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Analyzing the Customer Journey through Data Analytics

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Abstract: ***The quantitative content analysis identified five underlying themes of the customer journey, namely, service satisfaction, failure and recovery, co-creation, customer response, channels and technological disruption. The results section reviewed and discussed each theme and its sub-themes in turn. The review identified important gaps in the literature related to the key stages of a customer journey. Customer Journey Mapping (CJM) is pivotal for understanding and enhancing customer experiences across touchpoints. The integration of real-time data analytics into CJM has transformed this traditionally static tool into a dynamic framework capable of tracking and optimizing customer interactions. This paper explores the methodologies, tools, and benefits of combining real-time data analytics with CJM. The discussion includes a comprehensive review of related literature, implementation strategies, challenges, and future directions. This paper argues that real-time data analytics enhances CJM by enabling continuous adaptation to customer behaviour's, resulting in improved customer satisfaction and business performance. Understanding and enhancing customer experiences has emerged as a central focus for businesses seeking to remain competitive in today's dynamic market landscape. Customer Journey Mapping (CJM), a widely used methodology, provides a structured approach to visualizing the customer's interactions across various touchpoints with a business. The customer journey is becoming more complex due to digitization of business processes, broadening the gap between the proposed journey and the journey that is actually experienced by customers. Customer Journey Analytics (CJA) aims to detect and analyse pain points in the journey in order to improve the customer experience. This study proposes an extended version of the Customer Journey Mapping (CJM) model, to measure the impact of different types of touchpoints along the customer journey on customer experience, and to apply process mining to gain more insight in the gap between proposed and actual journeys. Moreover, this model is used to develop dedicated CJA based on process mining techniques. A case study on e-commerce applies the CJM-model in practice and shows how the combination of process mining techniques can answer the analysis questions that arise in customer journey management. This research contributes to both academic discourse and managerial practice by offering actionable insights into how brands can ethically and effectively engage with digital consumers. It underscores the necessity for marketers to balance technological innovation with consumer trust and transparency. Ultimately, this study provides a robust framework for understanding the digital consumer psyche and offers strategic recommendations for navigating the rapidly evolving landscape of social media marketing.***

I. INTRODUCTION

Customer Journey Analytics is the process of understanding the impact of every interaction a customer has with your business. Often, customer journey analytics starts with a customer journey map, which is presented as a graph, flow chart, or other visual that documents each stage of the relationship between a customer and a brand. However, instead of just charting their customer journey on a map, customer journey analytics takes a further step to analyse what effect each interaction has on your customers' decisions. Further information is overlaid to help analyse how each interaction drives customers toward the end goal.

Key metrics per step in the journey Customer satisfaction scores, customer effort scores, and other survey results and more Customer journey analytics can help you to direct your customers' attention and resolve any pain points that stop them from taking desired actions. It helps you to augment your customer experience and develop a customer journey that not only gets customers to where you want them to go, but helps them connect to the journey itself. Learn how to utilise customer feedback with our free guide Many brands have a broad sense of their customer journey but haven't optimised it by creating a comprehensive customer journey map or analysing what affects their customers' experience. Technological developments have ensured strong worldwide growth in the use of the internet and wireless devices, such as smartphones and tablets. As a result, customers have many more opportunities to connect with companies. Processes of purchasing and consuming have become real 'journeys' because more channels are involved and those channels are used more intensively. As a consequence, channel preferences and use are constantly changing and customers have more control over these journeys.

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With one click, they switch to a competitor or share their experiences with the world. They are actively engaged in purchase processes by communicating about a brand through, for example, social media posts, online reviews, tweets They are actively engaged in purchase processes by communicating about a brand through, for example, social media posts, online reviews, tweets, blogs and vlogs. They help, and get help from, other customers using online forums and communities. Firms are no longer in full control of the communication and interaction with their customers and prospects and, in turn, no longer in full control of customer engagement behavior. It is therefore not surprising that customer journeys are receiving considerable attention in current business practice. An online search for 'customer journey' yields many thousands of results and demonstrates that interest in the concept lies largely in the practitioner, rather than the academic, domain. Moreover, the web is rich in software vendors, consultancies and industry commentators offering their services to assist organizations with designing, analysing and visualizing their customers' journeys.

A. *Objectives of the Study*

The study objectives typically focus on identifying pain points, optimizing touchpoints, and improving overall customer satisfaction and engagement, ultimately leading to increased sales and customer loyalty. A customer journey map is visual representation of the users interactions and touchpoint throughout their experience.

II. DEFINITION

Customer journey analytics is a data-driven approach that tracks, analyses, and visualizes how customers interact with your business across all touchpoints and channels over time. It transforms raw behavioural data into actionable insights about customer behaviour and preferences. Customer analytics, also called customer data analytics, is the systematic examination of a company's customer information and behaviour to identify, attract and retain the most profitable customers.

Steps for measuring customer journeys

Step 1: Create or capture user journey maps

Step 2: Determine the data you need to collect at each step of the customer journey

Step 3: Analyse the customer data CONCEPT

Customers in the digital era have information at their fingertips about where to find goods and services, what to buy and how much to expect to pay. They can find the perfect products for their needs, and therefore, organizations must do everything they can to serve the right products and marketing campaigns to their audience. To do this, organizations can use customer analytical tool to understand their customers.

The goal of customer analytics is to create a single, accurate view of an organization's customer base, which can inform decisions about how to best acquire and retain future customers. It can also identify high-value customers and suggest proactive ways to interact with them.

Organizations that deeply understand their customers' buying habits and lifestyle preferences can more easily predict those people's behaviour and, therefore, can optimize the customer journey. Accurate analysis requires large amounts of accurate data. Without this, analysis insights may be wildly wrong and unhelpful.

III. LITERATURE REVIEW

A. *Abstract*

Customer journey has become an increasingly important concept to understand complex customer behaviours and get insights into their experiences. While the term has been used in diverse disciplines since the 1990s and its literature has grown more than sevenfold over the last eight years, understanding of the topic remains incoherent. This paper adopted a stream- based systematic review approach to identify the underlying themes of the customer journey presented in the business literature up to May 2020. 147 relevant papers were retrieved from Scopus, Web of Science and EBSCO for the analysis. The quantitative content analysis identified five underlying themes of the customer journey, namely, service satisfaction, failure and recovery, co-creation, customer response, channels and technological disruption. The results section reviewed and discussed each theme and its sub-themes in turn. The review identified important gaps in the literature related to the key stages of a customer journey.

B. *Introduction*

In the past few years, the concept of customer journey has been widely adopted by both academics and practitioners. Such interest has been driven by the emerging prominence of the customer-centric philosophy in the marketing field (Crosier & Handford, 2012).

The term customer journey commonly refers to a process or sequence that a customer goes through to access or use an offering of a company (Følstad & Kvale, 2018b). Using customer journeys as the driver of business operations differs from traditional approaches, such as service blueprinting, which focus on the corporate perspective and neglect the customer view (Bolton, Gustafsson, McColl-Kennedy, Sirianni, & Tse, 2014). The concept places customers at its heart, making it a useful framework in assessing and evaluating customer experience within any service context (Mangiaracina, Brugnoli, & Perego, 2009). The analysis of customer journeys is useful in highlighting critical service moments and touchpoints that are significant for the formation of customer experience (Rawson, Duncan, & Jones, 2013). The recognition of the customer journey as a means to enhance and manage customer experience has driven the recent growth of the customer journey literature.

Attempts have been made to review the historical roots, terminologies and approaches of the customer journey based on 45 articles published prior to 2013 (Følstad & Kvale, 2018b).

However, the literature has evolved quickly, covering a wide range of themes and areas, evidenced by a diverse set of related marketing aspects and divergent uses of customer journeys in empirical studies (Åkesson et al., 2014, Canfield and Basso, 2017, Chen et al., 2008, Fornari et al., 2016, Klaus, 2013, Lim et al., 2015, Muskat et al., 2013, Panzera et al., 2017). Hence, past literature on customer journey does not appear coherent. Given that the customer journey literature has grown more than sevenfold in the past eight years and the previous review (Følstad & Kvale, 2018b) focused on the terminology as well as its applications in service design, there is a need to revisit this fast-growing body of work and examine the underlying themes to integrate the understanding of the customer journey into other constructs in business and marketing studies.

This paper takes a customer journey perspective to develop a systematic understanding of the customer journey by identifying the underlying themes of the phenomenon, placing them in context and synthesising the current body of knowledge. The attempt to aggregate and integrate the relevant literature to date provides a theoretical groundwork for future development of the topic.

The analysis is organised into seven sections. The next part discusses the methodology employed for the review. Section three summaries a profile of the customer journey literature. Section four presents the quantitative content analysis. Section five discusses the five themes of the customer journey in detail. The results sections do not include a comprehensive discussion on the terminology and historical background of the customer journey as this has already been undertaken in the review by Følstad and Kvale (2018b). Readers may refer to that review for detailed discussions of the subjects. Section six proposes potential future research avenues in the area of customer journeys. The last section presents the conclusion and discusses the limitations of the review.

C. Methodology

Systematic review papers can be of several types (Paul and Criado, 2020, Snyder, 2019), namely, Structured review focusing on widely used methods, theories and constructs (Canabal and White, 2008, Kahiya, 2018, Mishra et al., 2020, Paul and Singh, 2017, Rosado-Serrano et al., 2018), Stream-based review identifying research themes (Jones et al., 2011, Prayag and Ozanne, 2018, Schmitt et al., 2018, Vahidzadeh et al., 2020).

D. Profile of the customer journey literature

The Theory-Context-Construct-Methodology (TCCM) framework (Paul & Rosado-Serrano, 2019) was adopted to provide an overview of the customer journey literature. The bibliographic sources, most cited articles, commonly applied theories, studied contexts, researched variables and employed methods of the retrieved articles Although the initial search result showed that the first article that used the term customer journey

E. Quantitative Content Analysis

The results of the clustering analysis reflected the use of terminologies in different topics, as well as the wording within the same texts (Yeh et al., 2012). The analysis produced a dendrogram of frequently occurring terms (Fig. 2). The agglomeration results revealed five major themes, labelled service satisfaction, failure and recovery, customer response, co- creation, channels, and technological disruption. The identified themes reflected the research trends in customer journey studies.

F. The Five Themes Of The Customer Journey Literature

This section discusses the relevant literature for each of the five identified themes of the customer journey literature, namely service satisfaction, failure and recovery, customer response, co-creation, channels and technological disruption.

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G. Suggestions for Future Research

A heat map was constructed to analyse the frequency and gaps in the customer journey literature (Fig. 3). This analysis is useful in disclosing research trends of topics with a multidimensional nature (Davlembayeva, Papagiannidis, & Alamanos, 2019). The horizontal axis labels the three phases of the customer journey, namely the pre-purchase, purchase and post-purchase phase, while the vertical axis marks the five and eleven identified themes and sub-themes.

IV. CONCLUSION

The customer journey has been gaining attention from both academia and practitioners over the past decade. The customer journey literature has been growing at a rapid rate, especially in the last three and a half years, when more than half of the retrieved literature was published. However, the literature has appeared as incoherent due to its diverse theoretical background. Therefore, this stream-based systematic review has attempted to aggregate and integrate the current body of knowledge by should be inserted a randomness in the analysis of acquired data. This inserts a factor of uncertainty that may affect the results of the models. A method called traditional collaborative filtering recommendation algorithm is useful to compromise both desired accuracy and privacy of data. The benefit of loosing a big workforce from this field and exploiting in other more creative aspects leaves promises for the industry

Analysing the customer journey through data analytics offers powerful benefits, from enhanced customer experiences to improved conversion rates and increased customer loyalty. When done effectively, it allows organizations to better understand customer needs, optimize marketing strategies, and align internal processes with customer expectations.

To fully realize these benefits, organizations must:

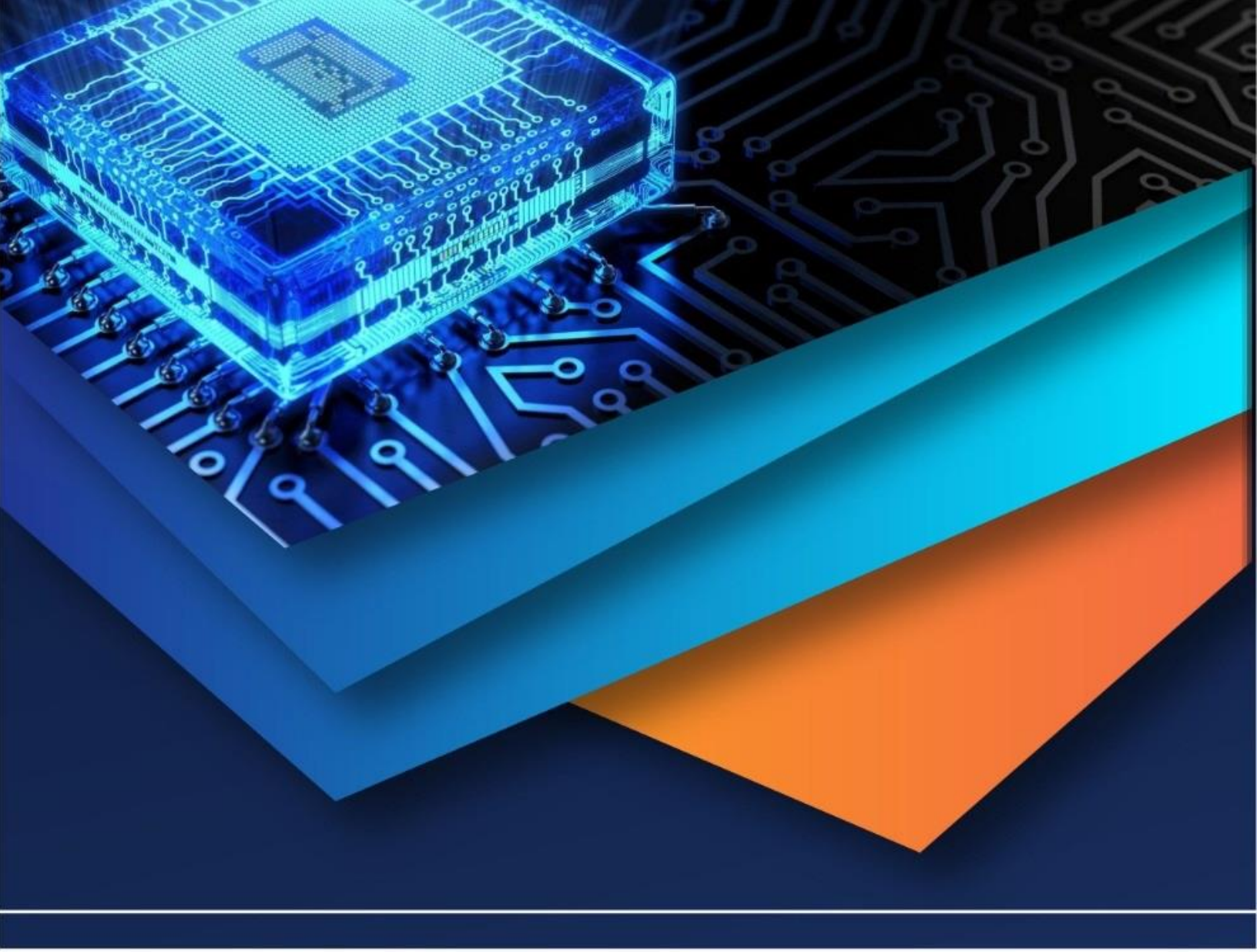
- Invest in high-quality, integrated data systems.
- Foster a data-driven culture.
- Ensure compliance with evolving data privacy laws.
- Continuously adapt to changes in customer behaviour and technological advancements.

In a world where customer journeys are becoming increasingly fragmented and dynamic, data analytics is not just a tool—it's a strategic imperative

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