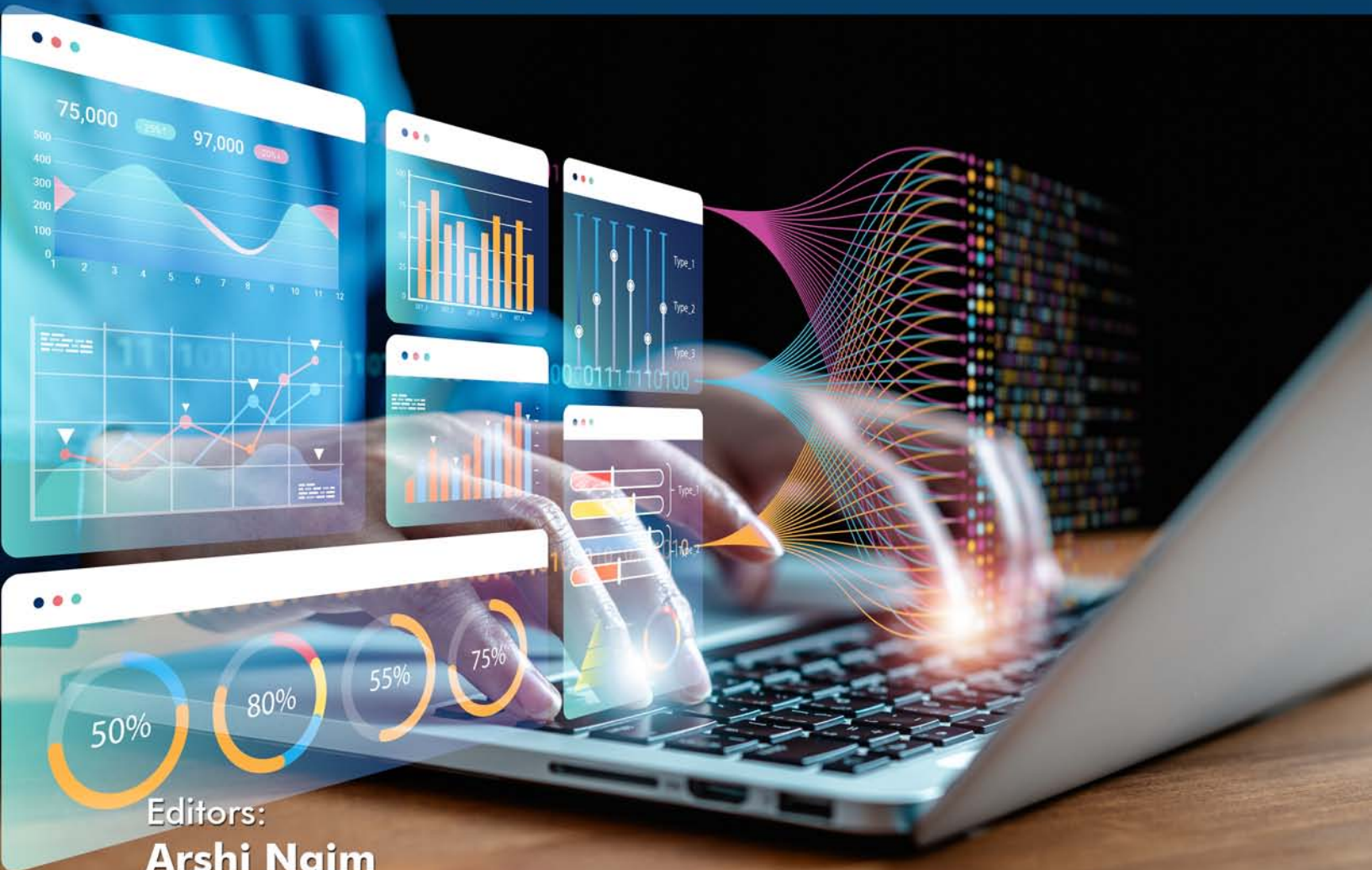## CASE STUDIES AND EMERGING TECHNOLOGIES

Editors:
Arshi Naim
Praveen Kumar Malik

Bentham Books

Trends in Business Process Modeling and Digital Marketing: Case Studies and Emerging Technologies

Edited By

Arshi Naim
Business Management, King Khalid University
Abha 62529, KSA

&

Praveen Kumar Malik
School of Electronics and Electrical Engineering
Lovely Professional University
Punjab 144001, India

Trends in Business Process Modeling and Digital Marketing: Case Studies and Emerging Technologies

need for a court order if at any point you breach any terms of this License Agreement. In no event will any delay or failure by Bentham Science Publishers in enforcing your compliance with this License Agreement constitute a waiver of any of its rights.

3. You acknowledge that you have read this License Agreement, and agree to be bound by its terms and conditions. To the extent that any other terms and conditions presented on any website of Bentham Science Publishers conflict with, or are inconsistent with, the terms and conditions set out in this License Agreement, you acknowledge that the terms and conditions set out in this License Agreement shall prevail.

CONTENTS

FOREWORD

In the ever-evolving landscape of business and marketing, staying ahead of the curve is not just a strategic advantage but a necessity. "Trends in Business Process Modelling and Digital Marketing: Case Studies and Emerging Technologies" serves as a timely and insightful guide into the dynamic realms of business process modeling and digital marketing.

As businesses navigate the intricate web of processes and strive for digital excellence, this book emerges as a beacon, shedding light on the transformative trends that shape industries today. The intricate interplay between business processes and digital marketing is a key theme explored within these pages. Through case studies and explorations of emerging technologies, this volume provides a comprehensive roadmap for practitioners, academics, and enthusiasts alike.

The case studies presented here are more than just stories—they are windows into real-world scenarios where innovative approaches have led to success. Each case study not only elucidates the challenges faced but, more importantly, unveils the strategies and technologies that pave the way for triumph. From streamlining complex business processes to harnessing the power of data-driven marketing, the narratives within offer valuable lessons and inspiration.

Moreover, as we navigate the uncharted territories of emerging technologies, the book serves as a compass, guiding readers through the intricacies of AI, block chain, and other transformative tools. The authors expertly unravel the potential applications and impact of these technologies, providing a roadmap for organizations seeking to harness their power.

In a world where change is constant, understanding the latest trends is paramount. This book is not just a collection of insights; it is a living document that reflects the pulse of contemporary business and marketing practices. As you embark on this journey through the pages ahead, may you find inspiration, practical wisdom, and a renewed sense of excitement for the possibilities that lie ahead.

<div align="right">

Etinder Pal Singh
Apeejay School of Management.
New Delhi, India

</div>

PREFACE

Welcome to "Trends in Business Process Modelling and Digital Marketing: Case Studies and Emerging Technologies". In the ever-evolving landscape of business and marketing, adaptability and foresight are paramount. This compilation seeks to unravel the intricate tapestry of contemporary business processes and digital marketing strategies, offering a panoramic view of the trends that shape industries worldwide.

As editors, our journey in curating this volume has been a fascinating exploration of the synergies between business process modeling and digital marketing. The convergence of these two domains is more than a mere coincidence; it represents a strategic imperative for organizations aiming not only to survive but to thrive in the digital age.

The case studies presented in this collection serve as practical testimonies to the dynamic challenges faced by businesses today. Through these real-world narratives, we delve into the intricacies of process optimization, customer engagement, and the strategic integration of digital technologies. Each case study is a testament to the resilience and ingenuity of organizations in navigating the complexities of the modern business landscape.

In addition to the case studies, this volume delves into the realm of emerging technologies that are reshaping the way business processes are modeled and digital marketing strategies are executed. From the transformative power of artificial intelligence to the decentralized promise of blockchain, our exploration of these technologies aims to equip readers with the knowledge and insights needed to navigate the digital frontier.

We extend our heartfelt gratitude to the contributors—experts, practitioners, and thought leaders—who generously shared their experiences and expertise, making this volume a rich tapestry of insights. Their dedication to advancing the understanding of business processes and digital marketing is evident in the depth and breadth of the content presented here.

As you embark on this journey through "Trends in Business Process Modelling and Digital Marketing", we encourage you to engage with case studies and emerging technologies, seeking inspiration and practical guidance for your own endeavors. The future of business and marketing is shaped by those who understand the trends of today and embrace the possibilities of tomorrow.

Arshi Naim
Business Management, King Khalid University
Abha 62529, KSA

&

Praveen Kumar Malik
School of Electronics and Electrical Engineering
Lovely Professional University
Punjab 144001, India

ACKNOWLEDGEMENT

List of Contributors

Arshi Naim
Business Management, King Khalid University, Abha 62529, KSA

Arshiya Begum
Faculty of Computer Science Department, King Khalid University, Abha 62529, KSA

Asfia Sabahath
Faculty of Computer Science Department, King Khalid University, Abha 62529, KSA

Akshay Upmanyu
Sharda School of Media, Film and Entertainment, Sharda University, Greater Noida, India

Anandhavalli Muniasamy
College of Computer Science, King Khalid University, Abha 62529, KSA

Deep Moni Gogoi
Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India

Disha Batra
Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India

Gunjan Sachdeva
Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India

Harshwardhani Sharma
Centre of Journalism and Mass Communication, Hemvati Nandan Bahuguna Garhwal University, Uttarakhand, India

Kaneez Masoom
Department of Business Administration, Khwaja Moinuddin Chishti Language University, Lucknow, India

Maithili Ganjoo
Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India

M. Blessy Doe
Department of Management Studies, Sri Ramakrishna Engineering College, Coimbatore, India

Mohammad Irfan
School of Business and Management, Christ University, Bengaluru, India

Mustafa Kayyali
Al Maaref University of Applied Sciences, Sarmada, North Syria

Nandini Deb
Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India

Praveen Kumar Malik
School of Electronics and Electrical Engineering, Lovely Professional University, Punjab, India

Praveen Kumar Malik
School of Electronics and Electrical Engineering, Lovely Professional University, Punjab, India

Ruhi Lal
Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India

S. Dhanabagiyam
School of Business and Management, Christ University, Bengaluru, India

Syed Haidar Ali   Department of Business Administration, Khwaja Moinuddin Chishti Language University, Lucknow, India

Shad Ahmad Khan   College of Business, University of Buraimi, Al Buraimi, Oman

Saiyid Saif Abbas Abidi   Babu Banarasi Das University, Lucknow, India

Sayeda Meeraj   College of Computer Science, King Khalid University, Abha 62529, KSA

Analyzing Digital Marketing Strategies of Market Leaders in the Feminine Hygiene Product Category: Gender Perspectives and Innovations

Maithili Ganjoo[1] and Gunjan Sachdeva[1,*]

[1] *Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India*

Abstract: In the dynamic field of digital marketing, it is critical to comprehend the nuances of customer behavior from a gender perspective, especially in categories like feminine hygiene. Through the lens of gender theories, this study explores the digital marketing strategies of three brands in the Indian sanitary napkin market: Whisper, Stayfree, and Sofy. By examining data from their digital campaigns and engaging in qualitative analysis, this research aims to explore the intricacies of how these brands cater to diverse gender demographics. Drawing from the ideologies of gender-based marketing, this study explores the dynamics that shape consumer responses to digital marketing initiatives. By examining consumer demographics and campaign details, the study provides useful recommendations for marketers looking to improve their strategies, in addition to illuminating the gendered aspects of digital marketing in the feminine hygiene industry. India has a population of 1.366 billion people, with 50.8% of the population being female. The majority of workers in India are informal workers, with women working mostly at the lower rung of the occupational ladder as agricultural laborers, petty traders, manufacturing outworkers, etc. The Indian sanitary napkin market is a highly competitive space, with brands like Whisper, Stayfree, and Sofy vying for a share of the market. According to a report by Your Story, feminine hygiene products need better marketing in India, and retailers are inevitably responsible for presenting the product to the buyer. Digital marketing has emerged as a powerful tool for brands to reach out to their target audience. With the advent of digital platforms, brands can now reach out to their customers in a more targeted and personalized manner. AI intervention in marketing has also enabled brands to create more effective campaigns by analyzing consumer data and providing insights into consumer behavior.

Keywords: Consumer behavior, Digital marketing, Gender, Sanitary napkins.

* **Corresponding author Gunjan Sachdeva:** Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India; E-mail: gunjansachdeva1539@gmail.com

INTRODUCTION

A revolution is happening in the dynamic world of digital marketing, where paper is replaced by pixels and tastes are shaped by algorithms. We interact with customers through displays, platforms, and clicks as the internet becomes our canvas (Kannan & Li, 2017). Digital marketing powers everything from social media campaigns to search engine rankings in today's business world (Saura, 2021). Advertising is only one aspect of it; other aspects include creating experiences, following data trails, and building tales (Wymbs, 2011). Enter this pixelated world now, where each click initiates a dialogue and each pixel represents a potential outcome (Saura, 2021). Digital marketing has become instrumental for businesses to connect with their audience, and this chapter delves into the strategies employed by market leaders in the feminine hygiene product category, with a particular focus on gender perspectives and innovations. As the digital age unfolds, it becomes imperative for businesses to embrace digital marketing strategies to remain competitive and tap into new opportunities (Charlesworth, 2014). The internet, with its vast user base of over 5.35 billion people globally, serves as the primary medium for these strategies (Internet and Social Media Users in the World 2024 | Statista, 2024). The digital space not only allows businesses to broaden their marketing reach but also enables them to narrow their focus with precision, targeting specific niche segments within a broader market. In this context, the importance of a well-formulated digital marketing strategy cannot be overstated, as it ensures that efforts are concentrated on elements most relevant to the business (Saura, 2021).

A coherent digital marketing strategy is indispensable in navigating the constantly evolving digital marketplace, facilitating an understanding of its impact on the relationship between a business or brand and its customers. In the absence of such a strategy, businesses risk missing golden opportunities and falling behind competitors in the ever-expanding digital landscape (Acs *et al.*, 2021). Unlike traditional mass-media marketing, the internet provides unique capabilities to both broaden and narrow marketing efforts simultaneously, transcending geographical constraints while allowing for precise targeting (Daoud *et al.*, 2024). Digital marketing strategies revolve around the traditional marketing mix, encompassing Product, Price, Promotion, and Place. "Place" in the digital sphere mostly refers to the internet and the large online community that uses it often. Pricing in the digital space is crucial, with transparency driving the need for businesses to offer compelling value propositions (Kannan & Li, 2017). Since it serves as the foundation for efficient customer interaction, a robust and marketable product is essential to the success of digital marketing. Digital marketing involves promoting using a variety of platforms, with the company website serving as the focal point of online activity (Wymbs, 2011). By matching content to user search queries,

search engine optimization (SEO) improves organic search results (Dumitriu & Popescu, 2020). Businesses may gain visibility for certain keywords by utilizing pay-per-click search advertising (PPC) (Mangàni, 2004). Maintaining current customers and establishing enduring relationships become critical functions of customer relationship management. The digital promotional environment is varied and includes elements such as content marketing, display media, and rising trends like online video and retargeting (Melović *et al.*, 2020). The theoretical foundation of this study is Bem's (1974) gender schema theory, which is comparable to Goffman's framing theory. Building on the works of Iyer and Debevec (1986), Milner *et al.* (1990), and Milner and Fodness (1996), the research investigates the gendered perceptions of products, specifically in the context of feminine hygiene items. As a result of societal norms and mass media transmission, the theory suggests that customers attach gender identities to items.

The feminine hygiene sector, especially in India, has a distinct environment influenced by shifting social attitudes and cultural taboos. India became a booming market for consumer goods, including menstrual hygiene products, after economic liberalization in 1991 (Economic Liberalization of 1991 - Study Page, n.d.). However, there are issues because of the ongoing cultural taboo around menstruation; girls are frequently exposed to limitations and social conventions that prevent candid conversations. Because menstruation is taboo in many communities, women have historically been forced to conceal it, which has limited conversation and increased misunderstandings (Jagadale & Jagadale, 2018).

Throughout the years, several items have been developed to help manage menstrual outflow, including tampons, menstrual cups, cotton pads, and sanitary napkins (Garg *et al.*, 2011). The three main brands in the Indian sanitary napkin market—Whisper, Stayfree, and Sofy—are the subject of this study's digital marketing techniques. Since its 1989 inception, Whisper has significantly changed the menstrual hygiene market in India. Whisper was the first company to publicly mention sanitary pads in advertisements after initially encountering difficulties with prime-time television advertising. The brand cleverly paired with Renuka Sahane, a well-known television personality, to recount her story. In order to dispel stereotypes and start talking about menstruation, Whisper launched creative ads like "Touch the Pickle" and school teaching initiatives over the course of two decades. These efforts were aimed at raising awareness of and increasing access to menstrual hygiene products (Whisper's History, 2021). With the invention of the first beltless pad, Stayfree, founded in 1974, has led the way in feminine care. Pre- and post-menstrual products are available from the brand, with a selection of choices to suit various needs. Stayfree has continuously improved its products to satisfy the shifting needs of customers while remaining committed to providing

Implementing Effective Marketing Technology for a New Business Venture: Case Studies from the Middle East

Arshi Naim[1,*] and Praveen Kumar Malik[2]

[1] *Business Management, King Khalid University, Abha 62529, KSA*

[2] *School of Electronics and Electrical Engineering, Lovely Professional University, Punjab, India*

Abstract: The objective of this study is to provide a comprehensive understanding of the importance of accurate target market identification for startups and to present effective strategies for market segmentation and audience targeting. This study is based on a descriptive evaluation of case studies in the Middle East region. The research findings highlight that startups with a clearly defined and well-targeted audience were significantly more likely to achieve high conversion rates and sustained growth. Startups that employed detailed audience personas and tailored their marketing communications accordingly saw marked improvements in brand engagement and customer acquisition. In conclusion, the study underscores the necessity for startups to invest in precise audience targeting and market segmentation for successful business setups.

Keywords: Marketing strategy, Market segmentation, Startups, Target audience.

INTRODUCTION

Developing a successful marketing strategy (MS) involves more than just outlining vague goals or potential outcomes for an indefinite duration. To achieve effective marketing, it is crucial to focus on several key components.

An MS is a meticulously processed practice that outlines marketing-related tasks to achieve specific outcomes (Naim *et al*., 2022). Serving as the cornerstone for informed marketing decisions, its ultimate function is to align marketing objectives and campaigns with broader company goals (Naim & Ghamdi, 2023). Consequently, most marketing strategies involve a combination of proactive planning and reactive adjustments to market dynamics, as illustrated in Fig. (**1**) within the general context of marketing strategies (Bang *et al*., 2016).

---
[*] **Corresponding author Arshi Naim:** Business Management, King Khalid University, Abha 62529, KSA; Tel: 00966-017-8612; E-mail: naimarshi123@gmail.com
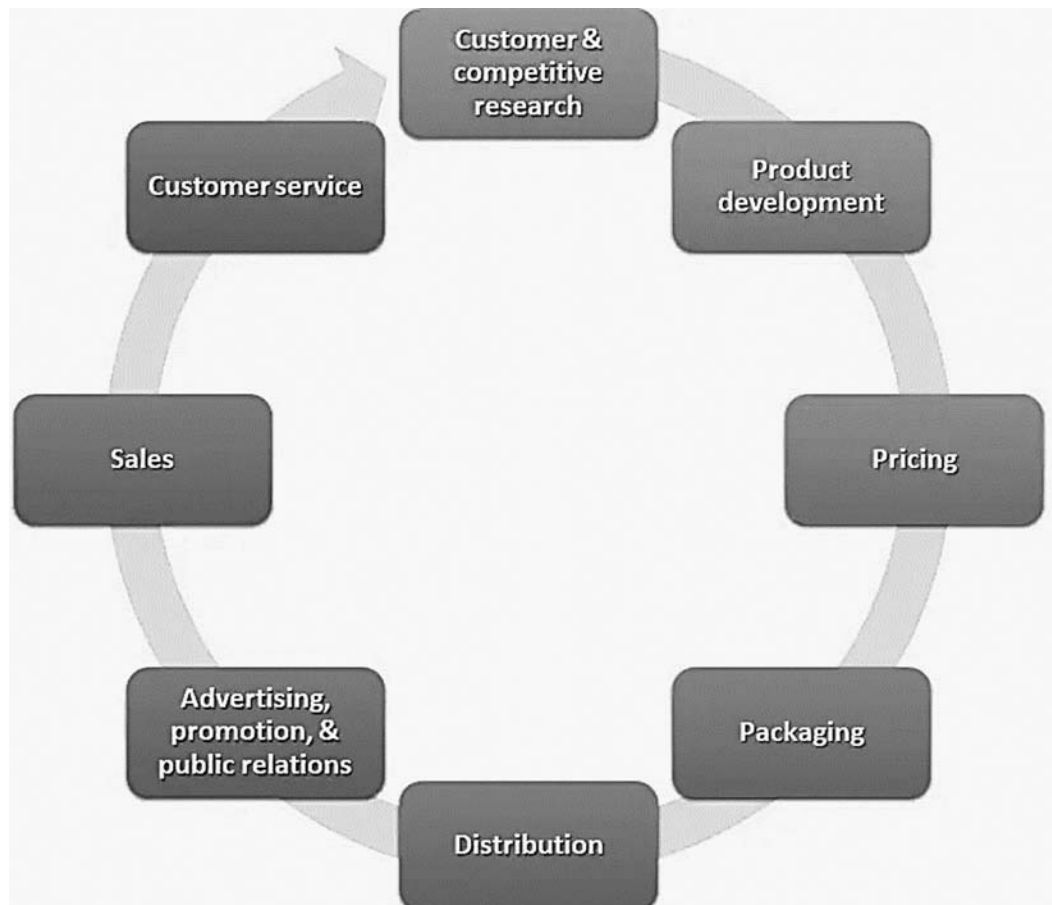
Fig. (1). Component of MS (Alqahtani *et al*., 2022).

Growth is a critical consideration, making a marketing strategy essential for any company that prioritizes expansion (Kamal *et al*., 2022). Smaller companies may face challenges related to time, money, and resources, but it is crucial for CEOs and leadership teams to recognize that marketing encompasses more than just advertising or sales. Undervaluing marketing based on past results is a common misconception. Every company, regardless of size, needs a well-defined marketing strategy supported by an appropriate budget and resource allocation to ensure effective implementation (Mulyana *et al*., 2020). Fig. (**2**) illustrates the comprehensive steps involved in building effective MS.
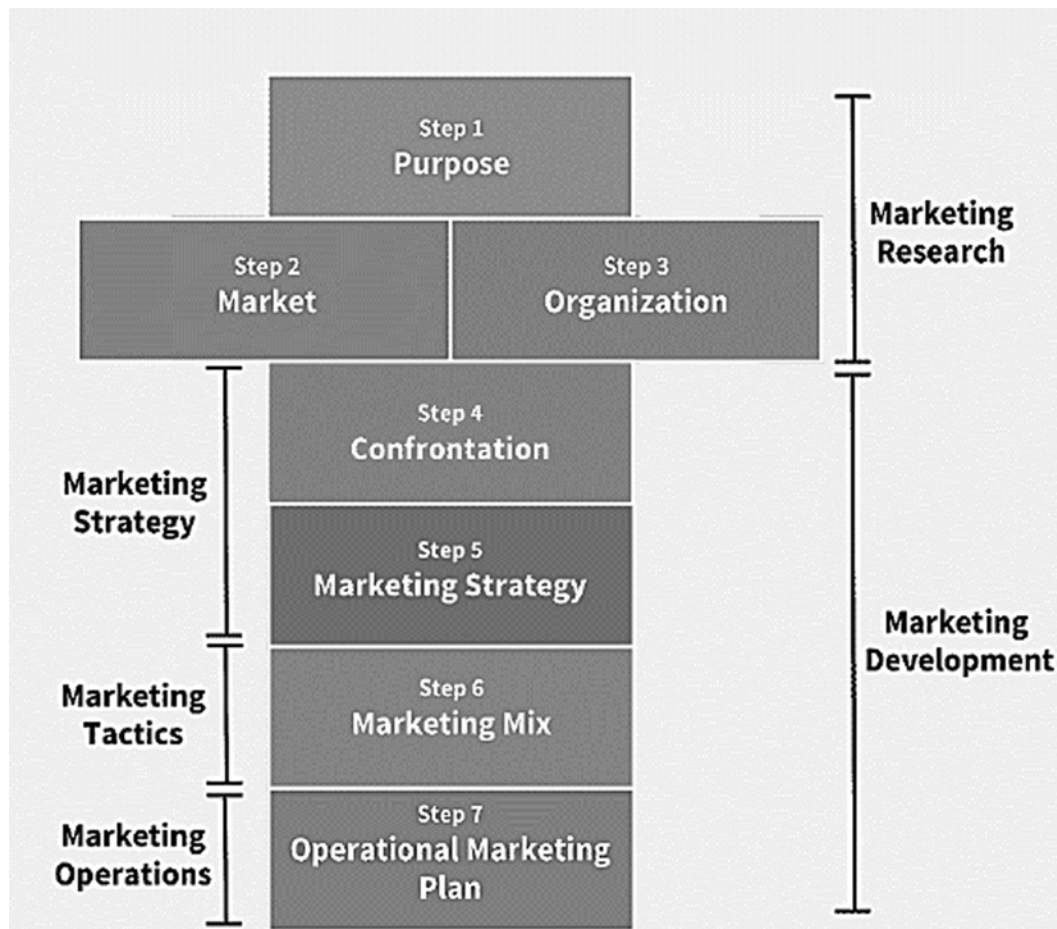
Fig. (2). MS process in a systematic phase (Fatima *et al*., 2022).

There are 5 significant players in the successful implementation of MS. These are defined for the explanation of MS in effective tactics in the Middle East.

Focus Group of Target Audience (TA)

Understanding the TA is crucial for any MS. This involves identifying and analyzing the specific group of consumers most likely to purchase products or services. Key aspects include demographic information (age, gender, income level), psychographics (interests, values, lifestyle), and behavioral data (purchase habits, brand loyalty). A deep understanding of the target audience enables the creation of tailored marketing messages that resonate and engage effectively.

Analysis of Online In-Destination Booking Service Processes in the Travel Industry: A Case Study

M. Blessy Doe[1], S. Dhanabagiyam[2] and **Mohammad Irfan[2,*]**

[1] *Department of Management Studies, Sri Ramakrishna Engineering College, Coimbatore, India*

[2] *School of Business and Management, Christ University, Bengaluru, India*

Abstract: This article presents a comprehensive analysis of the online in-destination booking service processes within the dynamic landscape of the travel industry. Utilizing a case study approach, the research investigates the various stages involved in providing travel-related services, focusing on the key players. The study employs a quantitative method to assess the information quality, system quality, service quality, customer satisfaction, and purchase intention of online in-destination booking. The research highlights the investigation of the usability of online travel booking systems and identifies the purchase intention of customers towards online travel booking websites. To address the research objectives, the participants are selected using a non-probability sampling method. The sample size of the study is 225 from in and around Coimbatore. The sampling procedure used is convenience sampling. The sampling is selected based on convenience and accessibility to the residents. The findings reveal that there exists a significant difference in respondents' opinions on quality criteria: system quality and service quality. Additionally, the study finds that the loading time of online travel booking websites is positively correlated with quality criteria and features of travel apps. By examining a specific case within the travel sector, this study contributes valuable insights that can inform strategic decision-making for businesses operating in the online in-destination booking space. The results aim to guide industry players in enhancing their operational efficiency, leveraging technology advancements, and aligning their services with evolving customer expectations, ultimately fostering sustainable growth in the competitive travel market.

Keywords: Customer satisfaction, Information quality, Key players, Purchase intention, Online in-destination booking service, System quality, Service quality, Travel industry.

INTRODUCTION

A major and rapidly expanding industry internationally is tourism. Money and jobs are generated by it. It also affords people the chance to comprehend a nation's

---
[*] **Corresponding author Mohammad Irfan:** School of Business and Management, Christ University, Bengaluru, India; E-mail: drmohdirfan31@gmail.com

culture, civilization, and religious features. Many nations rely heavily on tourism as their major source of income. It is an unseen export that generates significant foreign cash without causing a significant or noticeable loss of internal resources. One special category of very labor-intensive sectors is tourism. It offers many services that are required and anticipated by the approaching tourists. When it comes to the amount of money travelers spend while visiting a country, tourism is one of the biggest sectors. Sometimes, more money than the gross national product is received from the tourism sector. One of the most popular tourist sites in Asia is India, which has been effective in drawing both domestic and foreign visitors. India's culture and secularism have drawn many travelers from throughout the world. India is a popular travel destination for people all over the world because of its beautiful scenery, hill stations, historical sites, architecture, monuments, beaches, picturesque backwaters, and places of religious interest. India's tourism sector has a great deal of potential to grow into a highly profitable one. Domestic and international tourism has increased as a result of improved transportation and communication links, better hospitality services, higher living standards, and better value for foreign visitors' money.

In the modern world, one of the most significant and rapidly expanding businesses that generate numerous job opportunities is tourism. It contributes significantly to the nation's economy and generates a lot of income. Along with creating jobs and income, it also gives people from many nations and cultures the chance to travel and interact with people from other cultures and social settings for both personal and professional reasons. Only through tourism can people from different social, cultural, and religious backgrounds come together and learn more about one another. It fosters strong bonds between individuals from various linguistic and cultural backgrounds. Additionally, it opens them up to opportunities to comprehend and delve into the ancient past and rich traditions of a foreign location. The Government of India's introduction of the 'Incredible India' campaign is critical to promoting India as a comprehensive tourism destination in both local and international markets. Other specialized overseas media initiatives under the banner of 'Incredible India' have also been launched. The Indian government's 'Clean India' initiative promotes complete cleanliness, which has become an unavoidable standard at all tourist locations. The government has also done frequent market surveys to discover critical elements such as income numbers, vacation patterns, and people's psyches. This assists them in identifying the primary drivers in the tourism business.

In India, online travel is the new travel ecology. Online travel in India is currently entering a new phase. The most significant level in the travel system at this level is utilization and loyalty. However, all of this is changing as the attention shifts to comprehensive trip booking. The tourism industry is undergoing a tremendous

transformation, with travel-related items becoming increasingly popular. Supplied via the Internet, and conventional travel agencies have faced increasing competition from a new breed of online intermediaries. It is suggested that established tour operators recognize the potential of this new distribution channel and view the Internet as the only way ahead. The Internet and the tourism sector have both revolutionized the lives of consumers. Increased global exposure has increased the competitiveness of enterprises, which have grown more innovative and competitive in delivering new and better services to clients. Whether in the manufacturing or service sectors, information and communication technology is becoming an essential component of every industry, and the tourism industry is no different.

World Online Travel Booking Market

There was an increase of 7% of users in the world for online booking systems in January 2019. Furthermore, according to Zippia, there were 6.65 billion smartphone users worldwide as of 2022, with this figure predicted to rise to 7.34 billion by 2025. As a result, the growing number of smartphone users, along with rising internet penetration, is expected to drive revenue growth in the online travel agency industry in the coming years. Rising risks of unpredictable occurrences like the COVID-19 outbreak or natural disasters are expected to impede the expansion of the tourist sector and online travel agencies.

Growing government initiatives in many countries to promote tourism and build robust tourist infrastructure to improve tourism earnings is a prominent trend driving the growth of the online travel agency market over the timeframe. For example, the government of India gave an extra INR 2400 crore to the Ministry of Tourism in the 2022 budget. This budget was 18.42% larger than in 2021–22, and it was used by the Ministry of Tourism to expand tourist infrastructure, marketing and promotion, and capacity building. As a result, government actions and steps to promote tourism and enhance tourist infrastructure will be a prominent trend in the online travel agency industry in the future.

Despegar, a Latin American online travel provider, paid USD 136 million for Best Day Travel Group in January 2020. Despegar's revenues grew by 25% as a result of this purchase, solidifying its position as the premier travel agency in both Mexico and Latin America. Best Day Travel Group is an online travel business established in Mexico.

Internet and the Tourism Value Chain

A technology-driven marketplace creates the value chain for the business and brings out the demand and supply of the market as an instrument in bringing

Artificial Intelligence for Expanding Fintech Market and Securing Financial Stability: A Case Study Analysis of Selected Companies

Arshiya Begum[1,*], Arshi Naim[2], Praveen Kumar Malik[3] and **Asfia Sabahath[1]**

[1] *Faculty of Computer Science Department, King Khalid University, Abha 62529, KSA*

[2] *Business Management, King Khalid University, Abha 62529, KSA*

[3] *School of Electronics and Electrical Engineering, Lovely Professional University, Punjab, India*

Abstract: The field of artificial intelligence (AI) stands out as the most rapidly advancing domain within computer science, exerting a pervasive impact across various service sectors that have harnessed its applications. The current study gives a comprehensive exploration of the overarching applications in financial services (FS), offering practical insights into its definition and application. Primarily qualitative in nature, the research does not involve statistical measurement for the analysis of the results. The study elucidates the significant advantages resulting from the integration of AI practices in the banking and financial sectors. To illustrate this, the study analyzes instances of AI applications in financial firms, presenting results derived from positive observations outlined in their balance sheets and annual reports. The transformative influence of AI extends benefits to the users and firms in the service industry. The research paper offers a clear reason for the positive applications of AI in enhancing decisions in financial management and in the development of the market.

Keywords: Artificial intelligence, Balance sheets, Financial stability, Financial services, Market development.

INTRODUCTION

Artificial intelligence (AI) is being increasingly adopted across numerous industries, with a significant impact on the financial services (FS) sector, as noted by Ahmed *et al.* (2022). It is crucial to explore the role and advantages of AI in the financial realm, particularly in promoting financial stability (FSt) (Azeema *et al.*, 2023). The adoption of AI in FS has seen remarkable and substantial growth,

---

[*] **Corresponding author Arshiya Begum:** Faculty of Computer Science Department, King Khalid University, Abha 62529, KSA; E-mail: arshya@kku.edu.sa

as reported by Ahmed *et al.* (2022). AI's influence is evident in various areas, including the management of supply and demand factors within FS (Qin *et al.*, 2023).

Supply factors encompass technological advancements, while demand factors involve identifying profitable opportunities and evaluating competitive landscapes (Yathiraju *et al.*, 2023). Currently, financial firms leverage numerous AI applications to enhance their operational efficiency (Xie, 2019).

Financial institutions (Ftis) and vendors often use AI to automate customer interactions, evaluate credit quality for pricing, and analyze market insurance contracts (Naim, 2022). AI also helps FIs identify limited resources and assess the impact of market value on the firm (Musleh *et al.*, 2022). Furthermore, AI enables FIs and other organizations to evaluate Return on Investment (ROI) and establish connections between available funds, resource allocation, and fund hedging (Kamal *et al.*, 2022).

However, the adoption of any technology brings both advantages and disadvantages. While AI offers significant benefits, concerns have arisen regarding data handling and privacy, as identified by Malik *et al.* (2024). Issues include challenges in information processing efficiency and the impact of certain decisions on achieving stability in the financial system (Biju *et al.*, 2023).

These decisions pertain to areas such as credit assessments, financial markets (FM), insurance contracts, and customer interactions (Fatima *et al.*, 2022). Furthermore, there are concerns about an increased reliance on emerging technologies to achieve financial stability (Ahmed *et al.*, 2022). Notably, AI has been criticized for considering irrelevant and unrelated factors in the pursuit and measurement of FSt (Fatima *et al.*, 2022).

The present study presents an illustrative scenario showcasing the relevance of AI at a Fintech firm in India (Fig. **1**).

LITERATURE REVIEW

AI and machine learning are rapidly evolving technologies that have seen widespread adoption in various industries, as highlighted by Ahmed *et al.* (2022). This study focuses on the application of AI within the financial services (FS) sector (Musleh Al-Sartawi *et al.*, 2022). John McCarthy, known as the Father of AI, described AI as the discipline of developing intelligent machines, particularly intelligent computer programs (Kamal *et al.*, 2022). The AI journey began in the 1950s with the Dartmouth Summer Research Project on AI at Dartmouth College, USA (Kamal *et al.*, 2022; Mogaji *et al.*, 2022). Recently, AI has become integral

to business operations, with most firms leveraging AI to provide innovative services and solutions that are focused on achieving results (Fatima *et al.*, 2022; Kaur *et al.*, 2023).
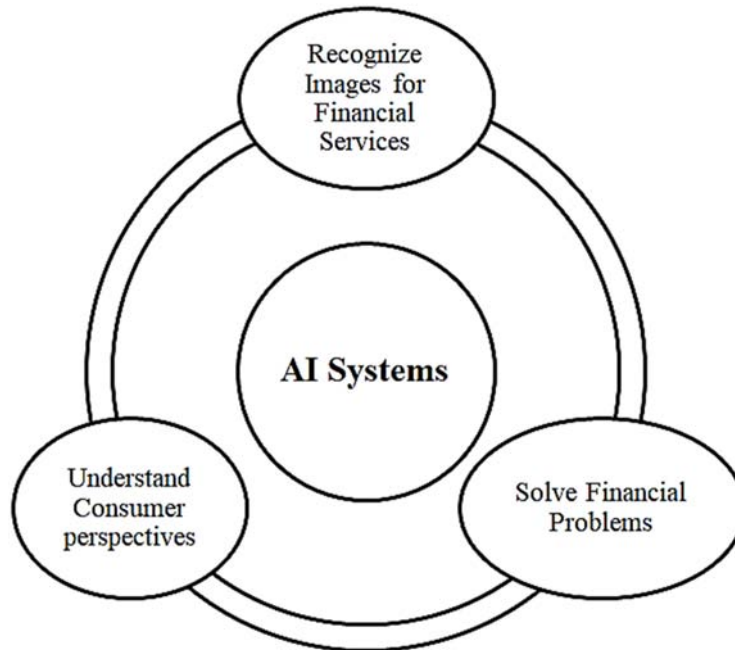
Fig. (1). AI working in Fintech firms in India.

Fintech firm is a UK-based organization and the second-largest global professional service provider, operating in numerous countries, including India (A. Naim, 2022). Recognized for its leadership in AI technologies, data, and analytics, the Fintech firm has global partnerships and actively applies AI in comprehensive financial decision-making, ranging from overarching strategies to individual choices (Naim *et al.*, 2024). Fintech firms in India serve as an exemplary case, illustrating the application of AI techniques at both client and organizational levels (Khatri *et al.*, 2024).

AI adoption is particularly pronounced in service industries like financial institutions (Ftis) and the medical sector in MD (Bobrovska *et al.*, 2023). These industries leverage AI applications for diverse benefits, including crimes, fraud, treatment and diagnosis of health issues, illustration and identification of side effects, and prognosis detection (Naim & Khan, 2024).

CHAPTER 5

Emerging Paradigms in Marketing Management: Scenario-Based Conceptual Framework

Arshi Naim[1,*]

[1] *Business Management, King Khalid University, Abha 62529, KSA*

Abstract: The rapidly evolving landscape of marketing management necessitates innovative approaches to address emerging challenges and opportunities. This paper introduces a scenario-based conceptual framework designed to enhance strategic decision-making in marketing. By integrating contemporary paradigms such as digital transformation, consumer-centricity, sustainability, and data-driven insights, this framework provides a robust foundation for navigating the complexities of modern markets. We explore how scenario planning, grounded in real-world contingencies and predictive analytics, can inform adaptive strategies that align with dynamic consumer behaviors and technological advancements. The proposed framework aims to equip marketers with the tools to anticipate shifts, mitigate risks, and capitalize on new growth avenues, ultimately fostering a more agile and responsive marketing ecosystem. Through comprehensive analysis and case studies, we demonstrate the practical application and benefits of this approach, offering a forward-thinking model that bridges theoretical constructs with actionable insights.

Keywords: Consumer behavior, Marketing management, Marketing ecosystem, Sigital transformation, Scenario-based approach.

INTRODUCTION

The field of marketing management is undergoing a significant transformation, driven by rapid technological advancements, evolving consumer preferences, and heightened global competition. In this dynamic environment, traditional marketing strategies often fall short of addressing the multifaceted challenges that contemporary businesses face. To remain competitive, marketers must adopt innovative frameworks that incorporate flexibility, foresight, and a deep understanding of emerging trends. This paper presents a scenario-based conceptual framework for marketing management designed to provide strategic guidance amidst uncertainty and change (Alkaraan *et al*., 2023).

---
[*] **Corresponding author Arshi Naim:** Business Management, King Khalid University, Abha 62529, KSA; E-mail: naimarshi123@gmail.com

Marketing management is a multifaceted discipline focused on the practical application of marketing techniques and the management of a firm's marketing resources and activities. It involves planning, organizing, controlling, and implementing marketing strategies to create value for customers and achieve the organization's objectives. The core functions of marketing management include market research, product development, pricing, promotion, distribution, and customer relationship management (Naim, 2022). In recent years, several emerging paradigms have reshaped the landscape of marketing management:

Digital Transformation

The rise of digital technologies has transformed how businesses engage with customers. Digital marketing, social media, e-commerce, and data analytics have become integral components of marketing strategies (Solberg & Durrieu, 2023).

Consumer-Centricity

Modern marketing emphasizes a deep understanding of consumer needs and preferences. Personalization and customer experience have become central to marketing efforts, with businesses striving to create value propositions tailored to individual consumers (Zaki *et al*., 2023).

Sustainability and Ethical Marketing

Increasing awareness of environmental and social issues has led to a growing emphasis on sustainability. Businesses are integrating ethical considerations into their marketing strategies, promoting sustainable products and practices.

Data-Driven Decision Making

The availability of vast amounts of data has revolutionized marketing management. Data analytics and machine learning enable businesses to gain insights into consumer behavior, optimize marketing campaigns, and make informed decisions (Zaki *et al*., 2023). Fig. (**1**) illustrates a holistic view of the marketing process.

Challenges and Opportunities

The dynamic nature of the market presents both challenges and opportunities for marketing management. Rapid technological advancements, changing consumer behaviors, and global competition require marketers to be agile and innovative. The integration of emerging paradigms into marketing strategies offers significant opportunities for growth and differentiation (Ruiz *et al*., 2022).

Fig. (1). A Comprehensive Picture of Marketing (Solberg & Durrieu 2023).

The objective of the current study is to develop a comprehensive framework, which can create a robust scenario-based conceptual framework that integrates key emerging paradigms in marketing management, including digital transformation, consumer-centricity, sustainability, and data-driven decision-making. Additionally, the research demonstrates how scenario planning can improve strategic decision-making by enabling marketers to anticipate market shifts, mitigate risks, and leverage opportunities.

To achieve these objectives, the research methodology employed in this study includes scenario planning techniques that are used to establish scenario planning techniques to construct plausible future scenarios that reflect potential market conditions. These scenarios are developed through a combination of expert insights, trend analysis, and predictive analytics.

By integrating these research methods, the paper aims to offer a comprehensive and actionable framework that equips marketers with the tools to effectively manage and thrive in an ever-evolving market environment. Through a blend of theoretical exploration and practical application, this study contributes to the advancement of marketing management practices, fostering a more agile and resilient approach to strategic decision-making.

LITERATURE REVIEW

The origins of marketing management can be traced back to the early 20th century when marketing began to emerge as a distinct discipline. Initially, marketing was primarily focused on distribution and logistics, emphasizing the efficient movement of goods from producers to consumers (Naim & Ghamdi, 2023).

People and Processes in Technological Development for Business Advancement in Indian Companies

Nandini Deb[1], Ruhi Lal[1,*] and Deep Moni Gogoi[1]

[1] *Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India*

Abstract: The dynamic landscape of Indian companies is characterised by the complex interaction between human capital, organisational processes, skilled employees, efficient workflows, and technological advancements. In today's rapidly changing business landscape, it is crucial to grasp the intricate relationship between people, processes, and technological progress. This understanding is essential for long-term business growth, especially as AI technologies continue to reshape the business ecosystem. The chapter aims to gain insights into the partnerships that influence the direction of technological advancements in Indian companies. The explorative study shall commence with an in-depth analysis of the role of skilled human resources in nurturing innovation and steering toward the direction of technological progressions. Investigating the challenges and opportunities posed by a diverse and rapidly evolving workforce, the chapter sheds light on the crucial role of talent acquisition, skill development, and leadership in shaping a conducive environment where technological advancements and workforce evolution complement each other.

Case studies are used as the methodology for analysis. A multiple case study approach was utilised. The cases were formulated through secondary data from advertisements, articles, blogs, and vlogs to delve into the depth of the research problem. By thoroughly analysing the cases, project management frameworks, and adaptive strategies used by successful Indian companies, this study offers valuable insights into how efficient processes drive innovation. The chapter delves into the complex connection between organisational processes and technological advancements. The central theme of the chapter revolves around the synergy between people and processes, accentuating the need for alignment and collaboration between diverse verticals and organisational frameworks. Real-life case studies of various industries demonstrate how successful Indian companies have steered the potential of their diverse workforce and optimized processes to acquire technological advancements and gain a competitive edge.

* **Corresponding author Ruhi Lal:** Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India; E-mail: ruhilal.smeh@mriu.edu.in

In conclusion, the chapter offers a comprehensive understanding of the elaborate web connecting people, processes, and technological innovations in Indian companies. The insights provided shall serve as a roadmap for organisations aiming to influence their human capital and streamline their processes to propel technological advancements and thereby derive sustained business growth in the evolving Indian business ecosystem.

Keywords: Business advancement, Human capital, Organisational processes, Skilled employees, Talent acquisition, Technological development.

INTRODUCTION

Technology has become an imperative tool for developing a new style of process that unites innovation and breakthroughs into new competitive markets. While technology was seen largely as a resource for output, it is now also seen as a source of communication with employees, people, clients, products, and projects across the globe. Business systems have undergone and are also currently undergoing massive transformations due to automation and digitization. While the impact is being felt at various levels, it is communication that has undergone massive changes with the inclusion of artificial intelligence and collaborative effort across various levels in an organisation. The Fifth Industrial Revolution will be characterized by the presence of new technologies that, by combining the physical, digital, and biological spheres, will generate consequences in all disciplines and economic and productive sectors (Helmann, Deschamps, & Loures, 2020).

The contemporary business environment demands a departure from the traditional paradigms. In India, specifically the Delhi-NCR region, where complexity, diversity, and adaptability define the business landscape, comprehension of how organisations navigate the challenges posed by technological disruptions becomes imperative. The present study contributes to the existing bulk of knowledge by unraveling the unique dynamics of technological development within the context of Indian companies. The research shall acknowledge the influence of socio-economic factors and government initiatives such as 'Make In India' and 'Digital India'.

With the pace at which technological innovations have taken up a gear, a comprehensive understanding is necessarytocomprehend the manner in which organisations in Delhi NCR navigate the dynamic intersection of human capital and streamline processes to bring about the full potential of emerging technologies. There are several studies that emphasise the role of skilled human capital in driving technological advancements (Davenport, Harris, & Shapiro, 2010); (Brynjolfsson & McAfee, 2014). However, there is still a gap in understanding how organizational processes are structured to facilitate the

seamless integration of technology in day-to-day operations. This research seeks to cover the gap by exploring the collaborations between skilled professionals, organisational structures, and innovative frameworks that foster technological development in the Indian business context specific to Delhi-NCR.

The intricate co-dependence between human capital and organisational processes becomes a crucial factor for harnessing technological innovations effectively. As businesses in India endeavour to stay competitive and relevant on the global stage, it is imperative to delve deeper into the complexities surrounding the dynamic relationship between people and processes within the context of technological evolution.

The chapter aims to investigate the multifaceted issues that hinder or facilitate technological development within organisations and how these factors impact overall business advancement. The research delves into the various areas of talent acquisition and retention in order to investigate how the selected organisations attract, nurture, and retain the right talent with the necessary technological expertise to support growth and innovation. The research also investigates the extent to which organisational culture supports the adoption of new technologies and what strategies are implemented to ensure a smooth transition.

The research establishes the problem of how, in the face of rapidly changing technological landscapes, Indian companies can cultivate a culture of agility and adaptability, thereby ensuring responsiveness to emerging trends.

By unravelling the dynamics of technological development, this research aims to provide insights that can inform strategic decision-making, organisational design, and workforce development. As organisations continue to navigate the challenges of a digital era, understanding how to effectively leverage the synergy between people and processes gives not only a competitive advantage but a strategic imperative point for sustained business advancement and development.

In the contemporary business landscape, technological advancements play a pivotal role in shaping the competitive edge of companies globally. Thus, this research aims at investigating the intricate relationship between people and processes in the context of technological advancements and the proper usage of these advancements in the organisational context.

REVIEW OF LITERATURE

Advanced technology and the implementation of advanced technology in business alter the interest, attitude, and perception of the people to adopt changes. Examining critically, it gives us an understanding of the role of people and

Integration of Emerging Technologies in Digital Marketing: A Case Study of Humans of Digital Marketing (HODM) Start-up, India

Disha Batra[1], Harshwardhani Sharma[2,*] and Akshay Upmanyu[3]

[1] *Department of Journalism and Mass Communication, School of Media Research and Studies, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, India*

[2] *Centre of Journalism and Mass Communication, Hemvati Nandan Bahuguna Garhwal University, Uttarakhand, India*

[3] *Sharda School of Media, Film and Entertainment, Sharda University, Greater Noida, India*

Abstract: In the rapidly evolving landscape of marketing, the infusion of cutting-edge technologies such as artificial intelligence (AI), virtual reality (VR), and augmented reality (AR) has ushered in a paradigm shift. These technologies, collectively known as emerging technologies, are redefining the ways in which digital marketers and start-ups engage with their audiences. This research explores the integration of emerging technologies in marketing with a concentrated case study of Humans of Digital Marketing (HODM), a start-up based in India. Humans of Digital Marketing is a versatile agency and academy offering comprehensive marketing services such as brand development, web design, and content creation. As an academy, HODM serves as an Ed-Tech platform, providing career hacks and domain-specific training by over 200 digital marketing experts, creating a dynamic ecosystem for learning and innovation.

This study aims to explore how Humans of Digital Marketing adopts emerging technologies in its marketing strategies, identify implementation challenges, and assess the measurable outcomes and return on investment, contributing insights to the digital marketing landscape. The objectives of the study are as follows: firstly, it seeks to investigate the depth of adoption of emerging technologies by digital marketers and start-ups, particularly within HODM. Secondly, it aims to identify and analyze the challenges and barriers encountered by these entities in the process of adopting and implementing AR, VR, and AI, including factors such as cost, technical expertise, and market acceptance. Thirdly, it aims to assess the outcomes and return on investment associated with the integration of emerging technologies. The methodology adopted for the study is a comprehensive exploration of HODM's experiences and strategies. Semi-structured interviews with key stakeholders, encompassing digital marketers and decision-makers within HODM, will be conducted to gather qualitative data. The study

---

* **Corresponding author Harshwardhani Sharma:** Centre of Journalism and Mass Communication, Hemvati Nandan Bahuguna Garhwal University, Uttarakhand, India;
E-mail: harshwardhanisharma@gmail.com

will provide a qualitative analysisof HODM's success stories, adoption drivers, challenges, and barriers. The study anticipates offering unique and in-depth insights into the strategies, challenges, and outcomes associated with integrating emerging technologies in the marketing landscape, with HODM serving as an illustrative case within the Indian context.

Keywords: Artificial intelligence, Augmented reality, Digital marketing, HODM, Virtual reality.

INTRODUCTION

The integration of emerging technologies in digital marketing has significantly transformed the field, shifting from generic to personalized interventions (Flaherty, 2021). This transformation stems from the explosion of information technology, which has made customer interaction more challenging (Bheekharry, 2019). The evolution of digital marketing closely correlates with advancements in technology, especially in the mobile and digital spheres (Mort, 2002; Upasani, 2023). The utilization of digital and social media in marketing strategies has become essential for increased engagement and interaction (Crittenden, 2015). However, the application of these technologies in emerging markets requires substantial adaptations of existing theories and approaches (Rana, 2020). These technologies have significantly expanded the reach and influence of consumers, necessitating new theoretical constructs and practical applications in digital and social media marketing, especially in emerging markets (Rana, 2020). The role of technology in shaping the future of digital marketing is further emphasized, focusing on data-driven decision-making, personalization, and ethical considerations (Нунес, 2023).

The environment of digital marketing in 2025 will be dynamic (Athira, 2023), data-driven, and audience-oriented. Digital marketing techniques are transforming with the incorporation of AI, AR, and VR (Athira, 2023a). While AR offers interactive information to improve the real world, AI offers targeted campaigns. By creating virtual settings, virtual reality enables brand experiences and immersive storytelling. These innovations encourage creativity and interaction in digital marketing by revolutionizing the way brands communicate with consumers.

AR in marketing efforts has a bright future as technology advances and becomes more widely available (Athira, 2023b). By connecting the real and virtual worlds, augmented reality gives brands a distinctive approach to presenting their goods and services. Enhanced product experiences, higher engagement, better brand awareness, higher conversion rates, and more immersive digital encounters are some of the main advantages. Examples include *Pokémon GO*, the *AR home*

décor tools from Home Depot, and Walmart's usage of augmented reality for inventory management and store design. *Transorze Solutions*, located in Trivandrum, India, offers comprehensive training in digital marketing and helps in finding employment.

The potential for digital marketing in India (Athira, 2024) is enormous, as there is a rising need for experts in the field and a growing number of companies looking to establish an online presence. Given the expansion and potential of digital marketing in the nation, the digital advertising market in India is predicted to reach a size of up to INR 539 billion by 2024 from a size of about INR 199 billion in the 2020 fiscal year.

DIGITAL MARKETING IN INDIA

The integration of emerging technologies in digital marketing in India has significantly transformed the industry, leading to a surge in digital marketing spending (Abdullah, 2023). This transformation has been driven by the adoption of digital technologies for personalized design, content, and behavior change interventions (Flaherty, 2021). The Indian market is rapidly evolving, with increasing internet and mobile usage, and marketers are adapting their strategies to align with these changes (Pawar, 2020). These trends underscore the need for marketers to stay ahead of the curve and leverage emerging technologies to reach their target audience effectively.

A series of studies have explored the impact of digital marketing on start-ups, particularly in the context of India. Aliami (2018) states that while digital marketing can increase revenue, start-ups often struggle with content creation and responsiveness. Dsouza (2023) highlighted the role of digital marketing in motivating people to start their businesses and the need for educational programs to support this trend. Chakraborti (2022) identified barriers to the adoption of digital marketing by start-ups, including usage, value, risk, and psychological barriers. Shrivastava (2020) emphasized the importance of digital marketing strategies in the context of India's digital transformation, particularly in optimizing keyword searches and tracking click-through and conversion rates. These studies collectively underscore the potential of digital marketing for start-ups in India while also highlighting the challenges and barriers they face.

Due to the COVID-19 pandemic and the emergence of new technology, the 2020s have seen a dramatic change in the digital marketing scene (Mladen Maksic, 2023). By utilizing technologies like artificial intelligence, augmented reality, virtual reality, blockchain, and the Internet of Things (IoT), businesses are adjusting to this digitally-driven era. The marketing landscape is evolving due to

Metaverse in Tourism: Bridging of the Digital and Actual Worlds

Kaneez Masoom[1,*], Syed Haidar Ali[1], Shad Ahmad Khan[2] and **Saiyid Saif Abbas Abidi[3]**

[1] *Department of Business Administration, Khwaja Moinuddin Chishti Language University, Lucknow, India*

[2] *College of Business, University of Buraimi, Al Buraimi, Oman*

[3] *Babu Banarasi Das University, Lucknow, India*

Abstract: The metaverse (MV) is transforming tourism by offering immersive virtual experiences. With VR and AR technologies, travelers can explore destinations, preview accommodations, and plan trips with unprecedented detail. Virtual tours provide real-time information and cultural exchange opportunities, making travel more accessible and interconnected. This study aims to analyze the current academic literature and industry reports to investigate how MV can transform the advertising and management of tourism. Based on a comprehensive literature review, articles from the media, and reports from the tourism industry, this research paper identifies and conceptualizes the MV ecosystem for the tourism industry. This study provides a novel and comprehensive roadmap for future research on enabling and sustaining mixed-reality travel in the MV.

Keywords: Disruptive technology, Information technology, Metaverse, Tourism, Virtual reality.

INTRODUCTION

To a large extent, information and communication technologies (ICT)s have reshaped the tourism industry's competitive landscape (Werthner & Klein, 1999). Global distribution systems like Amadeus and Sabre were developed in the 1980s, making it simple for travel agencies to collect data from a range of merchants and book flights, hotels, and trains for clients (Aamir *et al*., 2023; Amir & Atsan, 2020). When it came to strategic and operational procedures, the travel industry

---

* **Corresponding author Kaneez Masoom:** Department of Business Administration, Khwaja Moinuddin Chishti Language University, Lucknow, India; E-mail: kashshoyn@gmail.com

was radically revolutionized by the advent of the Internet in the late 1990s (Salter & Whitten, 2022). Extensive networking and the widespread adoption of smartphones have led to the development of a sophisticated information infrastructure that has radically altered the tourism industry (Buhalis, 2020) By removing the need for middlemen and giving destinations, hotels, airlines, and others access to a global market, the Internet has helped the tourism industry become more competitive (Law *et al*., 2015). Sharing economies pose new disruptive threats, yet technological platforms foster their development, such as Airbnb, UBER, *etc*. (Guttentag & Smith, 2017; Buhalis *et al*., 2020; 2023; Chang & Sokol, 2022).

The rapid growth of e-commerce and mobile commerce, especially with the advent of smartphones, has exhibited their disruptive potential in every industry (Khan *et al*., 2021; Kamal *et al*., 2022). This has a bigger potential in the travel industry (Wang *et al*., 2016). The rise of social media has been playing a dominating role in the context of tourism (Sharma *et al*., 2023a; 2023b; Sharma *et al*., 2024). Context relevance is made possible by smartphones, allowing for the instantaneous and contextual co-creation of value (Buhalis, 2020). As per Jang *et al*. (2021), users who actively engage with a brand's mobile app are more likely to become repeat buyers. Digital marketing, content marketing, AI, and IoT have also seen great development in recent years (Magd *et al*., 2022; Jonathan *et al*., 2024; Saleem *et al*., 2022; 2023; Magd *et al*., 2023a; Khan *et al*., 2023; Khan, 2023). Metaverse (MV) is expected to align all these tools and showcase a huge potential for the tourism industry (Buhalis *et al*., 2023a; Dwivedi *et al*., 2023).

Further, the 5G and mobile networks development, along with the Internet of Everything, not only allows for 3D simulation but also enhances the practicality of immersive technologies like MR, AR, and VR (Karyamsetty *et al*., 2023; Naim *et al*., 2024; Magd *et al*., 2023b; Porter & Heppelmann, 2014). This creates exceptional prospects for tourism marketing and management, as well as for in-depth engagement with a diverse range of stakeholders (Buhalis *et al*., 2023a). Tourists can learn more about places to visit and the services available before making a final decision, which will improve their real trips (Loureiro *et al*., 2020; Rauschnabel, 2022). Many people are interested in the MV now that Facebook is called Meta and has reorganized its business to focus on the MV (Glover, 2022).

MV as a term has been used to describe the merging of the digital and actual worlds, where people can freely commute between them for a variety of reasons, including socializing, working, and learning. Currently, most of what we know about how to put MV into action is theoretical. The only industry where such extensive adoption by gamers has been shown to exist is gaming (Katz, 2022). Researchers from all walks of academia work closely together to shape the future

of the MV by defining it, organizing it, and visualizing its potential (Dwivedi *et al*., 2022, 2023). MV is still a subject of deliberation, and many developments are yet to be explored. However, in the current iterations of the MV, users can create avatars and gain access to a wide variety of digital materials. The full promise, however, will be realized when digital environments allow humans to take part in hyper-realistic virtual interactions. The potential benefits of digitalization were apparent when COVID-19 mandated that most participants use online meeting platforms for their meetings, learning, interacting, consulting, and engaging (Bocar *et al*., 2022; Khan & Magd, 2021). But it lacked depth, clarity, and plausibility. Because of the developments and possibilities made possible by immersion, users may easily engage with both the actual and virtual worlds. By 2030, every physical device will be digitally connected (Lundmark, 2022). The actual world impacts the virtual world, and vice versa. This implies that accessing the MV does not always require a VR headset. Technologies such as artificial intelligence, blockchain, the Internet of Things (IoT), virtual reality (VR), augmented reality (AR), and digital twins (DT) are some of the key enabling technologies (Buhalis *et al*., 2023a).

According to Dwivedi *et al*. (2022), the MV, with the use of VR/AR, can seamlessly bridge the gap between the real world and the virtual world, enabling users to move freely between the two. By examining the pioneers of the MV, we can gain insight into the potential societal and economic impacts of a fully functional permanent cross-platform MV. In the MV, all a user's body language, including hand gestures, can be translated into text. This has led many to refer to it as an "embodied Internet" that brings online engagement closer to face-to-face communication (Clegg, 2022). Dwivedi *et al*.(2023) suggest that the advent of the MV is expected to facilitate innovation and disrupt all aspects of life. Further, it is going to revolutionize the prospects and challenges for markets and communities worldwide, with societal and cultural repercussions (Dwivedi *et al*., 2023). Thus, the way MV is going to behave in times to come is going to be a subject of interest for most researchers around the globe.

In terms of actualization, MV is still in the phase of conceptualization; although many people already exist in the MV, still most of them think of it as an idea. Pero (2022) claims that the MV is already having a noticeable effect on people's social lives, consumer habits, and leisure activities. To paraphrase, he claims that the inhabitants of the MV can be roughly divided into two groups. Those who have settled in the MV and those who have not are what I call colonists and natives, respectively. The inhabitants of the MV are all young people (under 21 years old) who have spent their whole lives playing online games. The people who form their society in the MV are referred to as MV colonists, assumed to be living in a digital colony similar to that in the actual world. This implies that there

CHAPTER 9

The Role of Social Media in Business Process Innovation

Mustafa Kayyali[1,*]

[1] *Al Maaref University of Applied Sciences, Sarmada, North Syria*

Abstract: The chapter titled "The Role of Social Media in Business Process Innovation" discusses the significant impact of social media networks on contemporary commercial processes. Social media, as a rapidly evolving and collaborative platform, has developed beyond its primary goal of connecting people to become a critical instrument in fostering innovation in business operations. This chapter analyzes the manner in which corporations employ social media to facilitate immediate communication, boost customer interaction, and acquire significant knowledge through data analytics. We evaluate various case studies that indicate how the integration of social media has resulted in better efficiency, increased innovation, and a competitive edge across a number of industries. Moreover, the chapter discusses the obstacles and techniques connected with integrating social networking sites with organizational goals and procedures. By appreciating these features, companies may efficiently harness the power of social media to promote innovation and sustain their competitive edge in the age of technology.

Keywords: Business process innovation, Competitive advantage, Customer engagement, Data analytics, Industry case studies, Real-time communication, Social media.

INTRODUCTION

Social media integration in business operations is now essential for firms aiming to stay competitive and relevant in today's rapidly changing digital environment (Saarikko *et al*., 2020). Social media platforms have revolutionized how organizations engage with customers, stakeholders, and internal teams. The original purpose of connecting individuals and sharing personal experiences has transformed into a powerful and versatile instrument for innovation, communication, and data-informed decision-making in the business world.

[*] **Corresponding author Mustafa Kayyali:** Al Maaref University of Applied Sciences, Sarmada, North Syria;
E-mail: kayyali@heranking.com

The chapter "The Role of Social Media in Business Process Innovation" thoroughly examines the significant impact of social media on modern business practices. Social media has evolved beyond its original purpose of facilitating personal relationships to become a powerful and engaging platform that can drive substantial change in businesses of various sizes and industries. Social media's exceptional capacity for instant communication and promoting high levels of client interaction is fundamental to this transition. Businesses may now engage with their audience in real-time using platforms like Facebook, Twitter, Instagram, LinkedIn, and others to respond to inquiries, resolve complaints, and gather feedback quickly and effectively. This increased flexibility in communication improves customer satisfaction and allows organizations to quickly adjust to changing market trends and consumer preferences. Social media is a valuable source of data that can be analyzed and interpreted. Businesses benefit greatly from the wealth of user-generated material on these platforms, gaining important insights into consumer behavior, mood, and preferences. By using modern analytics techniques, firms may exploit this data to influence strategic decision-making, optimize product offerings, and tailor the consumer experience in unprecedented ways.

Throughout the discourse, an array of case studies will be reviewed, highlighting the transformative influence of incorporating social media into business operations. These case studies span many industries, ranging from retail and hospitality to healthcare and finance, illustrating how forward-thinking firms have leveraged social media to promote innovation, streamline operations, and gain a competitive edge in their particular markets. Notwithstanding its clear benefits, the integration of social media with organizational goals and procedures provides its share of problems. From handling privacy concerns and maintaining an online reputation to connecting social media plans with larger business objectives, organizations battle with a plethora of obstacles on the route toward digital transformation. Therefore, it is vital for organizations to not only recognize the potential of social media but also establish comprehensive strategies for effectively harnessing its power while limiting dangers.

By comprehensively examining the role of social media in business process innovation, this chapter aims to provide readers with an increased awareness of how businesses may utilize this revolutionary technology to stimulate innovation, foster working together, and sustain a competitive advantage in the digital era. Through serious analysis, incisive case studies, and practical solutions, it attempts to educate businesses with the information and resources necessary to flourish in an ever more interconnected and dynamic world dominated by social media.

HISTORICAL BACKGROUND

To effectively grasp the importance of social media in business process innovation, it is vital to look into its historical evolution as well as its impact on various industries. The rise of social media can be traced back to the early 2000s with the emergence of sites like MySpace and LinkedIn, which largely focused on connecting individuals and professionals (Kross *et al.*, 2021). However, it was not until the introduction of Facebook and Twitter in the mid-2000s that social media began to pervade every facet of society, including business. Initially, businesses viewed social media as a unique marketing channel—a platform to exhibit products and services and communicate with customers in a more personal way. However, as social media usage spread and matured, its significance in business expanded far beyond marketing. Organizations started embracing social media for customer service, brand management, product creation, recruitment, and even internal communication and cooperation.

One of the most important advantages of social media to corporate operations is its capacity to democratize communication (Oni, 2021). Unlike conventional means of communication, such as television or print media, social media allows for two-way conversation in real time. Customers can interact with businesses directly, providing comments, asking questions, or lodging concerns. This direct line of communication not only promotes client happiness but also offers businesses vital information about customer preferences and market trends. Social media has democratized marketing, allowing even tiny enterprises with minimal finances to access a worldwide audience. Through tailored advertising and influencer relationships, businesses can exactly target their chosen market without breaking the budget. Social media platforms include comprehensive analytics tools that allow businesses to evaluate the efficacy of their campaigns in real time and make data-driven adjustments to enhance their outcomes.

In addition to communication and marketing, social media has also transformed the way organizations approach innovation. Crowdsourcing ideas and input from social media communities has become a popular way for obtaining insights and producing new product concepts. Companies can run polls, surveys, or open-ended talks to gather feedback from their audience, helping them find unmet requirements and build innovative solutions. Social media has altered the landscape of customer service. With the emergence of social messaging applications and chatbots, businesses can give round-the-clock support to their customers, fixing issues in real time and boosting the entire customer experience (Adamopoulou & Moussiades, 2020). Social media platforms can act as a forum for customers to seek support from one another, establishing a sense of community and solidarity around a business. Along with its various benefits,

Leveraging Queuing Theory for Efficient Electronic Business Management in Supermarkets: A Case Study of Giant Stores in the Gulf Region

Anandhavalli Muniasamy[1,*], Arshi Naim[2] and **Sayeda Meeraj[1]**

[1] *College of Computer Science, King Khalid University, Abha 62529, KSA*

[2] *Business Management, King Khalid University, Abha 62529, KSA*

Abstract: The COVID-19 pandemic, caused by the novel coronavirus, has significantly altered the social and commercial landscape. The impact has been particularly severe for entrepreneurs and local giant stores, leading to substantial losses. This study aims to provide support for giant stores to operate efficiently within the constraints of social distancing measures. It explores the integration of technology to maintain social distancing and streamline the entire purchasing process effectively. The study focuses on the implementation of an electronic queue system, offering insights into how giant stores can adopt this technology to mitigate the spread of the virus and achieve positive outcomes.

Keywords: Android-based system, Entrepreneurs, Token number, Queuing theory.

INTRODUCTION

Queuing theory operates on simulation techniques, contributing to overall time management and delay calculations. This research is grounded in simple queuing theory, specifically the first-come-first-serve approach. An electronic queue system generates a token number for each customer in the store, providing a timeline for moving to the payment counter. Implemented in five stores in giant towns in India, this Android-based system's effectiveness was measured by comparing sales before and during the pandemic (Anagha, A., & Sreelatha, K. S., 2023). The study also presents statistics on COVID-19 infections after the introduction of the electronic queue system in giant stores.

---

[*] **Corresponding author Anandhavalli Muniasamy:** College of Computer Science, King Khalid University, Abha 62529, KSA; E-mail: anandhavalli@kku.edu.sa

The application minimizes queues, saving time for both customers and employees. For stores, it transforms part of traditional shopping into electronic services, ensuring ample accountants for billing and providing a clear exit for customers [Brightwell, G., Fairthorne, M., & Luczak, M. J., 2018]. The queuing theory offers several advantages, including self-service checkout and payment. It efficiently serves more customers in less time with minimal human interaction. Business owners enhance productivity, creating a safe and protected environment for customers. Accountants using the system can accurately gauge the number of customers to serve within a given duration, reducing delays (Kerzel, 2023).

However, challenges emerged during the implementation of this Android-based system, such as security and privacy concerns. Not all customers were willing to share financial or personal data, with some preferring traditional shopping. Technological awareness and know-how posed another challenge, as not all customers in India were technologically literate (Alqahtani, H., & Naim, A., 2022).

Despite challenges, the results demonstrate the effectiveness of queuing theory in crowd management, achieving positive outcomes in social distancing and profit maximization even during a pandemic [Arshi Naim *et al*., 2022; Anagha *et al*., 2023].

In the bustling landscape of retail, especially within the Gulf region, the efficient management of electronic business operations has become paramount for supermarkets to meet the evolving demands of customers while maintaining operational excellence (Kang *et al*., 2023). Supermarkets, particularly giants like those prevalent in the Gulf region, face unique challenges in managing customer flow, optimizing service efficiency, and ensuring a seamless shopping experience.

The application of queuing theory presents a promising avenue for addressing these challenges and enhancing electronic business management in supermarkets. Queuing theory, rooted in mathematical principles, offers a systematic framework for analyzing and optimizing the flow of customers through service systems. By leveraging queuing theory, supermarkets can gain valuable insights into customer behavior, queue dynamics, and resource allocation, enabling them to make informed decisions to improve operational efficiency and customer satisfaction (Kang *et al*., 2023).

The research aims to explore and evaluate the integration of technology in giant stores to maintain effective operations during the COVID-19 pandemic, with a specific focus on social distancing measures. Key objectives include assessing the viability of an electronic queue system to streamline the purchasing process, reduce physical crowding, and minimize virus transmission risks. Additionally,

the study seeks to provide actionable insights for giant stores to adapt and thrive in the new commercial landscape, emphasizing efficiency, safety, and customer satisfaction amidst the constraints of social distancing. Through this research, the goal is to identify practical solutions that enable stores to continue serving customers while protecting public health.

This case study focuses on the application of queuing theory in the management of giant stores in the Gulf region, where supermarkets contend with large volumes of customers and diverse service offerings. By examining the implementation of queuing theory-based strategies in these supermarkets, this study aims to highlight the benefits, challenges, and best practices associated with optimizing electronic business management in the retail sector (Fatima *et al*., 2022).

Through a comprehensive analysis of queuing theory applications in giant stores, this case study seeks to provide valuable insights for supermarket operators, managers, and decision-makers (Xu *et al*., 2023). By understanding the principles and practices of queuing theory in the context of electronic business management, supermarkets in the Gulf region can enhance their competitiveness, improve customer experiences, and drive sustainable growth in the dynamic retail landscape.

LITERATURE REVIEW

Queue theory, also known as queuing theory, originated in the early 20th century and has since evolved into a fundamental concept in various fields, including mathematics, operations research, computer science, telecommunications, and engineering (Goswami *et al*., 2023).

Early Developments (Early 20th Century)

The study of queues can be traced back to the early 1900s with the work of Danish engineer A.K. Erlang. Erlang developed the theory of telephone traffic to analyze the capacity needed for a telephone exchange, considering factors such as call arrival rates and call duration [Arshi Naim *et al*., 2022]. His work laid the foundation for queueing theory and its application to telecommunications systems.

Birth of Queueing Theory (Mid-20th Century)

The formalization of queueing theory as a mathematical discipline occurred in the mid-20th century (Kamal *et al*., 2022). Notable contributors during this period include David G. Kendall, Leonard Kleinrock, and John Kingman. Kendall introduced the concept of stochastic processes to model queueing systems, while

SUBJECT INDEX