Impact of Big Data and Knowledge Management on Customer Interactions and Consumption Patterns: Applied Science Research Perspective

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ABSTRACT

This study aims to systematically review the literature on the impact of big data and knowledge management on customer interactions and consumption patterns from an applied science perspective. A comprehensive search strategy was implemented in seven scientific publication databases. The inclusion criteria consisted of original research articles published in English, excluding gray literature, book chapters, and conference proceedings. A total of 400 articles were retrieved, and 40 articles met the inclusion criteria after two rounds of screening. The selected articles were analyzed following a mixed-method approach incorporating qualitative and quantitative data analysis techniques. Thematic analysis was deployed to identify recurring themes and patterns in the articles, while descriptive statistics were used to summarize the study characteristics. The data analysis showed that big data and knowledge management significantly affect customer interactions and consumption patterns, with most studies focusing on the retail and banking sectors. The findings of this study have several theoretical and practical implications. From a theoretical point of view, this review contributes to the growing body of literature on the intersection of big data, knowledge management, and consumer behavior. From a practical perspective, the results can inform policymakers and practitioners on leveraging big data and knowledge management in order to improve customer interactions and consumption patterns.

Keywords-big data; customer knowledge management; customer interaction; consumption pattern; consumer behavior; innovation; artificial intelligence

I. INTRODUCTION

Digital revolution has significantly affected modern consumer decision-making. The Internet allows people to engage in knowledge-based consumption. People can share their use of products and purchasing experiences on various digital platforms, involving websites, discussion boards, and social media platforms, from households to the entire population. Many messages, entailing newspaper articles, social networking articles, reviews of items and customer experiences, scientific research, and media releases, are available online. The tendency of companies to undergo technological changes has boosted the quantity and quality of unorganized information. Scholars analyze this enormous volume of unorganized information employing big data analytics methods, which have been widely applied in theory development and have gained popularity in recent years [1].

Big data requires a cutting-edge economic data processing approach to collect knowledge for decision-making due to its massive volume, high velocity, and numerous types of unprocessed data [2]. Therefore, big data insights are troublesome when looking at raw data that have yet to be digested, or encoded data that have yet to be extracted. Considering its tremendous capacity to gather enormous volumes of raw information and utilize the best analytical techniques, big data analytics has emerged as the primary approach to study big data. It has become a tool that companies use to collect a range of information and perform statistical evaluations to help make sound decisions that previously depended on the knowledge and judgment of administrators [2].

In the past ten years, managerial academics in Information Systems (IS) have become increasingly interested in big data to

promote business revenue, operations, and customer support. Building Big Data Analytics (BDA) capabilities is a priority for many established and brand-new businesses. The goal is to empower employees to make and convey informed choices exploiting the amount, variation, and validity of the data to generate useful information [3]. Businesses now need to employ the data throughout the more condensed sectors of day-to-day management due to the significant rise in computing power accessible to analysts. However, BDA's managerial features under various circumstances could be investigated more thoroughly. Most previous studies focused on the algorithms and intelligence of BDA while ignoring its business influence [4]. Therefore, the interaction of technology and management assets is still a relatively new topic in BDA [5].

The widespread use of big data has led to an evaluation of the frontline perspective, particularly in the management of relationships with consumers [6]. Several companies have employed customer information to track and assess how consumers use their offerings, but more significantly to advertise and suggest new deals or notifications [7]. According to [8-9], companies that manage customer knowledge are more inclined to spot new market possibilities or changes in consumer behavior before competitors. This helps to provide the business, its investors, and its clients with an insightful financial perspective. Hence, systematizing the use of big data in CRM initiatives is essential. Customer Knowledge Management (CKM) refers to organizational procedures that support such activities by requiring a conducive environment and specific skills to be cultivated [10]. The creation of better items and services depends on effective CKM. Effective CKM would strengthen customer loyalty and the customer-establishment relationship [11]. The CKM objectives are the co-creation of value and customer collaboration [12]. Therefore, it is necessary to incorporate awareness of customer value into the development of new products [13]. To acquire, transmit, and use customer knowledge, a company must develop and supervise its most effective consumer relationships. To achieve this objective, businesses must foster a CKM-focused environment where everyone has high regard for customer retention [14].

According to recent studies, the impact of knowledge management on consumer patterns and the use of big data in customer interactions is still to be explored. For example, a systematic review of big data and customer relationship management in [15] revealed that while there is a growing body of research on big data, the role of knowledge management should be more present in this context. Similarly, a comprehensive review of knowledge management in consumer behavior in [16] found that although there is a growing interest in the consumer knowledge, there needs to be a more systematic research on how the latter affects consumer patterns. Furthermore, a review of the use of big data in marketing in [17] highlighted the need for greater research on the role of knowledge management in leveraging big data for customer insights. These studies suggest that a systematic review of the impact of knowledge management on consumer patterns and the use of big data in customer interactions is urgently needed.

Although there are numerous studies that evaluate the variables which affect customer knowledge management, entirely systematic reviews on knowledge management, its effects on consumer consumption patterns, and the use of big data in customer interactions need to be explored. Additionally, a literature review must critically evaluate this research area. To effectively execute CKM and big data strategies in enterprises, executives and analysts must understand the function of knowledge management, its influence on customer consumption behaviors, and big data influence on customer interactions. This study aims to thoroughly evaluate the existing literature on big data effects on customer interactions and the impact of knowledge management on consumer patterns. This study evaluates CKM using data from specific publications in the relevant literature. The main objective is to encourage further research and provide an executive summary of the recent developments in this domain.

II. THEORETICAL UNDERPINNINGS

Consumer knowledge is defined as a systematic and organized body of knowledge about consumers, constructed through systematic information analysis [18-19]. This knowledge can be classified into three categories: knowledge for customers, knowledge about customers, and knowledge from customers. Collaborative customer knowledge is a fourth type that arises from the collaboration between customers and the company. In [20], a widely accepted description of customer knowledge was provided, describing it as "the vigorous integration of significance, expertise, and insightful knowledge that must be obtained, produced, and consumed throughout purchases and interactions between the business and its consumers." According to [21], customer knowledge can be categorized into three main areas: (1) Knowledge for customers, comparing information on products and markets tailored to address customers' informational necessities, such as educational material, FAQs, instructional videos, etc., (2) knowledge about customers, derived from evaluating historical customer data, exemplifying insights, such as purchase tendencies, buying frequency, preferred communication channels, and personal preferences, and (3) knowledge from customers, acquired directly through diverse means, including surveys, focus groups, social networking sites, product testimonials, and live chats. In [22], another type of consumer knowledge was presented, collaborative customer knowledge. Collaborative understanding refers to the shared knowledge and insights generated through collaboration between customers and organizations. This type of customer knowledge goes beyond simply acquiring or processing information, as it involves actively creating new knowledge through partnership and cooperation.

When a company and its customers collaborate, this knowledge can be attained. According to [23], the tactical implementation of CKM liberates customers of innovative enterprises from being merely passive consumers of products and solutions to participate as knowledge collaborators. CKM aims to collect, share, and use customer knowledge to benefit the company and its clients. The creation, sharing, and use of customer knowledge within and between firm entities and their clients are ongoing. For a company organization to be more

efficient and skillful in providing goods or services and consequently pleasing clients, customer knowledge must be governed to ensure that the services it offers are the ones that suit consumers' expectations. CKM should place a different primary emphasis than that on the traditional customer relationship management. It should be an evolving strategic approach that attracts, creates, and includes customers. Identifying skills that could be useful for CKM duties is crucial. The incorporation of the consumer is viewed as a significant tactic to enhance quality and creativity.

CKM plays a critical role in businesses by facilitating the collection, sharing, and utilization of customer knowledge [24]. CKM enables organizations to better understand customer needs, preferences, and behaviors, ultimately improving customer satisfaction, loyalty, and profitability [25]. However, implementing CKM poses several challenges for organizations, including the need for specialized skills and technology, cultural resistance, and data privacy concerns [26]. Therefore, businesses must overcome these obstacles and strategically manage their customer knowledge to stay competitive in the condemporary marketplace. According to [13], CKM integrates knowledge management with CRM strategies. According to [27], CKM is the gathering and use of customer knowledge and the understanding of utilizing technological innovations to build more enduring customer connections. According to the Knowledge-Based View (KBV), knowledge is valuable. The performance of an organization depends on how much its staff can broaden their knowledge base, integrate various fields, and use the knowledge to create novel and high-quality and novel products [28].

In [29], a CKM model was proposed following this comprehensive system. Other studies acknowledge that various human, managerial, and technological elements affect customer knowledge management operations [30-31]. In [32], the hypothesis to demonstrate how people, organizations, and technology interplay was presented. This study stated that innovation is generated by human action, individuals constitute its developers, and that it is used in organizations by emphasizing three entities with four connections. These three factors, their interactions, and the suitable characteristics of each entity can help pinpoint the circumstances that favor CKM. In [33], a knowledge transfer model was proposed based on [32] and on dividing the variables into individuals, businesses, and technologies.

III. REVIEW APPROACH

Systematic Literature Review (SRL) is a method frequently employed to integrate new research fields [34-37]. The domain-based evaluation strategy used in this study is one of the five types of SLR [35]. The main goal of domain-based reviews [38], in contrast to other review types [39-41], is the expansion of a field or topic. This study carried out an SLR to investigate knowledge management, its impact on consumer buying patterns, and the usage of big data in customer interactions. The following SLR phases were followed.

A. Research Questions

This study aimed to investigate and identify research that engages big data in customer interactions and the impact of knowledge management on consumer behavior. To achieve this goal, various research questions were put forward and discussed as follows.

RVQ1: How do big data and knowledge applications affect customer interactions and consumption trends?

Various research techniques were adopted to study the subject of investigation. Considering the inquiry that follows, articles were examined in this study concerning their methods of investigation.

RVQ2: Which research methods are employed in the particular research?

Businesses must adopt novel approaches to achieve their business objectives and maintain their prospective existence. For this reason, monitoring consumer information and maintaining ongoing consumer interactions are crucial for every organization. Several companies try to collect big data to establish and nurture stronger connections with their clients. The subsequent study evaluates the sample investigations in light of their contexts and locations.

RVQ3: What are the contexts in which customer knowledge is commonly used?

Better customer interactions will be significantly aided by efficient management of customer knowledge. The research inquiries that followed were used to address problems and suggestions for additional studies under a gap assessment in the reviewed research.

RVQ4: According to the examined publications' gap analyses, what areas and questions require additional research?

B. SLR Protocol

In addition, more SLRs have appeared in the past few decades, but more papers have been published on this approach. The numbering and categorization of the steps of the procedure vary only slightly in the numerous guides available today [34, 36-37, 42-43]. The academic procedures and justifications for SRLs [35] is a comprehensive methodological protocol that synthesizes existing guidance into an accurate method to resolve this methodological ambiguity [44].

C. Search Process

In the two-stage study method, the objective is to select suitable studies based on predefined criteria. Phase 1 focuses on obtaining the seven essential studies that lay the foundation for this investigation. These "key pieces of evidence" correspond to pioneering research papers that have significantly shaped the understanding of this research area, covering several aspects, such as theories, concepts, models, surveys, data collection and analysis, prominent case studies, and results. Phase 2 includes looking into more pertinent research by examining the list of citations for every selected investigation. This study used academic e-databases. Keywords were chosen following the following procedures:

1. Deriving critical phrases from the study's questions
2. Identifying substitutes and alternate versions of those phrases

3. Employing the "AND" and "OR" boolean operators to create the search strings.

These actions had one of the following results: customer and knowledge and big data, customer interaction and knowledge and big data and consumer patterns, or knowledge management and customer. The main source for systematic keyword searches was the Web of Science (WoS). Secondary sources of cross-referencing were Scopus and EBSCO, which are also often used in brand-focused reviews. Seven important electronic databases were chosen to acquire the pertinent literature: Wiley Online Library, IEEE Xplore, Science Direct, Scopus, and Association for Information Systems (AISeL). These databases have been determined as the most prestigious conference proceedings and impact journals in the CKM discipline. The databases presented in Table I contain the articles that served as a framework for the study.

TABLE I. LIST OF DATABASES USED IN THE SYSTEMATIC LITERATURE REVIEW

Online Databases	URL
Scopus	http://www.scopus.com/
Elsevier	https://www.elsevier.com/
Science Direct	http://www.sciencedirect.com/
Wiley online library	https://onlinelibrary.wiley.com/
IEEE	http://ieeexplore.ieee.org/
Emerald Insight	http://www.emeraldinsight.com/
AISeL	http://aisel.aisnet.org/

D. Study Selection

The research selection method consists of the following steps taken after the research procedure that found relevant publications: (a) Choosing the research according to its subject and title, (b) removing papers with restricted or no access, (c) removing papers that are duplicated or linguistically useless, (d) after reviewing the outcomes in light of the research criteria, choose specific pertinent findings that can firmly support the research questions [30]. The following inclusion and exclusion criteria were defined: article abstracts, introductions, study techniques, findings, and conclusions were reviewed. High quality articles were chosen based on the inclusion and exclusion criteria and the quality standards assessment specified in the following section.

E. Inclusion Criteria

1. Articles covering the impact of big data and knowledge on customer interactions and consumer behavior.
2. Investigations with a suggested structure and a transparent methodology.
3. The journal version, including a conference adaptation, was chosen for research.
4. In identical papers, the most recent one was selected. A paper being a literature review was a crucial component in addressing related literature and was utilized as a starting point for expanding this investigation.

F. Exclusion Criteria

1. Research projects without a conceptual or methodological foundation.
2. Publications that need to address the impact of big data and knowledge on customer interactions and consumer behavior.
3. Articles from unscrupulous sources or magazines.
4. Articles written in languages other than English.

G. Quality assessment

The following quality evaluation questions were used to conduct additional assessments of the included articles [30, 45]

1. Does the field (category) have a clear definition?
2. Does the investigation support the publication or is it only a summary of lessons learned based on professional judgment?
3. Are the study objectives clearly stated?
4. Is the setting in which the investigation was performed sufficiently described?
5. Is the analysis strategy appropriate for achieving the study's goals?
6. Is the declaration of conclusions clear and concise?
7. Is the study comprehensive regarding consumer trends, big data, and customer knowledge management?
8. Does the study include a topic description?
9. Does the study employ a recognized model to help its analysis?

The scoring system was determined using 1 for Yes (Y), 0.5 for Partly (P), and 0 for No (N) or undetermined (i.e., data are not made explicit). The grading of the questions helped to assess the existing research and the importance of individual studies in integrating the findings. Additionally, this classification provided more precise inclusion or exclusion standards.

H. Data Extraction and Synthesis

A detailed evaluation of 40 items completed data extraction and aggregation. The goal was to deliver documents with accurate information on the available early studies. The fundamental details comprised the author, date, study methodology, and research setting. These items were selected considering the objectives of the investigation. Table II demonstrates an example of the data extraction form. After being extracted, the data were pooled and reviewed.

TABLE II. DATA EXTRACTION FORM FOR SLR

Extracted data	Description
Field activation/bibliographic data	Publication year, authors
Research methods (data collection and data analysis tools)	Case study, survey, conceptual paper, mixed method
Contexts	Industrial and other countries
Topics and questions for further research based on gap analysis	Research gaps identified, topics, and future research questions

IV. SLR RESULTS

A. Search Results

During the data extraction stage, parameters were extracted from each chosen publication. The extracted data include the fundamental details of each article, the study methodology, the context, and the purpose. Table III depicts the number of publications in each phase of the study selection process. 40 articles were found during the search process for this evaluation. Figure 1 portrays the number of papers chosen from each online database. Figure 2 additionally displays the progression of studies over time in chronological order. The graph shows that most studies were published between 2013 and 2023 and that there has been a sign of a growing emphasis on the topic since 2020.

TABLE III. SEARCH STRATEGY AND STUDY SELECTION OF SLR

Database	Title, abstract, and keywords filtering	Access	Deleted duplicate and non-English language content	Abstract and conclusion	Inclusion and exclusion criteria	Quality evaluation
Emerald Insight	55	35	30	22	18	8
Science Direct	42	32	18	15	5	3
Scopus	85	72	65	54	22	10
Elsevier	82	68	58	42	20	15
Wiley online library	25	22	15	10	6	2
IEEE Xplore	30	28	14	10	4	1
AISeL	26	14	8	5	3	1
Summary	345	271	208	148	78	40

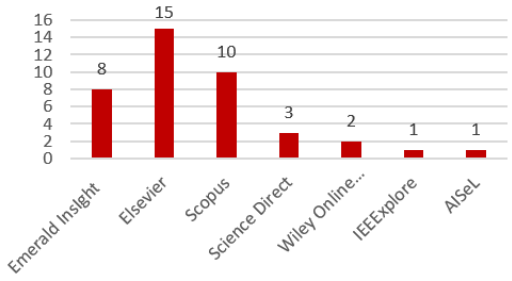

Fig. 1. Papers selected in electronic databases.

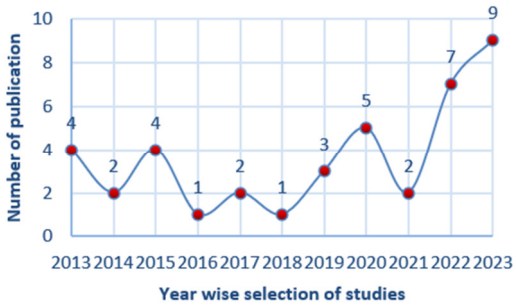

Fig. 2. Chronological order of studies over time.

B. Quality Assessment of Articles

Nine quality assessment questions were offered to assess the overall standard of the chosen studies. For each question, a score of 1 is particularly important. Furthermore, each paper's quality was rated following its performance on the quality assessment standards mentioned above as high, medium, or low. If a paper fully satisfies a condition, it obtains a score of 1. If it just slightly satisfies the criterion, it gets a rating of 0.5. Finally, it gets a rating of 0 if it does not satisfy a criterion in any way. Figure 3 reveals the higher exceptional caliber of the papers selected.

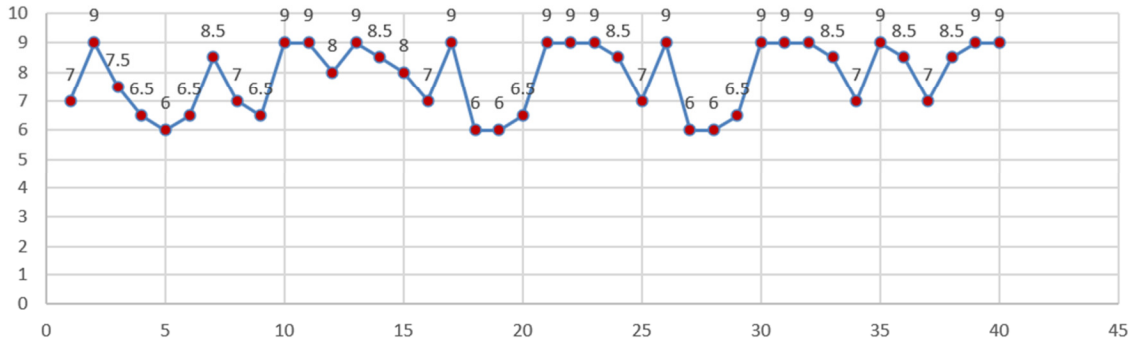

Fig. 3. Quality assessment of studies included.

V. FINDINGS

A. How Vibrant is the Big Data Domain Regarding Customer Contacts and the Function of Knowledge Management in Consumer Trends?

Figure 2 exhibits the number of articles produced by year, demonstrating that the clear focus increased from 2022 to 2023. Most recently released papers focused on providing a strategy to support organizational creativity and innovation and improve customer service. Researchers have investigated how big data analytics and knowledge management affect the expansion of customer interaction and intersections in organizations in light of these justifications. In most publications from 2013 to 2023, the corresponding technologies of big data, artificial intelligence, and Internet of Things were discussed. Big data, knowledge management, and customer contact were also mentioned in numerous articles.

B. Which Research Methods are Employed in Particular Research?

Figure 4 presents a summary of the findings on the research methodologies followed in the studies. This graph indicates that survey research was the primary quantitative strategy employed by most of the selected studies (55%). Of all the articles that employed qualitative approaches, conceptual papers, empirical studies, and case studies made up roughly 45% of the total. Since it takes time to explore and observe a person in many circumstances, the results show that action research is only used in a few studies. As a result, this type of study is more important and expensive than others. However, some studies employed conceptual and empirical research techniques more often than others. In this field, a variety of research approaches are deployed. Furthermore, it should be noted that applying qualitative research approaches in this field needs to be revised and calls for further study.

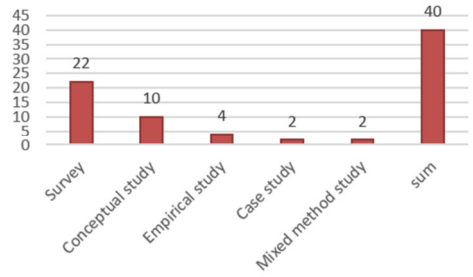

Fig. 4. Graphical explanation of several selected papers per year.

C. What are the Contexts in Which it is Commonly Used?

Big data and knowledge management have been studied in various settings and countries. According to Figure 5, most of the studies on the subject were conducted in China, the United Kingdom, Jordan, Saudi Arabia, Iran, Italy, India, and Malaysia [46]. The confluence of customer knowledge management in eight various circumstances encompassed two unique contexts: consumer interactions, knowledge management, and big data. As observed in Figure 6, big data and customer knowledge management were studied with customer interactions in the retail, manufacturing, information technology, telecommunications, and marketing industries. However, the tourism, health care, and medical industries have received fewer studies. Researchers should focus more on these industries and other fields not involved in Figure 6. Most of the selected studies were context-free.

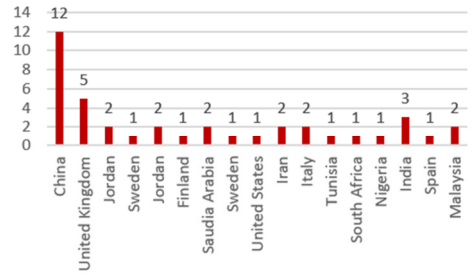

Fig. 5. Studies on the impact of big data and knowledge management on customer interactions and consumption patterns in different countries.

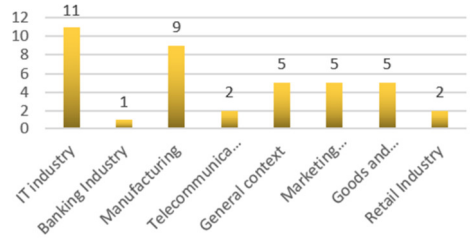

Fig. 6. Studies on the impact of big data and knowledge management on customer interactions and consumption patterns in different contexts.

D. According to the Examined Publications' Gap Analyses, What Areas and Questions Require Additional Research?

Following previous SLRs, the conclusion section identifies knowledge gaps in the corpus of published literature and develops a research strategy for further study. Table IV summarizes the identified gaps and priority research questions for additional studies. The review revealed a significant under-representation of research on the impacts of big data and knowledge management on consumer interactions and consumption trends. Most of the study findings have looked at the effects of big data and knowledge management independently in the context of customer engagement. Without uncertainty, more research is needed. Prospective investigations should utilize a wide range of qualitative and quantitative methodologies to improve the study of the field. This study urges researchers to adapt their study methodology in the future to consider developments in the influence of big data and knowledge management on consumer interactions and consumption habits.

VI. DISCUSSION AND CONCLUSION

This study aimed to investigate the effects of big data and knowledge management on consumer interactions and consumption patterns. Through an SLR, 40 relevant publications from 2013 to 2023 were identified and analyzed, revealing a significant growth in the number of studies in this area. The findings indicate that there has been a substantial increase in publications related to customer knowledge management and big data since 2013. Recent research has focused on the consequences of these phenomena, particularly in the manufacturing, marketing, retailing, and information technology industries. However, more studies need to be conducted on the impact of big data and knowledge management on consumer interactions and consumption patterns in the food, hospitality, wellness, and medical sectors. Therefore, future research should pay more attention to these neglected areas.

Most of the selected studies were carried out in industrialized countries, leaving a gap on the effects of big data and knowledge management on developing economies. Thus, researchers should consider further exploring this issue to provide a more global perspective. The analysis of the chosen articles also revealed that the terms "big data," "knowledge management," and "CKM" were the most frequently occurring ones in the literature. However, the "case study method" was less frequently used. Additionally, consumer intersection and consumer patterns occur infrequently in the literature,

indicating the need for more research on these topics. Psychological factors, such as employee competencies, emerged as important determinants of the success of big data and CKM within enterprises. Consequently, it is suggested that future research should more deeply explore the role of psychology in this area.

TABLE IV. IDENTIFYING GAPS AND PRIORITIZING RESEARCH QUESTIONS FOR ADDITIONAL STUDY

Topics	Research gap identified	Future research questions
Future directions - Theory development		
Theoretical foundation and theory development	Need to introduce new theories	• What scholarly disciplines and research fields can help create theories for big data and knowledge management on consumer interactions and consumption patterns? • Which relevant enterprise structures are appropriate for analyzing big advanced data and knowledge management on consumer interactions, knowledge management, and study consumption patterns? • How may collaboration and customer support-dominant reasoning be used to clarify customer-related elements and additional actors' involvement in forming views?
Future directions - Context		
Impact of big data and knowledge management on customer interactions and consumption patterns	Lack of research on these connections of three keywords: knowledge management, big data, and customer interaction	• How is the future of GHRM being shaped by the convergence of consumer interactions and cutting-edge technologies? • How do consumers interpret verbal, visual, or a combination of the three marketing? • How might brand interactions with GHRM, AI-powered, and other advanced technologies affect consumer perceptions? • How might augmented and virtual reality tools affect consumer interaction and intersection?
Comparative studies	Need to conduct comparative studies across touchpoints	• How do consumer perceptions regarding different interactions with technology change throughout the customer procedure? • In different circumstances, how might attitudes toward customer knowledge management be managed?
Future directions - Characteristics		
Dimensionality	Lack of consensus about dimensions. Need to explore	• How can knowledge management and big data of consumers be conducted in a business effectively? • How do factors relating to consumers affect the way customers perceive and interact with businesses in different contexts?
Future directions-Methodology		
Methodology	Opportunities for qualitative and quantitative research. Need for longitudinal studies. Need to extend the set of research methods	• What quantitative exploratory research is required to expand the context of the study? • How does exploratory research help identify consumer technological illegal access that has not been previously investigated? • How could the study be aided by analyzing big data and AI-driven learning techniques? • Can longitudinal research be used to understand better the dynamics of how big data and knowledge management affect consumer behavior and customer interactions? • How do research techniques broaden and develop understandings? • How might technology breakthroughs in research be used to its advantage?

In conclusion, this SLR sheds light on the importance of big data and knowledge management in shaping consumer interactions and consumption patterns. Despite the increasing number of studies in this field, several gaps in the literature require further investigation. By filling these gaps, researchers can contribute to a better comprehension of the impact of big data and knowledge management on consumer behavior and help companies improve their competitive position. Academics can exploit the extracted data to examine how big data and knowledge management affect customer interactions and consumption habits at various companies. The findings of this study can help companies and academics to effectively explore big data, knowledge management, and customer patterns. By strengthening employee competencies, academics and practitioners can enable and advance big data and customer knowledge management within enterprises.

Although this study provides a comprehensive overview of the literature on the effects of big data and knowledge management on consumer interactions and consumption patterns, it has some limitations. First, the search was limited to seven databases, meaning that some relevant studies may have been missed. Second, the review was based on English-language publications, which could lead to a bias towards Western perspectives. Third, the inclusion and exclusion criteria might have led to a narrower scope of analysis than initially intended. Therefore, it is recommended that future research should expand the scope of the analysis by including more databases and non-English-language publications. Furthermore, researchers could explore the role of culture and context in shaping the impact of big data and knowledge management on consumer behavior. Longitudinal studies could also provide insight into the temporal dimension of these phenomena. In summary, this SLR highlights the importance of big data and knowledge management in shaping consumer interactions and consumption patterns. By identifying the gaps in the literature and suggesting avenues for future research, this study seeks to inspire further investigation into this exciting and rapidly evolving field.

VII. THEORETICAL AND MANAGERIAL IMPLICATIONS

A. Theoretical Implications

The current study has set the stage for developing the influence of big data and knowledge management on consumer interactions and consumption habits as a distinct study area. Most notably, the review has manifested that there are still numerous unknown domains related to information management on customer interactions and consumption patterns, with just a tiny percentage of the online realm having been researched that far. The review has suggested that brand-new technological domains may call for fresh concepts and theoretical frameworks for big data and consumer behavior. Existing studies mainly relied on stale theories and are characterized by an inward-looking perspective. The key theoretical recommendation in this review is that future studies broaden their theoretical foundations or take a multifaceted approach. To comprehend how big data and knowledge management qualities can be determined from consumers' interactions with consumption patterns, this review has

explicitly recommended theories of human-machine relationships, assemblage theory, or actor-network theory. The evaluation performed has also displayed how big data analysis, knowledge management, and consumer consumption patterns have typically been considered separately in the context of research. The review has particularly highlighted the variations between those digital touchpoints that were previously ignored. It will be necessary for marketers to develop a more nuanced grasp of a platform's unique nature to detect context, given the proliferation of touchpoints and technology. Future studies should focus on theoretical contributions to solve the considerable theoretical and empirical gaps. Additionally, this study highlighted various digital techniques that can help advance the study of customer impressions, including big data analysis.

B. Practical Implications

This review has several useful implications for businesses. The review highlights the value of knowledge management and big data analytics for corporate competitiveness. The findings show that businesses are more likely to enhance their capabilities when they adopt and use big data analytics than those that do not. The assessment also makes the case that even if knowledge management can increase data security and company efficiency, a company must have the right competencies to achieve its goals. Big data analytics constitutes one of these talents. These results, in particular, alert leaders and executives to the possibility that the initiative aimed at reinventing enterprises through knowledge management capacities might fail because it lacks such crucial infrastructures for information technology. The review findings provide business and IT executives, who work on integrating big data analytics, with useful advice. Big data analytics offers the capacity to enhance decision-making procedures, which is one of its advantages. Therefore, businesses must ensure that their staff has the necessary abilities and must offer quantitative development, where necessary, involving areas such as corporate analytics, data extraction, and basic statistical concepts.

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