

Management Theories' Potential for Better Digital Service Customer Experience

Digital service provision has undergone a period of considerable change because of the COVID-19 pandemic, and the challenges of delivering a positive customer experience through digital services are still relevant to this day. The bibliometric analysis carried out in the study showed that this has accelerated research on the modeling of customer experience in digital services, in which researchers are looking for new ways to overcome the challenges encountered. The analysis of the main research themes and seminal publications revealed through the bibliometric analysis concludes that contemporary management theories have the potential to contribute to addressing the emerging challenges in customer experience modeling in digital services.

Keywords: customer experience, digital services, contemporary management theories.

Skaitmeninių paslaugų teikimas išgyveno didelių pokyčių laikotarpį dėl COVID-19 pandemijos, o iššūkiai, susiję su teigiamos klientų patirties užtikrinimu teikiant skaitmenines paslaugas, tebėra aktualūs iki šiol. Tyrime atlikta bibliometrinė analizė parodė, kad tai paspartino klientų patirties naudojantis skaitmeninėmis paslaugomis modeliavimo mokslinius tyrimus, kuriais tyrėjai ieško naujų būdų, kaip įveikti iškylusius iššūkius. Analizuojant pagrindines mokslinių tyrimų temas ir pagrindines publikacijas, atskleistas atlikus bibliometrinę analizę, daroma išvada, kad šiuolaikinės vadybos teorijos turi potencialo padėti spręsti kylančius iššūkius, susijusius su klientų patirties modeliavimu skaitmeninėse paslaugose.

Raktiniai žodžiai: klientų patirtis, skaitmeninės paslaugos, naujosios vadybos teorijos.

Introduction

Research shows that knowledge about digital services shifted after the pandemic (Nilashi et al., 2021; Yu et al., 2022). The COVID-19 pandemic has accelerated the growth of digital platforms and a significant part of the activities of organizations have moved to the digital setting. Companies started to contact both with other businesses (business-to-business,

B2B) and with customers (business-to-customer, B2C) by information and communication technology. Entire sectors have begun to provide services remotely, such as healthcare (Nataliia et al., 2021; Taylor et al., 2020), retail (Galhotra & Dewan, 2020), etc., also teleworking and virtual meetings have taken hold in organizations (e.g., Arunprasad et al., 2022). The accelerated adoption of digital platforms propelled the relevance of

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digital service quality (Agostino et al., 2021; Yahaya et al., 2023) and introduced new challenges to organization management (Gečienė, 2021; Khor & Tan, 2023). The changes that took place during the pandemic constraints suddenly made previous knowledge obsolete. Thus, this article addresses **the research problem** in the form of a question – how can management theories help organizations to cope with current affairs? So far, scientific publications have not yet paid attention to such aspects. To fill this gap, **this paper aims** to explore how contemporary management theories can help to better understand the challenges of managing digital services in the new era. Digital service customer experience being **the research object of the paper**, the aim of the paper is realized through a bibliometric analysis, exploring the publications' annual productivity and citation metrics, key topics, and foundational publications of articles on digital customer experience modelling. These techniques help reveal the prominence of contemporary management theories in scientific articles on digital customer experience. This article explores how researchers are addressing the new challenges based on contemporary management theories.

The research is based on bibliometric analysis of digital service customer experience in publications within 2000–2022. Further, in the discussion section of the paper, seminal publications are examined to identify the connected contemporary management theories. The paper also presents an overview of changes to contemporary management theories following the accelerated move to the digital environment during the pandemic.

Literature overview

There is plenty of research done regarding the various aspects of customer experience both in product and service areas. However, the transaction type in which the customer experience is analyzed remains mainly bound to B2C. According to the database of high-quality journals Web of Science Core Collection, the search results of keywords “Customer experience modeling” return nearly 8000 scientific articles. However, only 96 articles are returned after adding the keyword “B2B” to the topic. This emphasizes the scarcity of research on the B2B context in the business field, compared to same topics covering B2C perspective (Hasler et al., 2022; Raišys & Baranauskas, 2022; Shankar et al., 2022). Hence in this paper, research articles on customer experience modeling in digital services are analyzed using bibliometric analysis without separating them into B2B or B2C contexts to get a wider overview of the scientific scape on the topic.

Bibliometric analysis is a method used by scholars to reveal current trends, directions, and leading topics of the research field (Wang et al., 2014). It is a useful method analyzing large collections of scientific publications (Donthu et al., 2021; van Nunen et al., 2018). This paper presents a bibliometric analysis using two main techniques – performance analysis and science mapping – and utilizes measures such as total publications, total citations, bibliographic coupling (of publications), and co-citation analysis (of publications).

Digital services are those that are provided and obtained through digital channels, more specifically, over the

World Wide Web (or the Internet). Thus, it defines the medium in which the transaction between the collaborating parties occurs. Compared to traditional service definition, which emphasizes intangibility and the lack of ownership of the benefits obtained by the customer (Williams et al., 2008), the two may seem not to differ drastically from each other. However, the difference between the two is better outlined in the specifics of provisioning and receiving the service. The differences of the two forms of services lie in the properties of services themselves, the process of benefit exchange between the parties (Williams et al., 2008), and the service provision's scale limits (Hsu, 2007), to name a few. Therefore, since digital services are based on World Wide Web, research on digital services is only as recent as the World Wide Web, which emerged in the 1990's, after it became accessible to the public (Glowniak, 1998).

Customer experience is defined and used by various researchers slightly differently, which results in non-uniformity of the definition of customer experience (Becker & Jaakkola, 2020). Researchers define customer experience as a customers' subjective (emotional, behavioral, sensory and social) reaction to a company's services or goods (Barbu et al., 2021; Bueno et al., 2019; Lemon & Verhoef, 2016). According to M. Godovykh & A. D. A. Tasci (2020), the experience can include educational, esthetic, entertainment, emotional, informative, practice, involvement, knowledge and many other components. S. Bagdare & R. Jain (2013) suggest that the source of experience can include people, objects, and processes involved in the interaction of a customer and a company. The outcomes of positive

customer experience include customer satisfaction and loyalty (Srivastava & Kaul, 2016), which in turn drive the business towards its goals. Therefore, if the decisions taken regarding the company's service delivery processes, technologies and methods result in increased service quality, it contributes to a positive customer experience. To guide the business in such a complex task, management theories offer guidelines that companies could adapt in their decision-making process regarding the improvement of service delivery. For the adoption of such guidelines, companies select guidelines based on appropriate approaches to the desired goal and choose the means that would be effective in achieving the result.

Research methodology

To analyze the papers on customer experience modeling in digital services, Clarivate Web of Science Core Collection database was investigated. At first, the scope of research available between the B2B and B2C domains was investigated. The search in database was conducted based on the keywords "customer experience modeling", "digital services" and "B2B" in the Topic field, while also refining the search to only return scientific articles written in English. The search returned only 15 scientific papers published in high-quality journals. This result implies that research on customer experience modeling in B2B digital services is scarce. To obtain a better overview and analyze the scientific scape of customer experience modeling in digital services without narrowing down to specific relationship model between service-provisioning and receiving

parties, a successive search was conducted, using the keywords “customer experience modeling” and “digital services” in the *Topic* field, refining the search to return scientific articles written in English, published in 2000–2022. The query returned 221 articles linked to customer experience modeling in digital services, written in English and published in high-quality journals in 2000–2022. According to G. Rogers et al. (2020), the sample over $n = 200$ is sufficient to effectively use bibliometric analysis.

The bibliometric analysis is conducted by combining different performance analysis and science mapping techniques to get an overview and insight into the analyzed field or topic (Donthu et al., 2021). Performance analysis is used to reveal the contribution and performance metrics of the research constituents to the scientific field (Gaviria-Marin et al., 2019). The constituents analyzed can be publications, authors, countries, journals, etc. In this paper, to analyze the publications regarding customer experience modeling in the context of digital services, the applied measures are: 1) total number of publications per year; and 2) total articles' citations per year. Respectively, the results of these measures provide an overview of the publications' trends in productivity and impact over time. Based on these trends, the future direction of the topic is discussed.

Furthermore, to gain a deeper insight and analyze the past and the present state of scientific publications on the topic, science mapping techniques applied in this paper are: 1) co-citation analysis; and 2) bibliographic coupling. Co-citation analysis allows insight into the foundations of the topic, revealing

the seminal publications on the topic by identifying the publications that are often cited together in the papers of the analyzed sample. Meanwhile, bibliographic coupling shows the similarity of publication content among the analyzed papers on the topic by comparing the references they share, revealing the clusters of topic's leading themes. To visualize the links between the publications, visual science-mapping software VOSviewer was used.

Based on performance analysis and scientific mapping, the leading foundational articles on the topic are selected, their theoretical approaches are identified and linked to contemporary management theories. Finally, an overview of post-pandemic changes to the identified contemporary management theories are discussed and conclusions are drawn.

Results

The results of bibliometric analysis (using performance analysis and scientific mapping methods) are presented below. In this section, publication trends in terms of total publications per year and total citations of publications of a given year are observed. Also, the most influential authors of the topic are revealed and most cited, foundational articles regarding customer experience in digital services are analyzed to find out what management theories the authors use.

Performance analysis

One of the applied measures of performance analysis is the total publication count per year, which shows the productivity trend over the years (Figure 1).

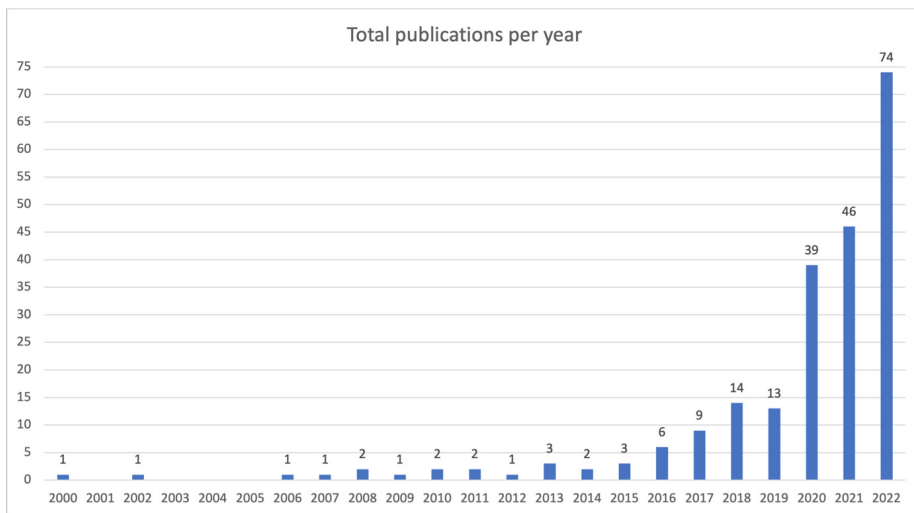


Fig. 1. Total number of articles on customer experience modeling in digital services per year

As seen in Figure 1, the number of published articles remained very low in the first decade from the year 2000, with only a couple of years resulting in more than one article, and a few years with no published articles on the topic. From 2010 to 2015, there were no gap years without articles, but the publication count was still under three articles per year. From 2015, the topic gained more momentum in terms of productivity. Starting with three publications in 2015, an increasing number of articles have been published each year, except for 2019, which had one less published article than the 2018. The most productive year was 2022, having 70 published articles on the topic. Such sudden increase of publications regarding digital services and customer experience was due to an accelerated digital transformation of businesses because of the COVID-19 pandemic (Agostino et al., 2021; Kudyba, 2020; Stalmachova

et al., 2022), since most of the businesses had to relocate their services online.

The second measure of performance analysis applied was the total articles' citations per year. This measure shows how many articles published in a certain year have been cited. It reveals the years in which the articles that had the greatest impact were published (Figure 2).

As observed in Figure 2, the number of citations fluctuates over the years. Out of the nineteen years that had some publications on the topic, ten non-consecutive years had more than a hundred citations of the articles published during the particular year (2007, 2010 and each year from 2015 to 2022). The year that had the most cited publications was 2020. Even though the most articles were written in 2020, 2021 and 2022, the second most cited year was 2018. Two years later, a significant increase in publications was observed (Figure 1). This called for a deeper analysis to find the foundational

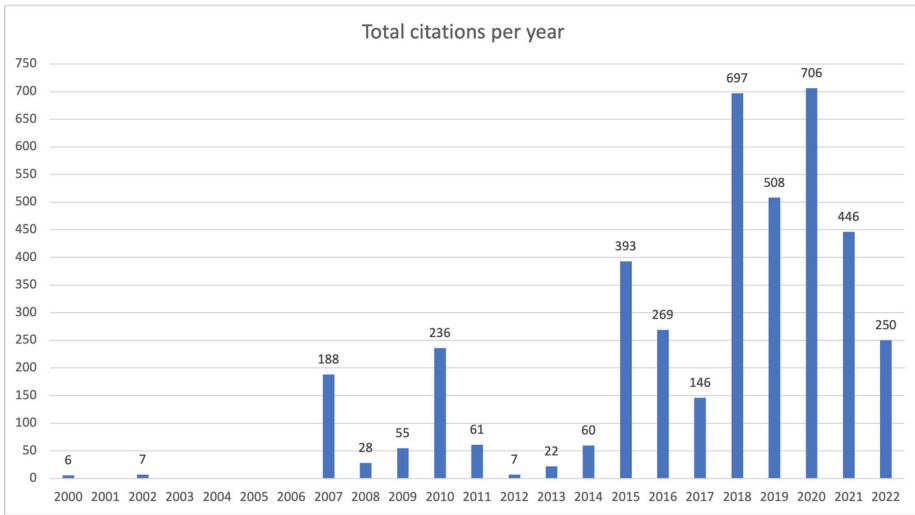


Fig. 2. Total number of citations of each year's articles regarding customer experience modeling in digital services

papers that had such an impact of propelled productivity on the topic in the following years.

Scientific mapping

To extend the insights gained from performance analysis, the second part of the bibliometric analysis includes two scientific mapping methods – co-citation analysis and bibliographic coupling. Co-citation analysis shows the publications that are often cited together in one publication, uncovering the foundational publications. Bibliographic coupling reveals thematic clusters that are formed by publications, by identifying the links between the publications based on the references they share.

Five predominating clusters were identified by defining a threshold of $n = 23$ citations, depicted in Figure 3. The blue color cluster is predominated by C. I. Mbama & P. O. Ezepue (2018),

the purple cluster is predominated by L. Blasco-Arcas et al. (2016), the green cluster is predominated by S.-H. Chang et al. (2016), the yellow cluster is predominated by K. Owusu Kwateng et al. (2018), and the red cluster is predominated by E. Hickman et al. (2020).

The articles were clustered into common themes. The blue cluster covers commerce and technology, including digital platforms, sales strategies, and user experience, which all have direct influence on customer experience in digital services. The purple and yellow clusters cover broader themes, which have some relevance to customer experience in digital services. The purple cluster focuses on the impact and value of digital tools and platforms for customer engagement, brand experience, and behavior. The yellow cluster covers the adoption of digital technologies in various aspects of human life, such as healthcare, finance, retail, tourism, and education. The green cluster focuses more on organizational

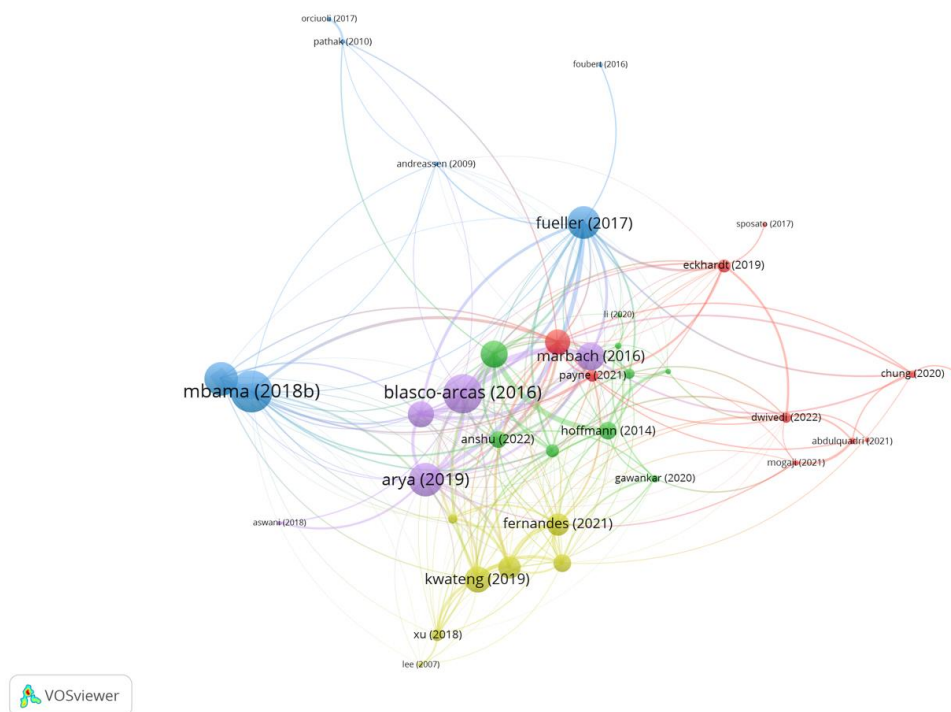


Fig. 3. Bibliographic coupling of customer experience modeling in digital services publications indexed in 2000–2022

themes, such as marketing, supply chain management, and organization performance. The red cluster is specifically focused on customer experience in digital services, examining the leverage of digital technologies and innovation in enhancing the customer experience and creating value for customers.

Overall, the shared theme between the clusters is the influence of digital technologies and platforms on customer experience in digital services, although the level of focus on this theme differs among the clusters.

Co-citation analysis

To find seminal publications on the topic, co-citation analysis was performed

to identify the publications that are often cited together in other papers covering customer experience in digital services. The citation threshold of $n = 4$ citations was set to identify the articles which were cited by at least 4 articles of the analyzed sample of 221 articles. The co-citation analysis in VOSviewer returned 291 cited articles, combined into 8 clusters (Figure 4).

Following the colored clusters depicted in Figure 4, each cluster has two dominant publications except for the brown cluster, which is the smallest cluster and has only one dominant publication. The red cluster is predominated by F.D. Davis (1989) and C. Fornell & D.-F. Larcker (1981), the green cluster is predominated



The dominant publications listed above are those that are commonly cited in many of the articles from the analyzed sample ($n = 221$). Overall, co-citation analysis revealed 15 publications that

The dominant publications listed above are those that are commonly cited in many of the articles from the analyzed sample ($n = 221$). Overall, co-citation analysis revealed 15 publications that form the foundation of the analyzed sample's articles. Further, the discussion covers the connection between the theoretical approaches of the foundational publications and contemporary management theories, as well as the challenges posed to these theories in the post-pandemic context.

Discussion

The COVID-19 pandemic presented a reason for a sudden digital transformation for most of the organizations. The rise in number of publications on customer experience in digital services after 2020, as depicted in Figure 1, supports the assertion made in scientific literature regarding the increasing significance of digital service quality. As discussed earlier in the paper, the unexpected digital transformation introduced new challenges to organization management.

The bibliometric analysis revealed that most of the articles published in 2000–2022, which focused on digital service customer experience, either broadly or in specific areas, have roots in the same 15 publications, spanning 1980–2016. In these publications, links to contemporary management theories are observed. The publications discuss brand differentiation through unique value and customer experience (Lemke et al., 2011; Lemon & Verhoef, 2016; Pine & Gilmore, 1998; Verhoef et al., 2009), brand experience (Brakus et al., 2009), understanding customer behavior (Oliver, 1980), alignment of service quality by customer expectations (Parasuraman et al., 1988), and consideration of factors that influence information technology adoption (Davis, 1989), which all relate to positioning school's perspective of competitive advantage through differentiation (Porter, 1985). Contemporary change management approaches are found in publications discussing service-dominant logic and value co-creation (Vargo et al., 2008; Vargo & Lusch, 2004, 2008). From the perspective of complexity theory, other publications study complex relationships and interactions among

variables using structural equation modeling (Fornell & Larcker, 1981) and multivariate data analysis (Hair, 2009), the complexity of interplay between human behavior and environment (Ajzen, 1991), and causes of systematic measurement errors in behavioral research (Podsakoff et al., 2003).

For organization and business management, the COVID-19 pandemic introduced challenges many of which are still relevant to this day. In terms of differentiation, businesses face shifted customer expectations (Meena & Kumar, 2022; Mehta et al., 2023; Planinc & Kukanja, 2022; Pratap et al., 2023), and the need to adapt to changing customer behavior (Eger et al., 2021; Nariswari et al., 2023; Yeoman, 2022). The increased reliance on digital technology has also altered the market conditions (Antonyuk et al., 2021; Kudyba, 2020; Tiwari, 2022). To overcome these and other new challenges, a successful use of change management methods in the post-pandemic market has become a key measure to remain competitive (Alichleh AL-Ali et al., 2022; Kasana et al., 2023). The complexity theory's presumption that change is constant and dynamic (McMullen & Schultz, 2021) has become highly relevant – as the pandemic challenges have shown, the established linear models of change management may require revision to avoid being obsolete. Based on the results of bibliometric analysis, the management research is addressing the discussed post-pandemic challenges since recent articles root from the publications that are related to business differentiation, change management, and organizational complexity approaches.

As can be seen, management theories such as strategic positioning, contemporary change management, and complexity theory can play a role in overcoming the latest challenges. Strategic positioning is concerned with cost leadership and differentiation for a superior company's position in the market. Literature examples show that strategic positioning theory is elaborated by researchers from various fields who are trying to find solutions to the practical management problems (e.g., Fumasoli et al., 2020; Kim et al., 2021; Visscher et al., 2021).

Contemporary theories of change management seek the most effective and efficient ways of implementing change that are appropriate for today's context. Contemporary change management theories are gaining attention in recent service management and customer service publications. For example, D. Sittrop & C. Crosthwaite (2021) discuss the use of Kotter's change management model in the process of implementing customer relationship management system, R. Harrison et al. (2021) examines Kotter's and Lewin's models' application in healthcare services, S. Bambauer-Sachse & T. Helbling (2021) found that the use of agile methods lead to increased customer satisfaction with IT services, etc.

Finally, complexity theory is based on the notion that organizations are dynamic, adaptive systems with emergent qualities that cannot be completely understood by examining their elements in isolation. It has the potential to address the challenges of improving digital services by revealing insights into their adoption behavior (Zhang et al., 2021), digital service innovation (Chae, 2014),

developing digital business strategy (Park & Mithas, 2020), etc.

In summary, although management theories are not directly employed in the studies of developing customer experience in digital service platforms, an understanding of these theories can help in finding solutions to the problems.

Conclusions

As a result of the pandemic, research on the newly emerging challenges of digital service management, such as increased customer expectations and shifted behavior, has grown rapidly in scientific literature. The number of scientific publications on digital customer experience has more than doubled since 2020, compared to the period of 2000–2019. Academics agree on positive customer experience being the driver of customer satisfaction and loyalty, which drives the business toward its goals. Scholars look for ways to address the newly emerged managerial challenges through various applications of digital technologies, as the influence of digital technologies and platforms on customer experience was identified as a shared theme between the publications. Based on the results of bibliometric analysis, articles published in 2000–2022 regarding customer experience modeling in digital services examine the aspects of digital service challenges from the perspectives of strategic positioning, change management, and complexity theories. Although these theories are not directly applied in research that models customer experience in digital services, an understanding of the theories has a potential to contribute to overcoming the emerging challenges.

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VADYBOS TEORIJŲ GALIMYBĖS GERESNEI SKAITMENINIŲ PASLAUGŲ KLIENTŲ PATIRČIAI UŽTIKRINTI

S a n t r a u k a

COVID-19 pandemija paspartino skaitmeninių platformų augimą ir paskatino paslaugas teikiančių įmonių veiklos persikėlimą į skaitmeninę aplinką. Kartu su įmonių veiklos persikėlimu į skaitmeninę aplinką pakilo klientų lūkesčių skaitmeninių paslaugų atžvilgiu kartelė bei pakito elgsena. Dėl to skaitmeninių paslaugų kokybė tapo dar svarbesnė, o organizacijoms iškilo naujų iššūkių.

Siekiant užpildyti šią spragą, straipsnyje bibliometrinės analizės pagrindu tirama, kaip šiuolaikinės vadybos teorijos gali padėti geriau suprasti naujausius skaitmeninių paslaugų valdymo iššūkius. Daugiausia dėmesio skiriama skaitmeninių paslaugų klientų patirčiai.

Bibliometrinė analizė apima 2000–2022 m. laikotarpiu publikuotus mokslinius straipsnius skaitmeninių paslaugų klientų patirties modeliavimo tema. Tyrimo imtį sudaro 221 mokslinis straipsnis. Į tyrimo imtį įtraukti moksliniai straipsniai, pasiekiami mokslinių publikacijų duomenų bazėje *Clarivate Web of Science Core Collection*. Tyrimas įgyvendintas publikacijų našumo rezultatų analizės ir mokslinio žemėlapių sudarymo metodais ištyrus metinių publikacijų ir jų cituojamumo skaičių, publikacijų bibliografines sąsajas ir bendracitavimo analizę.

Teorinė analizė atskleidė, kad tyrimų apie klientų patirties modeliavimą verslas–verslui transakcijų tipo kontekste, palyginti su verslas–klientui perspektyva, yra nedaug. Taip pat pabrėžiama, kad labai svarbu priimti sprendimus dėl paslaugų teikimo procesų, technologijų ir metodų, kurie lemia aukštesnę paslaugų kokybę ir prisideda prie teigiamos klientų patirties. Nes teigiama klientų patirtis lemia jų pasitenkinimą ir lojalumą, o tai savo ruožtu skatina įmonę siekti savo tikslų. Siekiant padėti

įmonėms atlikti šią užduotį, vadybos teorijos siūlo gaires, kurias įmonės galėtų pritaikyti priimdamos sprendimus dėl paslaugų teikimo tobulinimo.

Tyrimas parodė, kad mokslinių straipsnių skaičius sparčiai išaugo po COVID-19 pandemijos pradžios bei įžvelgiama šio skaičiaus didėjimo tendencija. Bibliografinių sąsajų analizės pagrindu atskleistos pagrindinės skaitmeninių paslaugų klientų patirties publikacijų temos, susijusios su skaitmeninių technologijų poveikiu klientams, klientų įsitraukimu ir patirtimi, inovacijų ir vertės kūrimu, organizacinėmis strategijomis ir skaitmeninių technologijų įsisavinimu tarp klientų. Bendracitavimo analizė parodė, kad imtyje tirti moksliniai straipsniai remiasi mokslinėmis publikacijomis, kurių teorinė prieiga siejama su strateginio pozicionavimo ir vadybos kompleksiskumo teorijomis bei šiuolaikiniais pokyčių valdymo metodais. Šie metodai padeda įmonėms geriau suprasti pakitusią skaitmeninių paslaugų klientų elgseną, pasirinkti efektyvią kaštų ir diferencijavimo strategijas bei įgyvendinti veiksmingesnius pokyčius ir diegti inovacijas.

Atsižvelgiant į tyrimo ribojimus, šių teorijų supratimas gali padėti spręsti skaitmeninių paslaugų srityje kylančius iššūkius, nors skaitmeninių paslaugų klientų patirties modeliavimo aspektus aptariančiuose moksliniuose straipsniuose šiuolaikinės vadybos teorijos nebuvo tiesiogiai taikomos. Todėl tolesni tyrimai, kuriuose šiuolaikinių vadybos teorijų prieigos būtų tiesiogiai taikomos modeliuojant klientų patirtį skaitmeninių paslaugų srityje, galėtų būti vertingi sprendžiant naujai kilusius iššūkius dėl pandemijos paskatinto spartaus paslaugų perėjimo į skaitmeninę erdvę.

