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Doctoral Dissertation

MODELLING CUSTOMER EXPERIENCE IN BUSINESS-TO-BUSINESS DIGITAL SERVICE INDUSTRY

SOCIAL SCIENCES,
MANAGEMENT (S 003)
VILNIUS, 2026

Mykolas Romeris University

MYKOLAS ROMERIS UNIVERSITY

Simonas Juozapas Raišys

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ABBREVIATIONS

AVE	Average Variance Extracted
ADO	Antecedents-decisions-outcomes framework (Paul et al., 2024)
AI	Artificial intelligence
B2B	Business-to-Business
B2C	Business-to-Consumer
CB-SEM	Covariance-Based Structural Equation Modelling
CEM	Customer Experience Management
CI	Confidence Interval
CJMC	Customer Journey Management Capability (Homburg & Tischer, 2023)
CMB	Common Method Bias
CX	Customer Experience
DA	Direct Antecedents
EXQ	Service Experience Quality Measurement Scale (Klaus & Maklan, 2012)
HTMT	Heterotrait-Monotrait Ratio
KPI	Key Performance Index
LM	Linear Regression Model
LVS	Latent Variable Score
MBE	Multidimensional Brand Equity Scale (Yoo & Donthu, 2001)

NCA	Necessary Condition Analysis
OBE	Overall Brand Equity Scale (Yoo & Donthu, 2001)
PLS-SEM	Partial Least Squares Structural Equation Modelling
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta Analyses
RMSE	Root-Mean-Square Error
ROS	Return on Sales
SaaS	Software-as-a-Service
SDL	Service-Dominant Logic
SEM	Structural Equation Modelling
SERVCON	Service Convenience Scale (Seiders et al., 2007)
SERVQUAL	Service Quality Measurement Instrument (Parasuraman et al., 1988)
SLR	Systematic Literature Review
VIF	Variance Inflation Factor
WOM	Word-of-Mouth
WoS	Web of Science
WTR	Willingness to Recommend

GLOSSARY OF KEY TERMS

Affective customer experience	customer's emotional response to interaction with a digital service, reflective positive affective states such as feeling good, optimism, and enthusiasm generated during service use (adapted from Barbu et al., 2021).
Affective loyalty	a customer's emotional attachment to and preference for a service provider, reflected in positive feelings and liking that exceed those toward competing providers.
B2B Digital services	services delivered and obtained electronically between organizations through digital channels, primarily via the internet, where service provision and benefit exchange occur without physical ownership and are characterized by intangibility, technology-mediated interactions, and scalable service delivery.
Behavioral loyalty	a customer's actual repeat purchasing behavior from a service provider, reflected in a higher share of spending, frequency of use, and volume of services purchased compared to alternative providers.
Brand equity	customer's subjective evaluation of a company's offering beyond objectively measured value and either adds or detracts from perceived value (Aaker, 1996; Verhoef & Lemon, 2013).
Cognitive customer experience	customer's cognitive response to interaction with a digital service, reflecting the perceived usefulness of information, facilitated learning, and cognitive engagement through the generation of new ideas or perspectives (adapted from Barbu et al., 2021).
Cognitive loyalty	a customer's belief-based evaluation that a service provider offers superior service quality and benefits compared to alternative providers within the same category.
Conative loyalty	a customer's intentional commitment to maintain and continue the relationship with a service provider, expressed through repurchase intentions, provider preference, and willingness to recommend the provider to others.

Customer experience	customer's subjective interpretation of verbal and non-verbal, direct, and indirect interactions with people, objects, and the environment, within a network of service actors, throughout the entire length of service provision, inducing customer's cognitive, affective, and physical responses (adapted from Homburg et al., 2017; Jain et al., 2017; McColl-Kennedy et al., 2015; Vargo & Lusch, 2016).
Customer journey	the sequence of touchpoints through which a customer moves to access and use a particular service (adapted from Jaakkola & Terho, 2021).
Customer knowledge sharing	customer feedback and suggestions regarding a service to the service provider and other customers (Kumar & Pansari, 2016).
Customer loyalty	customer's cognitive, affective, and conative commitment to the brand, service, or a company, leading to behavioral outcomes such as repeated patronage, positive word of mouth, and resistance to switching service providers regardless of the competitive offerings from other companies (Morgan & Hunt, 1994; Oliver, 1999).
Customer satisfaction	a customer's reflection of how service meets or exceeds their expectations, e.g., in terms of quality, reliability or attitude towards a company and its offerings post receiving a service (Oliver, 1977).
Emotional attachment to a brand	the bond that forms between a customer and a specific brand, including feelings of affection, passion, and a sense of connection (Thomson et al., 2005).
Habits	"learned sequences of acts that have become automatic responses to specific cues, and are functional in obtaining certain goals or end-states" (Verplanken & Aarts, 1999, p. 104).
Interaction experience	customer's subjective experience arising from a single interaction with a service provider, occurring before, during, or after service use, and contributing to both service and customer experience (Voorhees et al., 2017).
Organizational agility	organization's ability to quickly respond and adapt to unexpected market changes (Sambamurthy et al., 2003).

Perceived value	customer's assessment of the sacrifices made and benefits received from using a service (Flint et al., 2002).
Repeat purchase outcomes	an umbrella term for intentional and behavioral manifestations of repeat purchasing, encompassing repurchase intentions (customer's stated likelihood to continue purchasing) and repurchase behavior (actual repeated buying from the same provider).
Service experience	customer's subjective experience emerging from all interactions related to the delivery of one specific service, occurring before, during, and after its use, and contributing to the overall customer's experience (Voorhees et al., 2017).
Switching costs	monetary and nonmonetary expenses such as time and psychological effort, incurred by a customer when changing from one service provider to another (Dick & Basu, 1994; Heide & Weiss, 1995).
Touchpoint	an interaction of any form (verbal, physical, digital, visual) between the customer and the service provider (Homburg et al., 2017).
Trust	customer's willingness to rely on a company's ability, benevolence and integrity to provide services that satisfy customer's important needs, even without the ability to monitor or control the company's actions, while recognizing the associated risks (Mayer et al., 1995).
Value-in-use	customer's cognitive evaluation of the actual benefits derived from a service, across the dimensions of experience, personalization, and relationship (Ranjan & Read, 2016; Sandström et al., 2008; Vargo & Lusch, 2004, 2008).
Word-of-mouth	non-commercial communication between individuals, pertaining to a company, brand or a service, often oriented towards sharing either positive or negative attitudes or referrals (Buttle, 1998).

INTRODUCTION

Relevance of the topic. Since the introduction of the experience economy idea (Pine & Gilmore, 1998), scholars have consistently positioned customer experience as an antecedent of the customer's attitudinal and behavioral outcomes which impacts company's financial performance. Evidence in research and practice shows that customer experience is one of the main components in the pursuit of attracting repeat customers (D. R. Sharma & Singh, 2023), increasing customer loyalty (Wiguna & Wang, 2021), as well as growth of business profits (Sari & Padmantyo, 2023). For example, positive customer experience enhances customer satisfaction (Brakus et al., 2009), which is a driver of customer retention and repurchase intentions (E. W. Anderson & Sullivan, 1993). Customer experience also fosters both attitudinal and behavioral loyalty dimensions (Dick & Basu, 1994; Oliver, 1999). By incorporating service features that support these intermediary mechanisms, companies can use customer experience to strengthen their differentiation, competitive advantage, increase market share and financial performance (Grønholdt et al., 2015; Homburg et al., 2017). The underlying mechanisms of such causal logic, where customer experience acts as a driver that translates through intermediating constructs (such as satisfaction) into loyalty and repeat purchases are what this dissertation aims to model and empirically test. Customer experience is a complex, subjective phenomenon arising from customers' responses to direct and indirect interactions with firms and other market actors (L. Becker & Jaakkola, 2020; Meyer & Schwager, 2007), and researchers continue to highlight the need for greater conceptual clarity, integration, and empirical refinement in customer experience research (L. Becker & Jaakkola, 2020; Waqas et al., 2021; Hoodi & Hasangholi Pouryasouri, 2023; Kuppelwieser & Klaus, 2021a; Purmonen et al., 2023). Therefore, understanding the drivers that generate positive customer experience and the pathways through which it shapes loyalty and repeat purchase is both a theoretical and a managerial priority.

Businesses increasingly shift their offerings from goods to services and toward their digital provision. This is reflected in the rise of servitization and product-service systems (Agostino et al., 2021; Taylor et al., 2020; K. Zhang et al., 2023), as well as the expansion of the digital economy (Limna et al., 2023). Several of the global events also acted as catalysts for such transition. For example, the 2000s saw the rise of cloud computing, which enabled businesses to offer subscription-based digital services (e.g., based on a software-as-a-service model), without depending on locally deployed physical infrastructure for service delivery (B. Li & Kumar, 2022; Weinhardt et al., 2009; Yang et al., 2015). Later, the rapid growth of the internet-of-things in the 2010s allowed physical assets (such as manufacturing machines, medical equipment, and IT infrastructure) to be monitored and diagnosed remotely, reducing the need for physical intervention (Gubbi et al., 2013; Nunes et al., 2023; Zonta et al., 2020). The covid-19 pandemic also acted as one important catalyst of this broad shift from goods to digital services. As physical supply chains were disrupted, businesses actively sought opportunities in offering digital services and accelerated their move toward digital

environments (Amankwah-Amoah et al., 2021; Barbosa et al., 2022; Moosavi et al., 2022; Santos et al., 2023). In addition to the business offerings, the global shift towards conducting many office-based and client-facing business towards online environments revealed opportunities in reducing costs, such as in office space rental (Gupta et al., 2026). More recently, the rapid rise and development of artificial intelligence (AI) services allowed businesses operating in business-to-business (B2B) settings to improve customer experience by improving responsiveness and offering highly personalized, digital service delivery (Chatterjee et al., 2021; Chen & Prentice, 2024; Kushwaha et al., 2021; Moradi & Dass, 2022; Rusthollkarhu et al., 2022; Weidig et al., 2024). Together, these global developments with the trend of moving business towards digital environments have reinforced the relevance of research on customer experience in the digital service domain.

Within this expanding digital service domain, B2B services play a particularly significant role. The European Commission's Digital Decade Policy Programme (Torrecillas Jodar et al., 2023) focuses on Europe's digital transformation, in which by the year 2030, it aims to reach 100% of key public services to be provided digitally, and reach a goal of 75% of companies to use Cloud, AI, or Big Data technologies, all three of which are in the realm of B2B digital services. Considering such anticipated high adoption rates of B2B digital services in businesses, the demand for research that contributes to the improvement of B2B digital service provision is set to grow steadily, since management approaches developed for business-to-consumer (B2C) companies do not always address the challenges faced by B2B companies, where multiple decision-makers, longer-lasting relationships, and a higher degree of resource integration make customer experience more complex to manage (Rusthollkarhu et al., 2020; Witell et al., 2020). While customer experience management is an innovation-intensive area of organizational management and one of the most promising strategies for improving business performance (Heshmati et al., 2019; Klink et al., 2020), it remains under-researched in the context of B2B services (Lecoeuvre et al., 2021; Ulaga, 2018; Wirtz et al., 2025). The modelling of customer experience in particular is repeatedly described as underdeveloped and highly relevant (Homburg et al., 2017; Lecoeuvre et al., 2021; Lemon & Verhoef, 2016), since most research focuses on the B2C environment, while the majority of organizations work within the B2B environment (Kuppelwieser & Klaus, 2021a). Given the importance of customer experience for an organization's sustainability and competitive advantage in the market (Sheth et al., 2023), limited knowledge of how to manage customer experience in B2B digital services creates practical challenges for businesses in designing and differentiating their services, retaining customers, as well as complicating business development and impeding the digital transformation organizations increasingly pursue.

Problem of the research. The form and delivery of services differ considerably. Some are predominantly contact-based and require a substantial amount of attention and customer service, whereas others are delivered through digital channels and prioritize client autonomy and decision-making. Consequently, such diversity highlights the need to model and manage customer experience within particular categories of

services, such as digital services within B2B contexts, where the customer experience may vary significantly from that in B2C or face-to-face settings.

Although customer experience research has evolved significantly since the introduction of the experience economy idea, its conceptual and empirical contribution largely remains within the boundaries of B2C settings (Witell et al., 2020). Early contributions of the field shifted the focus from purely functional value, proposing that the consumption of a product or service forms an experience that involves cognition, emotions, senses, and actions of the consumer (Gentile et al., 2007; Schmitt, 1999). Later, based on these foundational works, Verhoef et al. (2009) and Lemon & Verhoef (2016) contributed to the formation of a multidimensional, journey-based conceptualization of customer experience, emphasizing that experience forms through customers' responses to multiple touchpoints before, during, and after a purchase. Meanwhile, Homburg et al. (2017) made an impactful contribution in describing how organizations can design and manage customer experiences. The research field was further refined through process-based and stimulus-based frameworks (L. Becker & Jaakkola, 2020), operationalized through measurement scales such as EXQ for measuring service experience quality (Klaus & Maklan, 2012; Kuppelwieser & Klaus, 2021b) and the SJQ scale for measuring service customer journey quality (Jaakkola & Terho, 2021). In B2B settings, a smaller but growing body of work began to adapt these ideas to organizational, multi-actor service contexts (Cepeda-Carrión et al., 2023; Gounaris & Almoraish, 2024; Witell et al., 2020; Zolkiewski et al., 2017).

It is less clear how the distinct dimensions of customer experience combine, and through which mechanisms they translate into behavioral outcomes, particularly in the digital B2B context. Therefore, the limitations of the existing models account for this uncertainty. First, customer experience is often modelled as an aggregated construct, which obscures the contribution of each dimension towards customer outcomes. Second, its influence on outcomes is frequently modelled as direct effects, leaving the mediating pathways under-researched. Finally, the consequences of customer experience are addressed in a fragmented manner, often focusing on service-specific outcomes, leaving the possible attitudinal and behavioral consequences underexplored. Since most models were developed in B2C settings, their applicability in B2B digital services remains uncertain. In addition, the dimensions of customer experience, the intermediary mechanisms linking them to outcomes, and both intended and actual repeat purchase have rarely been examined together within a single model.

Closing these gaps is complicated by the nature of customer experience formation itself. While customer experience formation was traditionally viewed as provider-controlled, research increasingly acknowledges the factors that are out of the provider's control (Lipkin, 2016). Customer experience in B2B digital services exhibits heterogeneity, as it is influenced by numerous elements stemming from both the service provider and the customer (Vargo & Lusch, 2016). By taking those elements into consideration, digital service providers might contribute to the transactional process, which ultimately fosters customer loyalty and encourages repeat purchase.

According to Klaus (2022), there is a deficiency in customer experience research

that provides guidance and support for management approaches. This observation is evident within the Lithuanian research context as well, where customer experience has predominantly been investigated indirectly through closely related constructs, including service quality, perceived value, satisfaction, trust, commitment, switching costs, and loyalty (Dikčius et al., 2019; Meidutė-Kavaliauskienė et al., 2020; Skačkauskienė et al., 2015; Zikienė et al., 2024). Customer experience itself has also received some attention (Davidavičienė et al., 2020; Kaunaitė & Liorančaitė-Šukienė, 2023; Zikienė & Gagiškytė, 2021). Nevertheless, studies explicitly addressing customer experience in B2B contexts remain scarce.

Another aspect that distinguishes customer experience between B2B and B2C as a phenomenon is that organizations themselves do not possess an inherent customer experience. It is rather the individuals responsible for accepting and co-creating the service with the service provider, and ultimately, evaluating their experience throughout the whole service encounter (Witell et al., 2020). This further underlines the multi-actor nature of the customer experience in a B2B context. Therefore, the **research problem** addressed in this dissertation is how business customer experience in B2B digital services can be modelled to explain its effects on customer loyalty and repeat purchase outcomes.

The **research subject** of this dissertation is customer experience in B2B digital services and its effects on customer loyalty and repeat purchase outcomes.

The **aim** of the dissertation is to develop and empirically validate a model explaining how customer experience in B2B digital services affects loyalty and repeat purchase outcomes.

To achieve the aim of the dissertation, the research **objectives** were determined as follows:

1. To conceptualize the phenomenon of customer experience in B2B digital service context based on scientific literature analysis.
2. To critically analyze and synthesize the literature on customer experience in B2B services and identify conceptual and empirical research gaps.
3. To identify and theoretically synthesize the antecedents, components, and consequences of customer experience in B2B services.
4. To design an empirical research framework for examining relationships between customer experience, customer loyalty, and repeat purchase behavior and intentions in B2B digital services.
5. To empirically assess the relationships between customer experience dimensions and customer loyalty dimensions, as well as repeat purchase behavior and intentions, through underlying mediating and moderating mechanisms in B2B digital services.
6. To prepare an empirically validated model of customer experience in B2B digital services and present theoretical and managerial insights for modelling and managing customer experience in pursuit of strengthening customer loyalty and fostering repeat purchase outcomes.

Defended statements:

1. In the context of B2B digital services, where customer-provider interactions are predominantly technologically mediated, customer experience is empirically and conceptually distinguishable into cognitive and affective dimensions. These dimensions conceptually encompass the intellectual, emotional, social, and relational aspects through which customer experience is formed, while behavioral responses are empirically positioned as consequences of these experiential dimensions rather than as constituent elements of customer experience itself. It is argued that other experience dimensions frequently discussed in the literature tend to conceptually overlap with these core dimensions and treating them as separate masks the differentiated mechanisms through which customer experience influences customer loyalty and repurchase.
2. In the tested model, the influence of customer experience on customer loyalty and repurchase outcomes operates primarily through value-based, emotional, and relationship-oriented mechanisms. This positions customer experience as an upstream driver rather than an isolated determinant of loyalty and repurchase outcomes and emphasizes the processual nature of the impact of customer experience in a B2B digital service context.
3. The relationships of cognitive customer experience with loyalty and repurchase intentions were not significantly moderated by the examined contextual conditions (switching costs, firm's organizational agility, and customer knowledge sharing).
4. The rapid growth of customer experience research has led to conceptual overlap and fragmented modelling practices. This has generated uncertainty regarding how customer experience should be positioned and modelled, particularly in relation to its mediating mechanisms and outcomes in B2B digital services. By separating customer experience dimensions from mediating mechanisms and outcomes and integrating them into a coherent structure, this dissertation provides a structured modelling logic that supports consistent theorizing and empirical research on customer experience and offers a basis for its integration into future explanatory models.
5. Trust and habit act as necessary conditions for achieving a higher level of repeat purchases. Without at least minimal levels of trust and habit, higher levels of repurchase were not observed, regardless of the strength or existence of the other mechanisms in the model. Thus, a construct may have a relatively small impact on purchasing behavior, as in the case of trust, but at the same time remain a necessary condition for achieving higher levels of repurchase.

Methodological and theoretical contribution of this research lies in the development and empirical validation of an integrative model of customer experience in B2B digital services, as well as its relevance for managerial decision-making. From a theoretical perspective, this dissertation advances the field by mapping the fragmented insights on antecedents, components, and consequences of customer experience.

This research identifies previously underexplored relationships and conceptual overlaps between constructs surrounding customer experience, and provides a coherent, structured foundation for understanding customer experience in complex B2B service environments. In particular, the final model in this dissertation is built using a mechanism-based approach to demonstrate the translation of customer experience into behavioral outcomes through key mediating constructs. This moves beyond dominant approaches focused on customer experience's direct effects and offers a more nuanced explanation of how customer loyalty and repeat purchase behavior are formed in B2B service contexts.

From a methodological perspective, the dissertation applies partial least squares structural equation modelling (PLS-SEM) to test a comprehensive, multi-layered model that integrates multiple constructs and mediation paths within a single conceptual model. Customer experience and related constructs are operationalized using validated measurement scales by adapting them to the B2B digital service context. The empirical testing of mediation mechanisms provides evidence that within the tested model, effects of positive customer experience on behavioral outcomes are primarily indirect and driven by underlying relational and value-based factors. The dissertation contributes to the management research field's empirical data pool from the perspective of the underexplored domain of B2B digital services, demonstrating the applicability of customer experience models in scalable, technology-driven environments.

Importantly, the dissertation offers clear managerial practice implications. The proposed empirical model enables managers to identify and prioritize the key mechanisms through which customer experience influences business outcomes, thus supporting the decision-making, resource allocation, service design activities, and customer relationship management practices. Rather than focusing on isolated service attributes, the model adopts a more holistic perspective. In turn, the model can be used by practitioners as a diagnostic and planning tool within B2B digital service settings. By highlighting which aspects of the customer experience most strongly drive the behavioral outcomes, this research fosters the development of more effective and scalable service strategies, ultimately offering a contribution to the long-term business performance.

Keywords: customer experience, B2B, digital services, loyalty, repeat purchase.

I. THEORETICAL FOUNDATIONS OF CUSTOMER EXPERIENCE IN B2B DIGITAL SERVICE RESEARCH

1.1. Conceptualization of customer experience in B2B service research

Customer experience is a phenomenon that is studied for a few decades now, yet it remains a complex concept (Lipkin, 2016) to definitively identify the factors that influence it in various business areas. The experience phenomenon is studied in various fields, such as retail (Disse & Olsson, 2023), education (Dropulić et al., 2021), e-commerce (Dhaigude & Mohan, 2023), digital services (Kacprzak & Hensel, 2023), healthcare (Kurtuluş & Cengiz, 2022), tourism (Veloso & Gomez-Suarez, 2023), etc. Customer experience is largely studied in B2C context, albeit different definitions emerge depending on the domain in which it is studied (Petermans et al., 2013; Quiñones & Rojas, 2023). The definition of customer experience in scientific literature is often not differentiated between B2C and B2B contexts. However, in B2B domain, the interpretation of customer experience as a phenomena exhibits more heterogeneity, as the influence of numerous factors stemming both from the customer and the provider is more strongly reinforced (Lipkin, 2016). To establish how customer experience in B2B digital services is defined and perceived in this dissertation, in the following subsections: 1) definitions of customer experience found in the academic literature are collected and analyzed, and a concluding definition of B2B digital service customer experience is provided; 2) the academic approaches to customer experience formation are discussed, analyzed, and the scientific approach that is adopted in this dissertation is identified; 3) the characteristics of digital services and how they shape B2B customer experience are examined; and 4) customer experience modelling and empirical testing approaches are reviewed.

Although the empirical part of this dissertation focuses on the context of B2B digital services, the theoretical analysis presented in this chapter deliberately draws on a broader body of research on customer experience in the field of B2B services. This decision reflects the present state of the research field, which is characterized by a lack of studies examining customer experience specifically in digital B2B services. The existing literature indicates that customer experience in digital services is understood in a similar way to that in the context of non-digital services (see Section 1.1.1.). Therefore, limiting the theoretical analysis to digital B2B studies alone would not provide a sufficient conceptual foundation for model development. Similarly, the systematic literature review presented in Section 1.2.2. covers B2B service research more broadly. The concepts, relationships, and mechanisms identified in the broader literature on B2B services are examined first, while the specific characteristics of digital service delivery and their significance in shaping the customer experience are discussed separately in Section 1.1.3. and are subsequently reflected in the operationalization of constructs and the design of the empirical study.

1.1.1. Concept of customer experience

Since most of the customer experience literature focuses on B2C domain, its interpretation in B2B context derives from B2C literature (Cepeda-Carrión et al., 2023). In English language, the term "experience" can both be described as a process (noun) and as an outcome (verb) (Jain et al., 2017). In service research, both forms of the term are used, depending on the context (Palmer, 2010). However, considering the definition of customer experience in service research, often "experience" is defined as a verb (Lipkin, 2016), underlining the intentionality of human mind to the external stimuli.

According to Becker & Jaakkola (2020), there is no common, definitive understanding of customer experience, as some researchers define the scope of customer experience based on the context of their research, such as service encounters or retail settings, and others describe the customer experience in such broad terms that encompass customers' lifeworlds. As seen in Table 1, various researchers of different disciplines defined the customer experience phenomenon, and these definitions are used in various studies to base the understanding of customer experience to this day (e.g., Rageh Ismail et al., 2011; Roy, 2018; Klaus, 2022).

Table 1. Synthesis of common conceptualizations of customer experience in scientific literature.

Experience description	Stimulus origin	Representative articles
Customer experience is a consumption-based emotional phenomena that holds symbolic, hedonic, and esthetic meanings.	Experience stimuli stem from customer's use of products or services in conjunction with interactions with their environment and other people.	(Chen & Prentice, 2024; Holbrook & Hirschman, 1982; Jiang et al., 2023)
The sum of the impressions formed by the customer when they learn about, shop for, use, and sometimes when part ways with the product or service.	Experience stimuli stem from the use of products or services that a company offers.	(Akoijam et al., 2023; Amoroso et al., 2021; Carbone & Haeckel, 1994)
Experience involves activities that have a direct impact on individuals.	Experience stimuli stem from the use of products or services of a company, and act as a distinctive offering to the customer.	(Gu et al., 2023; Guan et al., 2024; Pine & Gilmore, 1998)
Experiences are the result of participation or observation of an object or an event. These encounters stimulate senses, emotions, thoughts, behaviors, and relationships, contributing to person's overall understanding and growth.	Experience stimuli are caused by actions of a company and related to the brand, starting prior to the consumption of company's offerings.	(Lianopoulos et al., 2024; Schmitt, 1999; Weidig et al., 2024)
Customer experience is a personal, intellectual, emotional, sensory, physical, and spiritual response of a customer that derives from their contact with a product or a company.	Experience stimuli stem from the use of company's products or the contact with the company itself.	(Gentile et al., 2007; Izquierdo-Yusta et al., 2021; Weidig et al., 2024)
Customer experience is a complex construct influenced by aspects that are both inside and outside the retailer's influence. It encompasses cognitive, emotional, social, and physical reactions to the retail setting and interactions.	Experience stimuli stem from customer's contact with the company or other customers.	(Ameen et al., 2021; Amoroso et al., 2021; Verhoef et al., 2009)
Experience is a subjective phenomenon, caused by multi-actor co-creation of services.	Experience stimuli are caused by all the actors involved in the service ecosystem.	(J.-S. Lee & Park, 2023; Nguyen et al., 2024; Vargo & Lusch, 2004, 2008, 2016)

Source: based on Becker & Jaakkola (2020); Roy (2018), elaborated by the author.

All descriptions of customer experience phenomenon presented in Table 1 have two things in common. First, the customer experience as a phenomenon is described in all the descriptions as subjective, one person's experience. In the understanding of customer experience, experience is not shared, but each customer forms their own experience. Hence, the smallest unit where customer experience manifests and where research might be conducted, is at the personal level. The second thing in common between the descriptions is that customer experience is a response to the stimuli, initially instigated by the service provider, whether they are intended, unintended, direct, or indirect.

The difference between the descriptions of experience in Table 1 lie in the specifics of what kind of responses customer has to the stimuli and where stimuli stem from. For example, according to Holbrook & Hirschman (1982), customer experience has symbolic, hedonic and esthetic meanings, which suggests that since each customer is different, each one's response to the given meanings of the experience might manifest in different ways. According to Holbrook & Hirschman (1982), experience stimuli stem from the use of products or services, in conjunction with interactions with other people. Further, Pine & Gilmore (1998) do not identify any particular ways a customer is affected by the stimuli, nor specify the properties through which the experience might find meanings in customer's mind. However, they specify that the experience is a distinctive offering that a company provides. On the other hand, Schmitt (1999) distinguishes senses, emotions, thoughts, behaviors and relationships as affected attributes of a customer. In this case, the stimuli for the experience start prior to the consumption of the product or receiving a service. Gentile et al. (2007) also add an intellectual dimension to the description given by Schmitt (1999). According to Gentile et al. (2007), the experience is formed using products or services, or by contact with the providing company. In all the discussed cases up to this point, scholars positioned experience stimuli as stemming from the service or product-providing company towards the customer, either directly or via service or product. However, Verhoef et al. (2009) and Vargo & Lusch (2004, 2008, 2016) suggest that customer experience is not only shaped by the actions of the service provider or the use of products or services, but is also influenced by others involved in the service delivery ecosystem (e.g., by other customers or the provider's employees who do not directly influence the process of service provision). Overall, the descriptions of customer experience share common features, but at the same time differ considerably, either by the ways experience is evidenced by the customer, or the origins of stimuli which form the experience. These differences are reflected in other research when scholars define customer experience. Researchers apply the understanding of experience in a way that is most appropriate for their study.

According to Jain et al. (2017), customer experience is the aggregate of feelings, perceptions and attitudes that are an internal and subjective customer's interpretation to the interaction with components that comprise a service encounter, such as people, objects, processes and environment. McColl-Kennedy et al. (2015) similar understanding of the definition by adding that customer experience is holistic, involving customer's cognitive, affective, emotional, and physical responses to the direct

and indirect contact with service provider, outlining that experience can also be influenced by more than just provider-controlled elements. Homburg et al. (2017) define customer experience as the evolvement of customers' sensorial, affective, cognitive, relational, and behavioral responses via verbal or nonverbal contact throughout the entirety of the transactional process with the service or product provider. In contrast, Kandampully et al. (2018) suggest that customers not only react to the product or service provider, but also to the whole network of actors, such as stakeholders, customers, suppliers, managers, frontline employees and brands.

Definitions of customer experience vary little between B2C and B2B contexts, as they stem from the same foundational literature. The differences of definitions between B2C and B2B are of the same extent as those found across B2C or B2B studies themselves. The key difference between extant B2C and B2B customer experience research is the dimensional focus. Historically, B2C studies focused more on the affective responses and hedonic values, while B2B focused more on cognitive responses and utilitarian values (S. Andersson et al., 2018; Ferguson & Mohan, 2020; Lim, 2014; Rejikumar & Asokan-Ajitha, 2022). However, studies increasingly explore the role of affective responses and hedonic values in B2B customer experience (e.g., T. Andersson et al., 2017; Candi & Kahn, 2016; Pandey & Mookerjee, 2018; Roy et al., 2019). Table 2 contrasts how customer experience is manifested in B2C and B2B settings across the dimensions most frequently emphasized in the literature.

Table 2. Differences and shared foundations of customer experience in B2C and B2B settings.

Dimension	B2C customer experience	B2B customer experience	Sources
Decision-makers	Individual consumer deciding autonomously	Multiple individuals with distinct goals within organization	(Witell et al., 2020; Zolkiewski et al., 2017)
Relationship characteristics	Irregular transactional encounters	Long-term, contractually bound relationships spanning repeated interactions	(Homburg et al., 2017; Zolkiewski et al., 2017)
Experience evaluation focus	Emphasis on affective responses and hedonic value	Emphasis on cognitive responses and utilitarian value, with increasingly acknowledge affective responses	(S. Andersson et al., 2018; Ferguson & Mohan, 2020; Lim, 2014)
Positioning of experience	Individual experience	Distributed across several individuals within the client organization	(McColl-Kennedy et al., 2019; Witell et al., 2020)
Customization and co-creation	Largely standardized offerings with limited co-creation	Highly customized, co-created solutions between provider and customer	(McColl-Kennedy et al., 2019; Zolkiewski et al., 2017)

Dimension	B2C customer experience	B2B customer experience	Sources
Perceived risk and switching costs	Comparatively low risk, easy switching	High risk and switching costs due to contractual lock-in and service embeddedness in client's business processes	(Jang et al., 2022; Zolkiewski et al., 2017)
Customer journey touchpoints	Largely single sided, provider-to-consumer touchpoints	Multi-actor, multi-level ecosystem of touchpoints	(Lemon & Verhoef, 2016; McColl-Kennedy et al., 2019)

Source: compiled by the author.

What sets the B2B digital service context apart is not a different nature of the construct, but the accumulation of the distinctive conditions (i.e., collective decision-making, long-term contractual relationships, emphasis on utilitarian evaluation), which together justify examining customer experience in B2B settings separately rather than directly transferring B2C findings.

The variety of customer experience definitions is caused by the variation of different domains that customer experience is analyzed in. In their research, Becker & Jaakkola (2020) revealed that approaches to customer experience as a phenomenon depend on the literature field, and can vary from narrow to wide scope (see Figure 1).

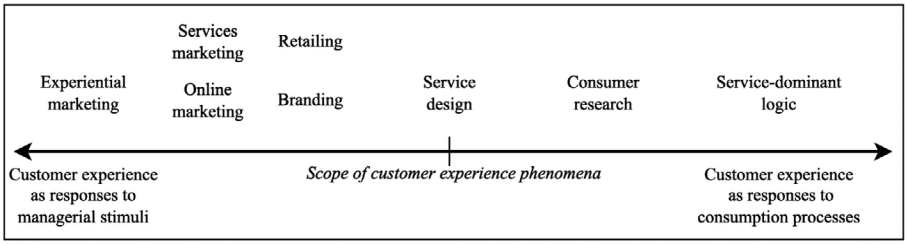


Figure 1. Customer experience phenomenon scope based on the literature field.

Source: L. Becker & Jaakkola (2020), adapted by author.

In experiential marketing, for example, customer experience is positioned as an isolated, company-created economic offering that is presented to the customers in order to reach a further customer involvement with the company or brand (e.g., Carmo et al., 2022; Rather, 2020), i.e., company's efforts to create favorable customer experience triggers customers to act favorably to the company. On the other end of the phenomenon's scope spectrum, service research studies which adopt Service-Dominant Logic highlight similar customer experience management intentions in terms of provoking the customer to act in economic favor to the company in the future. However, literature based on Service-Dominant Logic also outlines that stimuli which fosters customer's experience stem from within the service ecosystem and are not limited to

the company providing a service (e.g., Katsifaraki & Theodosiou, 2023).

In the digital service research literature, customer experience is understood in a very similar way to non-digital service research. Customer experience is generally considered to be shaped through the customer's interaction with the service provider and through the use of a service. Customers make personal interpretations of the information they receive through this interaction with the provider and use of service, which results in a positive or negative experience. For example, Méndez-Aparicio et al. (2020) in their study of digital services in private insurance, combine the different authors' descriptions of customer experience to define it as meeting the needs of a customer in a way that is memorable, i.e., creating a unique experience for the customer through interaction with the company. In the case of insurance services, since the service manifests through an interaction with the service provider, this interaction can be considered as the use of the service. Thus, this interpretation tends towards the approach of viewing experience as a customer's response to the service consumption process. Similar approach is observed in a study by Susanto et al. (2023) on digital banking services, where customer experience is interpreted as customers' cognitive and emotional responses to interactions with service provider and to the use of the service (e.g., use of digital banking applications). It is observed that customer experience is interpreted in a similar way in studies of other digital services, such as chatbots (Trivedi, 2019), online universities (Izquierdo-Yusta et al., 2021), music streaming (Tronvoll, 2019), online retailing (Jaiswal & Singh, 2020), artificial intelligence services (Gao et al., 2022), etc. Since digital services are delivered electronically and just as with standard services, are for the most part intangible (Williams et al., 2008), objects and environment are not interpreted in digital services research the same way as in standard services.

In general, researchers base their understanding of customer experience on different literature, which results in slightly different descriptions of what customer experience entails (L. Becker & Jaakkola, 2020). For example, some researchers distinguish between dimensions of experience in a particularly granular, potentially overlapping manner, e.g., the specifics of intellectual dimension might fall within the cognitive dimension, while the specifics of social and relational dimensions might fall within the affective dimension. Therefore, to operationalize customer experience without diluting the concept through excessive dimensional fragmentation, customer experience can be captured through two main dimensions: cognitive and affective (e.g., Gounaris & Almoraish, 2024; Reinares-Lara et al., 2019). These dimensions reflect how customers process information and experience emotions, while the actions customers engage in are treated as behavioral manifestations arising from these dimensions rather than as a dimension of experience itself.

Based on the definitions given in the literature, and considering the B2B-specific conditions summarized above, the following definition of B2B digital service customer experience is adopted:

Customer experience in B2B digital services is the customer's subjective interpretation of verbal and nonverbal, direct, and indirect interactions with people, objects, and the

environment, within a network of service actors, throughout the entire length of service provision, inducing customer's cognitive, affective, and physical responses.

This definition is adopted throughout this dissertation. The following subsections shift the focus from the conceptualization of customer experience to the mechanisms through which it is formed.

1.1.2. Customer experience formation and the role of the service provider

Delving deeper into the understanding of how customer experience forms, examples of different perspectives on the phenomenon emerge. Lipkin (2016) outlines three main perspectives of customer experience formation found in the literature: a) stimulus-based perspective; b) interaction-based perspective; and c) sense-making-based perspective.

Through the lens of the stimulus-based perspective, the customer is portrayed as a passive participant in the service interaction, who only reacts to the stimuli that are created by the service provider (Mahr et al., 2019). This viewpoint originates from the Stimulus-Organism-Response paradigm (Mehrabian & Russell, 1974), which suggests that stimuli have an influence on the perceptions of customers, which in turn results in specific customer behaviors. According to this point of view, the service provider is in charge of the creation and application managerial stimuli to provoke the desired affective, cognitive, or physical responses from the consumer (L. Becker & Jaakkola, 2020). In customer experience research, stimulus-based perspective is actively used by many researchers (e.g., Hsu et al., 2024; Bonfanti et al., 2023; Chakraborty et al., 2023; Guo & Tocquer, 2023; Lien & Tang, 2023).

Meanwhile, the interaction-based perspective extends the stimulus-based perspective (Lipkin, 2016), by placing a greater emphasis on social interactions and individual processes. In contrast to stimulus-based research, interaction-based customer experience studies view customers as active participants in service transaction, who contribute to their experience by proactively engaging with the organization (K. Li et al., 2023). Interaction-based perspective resonates with dyadic business relationship view, suggesting that the effectiveness in exchange (product or service) relationships depend both on the customer and the provider (Wren & Simpson, 1996). Based on dyadic view, researchers treat customer-supplier interaction as an individual unit of analysis rather than examining the actions of the supplier and the customer in isolation (Sahhar et al., 2021). However, researchers increasingly adopt Service-Dominant Logic (Vargo & Lusch, 2004, 2008, 2016) over the dyadic business relationship position. Based on Service-Dominant Logic, networked actors are connected through service transactions, forming service ecosystems. These ecosystems serve as an environment for customers and providers to work together to co-create value that benefits both (Karahasanović & Culén, 2022). Partially similar to dyadic business relationship position, Service-Dominant Logic fosters the idea that service-for-service exchange is central to any transaction (Vargo & Lusch, 2008). Based on Service-Dominant Logic, customer experience is influenced not only by the relationship between the primary

service provider and the customer, but by overlapping service ecosystems that form constellation of actors related to the co-creation of a particular service.

Finally, sense-making-based perspective, approaches the formation of customer experience more holistically and dynamically. In contrast to both stimulus-based and interaction-based approaches, this approach views customer experience as a phenomenon that is embedded in customer's worldview (McColl-Kennedy et al., 2015). According to this point of view, the customer is engaged and in charge of making sense of their experience with a service by actively, subjectively, and dynamically interpreting service-related events that occur during the whole service transaction with the service provider (Dube & Helkkula, 2015). The sense-making-based perspective is linked with customer ecosystem lens (Lipkin, 2016), which are based on Customer-Dominant Logic. Table 3 summarizes perspectives of customer experience formation.

Table 3. Summarization of perspectives of customer experience formation.

Perspective	Framework	Experience formation origins	Root publications
Stimulus-based	Stimulus-Organism-Response	*Dyadic:* experience forms by reaction to managerial stimuli introduced by service provider	Mehrabian & Russell (1974)
Interaction-based	Service-Dominant Logic	*Systemic:* experience forms through interactions with service provider and other networked service-ecosystem actors	Vargo & Lusch (2004, 2008, 2016)
Sense-making-based	Customer-Dominant Logic	*Systemic:* experience is formed and influenced by customers' active, subjective, and dynamic interpretation of service-related events, context, and past experiences	Heinonen et al. (2010)

Source: based on Lipkin, (2016), elaborated by the author.

The comparison between Service-Dominant Logic and Customer-Dominant Logic reveals both shared and contrasting characteristics of the mindsets. According to Heinonen et al. (2010, p. 534), Customer-Dominant Logic differs from other mindsets on provider-service-customer connections by shifting the emphasis from company efforts to provide services that align with customer preferences, to a focus on understanding how customers use services and help them accomplish their objectives. Based on this mindset, customer experience is driven by customers, influenced by not only direct or indirect involvement with the service or its provider, but also by customers' previous experiences and their reactions to the environment (Heinonen & Strandvik, 2018).

Both theories see value co-creation as an integrative part of a service. According to Hansen (2019, p. 77), based on Customer-Dominant Logic, value co-creation is interpreted as an ongoing process of value formation (i.e., not only created by the provider, but also dynamically formed from the customers' perspective) that is embedded in time, context, and is influenced both collectively and intersubjectively. Similarly, according to Service-Dominant Logic, value is determined by the end user of services and interprets the output of co-creation as value-in-use and value-in-context (Hansen, 2019, p. 77).

While Lipkin (2016, p. 20) suggested that sense-making based perspective might be most suitable approach to study customer experience formation due to complexity of the phenomenon, Li et al. (2023, p. 491) found that most of customer experience research is based on stimulus-based and interaction-based perspectives. Since Customer-Dominant Logic is linked to sense-making-based perspective, and Service-Dominant Logic is linked to stimulus-based and interaction-based perspectives, it therefore can be reasoned that in isolated comparison between the two Logics, or mindsets, Service-Dominant Logic is adopted more widely in customer experience research than Customer-Dominant Logic.

Initially, Dominant Logic was introduced as a collection of insights and schemas, intended to guide decision-making in organizations (Prahalad & Bettis, 1986, p. 491). According to Prahalad (2004), when a company makes certain successful decisions, a particular way of thinking about how the business environment works eventually settles down, forming the Dominant Logic in the business. For more than two decades, the Dominant Logic has been actively used both in the scientific literature and in practice (Franke & zu Knyphausen-Aufsess, 2014). However, Vargo & Lusch (2004, p. 1) noted in their seminal work that the academic community studying provider-customer exchanges has increasingly emphasized "intangible resources, the co-creation of value, and relationships". Upon this and other related observations, they proposed a novel Service-Dominant Logic.

Service-Dominant Logic is a mindset (Vargo, 2007, p. 105) for determining and analyzing the constituents of value exchange between the provider and the customer. The original article on the mindset emphasized and analyzed the shift from goods-dominant to service-dominant view in marketing, elaborating that (Vargo & Lusch, 2004, p. 15) "the focus is shifting away from tangibles and toward intangibles, such as skills, information, and knowledge, and toward interactivity and connectivity and ongoing relationships". The pioneering authors of Service-Dominant Logic Stephen L. Vargo and Robert F. Lusch have explicitly outlined that they do not claim sole ownership of the mindset and invite scientists on its further elaboration, stating that (Vargo & Lusch, 2008, p. 1) it evolved as an "open-source evolution that we tried to identify, punctuate, and advance in our initial article and then elaborate and refine through subsequent work, while encouraging other scholars to do the same". Therefore, while Service-Dominant Logic originated in the field of marketing, it was later applied and elaborated by other researchers in a variety of other scientific fields and areas.

Originally, there were eight foundational premises of Service-Dominant Logic

(Vargo & Lusch, 2004). Based on the latest update from its pioneering authors (Vargo & Lusch, 2016), those eight foundational premises were expanded, resulting in eleven foundational premises that form the mindset that the Service-Dominant Logic currently is. The foundational premises are listed in Table 4.

Table 4. Foundational premises of Service-Dominant Logic.

No.	Foundational premise	Ontological status
FP1	"Service is the fundamental basis of exchange"	Axiom
FP2	"Indirect exchange masks the fundamental basis of exchange"	Proposition
FP3	"Goods are distribution mechanisms for service provision"	Proposition
FP4	"Operant resources are the fundamental source of strategic benefit"	Proposition
FP5	"All economies are service economies"	Proposition
FP6	"Value is cocreated by multiple actors, always including the beneficiary"	Axiom
FP7	"Actors cannot deliver value but can participate in the creation and offering of value propositions"	Proposition
FP8	"A service-centered view is inherently beneficiary oriented and relational"	Proposition
FP9	"All social and economic actors are resource integrators"	Axiom
FP10	"Value is always uniquely and phenomenologically determined by the beneficiary"	Axiom
FP11	"Value co-creation is coordinated through actor-generated institutions and institutional arrangements"	Axiom

Source: Vargo & Lusch (2016, p. 8).

As shown in Table 4, some foundational premises ontologically are axiomatic or propositional. According to Williams (2012), premises being axiomatic mean that these statements act as starting points of the mindset, on which the provider-customer transaction is further analyzed. Propositions, on the other hand, are opinions, or directions of thought which expand the understanding of the mindset and derive from axiomatic premises.

For an explanation of Service-Dominant Logic, various scholars' interpretations of foundational premises are further be analyzed. The interpretations of foundational premises proposed by Vargo and Lusch do not significantly differ in the scientific literature.

FP1 is an axiom which suggests that both the customer and the supplier expect a certain intangible value from each other, i.e., exchange is done in service-for-service fashion. Customers approach providers because they have a need that providers can fulfil, and providers present their offerings to be serviced by (benefit from) the customer in return. Vargo & Lusch (2008, p. 6) define service (noun) as "the "application of skills and knowledge" (operant resources) for the benefit of another party". This

axiomatic premise is elaborated by subsequent foundational premises FP2-FP5 (Hunt, 2020; Williams, 2012).

FP2 is a proposition derived from FP1, which suggests that if many stakeholders who are not in direct contact with the customer are involved in the process of developing the final value proposition for the customer, then the exchanges that take place between these stakeholders do not necessarily reflect (in turn, they mask) the service for an end user (Vespestad & Clancy, 2018). In other words, the exchange of money and goods between the company and the customer masks the true basis of exchange – service-for-service (Silva-Lacerda et al., 2018).

FP3 derives from FP1, highlighting that tangible objects do not have intrinsic value, but rather they are a means for the end user to obtain value when the objects are used, also known as value-in-use (Skålén et al., 2018; Uzoka, 2020). In this way, the provider delivers a intangible value through a tangible object for the customer and vice versa (Manurung et al., 2023).

To understand the meaning of FP4, it is first helpful to refer to the article by Vargo and Lusch, in which they distinguish between operant and operand resources. According to Vargo & Lusch (2004), operant resources refer to invisible and intangible resources such as knowledge, skills, and other tools that can be applied to operand resources. In contrast, operand resources can be tangible, such as products through which a service is provided to a customer. Thus, the product through which the service is provided to the customer requires the application of intangible resources such as knowledge and skills to create it. Therefore, FP4 derives from FP1 and suggests that operant resources (knowledge and skills) are the drivers of strategic benefit creation (Vespestad & Clancy, 2018), since both the customer and the provider receive services in the exchange (Vargo & Lusch, 2016, p. 7).

FP5 builds on FP1 with the idea that all economic exchanges are based on the application of competences in a variety of domains, so that even in the development of products, people are essentially exchanging services that embody their skills and knowledge (Vargo & Lusch, 2004).

FP6 suggests that all networked actors in the ecosystem of a service work together to create value that the service brings to the customer (Kohtamäki & Rajala, 2016). It highlights an essential participation of the final beneficiary in the value co-creation, which means that value is manifested through the customer's active use of the operands or services. This axiomatic premise is further elaborated through premises FP7 and FP8 (Hunt, 2020).

FP7 elaborates on the FP6. It is interpreted that the end-value for the customer is not created by actors in the service ecosystem, but rather they develop the value proposition (or an offering) of what might be valuable for the customer (e.g., Dziewanowska, 2017; Liu et al., 2020). Axiomatic premise FP10 takes this idea further by explicitly stating that it is up to the customer to determine whether a service is valuable.

FP8 is a proposition derived from FP6, interpreted by academics as the need for a service provider to approach value creation by always analyzing, reflecting and relating to the interests of the customer (e.g., Festa et al., 2019; Ng & Wood, 2018). It should be

noted that in the latest update of the Service-Dominant Logic by Vargo & Lusch (2016, p. 10), FP8 formulation was changed by replacing the word "customer" with "beneficiary" to better outline that the companies themselves are also recipients of benefits.

FP9 is an axiomatic premise, which specifies that all actors (individuals, institutions, households, etc.) in a service ecosystem integrate their resources (operand and operant) into the co-creation process to be able to create and benefit from each other's value offerings (Festa et al., 2019; Singaraju et al., 2016).

FP11 is the latest addition to the list of foundational premises (Vargo & Lusch, 2016), which is an axiom that focuses on the role of institutions and institutional arrangements in service ecosystems (Sudbury-Riley & Hunter-Jones, 2021; Tregua et al., 2022). According to Vargo & Lusch (2016, p. 11), institutions in the context of a service ecosystem are not organizations, but are a set of "rules, norms and beliefs", for example, informal relationships between people, communities of certain schools of thought, etc. Institutional arrangements, in this case, are how value is co-created, such as through the same informal relationships' determined agreements or through the rules that the community of schools of thought uses in the co-creation of value.

Based on the foundational premises, the applicability of Service-Dominant Logic mindset in a B2B context emerges. Although mindset's applicability in the B2B context is supported by the publication of Vargo & Lusch (2016), the applicability evidently unfolds through the axioms: businesses, which are institutions made up of actors connected by established arrangements (FP11), co-create services with other businesses (FP6) for the mutual purpose of benefiting from (getting serviced by) each other (FP1), by applying tangible and intangible resources (FP9) to achieve a result that they each consider valuable (FP10). The application of Service-Dominant Logic in B2B context is further evidenced by articles applying this mindset in B2B: marketing (Kovalchuk et al., 2023), logistics (Lindsey Hall et al., 2022), information technology (Sun & Gregor, 2023), agriculture (Utami & Alamanda, 2021), etc. Furthermore, it is also observed that Service-Dominant Logic is used in digital service research (e.g., Blaschke et al., 2019; Stoll et al., 2020; C.-Y. Li et al., 2023; Mijač et al., 2023) and customer experience research (e.g., Alimamy & Al-Imamy, 2022; Dieck & Han, 2022; Helkkula et al., 2023; Rather et al., 2022; Wani et al., 2021).

In conclusion, building on the definitions and approaches to customer experience discussed in this chapter, this dissertation adopts an interaction-based approach to customer experience formation. Moreover, the interaction-based approach is aligned with the Service-Dominant Logic mindset, which has its roots in service research and is observed to be effective in B2B context. Thus, this dissertation adopts Service-Dominant Logic mindset for understanding of B2B service exchange.

The role of the service provider. Customer experience management (CEM) highlights the importance for businesses to design and measure their customers' experience with services. It encompasses the management of a wide range of customer experience aspects, in relation to various concepts such as service quality, customer loyalty, customer engagement, customer satisfaction (Jaakkola & Terho, 2021; Waqas et al., 2021), etc. A variety of methods (e. g. omnichannel management, personalization

and customization), metrics (e. g., net promoter score, customer satisfaction score) and tools (e. g., customer relationship management systems) are used by businesses to capture and design the overall experience of their customers. The B2B conditions summarized in Table 2 make this task more demanding than in B2C settings, since experience management has to accommodate multiple decision-makers and longer lasting business relationships between the parties (Witell et al., 2020), as well as a higher degree of resource integration and value co-creation from each of the parties involved (Rustholllkarhu et al., 2020).

Up until recently, customer experience management (CEM) research was in its infancy phase and scholars' understanding of the construct itself was strongly fragmented (Homburg et al., 2017; Hoodi & Hasangholi Pouryasouri, 2023; Köninger & Gouthier, 2024). Schmitt (2003, p. 17) defines CEM as a "process of strategically managing a customer's entire experience with a product or company". Verhoef et al. (2009) explain CEM as a strategy to design such customer experience that would benefit both customer and the provider. Homburg et al. (2017) argue that CEM is a higher order resource which involves organization's cultural perspectives, strategic planning and organizational capabilities aimed at building customer loyalty over time. Based on interaction-based approach to B2B customer experience formation and Service-Dominant Logic, the question arises as to what the role and capabilities of the service provider are in influencing the customer experience, according to CEM research.

As observed earlier, customers' experiences are formed not only through interactions with service providers (both through social interactions and the use of services), but through interactions with other networked actors, and based on customers' past experiences as well. Therefore, CEM research turned from provider-centric view towards a perspective of interactions among networked actors. As a result, CEM scholars highlight co-creation of value, and in turn, experience (Chathoth et al., 2016; H.-Y. Lee et al., 2023). Nevertheless, service provider's role in CEM remains significant, as their actions continue to contribute to the formation of a positive customer experience. Researchers identify opportunities for service providers to manage the customer experience through, e. g., building long-term relationships (Homburg et al., 2017), consistent and reliable service provisioning (Voorhees et al., 2017), mapping the customer journey (Lemon & Verhoef, 2016), etc. However, in practice, managing customer experience remains challenging due to holistic, multifaceted nature of customer experience (Wetzels et al., 2023) and service-provider centricity of experience management approaches (Jaakkola et al., 2015), seldom utilizing management methods along the perspective of networked actors' co-creation of experience.

Although theory and practice sometimes exhibit a "dichotomy", examples of customer experience co-creation do appear in empirical research. Often, such studies are not dealing with business in general, but with a narrow, specialized part of business such as tourist check-in, chatbots, grocery stores' self-service, etc. Therefore, generalizing and applying the findings from one part of business to another becomes complicated or does not even fit at all. This limits the transferability of findings across service settings and points to the need to examine customer experience at the level of services

in general rather than focusing on an individual service encounter. The extent to which such broader evidence exists in B2B service research is examined in Section 1.2.

1.1.3. Digital service context of B2B customer experience

In B2B digital services, the channel through which the interactions between the actors involved in the service ecosystem occur redefines how the experience is formed. Physical services rely largely on interpersonal encounters between service provider and customer representatives, but in digital services, the interactions are mediated through technological interfaces, platforms, and self-service functionalities (Schumann et al., 2012). Since this dissertation focuses specifically on the B2B digital services sector, this section examines how the characteristics of digital service delivery shape the customer experience, thereby establishing a conceptual basis for further analysis.

The conditions of the B2B context presented in Table 2 influence how experience is formed when interactions among the involved actors are mediated by technology. It can be observed that in a B2B environment, the client is an organization rather than a single specific individual. Therefore, one could argue that within an organization, experience is distributed among many individuals who initiate, approve, use, and evaluate the service (Witell et al., 2020). However, despite this decentralized approach, the client company's purchasing decisions are often communicated to the service provider by a single representative of the organization, such as a project or product owner, the purchasing center manager, or another decision-maker. Since this individual is exposed to other colleagues' assessments of the service and advice regarding decisions, evaluating this person's experience may reflect the broader organizational perspective rather than just the individual's personal experience. Therefore, when gathering feedback and measuring the customer experience based on a specific decision-maker, it can be assumed that this person is informed about the experiences of a broader circle of the organization's employees with a specific service or provider, and this influences their own experience.

It is also worth noting that customer experience in a B2B context is traditionally associated more strongly with cognitive and utilitarian service evaluation, reflecting the purposeful, results-based nature of organizational service use (S. Andersson et al., 2018; Ferguson & Mohan, 2020; Lim, 2014). The common view in the literature is that business customers evaluate services based on functional outcomes, such as reliability, efficiency, and the tangible benefits derived from using the service, while hedonic satisfaction remains secondary. However, research is beginning to show that affective reactions also play an important role in the B2B environment (Candi & Kahn, 2016; Pandey & Mookerjee, 2018; Roy et al., 2019). The utilitarian evaluation of the service is more often observed because of the higher level of resource integration and co-creation of value between the provider and the client than in B2C transactions, as business clients often actively participate in configuring, integrating, and incorporating the service's outcomes or features into their business processes (Rustholllkarhu et al., 2020).

Several specific characteristics distinguish the context of digital services from physical B2B services and B2C digital services. Since B2B digital services are provided and received electronically between organizations via digital channels, they are characterized by intangibility, technology-mediated interactions, and scalability. Of these characteristics, intangibility is the feature that often applies to services, regardless of the medium, whether physical or digital, through which it is delivered. However, technology, specifically software interfaces, serves as the means through which organizations exchange value. This way, the use of such interfaces becomes an integrated part of the experience. For example, video conferencing technology designed for business meetings acts as an intermediary in organizational interaction. If the software works unreliably, the customer's experience can accordingly worsen. Furthermore, digital services can be scalable and standardized, allowing providers to serve many organizational clients simultaneously with limited human involvement, which reduces the number of interpersonal touchpoints during the customer journey. On the other hand, due to the aforementioned intensive integration of resources on both sides of the transaction, the service outcomes can also be unique. In the latter case, unlike B2C digital services, the frequency of provider-customer interactions can be significantly higher. Finally, many B2B digital services offer long-term benefits. This is particularly noticeable in the "software as a service" (SaaS) model, where the software, as a service output, is implemented and maintained over time. In such case, the interactions between the provider and the customer are ongoing for at least as long as the software is being used, rather than being based on isolated service encounters (Xiao et al., 2020). These aspects of digital B2B services highlight the continuous, potentially even routine, technology-mediated use, in contrast to irregular interactions in B2C and human-mediated, physical B2B service settings.

The characteristics of B2B digital services influence how the customer experience is shaped and which aspects of that experience become particularly important. When the environmental and physical aspects of the experience are limited, the cognitive and affective reactions that occur during service provision and use become particularly important for understanding the customer experience, while physical component remains secondary in explaining the formation of the experience in digitally mediated service encounters (Godovykh & Tasci, 2020). The cognitive dimension relates to how customers interpret and evaluate the service value and their interactions with the service provider from a utilitarian perspective, while the affective dimension is associated with emotional reactions experienced in relation to these interactions, as well as service use. Accordingly, this dissertation adopts the theoretical position that the customer experience in the context of B2B digital services is primarily interpreted through customers' cognitive and affective responses.

Digital nature of service delivery also influences the role of service characteristics such as convenience, speed, security, and accessibility. In a digital environment, these attributes are often integrated into the service's technological interface and infrastructure, corresponding to established aspects of digital service quality, such as efficiency, system availability, order fulfillment, and privacy (Parasuraman et al., 2005). From

a service design perspective, these characteristics form part of the conditions upon which the service delivery process is organized and experienced (Voss et al., 2008). These attributes can also be considered as "must-be" attributes, since their absence leads to dissatisfaction, but their presence, when taken for granted, does not necessarily create a clearly positive experience (Kano et al., 1984). From a theoretical perspective, this distinction separates the technological conditions that enable a satisfactory digital service provision from the true cognitive and affective responses to the provided service itself.

The digital environment also influences how switching costs work. In digital B2B services, particularly in SaaS models, switching costs are less tied to tangible assets than in physical B2B services. Instead, they accumulate over time due to investments in system customization, integration with existing tools, employee training, and aligning internal processes with the service. This is consistent with research on SaaS-based applications, which emphasizes that customer retention and the replacement of deployed SaaS applications are key issues in this context (Xiao et al., 2020). Such costs can become a barrier to switching service providers even in the absence of dependence on the supplier for tangible assets, due to established processes, employee habits, or existing integrations with other systems. Switching costs can also strengthen the positive relationship between customer journey management capabilities and customer loyalty (Homburg & Tischer, 2023). Therefore, in the context of digital services, switching costs have a clear theoretical link to the formation of loyalty. When competing digital service providers offer essentially similar functionalities, the impact of competition on customer decisions may be more limited.

Overall, the characteristics of B2B digital services indicate that the customer experience is shaped primarily through the continuous, technology-mediated use of services. Digital interfaces, continuity of use, and the limited role of physical and interpersonal touchpoints determine how customers interpret, evaluate, and emotionally respond to the service and its provision. These characteristics reveal the conditions under which the experience is shaped in a digital organizational environment.

1.1.4. Modelling approaches in customer experience research

Previous sections established what customer experience is and how it is formed. This section further examines how the customer experience construct is modelled, how its constituent elements are organized within broader conceptual frameworks, and which methods are used to test these models empirically. Building on the academic literature, in order to discover effective ways to manage (or co-create) the customer experience, researchers start by refining the customer experience construct and examining its constituent parts. For example, Hwang & Seo (2016) in their study reviewed CEM research literature in both hospitality-tourism context and business in general, and constructed a framework of antecedents and consequences of customer experience. Their framework distinguishes between internal antecedents (such as customer engagement and familiarity) and external antecedents (such as economic

factors and service quality). In turn, customer experience leads to subsequent events and outcomes (consequences), such as loyalty or repeat purchases. The antecedent-component-consequence composition, following the modelling logic of antecedents-decisions-outcomes (ADO) framework (Paul et al., 2024), is a leading approach of customer experience modelling found in academic literature (see, e.g. Jang et al., 2022; Lecoeuvre et al., 2021; Lemke et al., 2011; Zolkiewski et al., 2017). Notably, customer experience modelling studies usually incorporate statistical methods such as exploratory/confirmatory factor analyses (e.g. Kuppelwieser & Klaus, 2021b; Pecorari & Lima, 2021; Rejikumar & Asokan-Ajitha, 2022), structural equation modelling (e.g. García-Pascual et al., 2023; Mansoor et al., 2020; Park et al., 2024) or Anova (e.g. Gomez-Suarez & Veloso, 2024; Mou et al., 2023; Wenli Zou et al., 2022) to build, analyze, and validate the interaction between customer experience constituents and their responses to management approaches.

The identification of antecedents and components of customer experience tends to depend on the domain under study. Studies in tourism (Godovykh & Tasci, 2020), fintech (Barbu et al., 2021), and omnichannel retail (X. Zhang et al., 2024) identify different antecedents and experience dimensions that reflect the specific settings they examine. Thus, depending on the domain under investigation, the antecedents and components of the customer experience might be different. On the other hand, even though the studies in given examples have different compositions of customer experience's construct, the resulting consequences of positive customer experience stay highly similar, including customer loyalty, service use, and repeat purchases (Barbu et al., 2021; Godovykh & Tasci, 2020; X. Zhang et al., 2024). This is likely because, regardless of the business area, context or focus, the objectives of for-profit organizations are usually to expand and make a profit. Consequently, the findings established in B2C settings cannot be assumed to be directly applicable in B2B settings.

The same distinction between modelling architecture and its content is also reflected in Lithuanian research, where multiple studies examine the antecedents, components, and consequences that can be attributed to the construct of customer experience, albeit mostly in different contexts, such as B2C, business-to-government, consumer-to-consumer, or non-digital contexts. For example, Gaulė & Jovarauskienė (2022) analyzed the relationships between customer experience, customer value co-creation, co-design, and co-production in public services. In B2B context, Dikčius et al. (2019) examined perceived quality, satisfaction, trust, commitment, and switching costs as determinants of loyalty, while Raišienė & Raišys (2022) investigated service quality criteria for business customer satisfaction with B2B consulting services. Customer experience in digital services was addressed more directly in Raišys & Raišienė (2023), who examined the theoretical foundations and development of digital service customer experience modelling.

Lithuanian researchers also investigated the antecedents and outcomes often represented in customer experience models. For example, Kyguolienė & Aliukonis (2021) proposed a conceptual framework linking brand communication, customer expectations, emotional states during consumption, service or product performance,

customers' emotional states, satisfaction, and customer experience. Dikčius et al. (2024) investigated cognitive, affective, conative, and behavioral loyalty in online retailing, while Zikienė et al. (2024) assessed how loyalty programs influenced different dimensions of customer loyalty, based on engagement, personalization, gamification, and experience. In customer-to-customer digital commerce context, Ūsas et al. (2025) modelled the relationships between website quality, customer satisfaction, and loyalty. The most direct study identified investigating antecedents, components, and consequences of customer experience in B2B services is a systematic review by Raišys (2026).

Overall, Lithuanian scholars investigated customer experience both directly and indirectly through CEM, customer journeys, customer value, service quality, satisfaction, trust, switching costs, digital interactions, and different dimensions of loyalty. However, similar to the international context, these related elements have often been investigated separately from customer experience or within narrowly defined, service-specific contexts. Apart from the integrative theoretical map provided by Raišys (2026), no comparable Lithuanian study was identified that treats customer experience as a multidimensional B2B construct and examines its cognitive and affective dimensions, mediating and moderating mechanisms, loyalty dimensions, and repeat purchase outcomes in digital services. Thus, the Lithuanian research context contains many related constructs and relationships, but they remain dispersed across different contexts and models. This dissertation addresses this gap by developing and empirically testing an integrated model that differentiates cognitive and affective customer experience and evaluates their direct and indirect relationships with loyalty and repurchase outcomes in B2B digital services.

1.2. Literature landscape of customer experience research in services

Given the evidence on what customer experience is, how it is formed, and how it is modelled, this section turns to the research field itself and synthesizes what has been empirically established about customer experience in B2B services. Two complementary approaches of literature analysis are further employed, each serving a distinct function and presented according to their analytical scope. The bibliometric analysis is presented first as a general field-level overview of customer experience in services. This allows for a broad, quantitative mapping of the customer experience research field, describing its scale, thematic structure, and intellectual foundations. Meanwhile, the further presented systematic literature review offers a focused, qualitative synthesis that establishes the conceptual foundation for the model which is tested in empirical investigation. For transparency, the final search and dataset updates are reported separately for each analysis, which are March 2026 for the bibliometric analysis and November 2025 for the systematic literature review. These dates indicate when the respective datasets were finalized. The bibliometric analysis was initiated first, with its earlier stage published in Raišys & Raišienė (2023), and the database search was subsequently updated in March 2026.

1.2.1. Bibliometric analysis of service customer experience research

As previously discussed, scientific literature contains multiple definitions of customer experience, as well as various approaches to its formation, management, and measurement. To gain insights into the state of the literature on customer experience, bibliometric analysis is further employed. The analysis requires a large number of studies to depict a detailed overview of the scientific field (Donthu et al., 2021; van Nunen et al., 2018).

The bibliometric analysis adopted a four stage procedure, following Donthu et al. (2021) and Zupic & Čater (2015): 1) defining the aim and scope of the analysis and selecting the appropriate techniques; 2) systematically collecting bibliographic data from the selected databases; 3) merging and deduplicating the retrieved records; and 4) analyzing and visualizing the data, followed by the interpretation of the results. In line with this procedure, two types of techniques are applied, performance analysis and science mapping. Performance analysis describes the productivity and development of the field through the temporal distribution of publications, while science mapping reveals its conceptual and intellectual structure. Within science mapping, keyword co-occurrence analysis is employed to identify the field's conceptual structure, the temporal keyword overlay is used to reveal a thematic evolution of the field, and author co-citation analysis is applied to uncover its intellectual base (Small, 1973). Clarivate Web of Science (WoS) and Elsevier Scopus (Scopus) were selected as source databases because together they provide broad and complementary coverage of peer-reviewed journals, enabling comprehensive insights of the selected field. All mapping and clustering procedures were performed in VOSviewer software using the full counting method (van Eck & Waltman, 2010).

Minimum thresholds were applied in the science mapping analyses to keep the maps interpretable and to focus on items that were sufficiently represented in the dataset. Since bibliometric data usually includes many low-occurrence items, thresholds are used to reduce visual noise and support the interpretation of the main conceptual and intellectual structures of the field (Donthu et al., 2021; van Eck & Waltman, 2010). The thresholds were selected based on the specific dataset of this bibliometric analysis, with attention to the size of the study pool, the number of items retained, and the readability of the maps (Zupic & Čater, 2015). Threshold selection was also guided by the general logic of uneven frequency distributions in bibliometric data, including Zipf's patterns in term occurrences and Lotka's concentration in author-related indicators (Lotka, 1926; Zipf, 1949). These principles were used as methodological guidance rather than full statistical tests. The specific thresholds applied and the number of items retained are reported in the corresponding keyword co-occurrence and author co-citation analyses presented further.

This bibliometric analysis captures the overall breadth of research on customer experience in service domain, explores main subtopics studied in B2B and B2C contexts, and presents quantitative bibliometric indicators that allow the analysis to be conducted objectively. The inclusion of both B2B and B2C contexts is justified by the

limited number of studies identified when focusing exclusively on B2B customer experience in digital service settings. Initial database search within WoS and Scopus was conducted using narrowly defined criteria, limiting studies to those focused on customer experience in digital B2B services. This yielded a small number of records (14 in Scopus and 27 in WoS, with possible duplicates between databases). The scarcity of research in this narrow scope was also documented earlier by the author – a WoS search combining customer experience modelling, digital services and B2B returned only 15 articles (Raišys & Raišienė, 2023), which motivated broadening the dataset already at that stage. Broader search, only including studies on customer experience in B2B services resulted in somewhat increased, albeit still small study pool (111 in Scopus and 80 in WoS, with possible duplicates between databases). Datasets of this size provide a weak basis for bibliometric mapping. Rogers et al. (2020) suggest approximately 200 publications as a possible analytical minimum for bibliometric indicators, while noting that smaller sets may still be suitable for qualitative review. The identified record counts remain below this indicative level, and the dataset size considered appropriate also depends on the specific mapping technique applied. Therefore, a broader dataset covering customer experience in both B2B and B2C service settings was employed to capture the overall structure of the field, while a more detailed examination of B2B-specific studies is conducted in the subsequent section of this dissertation using a systematic literature review. The final update of database search was performed on 14th March 2026. The search strings employed in both databases are presented in Table 5.

Table 5. Database search strings used in Scopus and WoS for bibliometric analysis.

Web of Science (WoS)	Scopus
TS=("**customer experience" OR "CX**") AND TS=(**service***) AND LA=(**English**) AND DT=(**Article**)	TITLE-ABS-KEY (**"customer experience" OR "CX"**) AND TITLE-ABS-KEY (**service***) AND LANGUAGE (**english**) AND DOCTYPE (**ar**)

Source: created by author.

The search was based on keywords "customer experience" and "CX", with inclusion of "service*" where an asterisk marks a wildcard, meaning the search included all ending variations of the word "service" (i.e., services, service-oriented, etc.). Query was also refined to return scientific articles written in English.

Records retrieved from the two databases were merged and deduplicated using BiblioMerge software tool, used by the scientific community for merging and deduplicating Scopus and WoS database files (Diez-Junguitu & Peña-Cerezo, 2026). Between WoS and Scopus, 5090 records were initially retrieved. After removing 1408 duplicates, 3682 unique records remained in the final sample.

First, the performance of the research field is analyzed by examining publication growth over time, as well as co-authoring countries, which show the distribution of research across the world. Second, the conceptual structure is discussed based on

keyword co-occurrence analysis. Further, the temporal evolution of customer experience research themes is examined using overlay visualization. Then, the intellectual structure is explored using author co-citation analysis. The visualizations and clustering calculations were performed using VOSviewer software (van Eck & Waltman, 2010).

The performance of the research field was assessed by analyzing the distribution of publication count over the span of years 1990-2026, as earlier publications were sparse and did not represent continuous development of the research domain. As observed in Figure 2, three stages of research performance can be delineated. The number of publications remain low during the 1990's and early 2000's, with steady growth from 2005 to 2016, and an accelerated growth is evidenced from 2017 onwards. Additionally, even though the analysis was performed at the beginning of 2026, 193 publications have already been published. With a total of 645 publications observed in 2025, the 193 publications at the start of the year 2026 signifies the continuation of scholars' interest in the topic.

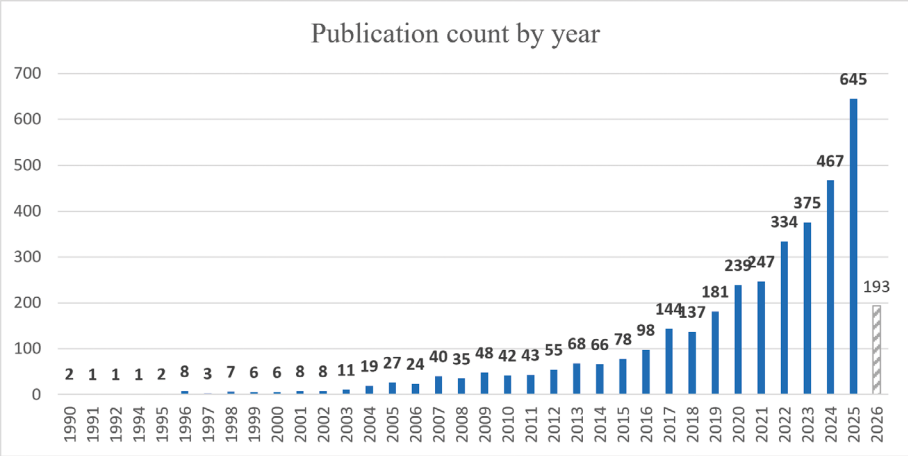


Figure 2. Annual publication trends in customer experience research.

Source: created by the author.

The three stages of customer experience publication growth depicted in Figure 2 can be explained by observing how customer experience emerged as a distinct research field. During the 1990's and early 2000's, customer experience was not a clearly defined research domain, but rather a part of related concepts, such as service quality, customer satisfaction, and relationship marketing. The publications during this time span (e.g., Oliver et al., 1997; Parasuraman et al., 1991) set the foundations for later research which conceptualized customer experience as a more holistic and multidimensional phenomenon.

The second stage, from around 2005 to 2016, shows a growing number of studies

recognizing customer experience as a distinct phenomenon, forming a separate field of study. While there already were publications that highlighted experiential aspects of consumption (e.g., Schmitt, 1999), the research shifted towards an understanding of customer experience through multidimensional lens, encompassing cognitive, emotional, and relational dimensions (e.g., Lemon & Verhoef, 2016; Verhoef et al., 2009). At the same time, the development of Service-Dominant Logic emphasized interaction-based value-co-creation between customers and firms strengthening the role of experience in service research (Vargo & Lusch, 2004, 2008, 2016).

Finally, the third stage that begun in 2017 has seen a rapid acceleration of publication output. This growth is particularly pronounced after 2020, indicating increasing importance of digital technologies in shaping customer experience. Recent studies increasingly focus on artificial intelligence, big data, intelligent chatbots (e.g., Ameen et al., 2021; Chen & Prentice, 2024; Gao et al., 2022; Kushwaha et al., 2021). These developments significantly broadened the scope of customer experience research, integrating marketing, information systems, and service innovation perspectives. Overall, the sharp increase in publications observed since 2017 reflects accelerating digital transformation of services and highlights the importance of managing digitally enabled customer experiences.

The structure of the research field is thoroughly described through keyword co-occurrence and keyword overlay analyses. The co-occurrence analysis reveals keywords that appear together in the same articles, analyzes the cited publications' keywords, and groups them into thematic clusters, revealing related concepts that are often studied together. Meanwhile, keyword overlay shows temporal trends in themes across the research field, showing the evolvement of thematic focus points of the field.

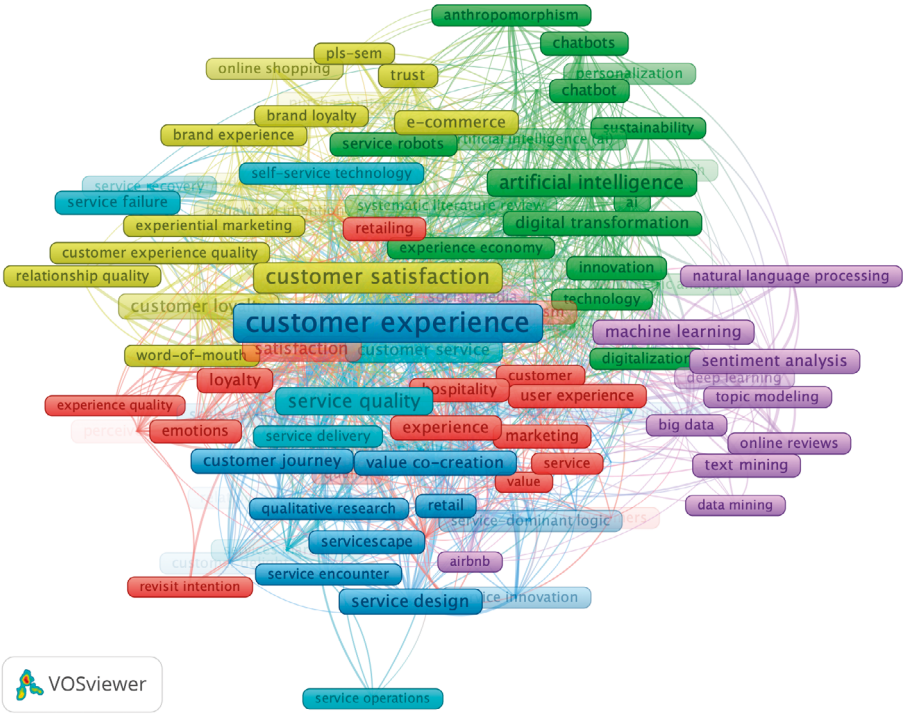


Figure 3. Keyword co-occurrence in service customer experience publications.

Source: created by the author using VOSviewer software.

Figure 3 shows the keyword co-occurrence network within the study pool. The settings in VOSviewer were selected to perform full counting of occurrences (without assigning weights according to the relative number of keywords within the same articles). As suggested by van Eck & Waltman (2010), a minimum occurrence threshold needed to be set for the analysis to include only the top keywords. Therefore, a threshold of minimum 15 occurrences within the study pool was selected. This resulted in 113 keywords, which included one non-conceptual keyword, "covid-19" (36 occurrences across the pool of 3682 documents), which was removed from the Figure 3 to provide a clearer representation of the conceptual structure of the research field. This decision was made as in this analysis, the keyword "covid-19" reflects a temporary, contextual disruption rather than a stable conceptual development of the field.

As observed in Figure 3, several thematic clusters are distinguished. The central cluster in blue represents the core customer experience research and is closely related to value co-creation, customer journey, and service-dominant logic. It illustrates the shift of transactional relationships towards relational and process-oriented views of

customer experience, reflecting the principles of service-dominant logic.

The yellow cluster is centered around customer satisfaction, with keywords such as trust, brand experience, and customer loyalty. The strong interconnections of these constructs and the customer experience research indicates that the field continues to build on established constructs, where customer experience is conceptualized as an antecedent to behavioral outcomes such as loyalty and behavioral intentions. Also in this cluster, the keyword PLS-SEM indicates the dominance of this structural equation modelling method as a dominant method for examining complex relationships between customer experience constructs.

The green cluster with keywords such as artificial intelligence, anthropomorphism, chatbot, digital transformation, and innovation reflects the aforementioned growing importance of information technologies in understanding and predicting customer behavior, as well as catering the needs of customers by successfully aligning with their expectations. The closely related purple cluster represents data-driven and analytics-oriented research, with keywords such as machine learning, sentiment analysis, big data, text mining, and natural language processing. This stream reflects the methodological and analytical advancement of the research field, where insights on customer experience are drawn from large-scale data sets for deeper analytical insights.

The cyan cluster captures service process and operational research, including keywords such as service recovery, service delivery, service operations, and service failure. This cluster reflects the operational perspective of customer experience, focusing on how service performance, failures, and recovery mechanisms shape customer perceptions. It emphasizes not only the role of service design or technology, but also the practical aspects of service provisioning in shaping customer outcomes.

Finally, the red cluster contains a broad perspective of customer experience research, encompassing keywords such as value, loyalty, emotions, experience quality, and revisit intention. This cluster highlights the central role of customer experience in shaping customers' cognitive and affective evaluations, as well as subsequent outcomes. The contextual keywords, such as tourism and hospitality further indicates that customer experience research is not only conceptual but also grounded in empirical contexts where value creation plays a critical role in service transactions, particularly in experience-intensive industries.

Overall, the keyword co-occurrence analysis shows that customer experience research in services has evolved into a multifaceted and multidisciplinary research field, with a growing focus on managing the outcomes of customer experience in digitally enabled environments. The findings indicate an integrated perspective where relational and value-based outcomes are examined in the light of technological advancements. However, the core constructs such as customer satisfaction, loyalty, and value remain central in the research, indicating their continued importance in explaining customer behavior.

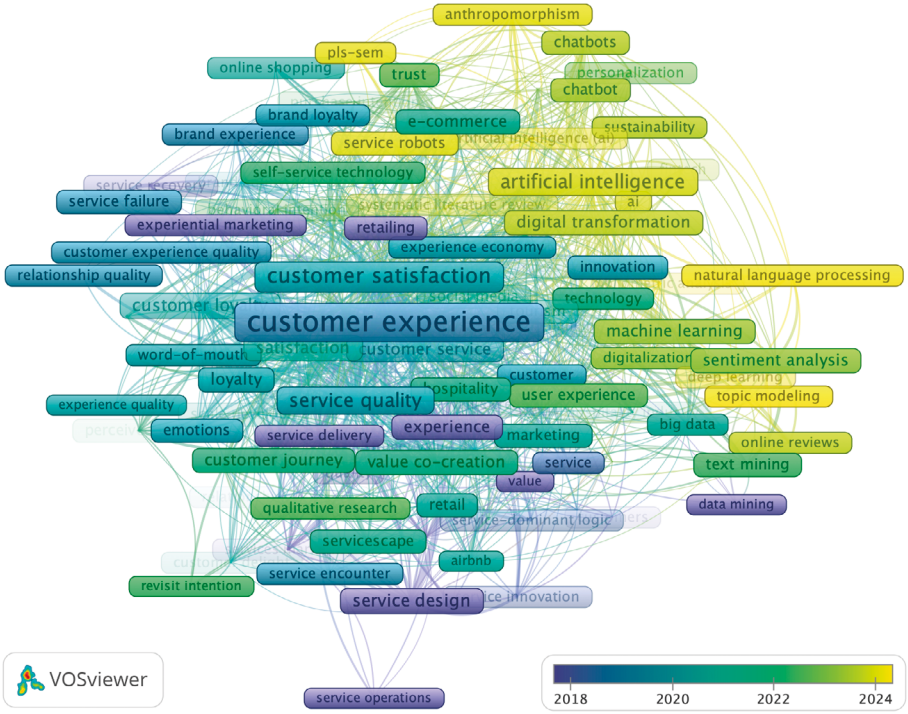


Figure 4. Temporal distribution of keywords within service customer experience research.

Source: created by the author using VOSviewer software.

The keyword overlay analysis shows the temporal distribution of keywords across the publications. As shown in Figure 4, constructs such as service design, consumer behavior, and Service-Dominant Logic represent an already established theoretical foundation of the field. The connection between these constructs and more recent themes, such as artificial intelligence and text mining suggest that researchers increasingly leverage technological capability advancements to better understand and manage customer experience. More recent keywords, such as PLS-SEM, natural language processing, chatbots, machine learning, and sentiment analysis further reinforce this trend, indicating reliance on advanced analytical approaches in empirical research. In addition, digital service-related themes (e.g., digital transformation, digitalization, user experience) act as a bridging link between traditional customer experience and the emerging technological solutions.

At the same time, the traditional experience outcome constructs (e.g., customer satisfaction, loyalty, service quality) remain central to the research field. Characterized by strong connections to the most recent technological keywords, these central constructs are increasingly analyzed within the digital context. Overall, the temporal

keyword analysis shows that customer experience research in service settings is evolving though integration of established theoretical foundations (e.g., Service-Dominant Logic and experiential marketing), use of capabilities provided by advancing technologies (e.g., PLS-SEM, sentiment analysis, artificial intelligence), and a growing focus on digital and digitally-enabled services (e.g., self-service, omnichannel, personalization, chatbots).

To further examine the structural organization of the research field, author co-citation analysis was conducted, allowing the identification of the field's influential researchers based on reference lists of the study pool (see Figure 5).

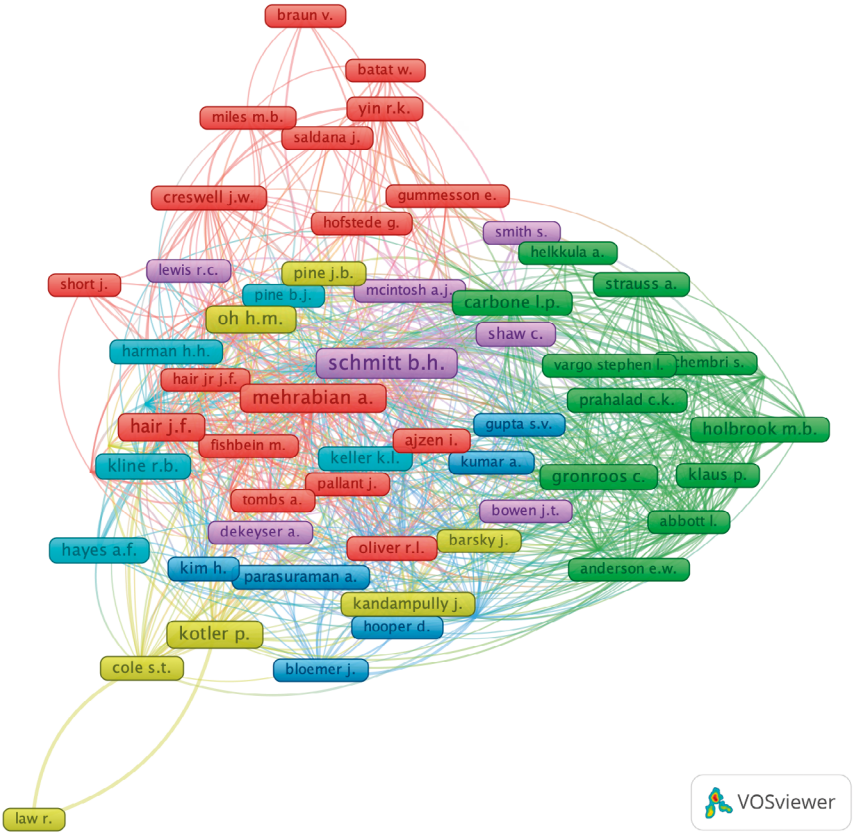


Figure 5. Author co-citation map within service customer experience research.

Source: created by the author using VOSviewer software.

The author co-citation analysis is performed by analyzing the reference lists of the studies in the study pool and determining the authors that are often cited together,

revealing the intellectual base of the field. The analysis was performed using full counting (regardless of number of co-authors for the same publication). A minimum number of citations of an author set at 7. Out of all 5603 authors in the study pool, 92 met the threshold and were clustered according to thematic relationships between the authors.

The red cluster depicted in Figure 5 features authors such as Hair, Hofstede, Mehrabian, and Oliver. Thus, the cluster represents a broad interdisciplinary foundation of the field, including behavioral, methodological, and experiential perspectives. Specifically, the inclusion of Ajzen and Fishbein highlights the role of behavioral intention theories, while Mehrabian emphasizes the importance of emotions and affective reactions in forming experience. Also, central to customer experience research, Oliver's work emphasizes customer satisfaction-loyalty sequence as core outcomes of customer experience. The methodological contributors, such as Hair, Pallant, and Bryman suggest the research field's strong reliance on advanced statistical and research design approaches in studying complex relationships between constructs. In addition to this complexity, Hofstede's cultural dimensions further suggest the influence of broader cultural contexts. Overall, the red cluster reflects the backbone of the field, integrating insights from psychology, marketing, and research methodology.

The green cluster includes the perspectives of Service-Dominant Logic and value co-creation. The role of interactions, value-in-use, and co-creation is represented by authors such as Vargo, Prahalad, Holbrook, Grönroos, and Abbott. This cluster illustrates the shift in perspective from company-controlled stimuli shaping customers' experiences to co-created experiences among actors in the service ecosystem. Moreover, this cluster reflects the systematic view of services, where multiple stakeholders, touchpoints, and interactions collectively shape the experience. This view is further extended by authors such as Carbone, Helkkula, and Klaus, who focus more explicitly on the design, management, and phenomenological understanding of customer experience.

The blue cluster, with authors such as Parasuraman, Kumar, Gupta, and Berry, is focused on service quality and relationship marketing stream of the field. The cluster reflects foundational efforts to conceptualize and measure service performance, for example through instruments such as SERVQUAL. In addition, the presence of relationship marketing scholars highlights the importance of long-term relationships, trust, and commitment between customers and firms.

Together, the yellow, purple, and cyan clusters encompass experiential, psychological, and managerial aspects of customer experience research. The yellow cluster, including Oh, Pine, Kotler, and Kandampully, highlights the service-dominant experiential marketing stream, where customer experience is examined in broader contexts, such as service value creation, hospitality services, and service design. The purple cluster, which includes De Keyser, Schmitt, Gilmore, and Bowen, represents the conceptualization and measurement of customer experience as a distinct construct. This cluster illustrates the efforts to define, operationalize, and validate customer experience in a systematic way. In turn, the cyan cluster provides methodological support for the

research field, including authors such as Cohen, Kline, Hayes, and Keller, whose works emphasize the importance of scale validation and statistical modelling. These clusters show that customer experience research has developed not only as a conceptual, but also as a methodologically mature field, supported by validated empirical approaches.

To sum up, the author co-citation analysis shows that customer experience research is grounded in an established, multidisciplinary literature, with perspectives from psychology, service quality, relationship marketing, Service-Dominant Logic, and experiential marketing. Methodologically, the analysis suggests that the field features prominent use of rigorous measurement and empirical validation approaches. Therefore, customer experience is a complex, subjective, value-driven phenomenon, which is operationalized into a measurable construct and examined using statistical empirical methods. Drawing on observations from both the keyword co-occurrence and author co-citation analysis, it is noticed that there is a tension between phenomenological roots of the customer experience and the applied positivist testing approaches. This raises empirical challenges for researchers, such as not over-simplifying the customer experience through standardized measurement scales, but at the same time addressing discrepancies between subjective perceptions and their quantitative measurements, while maintaining conceptual consistency across different industry contexts.

1.2.2. Systematic literature review of customer experience in B2B service research

While research indicates that a positive customer experience provides a competitive advantage for companies (e.g., Böttcher et al., 2023; Srivastava & Kaul, 2016), there is a sparseness of research on the nature and composition of customer experience in the B2B context, as well as the mechanisms through which it contributes to business success. Theory development in this field frequently focuses on specific, narrow aspects of customer experience within the service context (see, e.g., Barbu et al., 2021). Furthermore, there is a notable absence of extant systematic literature reviews on B2B customer experience that actively develop the construct. Instead, the focus is often on a limited overview of the research field (see, e.g., Gerea et al., 2021; Waqas et al., 2021). As Ojansivu (2023) have previously observed, research in the field of B2B marketing is characterized by fragmentation and an absence of a field-level lens. A systematic literature review (SLR) is employed in this section to address this gap by systematically synthesizing prior research and organizing existing insights into an integrative map of customer experience, capturing the current state of knowledge on the B2B customer experience construct, outlining its structural relationships with directly related constructs, and providing a basis for subsequent empirical model development.

The results of this SLR have been published by the author (Raišys, 2026). The search strategy, the selection procedure based on PRISMA, the resulting study pool of 21 articles, and the integrative map presented in this section correspond to those reported in that publication. In this dissertation, the SLR is presented in extended form and serves as the conceptual basis for the model developed in Section 1.3.

This systematic literature review applies the four phases of literature selection for review based on the PRISMA (Page et al., 2021) guidelines: identification, screening, eligibility, and included.

Identification. For the identification of articles, two most reputable databases were selected, WoS and Scopus. These databases together cover a major part of high-quality journals, which allows for sound observations to be made about the object under review. The search strings for both databases are presented in Table 6.

The queries were set to identify articles published in journals, written in English. Also, publication year ranges of 1990-2025 in WoS and 2000-2026 in Scopus were selected to ensure coverage of the most recent literature available as of November 19, 2025. The queries included "customer experience", "CX", and variations of "business to business" in the title, abstract, and keywords sections, and variations of "service" in all available search fields.

As a result, 431 articles were identified among WoS and Scopus. The records retrieved were deduplicated. Overall, 102 articles were removed due to duplication, leaving 329 articles for the further phase of screening.

Table 6. Database search strings used to identify publications in WoS and Scopus.

Web of Science (WoS)	Scopus
(((((TS=(**customer AND experience OR CX**)) AND TS=(**B2B OR business-to-business OR "business to business"**)) AND ALL=(**servic***)) AND PY=(**1990-2025**)) AND LA=(**English**)) AND DT=(**Article**)	(TITLE-ABS-KEY (**customer AND experience OR CX**) AND TITLE-ABS-KEY (**b2b OR "business-to-business" OR "business to business"**) AND ALL (**servic***) AND LANGUAGE (**english**)) AND PUBYEAR > **1999** AND PUBYEAR < **2026** AND (LIMIT-TO (SRCTYPE , "**j**")) AND (LIMIT-TO (DOCTYPE , "**ar**"))

Source: created by author.

Screening. In the second phase, the abstracts and keywords of the articles were screened, checking the context of the studies. Articles were included in the subsequent phase if they were concerned with the B2B context and investigated customer experience in services. Articles where the abstract or keywords did not unambiguously show that they met these criteria were still included in a further phase where the full text was checked to avoid screening errors. In the screening phase, 267 articles were excluded due to being off-topic for this systematic literature review – either investigating in other than B2B context or not investigating customer experience or services. Therefore, 62 articles were advanced to the eligibility checking phase.

Eligibility. In the third phase, full texts of the 62 articles were screened to assess their eligibility for this systematic review. Since in the previous phase articles with ambiguous link to customer experience were included for further screening, after careful inspection 41 articles were removed from further review. Particularly, 31 were excluded due to not

investigating customer experience factors, 3 because the link between the research object and customer experience is only implied, and another 3 articles were excluded because the term "experience" refers to the work experience of employees. Also, 3 articles were excluded due to investigating goods rather than services, and 1 because it was not concerned with B2B context. After identification, screening, and eligibility checking phases, a total of 21 articles were advanced to the final phase of included articles' analysis (see Figure 6).

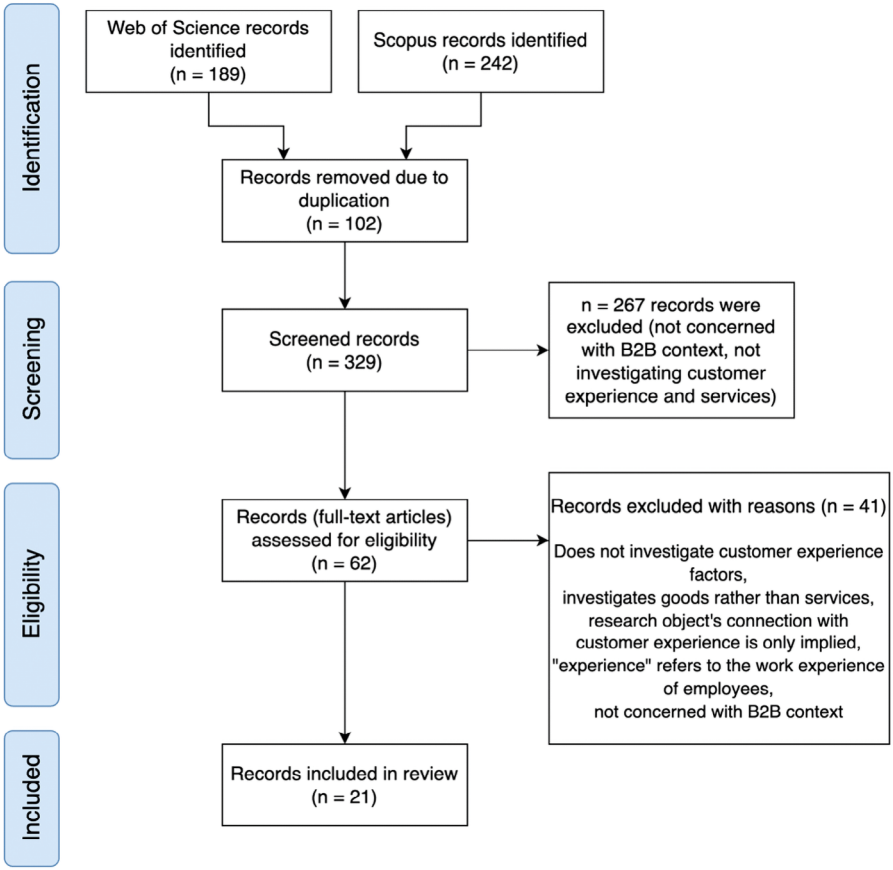


Figure 6. PRISMA flow diagram of building study pool.

Source: created by the author; published in Raišys (2026).

The analysis of publication years shows that only recently a trend of increasing research activity on the topic of customer experience factors in B2B services became noticeable (see Figure 7). Compared to the number of studies in B2C (one of the reasons

for exclusion in the screening phase), the number of B2B studies is very limited, resulting in a small study pool. Also, although the analyzed years reach as far back as 1990, articles on the topic are only found from 2007 onwards. The yearly publication of the articles is observed from 2016 to 2024 with no relevant articles identified from 2025, which indicates a cyclical pattern of scholarly attention to the factors of customer experience in B2B services.

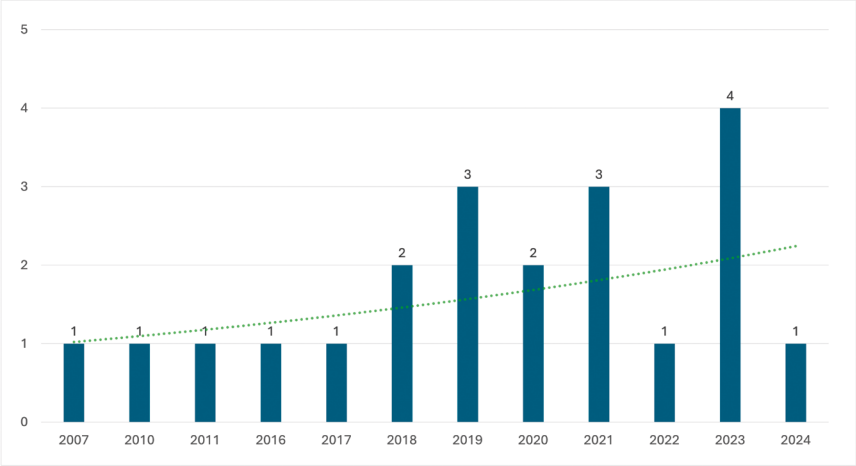


Figure 7. Number of publications per year with an exponential trendline.

Source: created by the author; published in Raišys (2026).

Out of the 21 articles included in the analysis, there are 2 conceptual studies, 4 qualitative studies, 11 quantitative studies, and 4 studies that incorporated both qualitative and quantitative research methods. Table 7 describes focus, context, and output of the analyzed studies.

Table 7. Characteristics of the studies in the study pool.

Study type	Publication	Study focus	Context	Output
Quantitative	Madaleno et al., 2007	Impact of customer experience on customer satisfaction	Cross-industry	Determinants of B2B customer satisfaction
	Biedenbach & Marell, 2010	Impact of customer experience on brand equity	Services	Conceptual model of customer experience impact on brand equity dimensions
	Zhang et al., 2016	Relationship between brand orientation and brand equity	Services	Conceptual model of brand orientation impact on overall brand equity
	McLean, 2017	Website quality influence on customer experience	Services	Website characteristics influencing customer experience
	Woo et al., 2019	Service innovation influence on long-term relationships with business customers	Services	Service innovation impact on long-term relationship with business customers
	Roy et al., 2019	Consequences of customer experience	Services	Conceptual model of service experience impact on service outcomes
	Zeeshan et al., 2019	Value co-creation influence on customer experience	Services	Theoretical framework of value co-creation facets influencing experience value
	Human et al., 2020	Consequences of customer experience	Cross-industry	Conceptual model of customer experience impact on loyalty
	Jang et al., 2022	Service experience influence on repeat purchase intentions	Cross-industry	Conceptual model of customer experience impact on repurchase intention
	Weiger, 2023	Influence of cultural differences to online customer experience	Cross-industry	Moderating role of cultural factors on the relationship between customer experiences (cognitive and social) and psychological customer engagement
	Cepeda-Carrión et al., 2023	Customer experience dimensions	Services	Model of customer experience dimensions as antecedents of customer satisfaction

Study type	Publication	Study focus	Context	Output
Qualitative & quantitative	Hsieh & Yuan, 2021	Formation of service experience	Services	Theoretical framework of service experience interpretation
	Kushwaha et al., 2021	Customer experience in computer-mediated environment	Services	Model of customer experience with chatbots
	Homburg & Tischer, 2023	Customer journey management	Cross-industry	B2B customer journey management capability (CJMC) measurement scale
	Gounaris & Almoraish, 2024	Measurement of customer experience dimensions	Services	Multidimensional customer experience scale
Qualitative	Lemke et al., 2011	Components of customer experience	Cross-industry	Conceptual model of customer experience quality
	Pandey & Mookerjee, 2018	Impact of emotions on decision-making in services	Cross-industry	B2B customer experience model
	Lecoeuvre et al., 2021	Age related prejudice influence on customer experience	Services	Age-related impressions that influence customer experience
	Tuunanen et al., 2023	Value co-creation mechanisms to improve service experience	Services	Model of service value co-creation mechanisms
Conceptual	Still et al., 2018	Layers of service experience	Services	Conceptual framework of service experience contextual layers
	Witell et al., 2020	Characterization of customer experience management	Cross-industry	B2B customer experience management framework

Source: compiled by the author; published in Raišys (2026).

As can be seen in Table 7, more than half of the studies examine the B2B customer experience in the context of the service industry, while the remaining third are cross-industry studies that either carry out separate goods- and services-related research or apply the findings to both goods and services. Studies investigate the construct of customer experience (e.g., its dimensions, interactions between its components), the impact of a positive experience on business performance (e.g., customer satisfaction, repeat purchase), and the impact of specific factors on the formation of customer experience (e.g., cultural factors, influence of co-creation). The output of most studies is a model, framework, or a scale for measuring customer experience.

To build an integrative map of the customer experience construct in B2B services,

the customer experience factors found in the selected pool of studies are further analyzed. The synthesis of the included studies applies the antecedents-decisions-outcomes (ADO) logic (Paul et al., 2024), which was identified as the prevailing modelling architecture in the field (see Section 1.1.4.). Applied to the customer experience construct at the holistic level, the antecedents stage captures the factors that precede and shape the experience, the central stage is examined through the components that constitute the experience itself, and the outcomes stage captures its consequences. Because the aim of this review is not only to establish what precedes and follows customer experience but also to explain how and under what conditions it translates into these outcomes, mediators and moderators are additionally distinguished as refinements of the antecedent–outcome pathways. Thus, to understand how customer experience factors are interconnected, they are examined according to their roles and positions at the holistic level of the customer experience phenomenon and categorized as antecedents, components, consequences, mediators, and moderators. This categorization is based on the roles and positions of the factors explicitly identified in the study pool, as well as the models presented.

Treatment of customer experience and related concepts. While Section 1.1.1. established the conceptualization of customer experience based on broad scope of literature, here it is further investigated how the construct is actually treated within the B2B service study pool. The reviewed studies investigate different variations of customer experience concept but treat them similarly. The studies investigate concepts such as customer experience, service experience, experience value, and interaction experience. However, the definitions of such concepts found in the studies hardly differ (see Table 8). Most of the studies adopt definitions provided by Klaus & Maklan (2013), Lemon & Verhoef (2016), Meyer & Schwager (2007), and Verhoef et al. (2009), regardless of the investigated concept. For example, McLean (2017) investigates customer experience, and Jang et al. (2022) investigate service experience. However, both studies refer to the definition of customer experience offered by Meyer & Schwager (2007), defining it as a subjective and internal response of the customer to direct and indirect contacts with a company. On a similar note, Cepeda-Carrión et al. (2023) refer to Klaus & Maklan (2012) and Roy et al. (2019), while Roy et al. (2019) themselves refer to Meyer & Schwager (2007), defining customer experience as a subjective cognitive, emotional, and behavioral responses to interactions with a company or brand.

Table 8. Experience concepts and their definitions observed in the study pool.

Publications	Concepts investigated	Originating sources of definition	Definition
Biedenbach & Marell, 2010; Cepeda-Carrión et al., 2023; Gounaris & Almoraish, 2024; Homburg & Tischer, 2023; Lemke et al., 2011; Madaleno et al., 2007; McLean, 2017	Customer experience	Biedenbach & Marell, 2010; Frow & Payne, 2007; Klaus & Maklan, 2012; Kranzbühler et al., 2018; Lipkin, 2016; Meyer & Schwager, 2007; Roy et al., 2019; Sousa & Voss, 2006; Verhoef et al., 2009	Subjective cognitive, emotional, and behavioral responses to interactions with a brand or a company across the touchpoints in the customer's journey.
Jang et al., 2022; Zhang et al., 2016	Customer experience/ service experience		
Human et al., 2020	Sales interaction experience/customer experience		
Roy et al., 2019; Still et al., 2018	Service experience		
Kushwaha et al., 2021; Lecoeuvre et al., 2021; Pandey & Mookerjee, 2018; Witell et al., 2020	Customer experience	Edvardsson et al., 2005; Jaakkola et al., 2015; Lemon & Verhoef, 2016; Prentice & Nguyen, 2020; Schmitt, 1999	Cognitive, emotional, behavioral, sensorial, and social responses to company's offerings, encompassing the perceptions, feelings, thoughts and relational experiences during the purchase or use of a service.
Woo et al., 2019	Customer experience/ service experience		
Hsieh & Yuan, 2021	Service experience		
Weiger, 2023	Online customer experience/customer experience		

Source: compiled by the author; published in Raišys (2026).

It is observed that the two definitions differ in terms of where the emphasis is placed regarding the triggers of customer's responses (cognitive, emotional, behavioral, etc.). One definition emphasizes interactions with a brand or a company, while the other highlights the same responses to the company's offerings including during their purchase and use. It can be argued that the definitions have the same meaning with different wording. The purchase or use of a company's offerings is indeed an interaction with a company or a brand, thus closing the gap between the definitions.

Interestingly, both definitions are not only used in the studies investigating the same concepts, but the concepts themselves are observed to be used interchangeably. For example, Human et al. (2020) use both the "sales interaction experience"

and "customer experience" when discussing the object of their study. Also, Jang et al. (2022), Woo et al. (2019), and Zhang et al. (2016) use the terms "customer experience" and "service experience" throughout their studies interchangeably as well. As Still et al. (2018) suggest, customer experience refers to the perspective of a service beneficiary, while the concept of service experience refers to a broader perspective, which also includes the experience of other actors. In contrast, as stated in scholarly literature outside the study pool, Voorhees et al. (2017) suggest that service experience refers to the narrower part of the overall customer experience, focusing on the customer's experiences elicited before, during, and after the provision of a specific service. Further, in line with Voorhees et al. (2017), interaction experience is even more granular part of the customer experience, referring to an experience with a specific encounter between the service provider and the customer (e.g., a phone call, an email, etc.). However, in this study pool, apart from the study by Still et al. (2018), such differentiation of concepts is not observed, demonstrating that the concepts of "customer experience" in services and "service experience" are often used interchangeably by scholars. Such interchangeability of the terms might be explained by the nature of empirical customer experience studies, which typically investigate specific service elements (interactions, specific stages of service provision, etc.) that contribute to the overall customer experience. As a result, although the investigated aspect may conceptually represent a specific service experience element or an individual interaction encounter, it is ultimately examined in terms of its impact on the customer's overall experience. Thus, the theoretically distinct concepts become used synonymously within empirical research models.

Antecedents. In the reviewed literature, antecedents are interpreted in different ways. Some authors study proxies of customer experience as antecedents to positive customer experience, meaning that meeting certain criteria or fulfilling certain factors that comprise customer experience consequently results in positive customer experience (e.g., Biedenbach & Marell, 2010; Jang et al., 2022; Tuunanen et al., 2023). Other authors build customer experience through certain factors (otherwise called components) or measurement scale items, which can be influenced by external factors, e.g., antecedents (e.g., Hsieh & Yuan, 2021; Lecoeuvre et al., 2021; McLean, 2017; Woo et al., 2019; Zhang et al., 2016).

Considering antecedents as external factors, service innovation is identified as a precursor to the service's value-in-use as perceived by the customer (Woo et al., 2019). Service innovation is expressed through technology innovation and value co-creation, and value-in-use manifests as experience, personalization, and relationship. Trust (related to risk) is distinguished as a factor that influences buying behavior and thus acts as an antecedent to customer experience (Lecoeuvre et al., 2021). Another set of antecedents are customer expectations and customer emotions. However, customer emotions are also component of customer experience which can be positively influenced by managing customer expectations (Hsieh & Yuan, 2021). Internal branding is an antecedent which itself is preceded by brand orientation (J. Zhang et al., 2016). In the context of website quality influence on customer experience, website credibility

(meaning accuracy and completeness) and information quality (meaning accuracy, relevance, and usefulness) are external factors which act as antecedents of customer experience (McLean, 2017).

In the case of treating proxies of customer experience as antecedents to positive customer experience, the information factor, namely "access to information" is also highlighted as an important precursor to the service experience (Tuunanen et al., 2023). Other proxies include value co-creation, interactions between customer and brand (Biedenbach & Marell, 2010), and customer journey, which incorporates customer relations, personalization, service brand, and post-sale engagement (Jang et al., 2022).

Overall, a small number of studies discuss the antecedents of customer experience. While some discuss antecedents as external factors that precede the customer experience, others treat customer experience proxies as antecedents of a positive experience (see Table 9).

Table 9. Antecedents of B2B service customer experience.

Sources	Antecedents of Customer Experience	Type of antecedents
Woo et al. (2019)	Service innovation (technology innovation, value co-creation)	External factors
Lecoeuvre et al. (2021)	Risk related Trust	
Hsieh & Yuan (2021)	Customer expectations	
	Customer emotions	
Zhang et al. (2016)	Internal branding	
McLean (2017)	Website credibility (accuracy, completeness)	
	Information quality (accuracy, relevance, usefulness)	
Gounaris & Almoraish (2024)	Exchange climate	
	Bonding	
	Past experience	
	Technical quality	Proxies
	Delivery performance	
	Price	
Tuunanen et al. (2023)	Access to information	
Biedenbach & Marell (2010)	Value co-creation	
	Interactions between customer and brand	
Jang et al., (2022)	Customer journey (customer relations, personalization, service brand, post-sale engagement)	

Source: compiled by the author; published in Raišys (2026).

It is observed that studies consider customer experience and positive customer experience as separate concepts. Customer experience is a phenomenon arising from antecedents, while positive customer experience is an outcome of a service transaction. However, only the factors that lead to a positive customer experience are studied, while those that have a negative impact are not. In turn, the analysis of the antecedents of customer experience as a phenomenon and as an outcome is intertwined. Studies use customer experience antecedents as external factors or as proxies depending on the context and aim of the research.

Components. Components are factors which represent customer experience and are used to examine how they influence or react to other factors and constructs. In a similar way to proxies, items from measurement scales are sometimes utilized to establish the components of customer experience. For example, adapted items from service experience quality (EXQ) scale (Klaus & Maklan, 2012, 2013) are used, which include dimensions named Product experience, Outcome focus, Moments-of-truth, and Peace-of-mind (Cepeda-Carrión et al., 2023; Human et al., 2020; Jang et al., 2022; Roy et al., 2019). In the context of B2B services, EXQ's dimension "Product experience" is adapted the most, even being renamed to Core service experience (Jang et al., 2022; Roy et al., 2019) or Basic service experience (Cepeda-Carrión et al., 2023).

Interestingly, some components are derived from service quality literature, using service quality assessment instrument SERVQUAL (Parasuraman et al., 1988). Based on SERVQUAL, some components of customer experience are modelled by directly applying the model's items, named Tangibility, Reliability, Responsiveness, Assurance, and Empathy (J. Zhang et al., 2016). Although service quality is part of the customer experience, a direct equation of service quality and customer experience contradicts the definitions of these constructs. As defined previously, customer experience involves the subjective responses of the customer to direct and indirect interactions with a company or a service. Meanwhile, service quality refers to the alignment between the customer's expectations and the actual service delivered. Therefore, to apply SERVQUAL items in measurement of customer experience, modifications of the model's items are recommended. For example, in the modified SERVQUAL's items are observed in the study by Lemke et al. (2011), e.g., Accessibility, Caring – attitude, Caring – procedures, Reliability, Value for time, Atmosphere, Personalization, and Application of knowledge.

Components are also observed to be sometimes based on the holistic dimensions of customer experience phenomenon, offered by Lemon & Verhoef (2016, p. 70), who describe customer experience as "customer's cognitive, emotional, sensory, social, and spiritual responses to all interactions with a firm". For example, the components Usefulness, Helpfulness, and Knowledge Benefit pertain to Cognitive dimension, and Human Contact, Human Warmth, and Human Sensitivity relate to the Social dimension (Weiger, 2023). On the other hand, the dimensions themselves are sometimes identified as components of customer experience, namely Cognitive, Emotional, Behavioral, Sensory, Social, Relational, and Intellectual dimensions (Lecoeuvre et al., 2021; Pandey & Mookerjee, 2018; Witell et al., 2020).

In certain cases, the components of customer experience are investigated through related constructs, layers, or dimensions. For example, the component Customer Journey derives from the phenomenon of customer journey management capability (CJMC), and includes four dimensions: Value anchoring of touchpoints, Consistency of touchpoints, Internal integration of touchpoints, and Individual control of touchpoints (Homburg & Tischer, 2023). Meanwhile, Still et al. (2018) identify the Individual, Dyadic relationship, and Institutional environment layers through which customer experience is formed. In the individual layer, the customer experience is shaped through the customer's subjective perception of the service provided. The dyadic relationship layer contains factors that arise from interpersonal interactions. Finally, the institutional environment layer contains environmental factors shaped through the individual and dyadic layers.

Table 10. Components of B2B service customer experience.

Sources	**Components of Customer Experience**	**Type of components**	**Originating external source of components**
Cepeda-Carrión et al., 2023; Human et al., 2020; Jang et al., 2022; Roy et al., 2019	Peace of mind Focus on results Moments of truth Basic/core service experience	Scale-based	Service experience quality (EXQ) scale (Klaus & Maklan, 2013)
Zhang et al. (2016)	Tangibility Reliability Responsiveness Assurance Empathy	Model-based	SERVQUAL instrument (Parasuraman et al., 1988)
Lemke et al. (2011)	Accessibility Caring - attitude Caring - procedures Reliability Value for time Atmosphere Personalization Application of knowledge		

Sources	Components of Customer Experience	Type of components	Originating external source of components
Lemke et al. (2011)	Communication Relationship with company Relationship with other customers Variety/choice Value for money Network quality Social impact	Standalone	-
Woo et al. (2019)	Memorability Customer's stimulation of abilities to solve problems Opportunities for customer to improve the process through experimentation		-
Zeeshan et al. (2019)	Accessibility Connectivity		Rashid (2015)
Weiger (2023)	Cognitive dimension - usefulness, helpfulness, knowledge benefit Social dimension - human contact, human warmth, human sensitivity	Dimension-based	Bleier et al. (2019)
Witell et al. (2020)	Cognitive Emotional Behavioral Sensory Social		Lemon & Verhoef (2016)
Lecoeuvre et al. (2021)	Emotional dimension - empathy		
Pandey & Mookerjee (2018)	Sensorial, Relational, Emotional, Behavioral, Intellectual		
Gounaris & Almoraish (2024)	Cognitive - factual, sagacious Affective - emotional, social		-
Homburg & Tischer (2023)	Customer journey dimensions - Value anchoring of touchpoints, Consistency of touchpoints, Internal integration of touchpoints, and Individual control of touchpoints		-
Still et al. (2018)	Individual Dyadic relationship Institutional environment	Layer-based	-

Source: compiled by the author; published in Raišys (2026).

As observed in Table 10, customer experience components are approached in different ways, i.e., utilizing customer experience measurement scales, individual items from customer experience or other related construct measurement scales, as well as

dimensions or layers.

In essence, the division of factors into scale-based and model-based component groups indicates the origin of their constituent factors. Factors derived from models and measurement scales are of the same nature as standalone factors, except that their origins are specified. In other words, scale-based, model-based, and standalone components are composed of both interrelated and unrelated individual factors. On the other hand, dimension-based components consist of the dimensions themselves, i.e., Cognitive, Social, Emotional, Behavioral, Sensorial, etc. (see Table 10), in which certain factors are located. It might be assumed that both scale-based, model-based, and standalone factors could also fall within the dimensions they are best aligned with. Meanwhile, the layers in the layer-based component group could serve as the largest components of the customer experience, where each of the layers (Individual, Dyadic Relationship, Institutional Environment) would contain the discussed dimensions with accompanying factors. However, such logical breakdown of component groups was not found in the study pool and is a prominent research gap to be investigated in future studies.

Consequences. Operationalization of customer experience components results in certain consequences referred to as consequential factors. The dominating findings suggest that a positive customer experience influences customer satisfaction (Cepeda-Carrión et al., 2023; Human et al., 2020; Madaleno et al., 2007; Roy et al., 2019), engagement and relationship (Lecoeuvre et al., 2021; Lemke et al., 2011; Madaleno et al., 2007; Pandey & Mookerjee, 2018; Weiger, 2023), value (Lemke et al., 2011; Pandey & Mookerjee, 2018; Roy et al., 2019; Tuunanen et al., 2023), and loyalty (Biedenbach & Marell, 2010; Homburg & Tischer, 2023; Human et al., 2020; Lemke et al., 2011; J. Zhang et al., 2016).

When comparing the customer experience's consequential factors found in the pool of studies, there is little overlap in terms of wording, but it is nevertheless possible to identify the key areas covering these factors. Specifically, the key areas are Engagement and Relationships, Satisfaction and Value, Loyalty, and Organizational Benefits. Table 11 lists consequences of positive customer experience, grouped into key areas.

Table 11. Consequential factors of B2B service customer experience.

Key areas	Consequences of positive Customer Experience	Sources
Engagement and Relationships	Customer relationship Brand awareness Brand associations Psychological customer engagement Behavioral customer engagement Purchase intention Purchase Repurchase intention Trust Customer retention	Biedenbach & Marell, 2010; Gounaris & Almoraish, 2024; Homburg & Tischer, 2023; Jang et al., 2022; Lecoeuvre et al., 2021; Lemke et al., 2011; Madaleno et al., 2007; Pandey & Mookerjee, 2018; Weiger, 2023; J. Zhang et al., 2016
Satisfaction and Value	Customer satisfaction Perceived quality Perceived value Experience value (symbolic, functional, cost, emotional) Utilitarian, hedonic, relational, cost/sacrifice values and goals	Biedenbach & Marell, 2010; Cepeda-Carrión et al., 2023; Human et al., 2020; Lemke et al., 2011; Madaleno et al., 2007; Roy et al., 2019; Tuunanen et al., 2023
Loyalty	Customer loyalty Brand loyalty Word-of-mouth Willingness to recommend Commitment	Biedenbach & Marell, 2010; Human et al., 2020; Lemke et al., 2011; J. Zhang et al., 2016
Organizational Benefits	Customer-related coordination costs Financial firm performance (ROS) Firm's organizational agility	Homburg & Tischer, 2023; Jang et al., 2022

Source: compiled by the author; published in Raišys (2026).

It is also observed that some studies explore not only the immediate consequences of positive customer experience, but also the subsequent outcomes of these consequences. For example, customer experience's consequential factors - customer loyalty and low customer-related coordination costs - influence company's performance (return on sales - ROS) (Homburg & Tischer, 2023). Cognitive and social online customer experience dimensions influence psychological customer engagement, which in turn influences behavioral customer engagement (Weiger, 2023). Finally, purchase intention is identified as a further consequence of the experience value that a positive customer experience generates (Pandey & Mookerjee, 2018). Notably, the factors that stand between positive customer experience and further consequences may also be considered as mediating factors.

Mediators and moderators. Mediators are influenced by independent factors and explain the relationship between independent and dependent factors. In the context of

customer experience and its surrounding factors, mediators are influenced by antecedents, components, or consequent factors of customer experience. Mediators can have a positive or negative impact on their relationship with other subsequent factors. Mediators have been identified in almost half of the studies. However, not all mediators found in the pool of studies had their type of impact specified, i.e., whether they positively or negatively impact the relationship between the causal and subsequent factors.

For the mediators with unspecified mediation impact, it was found that customer experience leads to utilitarian, hedonic, relational and cost/sacrifice value-in-use factors, which mediate between customer experience and relationship outcomes, such as commitment, purchase, retention and word-of-mouth (Lemke et al., 2011). Word-of-mouth mediates between customer experience quality and brand association, and customer's brand association mediates between customer experience quality and brand equity (J. Zhang et al., 2016). Experience value mediates between customer experience and purchase intention (Pandey & Mookerjee, 2018). Loyalty and customer-related coordination costs act as mediators between CJMC and provider company's ROS (Homburg & Tischer, 2023).

In contrast, several mediators were discovered with the type of mediation impact specified. For example, positive customer emotions positively impact the relationship between customer expectations and service experience (Hsieh & Yuan, 2021). All the studies which specify the type of mediation impact, identify positive mediation. Thus, no mediators with negative impact were identified (see Table 12).

Table 12. Mediating factors of B2B service customer experience.

Sources	Independent factors	Mediators	Mediation impact	Dependent factors
Lemke et al. (2011)	Customer experience quality	Value-in-use	Not specified	Relationship outcomes
Zhang et al. (2016)	Customer experience quality	Brand association	Not specified	Brand equity
		Word-of-mouth		Brand association
Pandey & Mookerjee (2018)	Customer experience	Experience value	Not specified	Purchase intention
Roy et al. (2019)	Service experience	Satisfaction	Not specified	Loyalty
		Perceived value		Positive word-of-mouth
		Loyalty		
		Hedonic value perceptions		Satisfaction
Human et al. (2020)	Sales interaction experience	Satisfaction	Positive	Willingness to recommend
Hsieh & Yuan (2021)	Customer expectations	Positive customer emotions	Positive	Service experience
Jang et al. (2022)	Customer experience	Firm's organizational agility	Positive	Repurchase intention
Homburg & Tischer (2023)	Customer journey management capability (CJMC)	Loyalty	Not specified	Financial firm performance (ROS)
		Customer-related coordination costs		
Cepeda-Carrión et al. (2023)	Basic service experience	Moments of truth	Not specified	Focus on results
				Peace of mind
		Focus on results		Customer satisfaction
		Peace of mind		

Source: compiled by the author; published in Raišys (2026).

As illustrated in Table 12, some mediators recur through the pool of studies, but in different forms. For example, the mediators emphasizing value are identified as Value-in-use, Experience value, Perceived value, and Hedonic value perceptions. Another finding is that satisfaction mediates between customer experience and positive word-of-mouth (WOM) (Roy et al., 2019), while also mediating between sales interaction experience and willingness to recommend (WTR) (Human et al., 2020). Thus, both in the context of overall customer experience and the specific stage of the customer's interaction with the provider, satisfaction is seen to contribute to brand or company advocacy. However, apart from the examples discussed, other mediators are not

recurring throughout the studies.

In addition to mediators, moderating factors can also be found in several studies. Moderating factors, or moderators, unlike mediators, are not influenced by an independent factor. Also, if mediators act as vehicles of the relationship between two factors, a moderator is an external variable that influences an already existing (positive or negative) relationship between two factors by strengthening or weakening the effect of one on the other. For example, as identified by Weiger (2023), Geert Hofstede's cultural dimensions' factors such as uncertainty avoidance, power distance, and individualism weaken the positive relationship between cognitive online customer experience and psychological customer engagement, while masculinity strengthens this relationship. It was also found that customer knowledge sharing, i.e., customer feedback about the experience of the service use, positively moderates the relationship between service experience and firm's organizational agility (i.e., quickly responding to market changes) (Jang et al., 2022). Moreover, customer's switching costs and number of provider-controlled touchpoints in the customer journey we found to positively moderate the relationship between CJMC and customer loyalty, with the number of provider-controlled touchpoints also positively moderating the relationship of CJMC and customer-related coordination costs (Homburg & Tischer, 2023).

Table 13. Moderating factors of B2B service customer experience.

Sources	Moderator	Moderating effect	Moderated relationship
Lemke et al. (2011)	Experience context (Hedonism of product category, Involvement, Product complexity, Rationality)	Not specified	Customer experience and Value-in-use
Pandey & Mookerjee (2018)	Primacy, Recency, Individual factors	Not specified	Customer experience and Experience value
	Group dynamics, Power relationships		Experience value and Purchase intention
Kushwaha et al. (2021)	Risk (performance, functional, financial, physical, social, and psychological)	Not specified	Customer satisfaction and Loyalty
Jang et al. (2022)	Customer knowledge sharing	Positive	Service experience and Firm's organizational agility
Homburg & Tischer (2023)	Customer's switching costs	Positive	CJMC and Customer loyalty
	Number of provider-controlled touchpoints	Positive	CJMC and Customer-related coordination costs
Weiger (2023)	Masculinity	Positive	Cognitive online customer experience and Psychological customer engagement
	Power distance	Negative	
	Individualism		
	Uncertainty avoidance		

Sources	Moderator	Moderating effect	Moderated relationship
Weiger (2023)	Uncertainty avoidance	Positive	Social online customer experience and Psychological customer engagement

Source: compiled by the author; published in Raišys (2026).

As observed in Table 13, only 6 studies have identified factors with moderating effects. Furthermore, only half of the studies that list moderators specify what moderating effects they have. To identify moderators, selected factors are tested to see if they have a moderating effect on the existing relationship between certain factors. Since moderators are not triggered by the factors whose relationship they moderate, that may be a reason for the limited number of moderators identified.

Integrative map of customer experience in B2B services. Of the 21 studies in the study pool, the majority (11 studies) are quantitative studies, while the rest are qualitative (4 studies), both quantitative and qualitative (4 studies), and only 2 studies are conceptual papers. Most of the studies (15 studies) present a model, a framework, or a scale to measure customer experience. A total of 13 studies explores purely service-related issues, while the remaining 8 explore cross-industry contexts, i.e., aligning or contrasting goods and service-related insights.

Out of this body of research, 9 studies focus on antecedents of customer experience, which manifest in two types: as external factors, which occur prior to the formation of the customer experience, or as proxies of the customer experience, which are preconditions for the formation of a positive customer experience.

Meanwhile, the components of customer experience are identified by 15 studies, where they are grouped into a dimension-based, layer-based, scale-based, model-based, and standalone components of customer experience. The largest portion of the studies (4 studies) base the components on EXQ scale by Klaus & Maklan (2012, 2013). Notably, 2 studies use the SERVQUAL (Parasuraman et al., 1988) instrument as the basis for customer experience components – one applies SERVQUAL items directly, and the other uses modified items. Since SERVQUAL items are designed to measure service quality and by its definition cannot be directly equated with the construct of customer experience, only modified items were included in the map.

Regarding the customer experience's consequential factors identified in 14 studies, four key areas are identified, ranging from the one with the most factors (10 factors) to the one with the fewest (3 factors): 1) Engagement and Relationships; 2) Satisfaction and Value; 3) Loyalty; and 4) Organizational Benefits. All consequences derive from a positive customer experience. Notably, some studies distinguish not only immediate consequences but also subsequent consequences that are further influenced by the immediate consequences, which would be similar to mediating factors, but as such these consequences are not identified or investigated in those studies.

Moreover, mediating factors of customer experience are identified in 9 studies.

Although mediators can establish a positive or negative link between factors, the mediating effects were either identified as positive or were not specified. This observation is perhaps anticipated given the tendency to investigate positive customer experiences and to identify their positive consequences. Mediators are examined both between customer experience and its consequences and between the components within customer experience.

Whereas some customer experience components, outcomes, or mediators were recurrent across the studies, moderators are found to be non-recurrent. Overall, moderators were least frequently researched, being addressed in only 6 studies out of the 21. Moderators may have a positive or negative effect on an existing relationship between two factors. In the case of moderators, both positive and negative moderating effects are identified throughout the studies, although moderators with unspecified moderating effects were identified as well.

By integrating the observations from systematic literature review and the analysis of antecedents, components, consequences, mediators, and moderators, an integrative map of customer experience in B2B services is presented in Figure 8. To facilitate interpretation of the integrative map, a simplified conceptual diagram is presented in Figure 9.

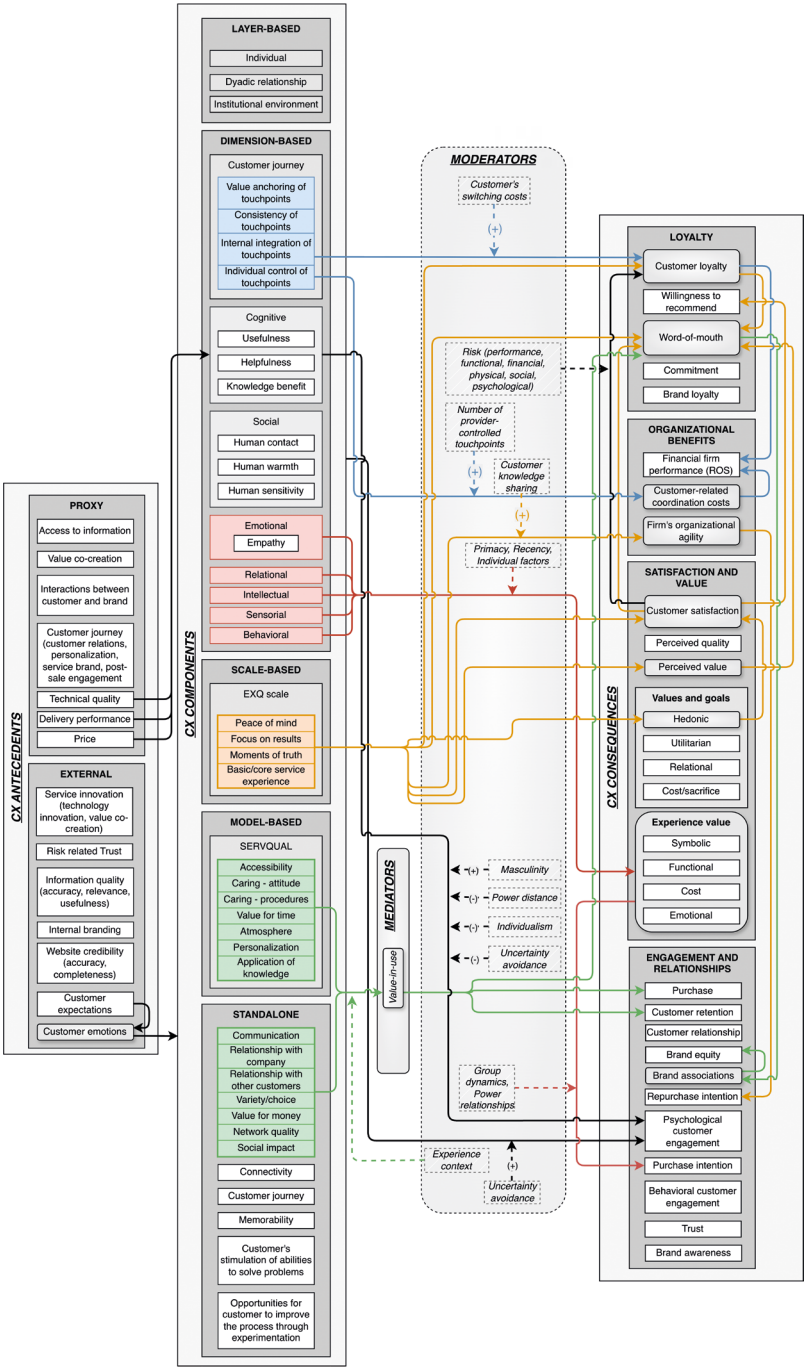


Figure 8. Integrative map of customer experience in B2B services.

Source: created by the author; published in Raišys (2026).

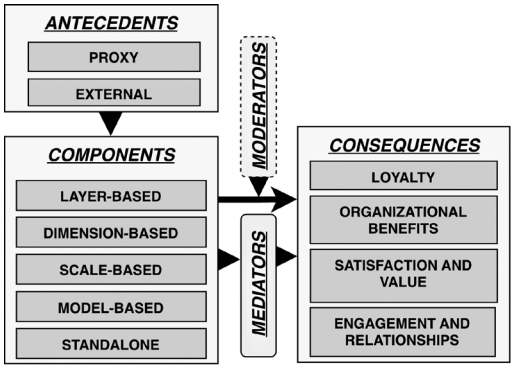


Figure 9. Simplified conceptual diagram of customer experience phenomenon in B2B services.

Source: created by the author; published in Raišys (2026).

Regarding the integrative map presented in Figure 8, it is important to note that the map is based entirely on the studies from the study pool. The map includes factors with their relationships explicitly mentioned or depicted in the respective models presented by the studies from which the grouping of factors into subgroups is synthesized (e.g., proxy, layer-based, loyalty, etc.).

As can be seen in the presented map, the antecedent factors are the preconditions for the formation of the customer experience, i.e., the components. Components, in turn, create the preconditions for the occurrence of customer experience consequences. It is worth noting that the antecedent, component, and consequence groups are arranged in a sequential order, but not all factors are linked. For example, it is not stated which specific antecedent factors provide the necessary preconditions for the formation of specific component factors. There are several relationships between component and consequence factors. However, there are also several other factors without clear relationships.

A few concerning observations arise regarding mediators. The logical structuring of the map revealed that almost all factors with a mediating role belong to one of the main groups of factors (antecedents or consequences). The only factor, value-in-use, is a mediator that does not belong to either group. It should therefore be noted that mediating factors, indicated by rounded corners in the map, are not only found in the mediator layer, but also in the antecedent and consequence groups. In addition, the whole subgroup of experience value factors in the consequences group also has a mediating role, which adds further complexity to the map. In the map, all relationships that have a mediator in their path are color coded to improve visual readability. Meanwhile, the moderators, which were found to be the least frequently researched in the study pool, are distinguished by dotted edges in the map. The role of moderators in the map is most clearly illustrated. They externally influence existing relationships between certain factors and belong to their own group (i.e., moderators are not found among the antecedents, components, or consequences).

However, judging from the presented integrative map, there is a lack of a more systematic, coherent picture of the investigated phenomenon. When the findings of studies which investigate the same phenomenon (customer experience in B2B services) are carefully integrated, the resulting map is complex, difficult to read and raises questions. For example, why certain factors are not linked to the factors from further groups (from antecedents to components, from components to consequences). Also, how much accuracy is there when relationships between groups are indicated differently – in some cases the relationship is between specific factors, while in others it is between clusters of factors and a specific factor (e.g., between the components group and psychological customer engagement in the consequences group).

The complexity in mapping the phenomenon of customer experience is likely due to each study in the pool of studies being focused on a narrow, specific subject area. These areas are where the quantitative and qualitative findings are presented. When these findings are combined with other validated studies, overlaps or discrepancies occur. While the presented map integrates scientific knowledge on the phenomenon of customer experience in B2B services, the question arises how to process this knowledge and prepare it not only for use in science, but also for applicability in practice.

1.3. Relationship of Customer Experience, Loyalty and Repurchase

As evidenced in the integrative map presented in Figure 8, customer experience leads to many possible outcomes in a transaction between a service provider and their customer. Since customer experience is modelled by specifying both its internal structure and its relationships within the system of constructs in which it operates, the empirical modelling of the construct requires a defined set of outcomes against which the effects of its dimensions can be established. From among these outcomes, the empirical investigation of this dissertation focuses on two consequences, customer loyalty and repurchase, based on theoretical prominence, consistent representation across the SLR's consequences, and relevance to the research aim. First, loyalty is theoretically prominent consequence of positive customer experience and is widely regarded as one of the key objectives of customer-oriented management (Khan et al., 2022; Mascarenhas et al., 2006; Oliver, 1999). Second, loyalty and repurchase consistently figured among the consequences identified in the SLR. Loyalty forms one of the four key consequence areas, while purchase, repurchase, and customer retention related outcomes appear within Engagement and Relationships, the most frequently addressed consequence area (see Table 11). Third, repurchase is the behavioral outcome most directly linked to business revenue and represents the ultimate behavioral outcome of the loyalty chain, at which cognitive, affective, and conative loyalty translate into observable action (Dick & Basu, 1994; Oliver, 1999). Both consequences correspond directly to the research aim of modelling the effects of customer experience on loyalty and repurchase in B2B digital services, while the remaining consequences identified in the integrative map (e.g., organizational benefits such as coordination costs and firm performance) are conceptually more distant from this focus.

In addition to these theoretical considerations, a practical constraint reinforces this focus. To revise and empirically verify the interrelationships between all of the factors in the map, it would require a significant number of items per each factor, resulting in hundreds of items for respondents to evaluate. Respondents would then be required to evaluate their experiences according to hundreds of evaluation items, and calculations should then be made, all within accepted validity and reliability parameters. This would require human, time, and monetary resources that exceed those available for the empirical investigation in this dissertation. Additionally, such investigation's feasibility is questionable due to the need for respondents to evaluate hundreds of items, which results in respondent fatigue due to holding focus for an extensive period of time, impacting consistency throughout given responses. Therefore, on both theoretical and practical grounds, the further focus of this dissertation is placed on specific consequences of positive customer experience, particularly customer loyalty and repurchase in digital B2B services, while the remaining consequences identified in the integrative map are left as directions for future research.

1.3.1. Customer experience and loyalty

Achieving customer loyalty is often one of the core business objectives (Khan et al., 2022; Mascarenhas et al., 2006). As shown in Figure 8, customer experience leads to loyalty factors, such as word-of-mouth, commitment, brand loyalty, etc. To obtain a more complete list of factors pertaining to loyalty, the literature should be explored to see how it is defined, how does it develop, and what intermediaries (mediators, moderators) exist between customer experience and loyalty.

Customer loyalty is defined as customer's cognitive, affective, and conative commitment to the brand, service, or a company, leading to behavioral outcomes such as repeated patronage, positive word of mouth, and resistance to switching service providers regardless of the competitive offerings from other companies (Morgan & Hunt, 1994; Oliver, 1999). Importantly, however, customer's repeated purchases do not necessarily imply loyalty. Since behavioral loyalty is only one of its stages, loyalty can exist without behavioral outcomes such as repeated purchases. Instead, loyalty can be rooted in psychological commitment, resulting in feelings of satisfaction and a sense of perceived value over time (Mittal et al., 2023; Yum & Yoo, 2023). Furthermore, frequent repurchases do not always stem from psychological commitment (H. Han et al., 2011). For this reason, different loyalty stages and repeated purchasing behavior is preferred to be studied in relation to each other, but as distinct constructs.

According to widely academically accepted conceptualization proposed by Oliver (1999), the development of customer loyalty goes through stages and starts with cognitive loyalty, developing into affective, conative, and finally, behavioral loyalty. Cognitive loyalty is analytical, utilitarian, based on comparing the costs and benefits of an offering. It is a foundational loyalty stage, nudging customers towards subsequent loyalty stages. Cognitive loyalty is influenced by customer's perceived quality and value, brand trust and brand image (Aydin & Özer, 2005; Chaudhuri & Holbrook, 2001; Lam et al.,

2004; Mustofa & Nuvriasari, 2024).

Affective loyalty is rooted in feelings and emotions. While cognitive loyalty initiates the progression through the loyalty stages, affective loyalty builds upon it by fostering customer's emotional connection to the company or a service. Affective loyalty is directly influenced by positive customer experience (Brakus et al., 2009; Loureiro & Sarmento, 2018; Srivastava & Kaul, 2016), as well as brand trust, satisfaction, effective communication, and word-of-mouth (Delgado-Ballester & Luis Munuera-Alemán, 2005; Pritjahjono et al., 2023).

Conative loyalty stems from the interplay of both cognitive and affective loyalty (Back & Parks, 2003; H. Han et al., 2011; Kim et al., 2013). Conative loyalty is a customer's conscious intention to act in favor of a company, and is a critical stage in the progression through loyalty stages, acting as a precursor to behavioral loyalty (Kim et al., 2013). However, conative loyalty does not always transition into behavioral loyalty because of situational factors, such as price changes (Oliver, 1999), availability of a service (Dick & Basu, 1994), or characteristics of the purchase cycle (Pan et al., 2012). While such constraints are logical and objective, the aforementioned reputable researchers consider them too context-specific and dependent on the individual circumstances of the buyer that they are essentially beyond the control of either the buyer or the service provider.

Behavioral loyalty is expressed in customer's actions, showcasing their commitment to the company, which can be expressed through positive word-of-mouth or repeat purchases (Aydin & Özer, 2005; Pritjahjono et al., 2023). However, while behavioral loyalty is often measured through repeat purchases, such equation might sometimes be misleading without analyzing the underlying motivations. For example, repeat purchase might happen out of convenience or habit (Liu-Thompkins & Tam, 2013; Saini & Singh, 2020). Therefore, a wider picture around influences on loyalty and repeat purchasing should be analyzed to avoid such mistake, by analyzing mediators and moderators in between such interrelationships.

Customer experience and loyalty have a complex relationship with various moderators and mediators playing their role between the two constructs. One such mediator is customer satisfaction, which is influenced by customer experience and trust, and influences customer loyalty in turn (Jeon et al., 2021; Kamath et al., 2020; Ogunnaike et al., 2022; Roy et al., 2019). It acts as a bridge between trust, positive customer experience and loyalty. Similarly, value-in-use, perceived value and brand equity serve as mediators between customer experience and loyalty as well (Kamath et al., 2020; Lemke et al., 2011), with perceived value being a mediator between experience quality and cognitive loyalty (Meitria et al., 2024). Since brand equity relates to customer's perceptions and evaluations of the brand, it is linked to cognitive loyalty. Furthermore, customer experience is connected to loyalty through satisfaction (Kamath et al., 2020; Roy et al., 2019). Satisfaction also has a positive mediating effect between customer experience and affective loyalty (Saputra et al., 2023). Emotional engagement mediates between customer experience and affective loyalty by developing an emotional attachment to a brand (Iglesias et al., 2011). These mediators affect the path that leads the

customer from their experience with the service towards loyalty to the company. They either strengthen or weaken loyalty outcomes.

Moderators, affecting the strength and polarity of the relationship between two factors are also found in the links between customer experience and loyalty. For example, an organization's ability to quickly adapt to changing environment and quick decision making plays a significant role in customer's intentions of repeat purchases (Jang et al., 2022). Customer knowledge sharing may affect how customer experience is transformed into customer loyalty, since prior research suggests that customer knowledge can affect loyalty formation and that customer knowledge sharing can moderate relationships between service experience and its consequences (Chiou et al., 2002; Jang et al., 2022). Finally, switching costs play a moderating role in the relationship between customer experience and cognitive loyalty (Homburg & Tischer, 2023).

Summarizing, positive customer experience results in various outcomes, which lead to loyalty by influencing customer's perceptions at different loyalty stages. While it was found that positive customer experience rarely results in loyalty or repurchase without intermediary factors in between, it can otherwise be the stated that customer experience can lead to either or both loyalty and repurchase. Loyalty evolves through its different stages, ultimately resulting in behavioral outcomes such as word-of-mouth or repurchase, while also the act of repurchasing itself can be motivated by positive customer experience without customer's loyalty in play.

1.3.2. Conceptual model and hypotheses development

The observations made in previous sections of this dissertation enable the modelling of the influence of customer experience on loyalty and repurchase outcomes. The relationships identified in Sections 1.2.2. and 1.3.1. are formulated as hypotheses for empirical testing. Hypotheses represent the links between constructs and are specified as direct effects, as well as mediating or moderating relationships between variables. The 20 formulated hypotheses, labelled as H1–H16, constitute the conceptual model for empirical testing.

The academic literature widely acknowledges the influence of customer experience on service-related outcomes, but it rarely distinguishes between its cognitive and affective dimensions. Thus, the relationships between customer experience and its related constructs must be explicitly attributed to one of these dimensions. To enhance conceptual clarity, these relationships are assigned to either the cognitive or affective dimension of customer experience.

Drawing on service quality theory, customers cognitively evaluate service experiences by comparing their perceptions with prior expectations (Parasuraman et al., 1988). These cognitive evaluations provide the basis for perceived value, which reflects customers' assessment of the benefits received in relation to the costs or sacrifices associated with the offering. Since cognitive loyalty is an early stage of loyalty, based on evaluations of a service provider's superiority among other service providers (Oliver, 1999), perceived value is expected to strengthen cognitive loyalty by reinforcing

customers' rational assessment of expected benefits from the service provider. Prior research presents evidence that perceived value positively influences customer loyalty (Yang & Peterson, 2004). Therefore, perceived value is hypothesized to mediate the relationship between cognitive customer experience and cognitive loyalty (H1).

Affective customer experience generates emotional responses and brand-related meanings. These emotional responses and meanings shape how customers subjectively evaluate a company's offering beyond its objectively measured value (Aaker, 1996; Verhoef & Lemon, 2013). In this case, brand equity reflects the additional value that customers attach or subtract from the offering because of their experiences with the brand. Therefore, when customers form positive emotional responses and brand-related meanings from their experience, these responses may strengthen brand equity. Since cognitive loyalty is based on customers' belief-based assessment of the provider (Oliver, 1999), brand equity may further support the formation of cognitive loyalty by strengthening customers' evaluation of the service provider and its offering (Kamath et al., 2020). Thus, brand equity is hypothesized to mediate the relationship between affective customer experience and cognitive loyalty (H2).

Value-in-use refers to the cognitive evaluation of the actual benefits derived from a service, rather than the benefits expected before service use (Sandström et al., 2008). Since cognitive customer experience shapes how customers assess these actual benefits, value-in-use is expected to strengthen customers' belief that continuing the relationship with the provider is worthwhile. Accordingly, value-in-use is hypothesized to mediate between cognitive customer experience and cognitive loyalty (H3).

Positive emotional experiences with a service can lead customers to form an emotional attachment to the brand. Because the customer feels emotionally connected to the provider and its services, this attachment can strengthen affective loyalty (He, 2023; Iglesias et al., 2011). Also, since habits develop through repeated behavior that becomes more automatic over time (Verplanken & Aarts, 1999), emotions-driven repeated engagement with the provider is expected to form a habit. As a result, emotional attachment to a brand is hypothesized to mediate the relationship between affective customer experience and habit (H4a), and between affective customer experience and affective loyalty (H4b).

Customer satisfaction, which reflects how well the service meets or exceeds customer's expectations (Oliver, 1977), and trust mediate the relationship between customer experience and loyalty. Since cognitive customer experience influences customer's evaluations, it may affect satisfaction. A satisfied customer is more emotionally committed to the service provider and willing to purchase services again (i.e., strengthening affective and conative loyalty dimensions) (Roy et al., 2019; Saputra et al., 2023). Similarly, positive affective experience may make the service provider appear reliable and well-intentioned (i.e., trusted) (Morgan & Hunt, 1994). As a consequence, this trust raises the chances for the customer to evaluate the service positively, influencing satisfaction with the service (Jeon et al., 2021). Based on these observations, customer satisfaction is hypothesized to mediate the relationship between cognitive customer experience and affective loyalty (H5a), between trust and affective loyalty

(H5b), and between cognitive customer experience and conative loyalty (H5c). Trust is hypothesized to mediate the relationship between affective customer experience and satisfaction (H6).

Positive cognitive evaluations, stemming from the customer's experience with the service, increases the chances for the customer to perceive using a particular service provider to be convenient, meaning spending less time and effort when sourcing a service (Seiders et al., 2007). In turn, convenience, which makes the decision-making simpler for the customer, may steer the customer towards repeated purchasing, although such purchasing has also been associated with situational rather than genuinely loyal patronage (Saini & Singh, 2020). Therefore, cognitive customer experience is hypothesized to influence repurchase behavior through convenience as a mediator (H7). Since conative loyalty influences repurchase intentions (Oliver, 1999), and repurchase intentions increase the likelihood of repurchase behavior (Limayem et al., 2007), it is hypothesized that the relationship between conative loyalty and repurchase behavior is mediated by repurchase intentions (H8).

Considering the contextual conditions which may affect the strength and direction of a relationship between two constructs, switching costs, firm's organizational agility, and customer knowledge sharing are distinguished as moderators in the path from positive customer experience towards loyalty and repurchase outcomes. Switching costs, which put financial, time, and effort constraints on the customer-provider relationship, may positively or negatively affect customer's cognitive attitude towards the provider. Scientific evidence on its role is mixed, as Homburg & Tischer (2023) found that switching costs strengthen the effect of customer journey management capability on loyalty in B2B settings, while Yang & Peterson (2004) found no such interaction, and Aydin & Özer (2005) identified switching costs as a direct antecedent of loyalty rather than as a contextual condition. Thus, switching costs are expected to moderate the relationship between cognitive customer experience and cognitive loyalty (H9). Organizational agility describes the service provider's ability to quickly respond and adapt to market changes (Sambamurthy et al., 2003), signaling to customers that the expected service outcomes can be ensured by timely and appropriate decisions throughout service provision and beyond. Although agility is a provider-side organizational capability, this dissertation examines it from the customer's perspective. Customers can evaluate such capability by observing its consequences, such as timely responses, rapid adaptation to their needs, continuity of service delivery, etc. While Jang et al. (2022) position organizational agility as a mediator in the relationship between customer experience and repurchase intentions, this dissertation examines whether perceived organizational agility strengthens or weakens this relationship. Accordingly, firm's organizational agility is hypothesized to moderate the relationship between cognitive customer experience and repurchase intentions (H10).

Customer knowledge sharing refers to customers' feedback about a service to the provider and other customers. Chiou et al. (2002) demonstrated that the customer's level of knowledge about a service shapes how loyalty is formed, while Jang et al. (2022) found customer knowledge sharing to moderate the relationship between service

experience and organizational agility. Since active knowledge sharing cognitively involves customers more deeply in the service details, it is hypothesized to moderate the relationship between cognitive customer experience and conative loyalty (H11).

Finally, the model incorporates Oliver's perspective on sequential loyalty development (Oliver, 1999), according to which, cognitive loyalty influences affective loyalty (H12), which in turn influences conative loyalty (H13), and subsequently behavioral loyalty (H14). Word-of-mouth and repeat purchasing are behavioral manifestations of loyalty (Dick & Basu, 1994; Pritjahjono et al., 2023) and are often combined into a single, aggregated loyalty measure (Yang & Peterson, 2004). Following Oliver's (1999) dimensional view of loyalty adopted in this dissertation, behavioral loyalty is modeled as a distinct construct, and these manifestations are examined as separate outcomes rather than as indicators of loyalty itself. It is proposed that behavioral loyalty captures the customer's continued behavioral preference for a provider, which include consistent collaboration, substantial share of spending, along with variety of services used, which is distinct from customer advocacy (word-of-mouth) (Buttle, 1998) and from repeat purchasing as the actual fact of repeated purchasing over time. Since customers who consistently do business with a certain provider are more likely both to recommend it and to keep purchasing from it (Pritjahjono et al., 2023), behavioral loyalty is hypothesized to influence word-of-mouth (H15a) and repurchase behavior (H15b). In addition, habit can play a role in repurchasing behavior independently from loyalty stages, since repurchasing behavior can become more automatic over time (Verplanken & Aarts, 1999). Limayem et al. (2007) demonstrated the relevance of habit for continued usage behavior by modelling it as a condition that reduces the power of intention. In this dissertation, however, habit is specified as a direct antecedent of repurchase to assess its influence alongside, rather than upon, the intention-based path. Accordingly, repurchase behavior is expected to be influenced by habit (H16).

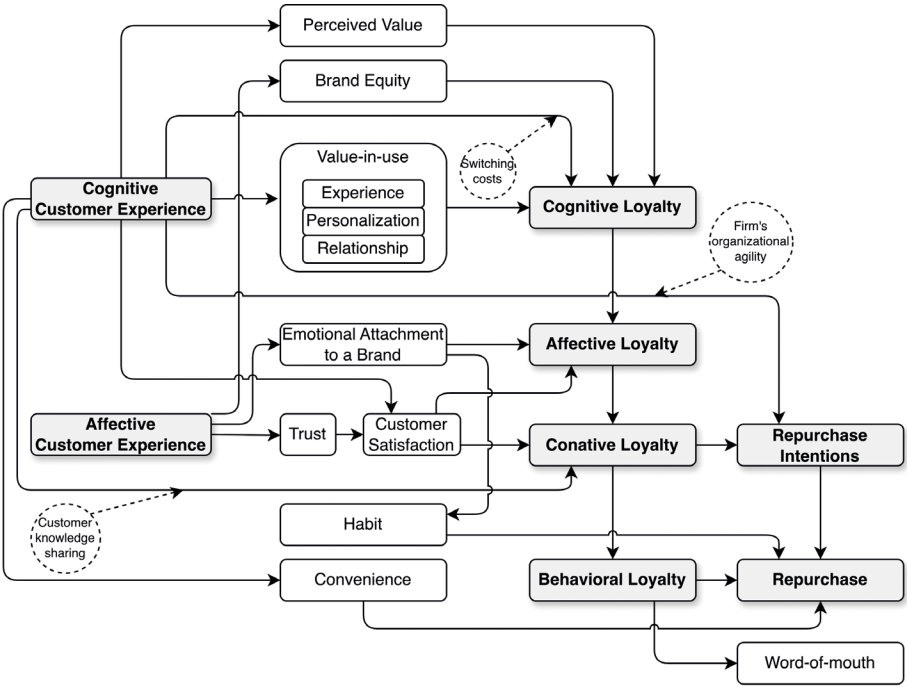


Figure 10. Conceptual model of customer experience effects on loyalty and repurchase in B2B services.

Source: created by the author.

Combining the hypotheses presented in this section, a conceptual B2B service customer experience–loyalty relationship model is developed (see Figure 10) based on insights from the broader B2B service customer experience literature, encompassing both digital and non-digital service contexts. The model is subsequently empirically tested in the context of digital B2B services in accordance with the formulated hypotheses.

II. EMPIRICAL RESEARCH METHODOLOGY OF CUSTOMER EXPERIENCE MODELLING IN B2B DIGITAL SERVICES

This chapter describes the research philosophy adopted in the empirical investigation, and outlines the research methods applied, detailing on how the research instrument was developed and implemented. It describes how theoretical constructs were transformed into measurable items, how established scales from prior studies were adapted, and outlines the procedures used for sampling and data collection. This chapter establishes the foundation for the subsequent chapter presenting the results of the empirical investigation from which the discussion and findings are formed.

As evidenced in the literature review, research on customer experience remains focused on the B2C context, while the practical evidence shows that the relevance of insights concerning B2B relationships have significantly increased through the last three decades. In addition, researchers acknowledge that applying the results of B2C research to B2B practice is problematic due to the fundamental differences among the actors within such relationships. Furthermore, the SLR has shown that very few customer experience studies empirically test differentiated customer experience dimensions. In addition, mediating and moderating pathways are rarely examined in B2B customer experience research (see Section 1.2.2.), even though they may play an important role alongside the direct effects of experience on customer outcomes.

To address these gaps, this dissertation presents a conceptual model for empirical testing in which customer experience is differentiated into two dimensions, cognitive and affective. The model treats customer experience as the starting point of the examined sequence and does not include its antecedents, since the research aim concerns the mechanisms through which customer experience translates into loyalty and repurchase outcomes, rather than the conditions under which the experience itself is formed. The behavioral component of customer experience is represented as the manifestation of loyalty and repeat purchase outcomes. The pathways between the dimensions of customer experience and customer outcomes are modeled using mediating pathways and moderating factors, with the goal of comprehensively investigating not only whether customer experience leads to loyalty and repeat purchases, but rather how, through which intermediate mechanisms, this effect manifests itself. Such model cannot be validated based on existing research, as no study has covered the proposed set of constructs and their relationships in the context of B2B digital services.

Accordingly, the object of the empirical study is the direct and indirect effects of customer experience on loyalty dimensions and repurchase outcomes through relevant mediating and moderating mechanisms within the context of B2B digital services. The aim of the empirical study is to empirically test the hypothesized direct, mediating, and moderating effects between customer experience dimensions, mediating constructs, loyalty dimensions, and repurchase outcomes in B2B digital service settings. To achieve this aim, the following tasks of the empirical study were established:

1. To select and justify the analytical methods capable of testing the proposed conceptual model empirically.
2. To operationalize the constructs detailed in the conceptual model into measurement items grounded in prior research and verify their suitability through expert review.
3. To specify the structural model and to collect the data from individuals who make or influence decisions within their organizations regarding evaluation and purchasing of B2B digital services.
4. To assess the measurement and structural models, including the testing of hypothesized direct, mediating, and moderating effects.
5. To identify the necessary conditions for achieving the final goal specified in the model, repurchase.

The first task is addressed in Sections 2.1. and 2.2.; the second task in Sections 2.3.1. and 2.3.2.; the third task in Sections 2.4. and 2.5.; and fourth and fifth tasks are addressed in Part III of this dissertation.

2.1. Research philosophy and methodological approach

The philosophy of the empirical study is selected according to the research problem, objectives, theoretical assumptions, and the nature and characteristics of the research object (Saunders et al., 2019). Customer experience is not directly observable, as it is a subjective interpretation of the customer-provider relationship. Accordingly, the empirical study is conducted through a post-positivist lens, which manifests itself in several features of the research design. First of all, the conceptual model developed for testing with empirical data reflects a reductionistic approach to constructing a complex phenomenon such as customer experience along with its outcomes in small, individual variables. Also, all constructs in the conceptual model, such as cognitive and affective customer experience, are considered latent (unobservable) and can be measured only indirectly through observable indicators (Jarvis et al., 2003). Furthermore, the study design allows for the potential rejection of hypotheses. Together, these features reflect the philosophy of post-positivism (Creswell & Creswell, 2017). In addition, complete objectivity is not assumed to be attainable. Instead, obstacles to objectivity are identified and mitigated through appropriate procedures, including an expert review of the measurement items (see Section 2.3.2.). The empirical findings are interpreted within a defined research context of B2B digital services, therefore their generalizability beyond this context is treated with caution (Bell et al., 2022). Since the empirical study aims to test the effects among constructs whose structural relationships are derived from the existing literature, deductive logic is applied, by which the hypotheses developed in Section 1.3.2. are tested with empirical data.

Based on the philosophical approach of the investigation, a quantitative research approach was chosen. This approach was selected because the aim of the empirical investigation is to test the hypothesized relationships simultaneously and to compare their strength, including mediation and moderation effects (Creswell & Creswell,

2017). The qualitative approach was rejected because it would be more suitable for analyzing how customer experience is interpreted by customers, rather than for testing predetermined hypotheses. Meanwhile, a mixed-methods approach, which includes analysis of bot qualitative and quantitative data, was not adopted because an additional qualitative phase was not necessary for the empirical aim. The exploratory component had already been completed during the theoretical stage through bibliometric analysis and SLR (Sections 1.2.1. and 1.2.2.), while the qualitative validation of the measurement instrument is fulfilled through an expert review.

The collected data is cross-sectional. It allows for testing hypothesized relationships but does not allow insight into how customer experience and its outcomes change over time, which is acknowledged as a limitation of the empirical research of this dissertation.

To position the methodological choices of this dissertation's empirical investigation within the research field, all 11 quantitative studies included in the SLR study pool (see Table 7) were reviewed. Table 14 summarizes the methodological decisions of these studies.

Table 14. Methodological decisions in previous quantitative studies of customer experience in B2B context.

Publication	Data collection	Data type	Analytical methods
Madaleno et al., 2007	Questionnaire	Cross-sectional	Exploratory factor analysis, correlation analysis, multiple regression
Biedenbach & Marell, 2010	Questionnaire		Structural equation modelling
Zhang et al., 2016	Questionnaire of paired firms		Structural equation modelling
McLean, 2017	Online experiment with an accompanying questionnaire		Structural equation modelling
Woo et al., 2019	Questionnaire		Structural equation modelling
Roy et al., 2019	Questionnaire from three separate samples		Factor analysis, structural equation modelling
Zeeshan et al., 2019	Questionnaire		Exploratory factor analysis, multiple regression
Human et al., 2020	Questionnaire		Partial least squares structural equation modelling, multigroup analysis
Jang et al., 2022	Questionnaire		Partial least squares structural equation modelling
Cepeda-Carrión et al., 2023	Questionnaire		Partial least squares structural equation modelling
Weiger, 2023	Questionnaire matched with behavioral data from web analytics tool and national culture indicators	Cross-sectional with behavioral data captured one week later	Confirmatory factor analysis, simultaneous equation modelling

Source: compiled by the author.

As shown in Table 14, quantitative research on customer experience predominantly relies on questionnaire method of data collection, and the data is in all analyzed cases cross-sectional. Only McLean (2017) stands out by conducting an online experiment alongside the questionnaire, while Weiger (2023) supplements the questionnaire responses with behavioral data obtained from a web analytics tool. The dominant analytical method is structural equation modelling, with more recent studies applying its more recent variant, PLS-SEM. The methodological choices of this dissertation's empirical investigation therefore correspond to the established practice of the research

field, where structural equation modelling is the dominant analytical method.

Based on the properties of the conceptual model for empirical testing, structural equation modelling was selected as the analytical method for the empirical investigation. The conceptual model's constructs are latent and measured through indicators, and the relationships between them form a system that has to be estimated as a whole, including several mediating and moderating relationships. Other closely related methods, such as correlation or regression, are not suitable for such evaluation. The choice between covariance-based and variance-based variants of structural equation modelling is addressed in the following section.

2.2. Empirical analysis methods: Partial Least Squares Structural Equation Modelling (PLS-SEM) and Necessary Condition Analysis (NCA)

Since the focus of the empirical investigation is on the modelling of customer experience and its outcomes in digital B2B services, the methodological approach must be capable of capturing complex, interdependent relationships between multiple constructs. Customer experience and its consequent outcomes related to loyalty and repurchase behavior cannot be observed directly, as they must be inferred from underlying observed measures. Thus, analytical approaches based on single-equation techniques, such as multiple regression or correlation-based analyses were deemed insufficient, as they do not support the explicit modelling of latent constructs nor the simultaneous assessment of measurement quality and structural relationships within a single model.

Structural Equation Modelling (SEM) is a multivariate technique used to investigate complex relationships among observed and latent variables. It is based on the principles of factor and multiple regression analyses, enabling researchers to assess both measurement quality and the hypothesized structural relationships within a single framework (Hair et al., 2021). SEM is particularly valuable in social sciences such as management, where theoretical constructs such as trust, customer experience, or organizational agility cannot be measured directly and must be inferred from multiple observed indicators.

The two most common SEM approaches are Covariance-Based SEM (CB-SEM) and variance-based, Partial Least Squares SEM (PLS-SEM). While they both rely on similar conceptual foundations, they have different analytical focus. CB-SEM is confirmatory in nature, meaning it focuses on reproducing the relationships (covariances) between variables and assessing how well overall model fits the data (Hair et al., 2019). In other words, CB-SEM tests whether the collected data fits an already well-established theoretical model under the assumption of data normality and large sample sizes (Gefen et al., 2000). PLS-SEM, in contrast, allows, to some extent, non-normal data, smaller sample sizes, is variance-based and primarily prediction-oriented. Its objective is to maximize the explained variance (R^2) of the examined (dependent) constructs, making it more suitable when the research aims to explore theoretical relationships, extend existing frameworks, or model complex interactions with both formative and

reflective constructs (Hair et al., 2021; Sarstedt et al., 2020).

Considering the theory-testing nature and the high complexity of the proposed model in this dissertation, as well as the inclusion of a formative construct, PLS-SEM was the appropriate methodological choice. In CB-SEM, the default measurement logic is reflective, assuming that the indicators of a construct share a common underlying cause. Formative constructs follow the opposite logic, as their indicators jointly form the construct rather than reflect it (Diamantopoulos & Winklhofer, 2001). Such constructs can also be estimated using a covariance-based framework, but it would require an additional specification and identification of conditions, while PLS-SEM estimates formative measurement models without these constraints. PLS-SEM is also resilient to deviations from normality, making it particularly advantageous for behavioral data gathered through surveys using Likert-type scales.

PLS-SEM features two closely related models: measurement model and structural model. Measurement model shows how well the measurement indicators, or items, represent the according latent variables. For reflective constructs, a latent variable (e.g., cognitive customer experience) is reflected by several interrelated items. In contrast, formative constructs are latent variables that are measured using several items that capture different aspects to form the latent variable. In other words, measurement model, often referred as the outer model, focuses on observed indicators rather than on the constructs whose relationships are studied. In contrast, the structural model, or inner model, is used to assess the hypothesized relationships between the constructs and focuses on the latent variables representing the theoretical framework of the study.

All model estimations reported in this dissertation were calculated using SmartPLS 4 software (Ringle et al., 2024). PLS-SEM can be performed by a range of software applications and the choice among them does not impact the estimation logic. Therefore, SmartPLS 4 was selected because SmartPLS is among the most widely used, comprehensive applications for conducting PLS-SEM analyses (Sarstedt & Cheah, 2019) and supports both PLS-SEM and necessary condition analysis (NCA) calculations. Before the assessment of measurement and structural models, the risk of common method bias (CMB) is addressed through procedural remedies applied during data collection and examined using collinearity statistics at both the indicator and the construct level, where variance inflation factor (VIF) values below 3,3 indicate no inflated collinearity, with 5,0 treated as an upper acceptable limit (Hair et al., 2021). If no CMB is found, the assessment of measurement and structural models can be proceeded.

For reflective constructs, reliability and validity are examined by assessing indicator loadings, internal consistency reliability (using Cronbach's alpha, Dijkstra-Henseler's rho and composite reliability), convergent validity (using Average Variance Extracted, AVE), and discriminant validity (using heterotrait-monotrait ratio, HTMT). For formative constructs, indicator weights and their significance are evaluated, along with tests for multicollinearity, using the Variance Inflation Factor (VIF). In formative measurement assessment, indicators with non-significant weights may still be retained when their loadings indicate a meaningful absolute contribution to construct formation (Hair et al., 2022). For Type II reflective–formative higher-order constructs

without a global reflective measure, convergent validity is inferred from the theoretical grounding linking the underlying dimensions to the higher-order construct, their prior empirical validation, and the assessment of multicollinearity together with the significance and relevance of formative weights (J.-M. Becker et al., 2012; Duarte & Amaro, 2018).

Indicator loadings show how strongly each observed item reflects its underlying construct, while indicator weights show how strongly each indicator contributes to the formation of latent variable, revealing most important items. Cronbach's alpha and composite reliability help assess if all indicators are consistent with each other, and VIF checks if indicators are not too highly correlated with each other, therefore providing unique and non-overlapping information. AVE shows whether a construct explains more variance in its indicators than the variance caused by random error, confirming that the indicators belong to that construct. Finally, HTMT ratio is used to check if all constructs in the model are distinct from each other, ensuring that they are not overlapping. For conceptually similar constructs, HTMT values below 0,90 are considered indicative of acceptable discriminant validity (Henseler et al., 2015).

During the assessment of measurement model, the model is revised accordingly to the observed metrics, for example, by removing measurement items to increase the loadings of other indicators or because the AVE of certain items are below the required threshold. Once the measurement model demonstrates satisfactory reliability and validity, the researcher can proceed to the assessment of the structural model.

The structural model is assessed through VIF check among the constructs (checking if the latent variables are unique and not too correlated to each other), evaluating path coefficients (β) which indicate the strength and direction of each relationship between constructs. The statistical significance of the relationships is tested through the bootstrapping procedure, which uses repeated resampling to generate confidence intervals and p-values for all estimated paths. This approach does not assume data normality, making it particularly suitable for PLS-SEM analysis. The coefficient of determination (R^2) is then assessed, to evaluate model's explanatory power by measuring how well the exogenous (independent) constructs explain variance in the endogenous (dependent) constructs. Generally, the R^2 values of 0,75, 0,50, and 0,25 are interpreted as substantial, moderate, and weak explanatory power, respectively (Hair et al., 2022). However, R^2 values should be interpreted as guidelines rather than strict thresholds, depending on the complexity of PLS-SEM model (i.e., the number of constructs and indicators) (Henseler et al., 2009), since models with higher number of constructs and relationships tend to exhibit generally lowered R^2 values. To account for the inflation of explained variance that may result from a larger number of predictors, adjusted R^2 is additionally assessed as a more conservative measure, as it adjusts the explained variance relative to the number of predictors and sample size.

Effect sizes (f^2) indicate how much each exogenous construct contributes to the explanation of an endogenous construct's variance, while predictive power (Q^2predict) is used to assess the model's ability to predict values of constructs with new data compared to the data from observed sample. Out-of-sample predictive power is

additionally assessed using the PLSpredict procedure. While R^2 values indicate the explanatory power of the model within the observed sample, PLSpredict evaluates the model's predictive performance for out-of-sample observations. Following the recommendations of Shmueli et al. (2019), the procedure is conducted using 10-fold cross-validation with 10 repetitions. Since the structural model includes multiple mediating constructs, predictive assessment is performed using the Direct Antecedents (DA) prediction mode, which incorporates both antecedents and mediators as predictors when generating model predictions. The procedure produces Q^2predict values for indicators of endogenous constructs, as well as prediction errors for the PLS-SEM model. To assess predictive performance, PLS-SEM prediction errors are compared against those generated by a linear model benchmark. When the distribution of prediction errors is sufficiently symmetrical, root-mean-square error (RMSE) is used as the primary evaluation criterion. Lower prediction errors for the PLS-SEM model relative to the benchmark indicate predictive relevance and allow predictive power to be interpreted as none, low, medium, or high.

Unlike in the refinement of the measurement model, where low-loading indicators may be removed to improve measurement quality, structural paths represent theoretically derived hypotheses and are therefore retained even when individual relationships are statistically non-significant. This ensures a comprehensive empirical assessment of all proposed direct, mediating, and moderating mechanisms within the conceptual model (Hair et al., 2022; Nitzl et al., 2016).

Once the measurement and structural models have been validated, the testing of indirect (mediation) and conditional (moderation) effects is carried out. Mediation analysis shows whether the effect of one construct on another operates through an intervening variable (mediator). The analysis of Specific indirect effects and Total indirect effects quantify how much of the relationship between two constructs is transmitted through one or several mediators. Following the framework offered by Zhao et al. (2010), each mediating path is further classified according to the mediation type: Complementary (both direct and mediated effects point to the same direction), Competitive (direct and mediated effects point to opposite directions), Indirect-only (mediated effect exists, but not the direct effect), Direct-only (direct effect exists, but not the indirect effect), and No-effect (neither mediated, nor direct effects exist). Serial mediation extends this logic by including more than one mediator in sequence, allowing the researcher to capture multi-step mediation effects (e.g., cognitive customer experience influencing conative loyalty through trust and customer satisfaction).

Moderation analysis, on the other hand, explores whether the strength or direction of a relationship between constructs changes depending on the level of another construct, i.e., the moderator. Given that interaction effects in PLS-SEM are typically small, lower threshold values are applied for interpretation, with 0,005 for small, 0,01 for medium, and 0,025 for large effects (Hair et al., 2022). When both mediation and moderation effects are in the same path between two constructs, the framework is referred to as moderated mediation, showing whether an indirect effect varies across moderator levels (Baron & Kenny, 1986).

The analytical framework applied in this empirical study follows the methodological principles established in recent PLS-SEM literature (e.g., Hair et al., 2021; Nitzl et al., 2016). PLS-SEM is especially appropriate for management research contexts that involve theory development rather than strict model confirmation, has non-normal data, and includes of both formative and reflective constructs. Moreover, its emphasis on variance explanation and predictive accuracy aligns with the practical nature of customer experience research, as PLS-SEM helps to uncover how and through which mechanisms customer experience drives loyalty and behavioral intentions, rather than (in case of CB-SEM) testing whether the collected data perfectly confirm an existing theoretical model.

In addition to sufficiency-based logic of PLS-SEM, a necessary condition analysis (NCA) is employed as a complementary analytical technique to assess whether specific conditions are required for achieving higher levels of the focus construct of the empirical study, i.e., repurchase. While PLS-SEM explains structural relationships between constructs and identifies explanatory mechanisms, NCA presents a necessity logic by identifying which constructs act as constraints for the achievement of a desired outcome.

Since repurchase is the primary ultimate behavioral outcome in this dissertation's empirical study, NCA is applied specifically for repurchase construct. The analysis is conducted by using latent variable scores from the final PLS-SEM model (after the assessment of both measurement and structural models). In line with NCA methodology (Dul, 2016), to estimate the necessity effects, the Ceiling Envelopment-Free Disposal Hull (CE-FDH) technique is used to estimate necessity effects, while statistical significance is assessed through permutation testing.

Necessity effects are evaluated using effect size (*d*), with values below 0,10 indicating weak effects, values between 0,10 and 0,30 indicating moderate effects, and values above 0,30 indicating large effects (Dul, 2016). While the full NCA results are retained in dissertation's annexes for completeness, the main interpretation emphasizes at least medium effects due to their greater practical relevance. For further interpretation of statistically significant necessity effects, bottleneck analysis is conducted to determine minimum levels of necessary conditions to achieve different levels of the outcome (repurchase).

In summary, PLS-SEM was selected because it provides a framework that accommodates complex causal structures and multiple construct measurement types, and allows for reliable estimation and testing of direct, indirect, and moderating effects. Therefore, this method offers a rigorous yet adaptable foundation for empirically testing the proposed conceptual model of customer experience and its impact on loyalty-related outcomes in a B2B digital service context. To complement the sufficiency-based logic of PLS-SEM, additionally employed NCA was used to identify minimum enabling conditions associated with higher repurchase outcomes.

2.3. Survey instrument development

2.3.1. Construct measurement items

Based on thorough literature review, a questionnaire was developed using items that measure the constructs in the structural model. Each of the constructs in the structural model was measured through items which reflect or form a measured construct. The choice of reflective or formative measurement mode for constructs follows decision rules by Jarvis et al. (2003). It is accepted that if prior research does not offer measurement for a construct, a researcher should create their own measurement of the construct (Hair et al., 2006). Thus, most measurement items from scientific literature were either adapted to fit the context of digital B2B services or, if items were already fit for use, were directly applied in empirical research of this dissertation. New measurement items were developed for constructs with limited research on existing measures. The sources and adaptations of the items for each construct are described below. The final wording of the items was established only after the expert review procedure. The complete set of measurement items is presented in Section 2.3.2. (see Table 16).

To measure cognitive and affective dimensions of customer experience, items that correspond to the definition of customer experience as it is defined in this dissertation were selected. Cognitive dimension refers to customers' cognitive responses to a service, shaping their perception of its value, usefulness, learning experience, and quality aspects, while the affective dimension involves the feelings and emotions experienced during service delivery, which translate into affective assessment of the service. Thus, items from Barbu et al. (2021) were used for the measurement of cognitive and affective customer experience.

While it is common in research to combine conative and behavioral loyalty dimensions into a single construct and to measure it through the lens of intentionality (Yang & Peterson, 2004), this dissertation puts an important focus on analyzing the interrelationships between different dimensions of both customer experience and loyalty. Therefore, it was chosen to measure behavioral loyalty using adapted items from X. Han et al. (2008), which measure not only the intentions of loyal behavior, but evaluate whether the customer's behavior itself shows signs of loyalty (for example, consciously spending more or using particular services more often than those offered by competitors). As discussed in Section 1.3.1. of this dissertation, cognitive loyalty manifests through customer's cognitive evaluation of costs and benefits, including the assessment of quality, value, etc. Affective loyalty involves customer's feelings and emotional connection with a company, brand or a service. Finally, conative loyalty stems from conscious intentions of the customer to start or continue using certain services. Therefore, grounded in this logic, for the measurement of Cognitive, Affective, and Conative Loyalty, items were adapted from A. Lee et al. (2017) and X. Han et al. (2008). Since the items in A. Lee et al. (2017) are oriented towards restaurant businesses and those in X. Han et al. (2008) towards hotels, the items were adapted to fit B2B digital services

by rewording the statements, but maintaining the same meaning and sentiment. For example, "The XYZ restaurant provides me superior service quality as compared to other restaurant brands" was reworded to "The XYZ provides superior service quality as compared to other firms", or the item "Compared with other hotels in this city, I have stayed more at this hotel" was reworded to "Compared with other providers in this service category, we have done business mostly with XYZ". The same logic was applied to all of the items across loyalty dimensions.

Items by Roy et al. (2019) were used to measure Perceived Value, Customer Satisfaction, and Word-of-mouth. The only change made was replacing "Firm X" with "XYZ" for consistency throughout the questionnaire. As Flint et al. (2002) argues, perceived value refers to customer's assessment of a service's cost and benefits ratio. In line with the definition of perceived value, items offered by Roy et al. (2019) focus on comparing the value of the service in terms of price and quality with other service providers. Based on expectation confirmation theory (Oliver, 1977), customer satisfaction reflects how service meets or exceeds customer's expectations, e.g., in terms of quality, reliability or attitude towards a company and its offerings post receiving a service. Therefore, items that are measured relative to the extent to which services meet the customer's expectations (e.g. "services of Firm X are excellent") are suitable for measuring customer satisfaction. As Buttle (1998) argues, Word-of-mouth is a non-commercial communication between individuals, pertaining to a company, brand or a service, often oriented towards sharing either positive or negative attitudes or referrals. Therefore, items for measurement of Word-of-Mouth fit its definition, as they measure customer's determination to spread positive message about a company and its services.

Trust was measured using the items adapted from Gurviez & Korchia (2002), since they correspond to the widely accepted understanding of what trust is and what are the attributes of a trustworthy company. As argued by Mayer et al. (1995), trust is a customer's willingness to rely on a company to provide services that satisfy important needs, even without the ability to monitor or control the company's actions, while recognizing the associated risks. To be seen as trustworthy, service provider should show ability (having the skillset and competence to provide the service), benevolence (company's employees' favorable intentions towards the customer), and integrity (company's honesty and reliability). Measurement items offered by Gurviez & Korchia (2002) capture the customer's assessment of service provider's ability, benevolence, and integrity, therefore the items were deemed fit for the measurement of Trust, with the change of wording from "products" to "services" and "brand" to "XYZ" to ensure wording consistency with other items in the questionnaire. In addition, "The terms of buying products from this brand is a guarantee" was adapted to "XYZ is committed to providing services on agreed conditions" for easier readability by using more explanatory wording.

Brand Equity measurement items were adapted from Yoo & Donthu (2001). Based on widely accepted conceptualizations of brand equity proposed by Aaker (1996) and Keller (1993), Yoo & Donthu (2001) developed two scales to measure brand equity. First one, "multidimensional brand equity" scale (or MBE) is, as the name implies,

multidimensional ten-item scale which incorporates constructs such as brand loyalty, perceived quality, brand awareness, and brand associations. The second one, "overall brand equity" (or OBE) is a four-item scale, measuring brand equity more holistically. Nevertheless, both scales are highly correlated, converging on the same construct, which is brand equity. Because of this, researchers are free to choose which scale to use according to their goals of using these scales. To capture specific influences between constructs where high granularity is required, i.e., focusing on brand equity as one of the main constructs of a study and where the influence on its dimensions needs to be detected, MBE scale is better suited. However, when brand equity is not the main focus of a study but participates as one of the contributory constructs in a larger model, a unidimensional OBE scale may be more efficient. Thus, since both scales measure the same construct and the use of unidimensional measurement of brand equity is more efficient in this empirical study, OBE measurement scale was selected. Only a minor change was made to the measurement items, which was changing the marking "X" to "XYZ" for consistency across the questionnaire.

Aligned with the mindset of Service-Dominant Logic discussed in Section 1.1.2. of this dissertation, Value-in-use was measured using items from Woo et al. (2019). Only a slight modification to the items were made to ensure consistency across the questionnaire, which was changing of the word "company" to "XYZ". The items measure three first-order constructs: experience, personalization, and relationship, which together form the second-order construct "value-in-use". All three dimensions are aligned with Service-Dominant Logic's foundational premises (see Table 4, Table 16). Experience dimension highlights the value of experience, use value, benefits, and relates to the foundational premises FP4, FP6, and FP10. It is measured whether, through the use of company's services, the customer's operant resources (intangibles, such as knowledge or skills) are enriched to solve problems, thus realizing benefits (FP4). Also, the customer is a co-creator of value, the experience dimension assesses whether the customer was able to contribute to the service process during the provision of the service, thus contributing to value creation (FP6). In addition, it captures the customer's evaluation of their experiences during service provisioning, since the value of the service is always determined by the beneficiary (FP10). Further, personalization dimension underlines customer orientation and relates to foundational premises FP7, FP8, and FP10. Different customers involve themselves differently in the process of service provisioning, thus they themselves participate in the creation of value propositions service providers could offer them (FP7). Also, it is measured if the services in question are beneficiary oriented and if they serve individual needs of different customers (FP8). Lastly, depending on how the user participated, contributed or was otherwise involved in the realization of value from the service, the benefits, value, or fun are determined by themselves, i.e., by the beneficiary (FP10). Finally, relationship dimension highlights engagement and interdependence, and relates to foundational premises FP6 and FP8. Value is co-created by multiple actors and manifests through customer's active use of services, therefore customer's engagement with the service leads to value enhancement, i.e., realizing increasingly greater benefits over time (FP6), and value

enrichment, i.e., provider integrates feedback from the customer's usage experience to improve service quality (FP6). Underlining relationship dimension and measuring connectedness of customer with the service provider, it is also assessed whether the provider truly reflects and relates to the needs of a customer, thus demonstrating customer-oriented and relational view (FP8).

Emotional Attachment to a Brand was measured using items from Gam et al. (2023). As Thomson et al. (2005) argue, this attachment is a bond that forms between a customer and a specific brand, including feelings of affection, passion, and a sense of connection. Using the aforementioned items, affection is assessed directly (e.g., "I have a lot of affection for this brand") and indirectly (e.g., "I find some comfort in buying or owning this brand"). Passion is addressed through items assessing if customer feels joy purchasing the brand, and attraction to the brand overall. Sense of connection is measured through customer's sense of relatedness to the brand. Based on association with the definition, the items were found to be appropriate for the measurement of Emotional Attachment to a Brand.

Items used for measuring Convenience were developed based on dimensions of service convenience model SERVCON (Seiders et al., 2007). SERVCON can be used as both a formative, full scale, and a reflective, reduced-item scale to measure service convenience. Reduced scale offers items along five dimensions: decision, access, transaction, benefit, and post-benefit. Full scale further adds several dimensions: satisfaction, shopping enjoyment, product category involvement, and behavioral intentions. The reduced-item, five-dimension scale should be used in studies where service convenience "plays a supporting rather than featured role" (Seiders et al., 2007, p. 154). The reduced-item scale is also proven to assess the service convenience construct with the results consistent with the full scale. Therefore, since convenience is a supporting construct in this dissertation, the reduced-item, five-dimensional scale of service convenience was selected. Since the original scale is prepared for use in retail environment, the items could not have been applied directly in this dissertation, by their original wording. Taking the five dimensions and semantic aspects of the original five items, adapted versions of items that fit the context of digital B2B services were developed. Decision convenience dimension measures easiness of making buying decision on the information that is available. Thus, the adapted item measures if the service provider shares clear information, simplifying decision making process. Access convenience dimension in Seiders et al. (2007) offers assessment of convenience to reach a retail store, including locations and working hours. Since digital services do not have the attribute of physical location, the corresponding adapted item measures how accessible is service support when needed. This measure stimulates the respondent to think about similar accessibility features to the original items – working hours, quickness to reach the support channel or person, point of contact/location (e.g., over the phone, website, or dedicated service desk, etc.). Benefit convenience dimension measures the quickness of realized benefits. While the scale focused on retail stores measures how quickly and effortlessly a customer can find the merchandise, the adapted item measures how quickly the business customer can see benefits stemming from use

of a service. Transaction convenience dimension assesses if the payment takes little time, and the purchase can be concluded quickly. Therefore, the adapted item measures how convenient it is for a business customer to continue (repurchase), change, or cancel the service as needed. Finally, the post-benefit dimension addresses the easiness of interactions with the provider after the purchase. For example, the original scale assesses how easy and quick can a customer do a product return or exchange. Thus, the adapted item measures whether it is simple and quick to arrange a modification of the service after the service is purchased. Together, the adapted five items cover five dimensions of service convenience and reflect the construct Convenience which is used in this empirical study.

Items offered by Jang et al. (2022) were used to measure Customer Knowledge Sharing and Firm's Organizational Agility. The items assess whether customers give feedback on their experiences with existing and newly acquired services and whether they suggest new services. Since customer knowledge is the customer's feedback and suggestions about services to the provider and to other customers, items offered by Jang et al. (2022) did not need major modifications except slight corrections of grammar and changing "the firm" to "XYZ" for questionnaire consistency.

Firm's Organizational Agility items were adapted from Jang et al. (2022). As Sambamurthy et al. (2003) argue, organizational agility refers to organization's ability to quickly respond and adapt to unexpected market changes. To measure this ability, items from Jang et al. (2022) assess if, in the eyes of the customer, an organization is able to rapidly respond to changing market and customer needs, implement appropriate decisions, and demonstrate an attitude of treating market changes as opportunities. The items needed only slight adaptation, for example the inclusion of "XYZ is able to…" (XYZ being a placeholder code for a company's name), where appropriate, to make the items easier to understand. Also, it makes it clearer that the respondent is asked to evaluate a particular organization rather than any other actor participating in service provisioning.

For the measurement of Switching Costs, items from Lam et al. (2004) were adapted. Since switching costs refer to customer's incurred expenses (such as money, time, physical and psychological effort) when changing service providers (Dick & Basu, 1994; Heide & Weiss, 1995), items offered by Lam et al. (2004) were deemed fit for use in this empirical study. The items measure if in case of switching service providers the customer would incur switching costs related to money, effort and time. In addition, it is assessed if there would be both decision-making and technological barriers in case of making the switch. To adapt the items for the empirical study in this dissertation, slight wording changes were made. Since the original items are referring to switching "from DPS to another courier firm", they were changed to read "from XYZ to another service provider", where XYZ marks a company's name.

Items for the measurement of Habit regarding decision automaticity and integration in an organization's decision-making were slightly adapted from Limayem et al. (2007) to include the words "XYZ services" (XYZ marking a company's name) instead of original "WWW" (World Wide Web). As (Verplanken & Aarts, 1999, p. 104) argue,

habits are "learned sequences of acts that have become automatic responses to specific cues, and are functional in obtaining certain goals or end-states". That is, for example, through continued/repetitive use of a certain company's services, it is possible to develop a habit in the organization, making the decision to continue to use it automatic (i.e. "it's the way things are done in the organization"), without much consideration during the decision-making. In B2B service research, studying habit formation is a complicated task due to the complexity of decision-making and focus on rationality (Gomes et al., 2016). In addition, longitudinal data is preferred to capture habit development over time (Gardner et al., 2022). However, since the presence and strength of a construct are the parameters sought to be measured in this empirical investigation, respondents' self-reports were sufficient to capture relevant data.

Similar to Habit measurement, measuring Repurchase behavior (in contrast to Repurchase Intentions) is also challenging due to most studies focusing on intentions rather than observed behaviors. Since this empirical investigation is focused on the presence of Repurchase behavior to be able to link it with other constructs rather than on repurchase metrics (such as frequency, spending increase over time, etc.), self-reports are sufficient to obtain relevant data. However, no established scale to measure Repurchase as self-reported behavior was found in scientific literature due to aforementioned focus of the scholars on repurchase intentions. Hence, items for the measurement of Repurchase were offered by the author of this dissertation by adapting the items from Molinari et al. (2008) in such way that they would measure actual behavior rather than intentions. For consistency in the measurement of both repurchase intentions and behavior, the same items from Molinari et al. (2008) indeed were also adapted for measurement of Repurchase Intentions, as they were originally designed to measure intentions. Molinari et al. (2008) proposed four items to measure repurchase intentions, but only three of them were used in this study when measuring both repurchase intentions and behavior. The decision was made not to use the item "I am likely to maintain the percentage-of-business given to this supplier". This decision was made because the "percentage-of-business" is specific to financial transactions and involves quantifiable data that may lead to confounding of intentions with actual repurchase behavior.

2.3.2. Expert review of construct measurement items

In general, and especially PLS-SEM research, measurement scales play an important role in the final outcome of the study, i.e., the findings based on the information gathered from respondents. It is therefore crucial that the scales used to measure the constructs are clearly understandable to the respondents and measure exactly the constructs they are supposed to measure. Therefore, in addition to previously discussed theoretical grounding of measurement items, an expert review was carried out to verify that the measurement items are suitable for use in a full-scale empirical study.

Three experts in business management were selected using a purposeful sampling method and anonymously coded as E1, E2, and E3. The experts were chosen based on

their extensive experience in strategic and governance-related roles within B2B organizations and their involvement in decision-making related to digital services. This ensured that the expert review included managerial perspectives from B2B digital service contexts, focusing on the practical applicability and contextual relevance of measurement items adapted from the scientific literature. The professional backgrounds of the experts are presented in Table 15.

Table 15. Professional characteristics of experts.

Expert code	Highest academic qualifications	Primary area of expertise	Current professional role	Years of professional experience
E1	MSc; Executive MBA	Corporate asset management in B2B contexts	Founder & CEO; Board member	20 years
E2	Executive MBA	Strategic management in B2B digital services	CEO	25 years
E3	MSc; Executive MBA	Corporate governance in B2B digital organizations	Founder; Board member	33 years

Source: created by the author.

The expert review was conducted via an online form, presenting constructs along with their definitions and measurement items. The form was designed to assess expert agreement on whether the measurement items accurately reflected the corresponding constructs. At the end of each section, experts could provide suggestions for refining the measurement items.

Based on the experts' suggestions, the survey items were revised and finalized accordingly. All measurement items for the constructs used in this empirical investigation are presented in Table 16.

Table 16. Measurement items for constructs used in PLS-SEM model.

Constructs	Item codes	Items	References
Affective Customer Experience	AFFCX1	Using XYZ makes me feel good	(Barbu et al., 2021)
	AFFCX2	Using XYZ makes me feel optimistic	
	AFFCX3	Using XYZ makes me feel enthusiastic	
Cognitive Customer Experience	COGCX1	The information obtained from XYZ is useful	
	COGCX2	I learned a lot from using XYZ	
	COGCX3	The information obtained from XYZ brings interesting ideas to mind	
Cognitive Loyalty	COGLOY1	The XYZ provides superior service quality as compared to other firms	(A. Lee et al., 2017)
	COGLOY2	No other company provides better services than XYZ	
	COGLOY3	I believe XYZ provides more benefits than other service providers in the same category	
	COGLOY4	Overall, service quality of XYZ was excellent compared to other providers	
Affective Loyalty	AFFLOY1	I love doing business with XYZ	
	AFFLOY2	I feel better when I do business with XYZ	
	AFFLOY3	I like XYZ more than other similar service providers	
Conative Loyalty	CONLOY1	I intend to continue doing business with XYZ	
	CONLOY2	I consider the XYZ as my first choice	
	CONLOY3	I am strongly willing to purchase again from the XYZ	
	CONLOY4	I would like to recommend the XYZ to my close friends	
Behavioral Loyalty	BEHLOY1	When my company requires this specific service, we consistently partner with XYZ	(X. Han et al., 2008)
	BEHLOY2	Compared with other providers, we spent more money with XYZ	
	BEHLOY3	Compared with other providers in this service category, we have done business mostly with XYZ	
	BEHLOY4	Compared with other providers in this category, we used a larger number of the services offered by XYZ	

Constructs	Item codes	Items	References
Repurchase Intentions	REPINT1	I will do more business with this provider in the next few years	(Molinari et al., 2008)
	REPINT2	I expect the relationship with this provider to last a long time	
	REPINT3	I would continue doing business with this provider even if prices increased somewhat	
Repurchase	REP1	I did business with this provider more than once in the last few years	
	REP2	The relationship with this provider lasts for some time now	
	REP3	I repeatedly do business with this provider regardless of service price fluctuations	
Perceived Value	PERCVAL1	Compared to other firms, XYZ provides the best value	(Roy et al., 2019)
	PERCVAL2	XYZ charges a reasonable price	
	PERCVAL3	XYZ provides better services at a competitive price	
	PERCVAL4	XYZ provides better quality for the price	
Customer Satisfaction	SAT1	Services of XYZ is of superior quality	
	SAT2	Services of XYZ are excellent	
	SAT3	Services of XYZ are done right the first time	
Word-of-Mouth	WOM1	I will highly recommend XYZ to others	
	WOM2	I will say positive things about XYZ to others	
	WOM3	I will encourage others to use services of XYZ	
	WOM4	I will refer other companies to XYZ	
Trust	TRUST1	XYZ's services give me security	(Gurviez & Korchia, 2002)
	TRUST2	I trust the quality of XYZ's services	
	TRUST3	XYZ is committed to providing services on agreed conditions	
	TRUST4	XYZ is sincere with its customers	
	TRUST5	XYZ is honest with its customers	
	TRUST6	XYZ shows interest in its customers	
	TRUST7	I think XYZ renews its services to take into account advances in research	
	TRUST8	I believe that XYZ is continually seeking to improve its responses to customer needs	

Constructs		Item codes	Items	References
Brand Equity		BREQ1	It makes sense to buy XYZ instead of any other brand, even if they are the same	(Yoo & Donthu, 2001)
		BREQ2	Even if another brand has the same features as XYZ, I would prefer to buy XYZ	
		BREQ3	If there is another brand as good as XYZ, I prefer to buy XYZ	
		BREQ4	If another brand is not different from XYZ in any way, it seems smarter to purchase XYZ	
Value-in-use	Experience	VIUEXP1	XYZ provides a memorable experience for me	(Woo et al., 2019)
		VIUEXP2	XYZ's services stimulate my ability to solve problems	
		VIUEXP3	It was possible for a customer to improve the process by experimenting and trying new things	
	Personal-ization	VIUPER1	The benefit, value or fun from the service provisioning process depended on the user and the usage scenario	
		VIUPER2	XYZ tries to serve the individual needs of each of its customers	
		VIUPER3	Different customers, depending on their taste, choice or knowledge, can involve themselves differently in the process	
	Relation-ship	VIUREL1	By using the XYZ's services, I feel connected to XYZ	
		VIUREL2	By using the XYZ's services, XYZ offers even greater benefits to me	
		VIUREL3	By using the XYZ's services, XYZ provides higher quality services to me	
Emotional Attachment to a Brand		EMATBR1	I have a lot of affection for this brand	(Gam et al., 2023)
		EMATBR2	The purchase of this brand gives me a lot of joy, pleasure	
		EMATBR3	I find some comfort in buying or owning this brand	
		EMATBR4	I am very related to this brand	
		EMATBR5	I am very attracted to this brand	
Habit		HAB1	Using the XYZ services has become automatic for me	(Limayem et al., 2007)
		HAB2	Using the XYZ services is natural to me	
		HAB3	When faced with a particular task, using the XYZ services is an obvious choice for me	

Convenience	CONV1	XYZ provides clear information, simplifying our decision-making process	(Seiders et al., 2007)
	CONV2	XYZ provides service support when needed	
	CONV3	Our company can quickly see intended benefits from using XYZ services	
	CONV4	It is convenient for our company to continue (repurchase), change or cancel the service as needed	
	CONV5	After the service is purchased, XYZ allows for arranging the service modifications quickly and simply	
Customer Knowledge Sharing	CKS1	I share my experiences with the services with XYZ and with other customers	(Jang et al., 2022)
	CKS2	I provide feedback to XYZ about their new services	
	CKS3	I provide suggestions to XYZ for developing new services	
Firm's Organizational Agility	FOA1	XYZ is able to rapidly respond to market/ customers' needs	
	FOA2	XYZ is quick to make and implement appropriate decisions	
	FOA3	XYZ treats market-related changes and apparent chaos as opportunities	
Switching Costs	SWC1	It would cost my company a lot of money to switch from XYZ to another service provider	(Lam et al., 2004)
	SWC2	It would take my company a lot of effort to switch from XYZ to another service provider	
	SWC3	It would take my company a lot of time to switch from XYZ to another service provider	
	SWC4	If my company changed from XYZ to another company, some new technological problems would arise	
	SWC5	My company will feel uncertain if we have to choose a new service provider	

Source: compiled by the author.

The finalized measurement items were used to operationalize the constructs included in the proposed PLS-SEM model and were applied in the empirical investigation to assess both the measurement and structural aspects of the model.

2.4. Specification of the PLS-SEM research model

Combining the conceptual model presented in Figure 10, the construct relationship hypotheses presented in Section 1.3.2. and the construct measurement items presented in Table 16, a PLS-SEM model used for the empirical investigation is presented in Figure 11.

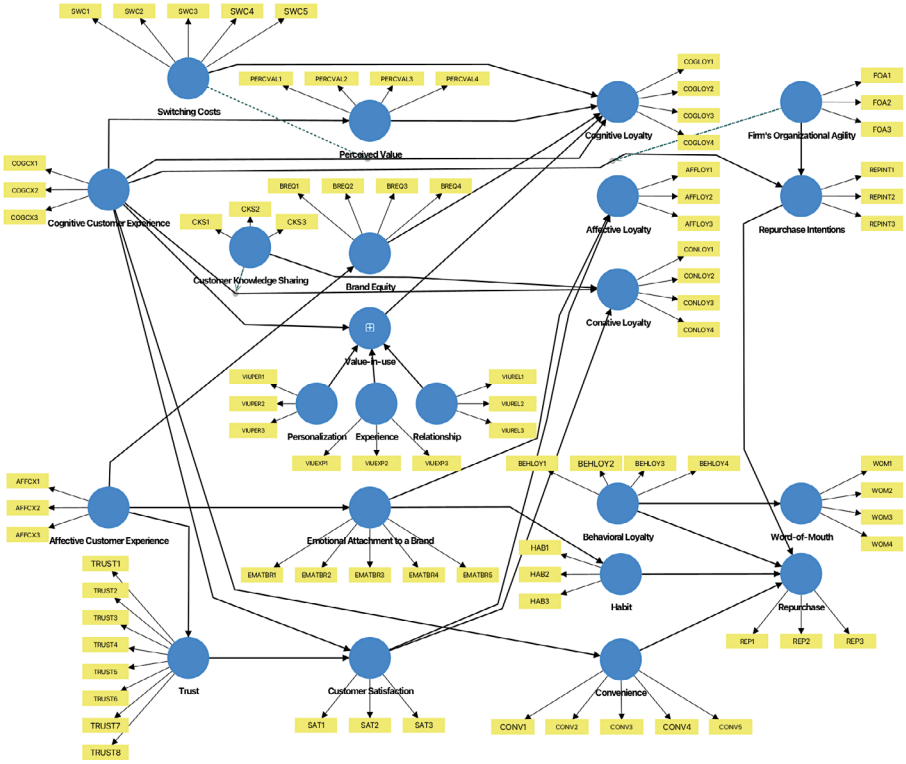


Figure 11. PLS-SEM model of customer experience-loyalty relationship in B2B services.

Source: created by the author using SmartPLS 4 software.

The PLS-SEM model presented in Figure 11 contains latent constructs which are marked by blue circles (e.g., Cognitive Customer Experience) and their measurement items marked by yellow rectangles (e.g., COGCX1, COGCX2, COGCX3). Arrows pointing from latent constructs to measurement items indicate that the latent construct is measured in reflective mode (e.g., Trust and its measurement items), while arrows pointing from measurement items to the latent construct indicates a formative measurement mode (e.g., Value-in-use and its first-order constructs). Arrows pointing from one latent construct to another indicates a direction of influence between

constructs and make up the structural model. When three or more latent constructs are connected in series, the constructs in between are considered to mediate the relationship between the constructs they connect. Finally, dashed arrows pointing from a latent construct to a link itself between two constructs indicate moderating effect on their relationship.

The presented PLS-SEM model serves as the analytical framework for the empirical investigation. The analysis is carried out in two-step approach. First, the measurement model is assessed to ensure consistency and accuracy of measurement items prior to the assessment of structural model. Second, the structural model is assessed to test the hypothesized relationships. This sequential evaluation allows for a thorough analysis of the proposed conceptual model and ensures that the relationships between the mechanisms linking customer experience with its outcomes are based on reliable and valid measurement items.

2.5. Sampling and data collection

The target population of this investigation consisted of individuals who make or influence buying decisions in their organizations related to digital or digitally enabled B2B services in the European Economic Area. The population is defined in professional terms but cannot be counted, as no framework for calculating population for such sample characteristics is available. The sample size was calculated using the statistical power method, which was chosen based on the analytical objectives and the purposeful sampling method. Probabilistic population estimation methods are not directly applicable in such studies, since there is no available sampling framework to rely on, thus it is not possible to specify sampling probabilities.

In line with the latest methodological recommendations related to PLS-SEM, sample size was calculated using power criteria rather than the commonly used "10-times rule". The 10-times rule is heuristic, as it suggests calculation of sample size by multiplying the number of paths to the latent variable that has them most by 10, i.e., in this empirical investigation, that would be value-in-use or cognitive loyalty, which have 4 direct incoming paths - multiplied by 10 would suggest that a sample size of 40 would be sufficient for the study. Such calculation ignores other characteristics of the study – the model's complexity, the anticipated effect sizes, etc. Thus, the calculation included an inverse square root method proposed by Kock & Hadaya (2018), which was developed considering the shortcomings of the 10-times rule. The a priori minimum theoretically meaningful effect size was set as a standardized path coefficient $\beta = 0{,}15$. This threshold reflects a conservative assumption commonly used in the social sciences and is consistent with Cohen's (1988) discussion of effect sizes close to the lower limit of practical significance. Assuming a two-tailed significance level of $\alpha = 0{,}05$ and a desired statistical power of at least 0,80, the minimum required sample size using the inverse square root method is approximately 350 observations.

The empirical study was carried out by collecting the data from $\boldsymbol{n = 386}$ respondents, exceeding this requirement and providing sufficient power to detect even

relatively weak structural relationships. The use of purposive sampling ensured the substantive relevance of the data and did not compromise the validity of the power-based assessment.

The data were collected between April 14th and September 28th in 2025, using the Prolific research platform, with the questionnaire administered through Qualtrics survey platform. The Prolific platform is increasingly used in empirical research in the social sciences and management, with methodological studies comparing online recruitment platforms indicating that the data obtained from Prolific is of similar quality to data collected using other recognized online tools, especially in terms of respondent attention and response reliability (Palan & Schitter, 2018; Peer et al., 2017, 2022). Overall, reviews of research practices indicate a significant shift toward online recruitment platforms, as studies relying exclusively on such platforms increasingly surpass those using traditional recruitment methods in leading academic journals (Goodman & Paolacci, 2017; Tomczak et al., 2023). The use of Prolific in this study reflects this broader methodological shift rather than the advantages of the platform.

The selection was based on a purposive, role-based logic. Eligible respondents had to reside in the European Economic Area, be fluent in English, and work full-time or part-time in for-profit B2B or mixed (B2B/B2C) organizations. In addition, and most importantly, participants had to be responsible for decision-making in at least one relevant functional area, such as business strategy, finance, operations, marketing, customer management, research and development, or supply chain management. These criteria were necessary to ensure that the respondent profile was consistent with the study objectives. In B2B studies, where access to decision-makers within organizations is often limited, selection based on role is a common and methodologically sound approach (Cabanelas et al., 2025).

To improve data quality, only respondents with a confirmation rate of 99-100% on the Prolific platform were allowed to participate. The confirmation rate reflects the proportion of a participant's previous responses that have been confirmed by researchers and is most often used as an indicator of the reliability and attentiveness of responses when collecting data online. Although targeted selection limits the possibilities for statistical generalization, this limitation follows from the context-specific, purposive sampling design of the study. Therefore, the results of the study should be considered analytically informative for the context under investigation, rather than representative of all B2B decision-makers.

The survey was conducted online using Qualtrics web-based survey platform. Respondents accessed the questionnaire via anonymous link and were first presented with an introduction presenting details of the study. Respondent eligibility was verified through screening questions that confirmed the respondents' involvement in decision-making regarding an organization's services and confirming the digital nature of the relevant services. The questionnaire was divided into thematic blocks corresponding to the main constructs of the study, including customer experience, loyalty, repurchase intentions, etc. All measurement items were measured using a 5-point Likert scale. To encourage respondent engagement, participants were asked to enter the name of the

company where they make service-related decisions, either real or fictional. This information was used only for dynamic question adaptation in the survey interface and was not treated as analytical data (e.g., replacing the "XYZ" in questions such as "I consider the XYZ as my first choice").

In total, the questionnaire consisted of 83 Likert scale questions, excluding screening and informed consent questions. The full research instrument, including the introductory statement, informed consent, screening questions and all measurement items, is provided in Annex 1. The measurement items were presented in six thematic blocks, with the items of each construct displayed together in a separate matrix question. Presentation of multiple items on the same screen was chosen to reduce the questionnaire completion time (Toepoel et al., 2009). The median questionnaire completion time was 7 minutes and 39 seconds, with most respondents taking between 6 and 11 minutes to complete the questionnaire. This is in line with generally recommended limits for online surveys and helps to reduce the risk of respondent fatigue (Revilla & Ochoa, 2017). Response times were checked for speeding according to guidelines of Greszki et al. (2015) and no such cases were identified. Overall, the sample size and survey structure reflect a conscious methodological balance between analytical precision and practical constraints associated with researching a narrowly defined group of B2B digital service decision-makers.

2.6. Ethical considerations

The empirical investigation was carried out in accordance with the established principles of ethics in survey-based research in social sciences, with particular attention to voluntariness and anonymity. Since the study involved individuals who make decisions regarding digital B2B services in their organizations, additional precautions were taken to ensure that participation would not pose personal, professional, or organizational risks to the respondents. The study was assessed by Research Ethics Compliance Committee of Mykolas Romeris University, which confirmed that the study complies with the applicable research ethics principles and could be conducted without additional amendments (decision No. 10-563, 23rd December 2025).

The survey was asynchronously carried out online via Qualtrics survey platform, allowing respondents to complete the survey at a time and place convenient for them. This method of data collection reduced potential pressure associated with time constraints or supervised participation and increased respondent autonomy. The online format also reduced the likelihood of socially desirable bias that can occur in surveys conducted by an interviewer, particularly when it comes to organizational practices or decision-making processes.

From the outset, the communication with respondents emphasized the study as voluntary. Prior to accessing the questionnaire's questions that gather data for the empirical investigation, the respondents were presented with clear introductory statement outlining academic purpose of the study, voluntariness of participation, and general conditions of participation. The introductory message clearly stated that the

participation in the study is voluntary, and that the respondents could withdraw from the survey at any time and any stage of the survey without any negative consequences. Also, the details and contacts of the researcher was presented for the respondents to address any concerns or questions. No questions were included that would allow respondents to be identified directly or indirectly, as no data was collected regarding respondents' age, gender, job titles, employment length, organizational size, industry or other personal parameters that could be combined to infer the exact individual participating in the study.

The Qualtrics platform offers an option to create a dynamic questionnaire, which means that the information provided by the respondent in one question can be used in the next question. Based on this principle, one question was asked, requesting the name of the company for which the respondent makes decisions regarding its services. The question clearly stated that the name could be fictional or real, and that it was only intended to help the respondent engage more fully in completing the questionnaire, as the generic names "XYZ" or "the company" would be replaced with the word entered by the respondent (i.e., the name of the company providing the service). It was also emphasized that this data would not be analyzed or published. The company names entered by respondents were used solely for the dynamic wording of the questionnaire items and were not exported into the analytical dataset, which contains no personally identifiable information or technical metadata.

Summarizing, no misleading methods were used at any stage of the study, as the purpose of the study, the nature of the questions, and the intended academic use of the data were presented transparently. Respondents were not subjected to sensitive, offensive, or psychologically stressful questions, as all survey questions were related only to professional experience, perceptions, and assessments in the context of an organization. The results were not interpreted individually, as they are presented only in summary form and are used exclusively for academic purposes. Overall, the research procedure was designed to balance methodological rigor and ethical responsibility by protecting anonymity, minimizing respondent burden, and limiting participation to relevant professional contexts, thus complying with widely recognized ethical standards for empirical research in the fields of management and social sciences.

III. EMPIRICAL RESULTS OF CUSTOMER EXPERIENCE MODELLING IN B2B DIGITAL SERVICES

3.1. Preliminary analysis: descriptive statistics and assessment of common method bias

Common method bias (CMB) is a systematic error that may occur when data for multiple variables are collected from the same source or using the same method, consequently increasing the risk of consistently distorting true relationships between variables either positively or negatively. Since the data in this empirical study was collected by respondents filling out a questionnaire which includes all examined variables, the investigation was assessed for CMB risks. Procedural remedies were applied during data collection – participation was anonymous, no identifying information was collected, the survey was completed without the researcher present, and the items were distributed across six thematic blocks. In addition, collinearity statistics were examined. Out of 83 indicators used to measure latent variables, 81 indicators exhibited VIF values below 3,3, with only two indicators slightly exceeding this threshold (3,42 and 3,56), but still well below the upper acceptable limit of 5,0. At the construct level, the collinearity assessment of the structural model returned VIF values ranging from 1,00 to 1,992, (see Annex 3), remaining below the 3,3 threshold for all predictor constructs. These results show no indication of the inflated collinearity that would be expected if a common method factor dominated the responses. It should be noted that these statistics are not equivalent to the full collinearity test proposed by Kock (2015), in which each latent variable is regressed on all remaining latent variables. Accordingly, the available diagnostics do not indicate common method bias, although it cannot be fully excluded.

Further, descriptive statistics were calculated for all observed indicators before conducting the PLS-SEM analysis. The questionnaire item evaluation mean values ranged from 2,997 to 4,358, showing that respondents generally evaluated the measured items positively. The standard deviations around the mean varied between 0,654 and 1,198, indicating an adequate spread of responses and sufficient variability in the dataset. No missing responses were identified, indicating that all questionnaires were complete and could be used without the listwise data deletion.

To assess the distribution of data, skewness values were observed, which ranged from −1,661 to 0,02 (within acceptable limits of -2 to 2), and excess kurtosis values ranged from −1,197 to 4,14 (within acceptable limits of -7 to 7 for PLS-SEM studies). These values show the data was close to normal, though a few indicators (e.g., REP1, excess kurtosis = 4,14) displayed slightly more concentrated responses. However, such deviations were not considered problematic for the selected analytical approach.

In summary, the dataset demonstrated good quality, as the collinearity diagnostics gave no indication of CMB, all responses were complete, the indicators showed sufficient variability and spread, and the data distribution met the requirements for PLS-SEM estimation.

3.2. Measurement model assessment

The evaluation of measurement model ensures that measurement items for constructs in the model are reliable and valid before testing structural relationships based on formulated hypotheses (H1-H16). Such evaluation is achieved by verifying that the observed indicators accurately reflect the corresponding latent constructs. The measurement model was evaluated separately for reflective and formative constructs. Reflective constructs were examined by analyzing indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. In the case of the formative construct in the model, the analysis focused on the significance and relevance of indicator weights and the absence of multicollinearity. The following sections provide a detailed assessment of reflective and formative constructs.

3.2.1. Assessment of reflective constructs

The assessment of the model's reflective constructs starts with analyzing indicator reliability based on outer loadings. The initial results showed that several indicators did not reach the minimum threshold value (>0,708) for their outer loadings (see Table 17). To improve indicator reliability, indicators with low loadings were removed, while observing how each removal affected the remaining loadings within the construct, and if the construct validity was not compromised. For constructs with multiple low-loading indicators, each indicator was individually removed to test how each of their removal affects the remaining loadings.

Table 17. Indicators with low outer loadings.

Indicator	Associated construct	Outer loadings
BEHLOY1	Behavioral Loyalty	0,701
BEHLOY2		0,574
CONV1	Convenience	0,651
CONV2		0,668
CONV4		0,594
CONV5		0,691
SWC1	Switching Costs	-0,363
SWC2		-0,126
SWC3		0,077
SWC4		0,663
SWC5		0,475
PERCVAL2	Perceived Value	0,7
TRUST1	Trust	0,659
TRUST7		0,606
TRUST8		0,686
VIUPER1	Personalization	0,661

Source: author's own elaboration based on SmartPLS 4 output.

For Behavioral Loyalty, removing the lowest-loading indicator BEHLOY2 improved construct's reliability, as well as resulting in acceptable loading for BEHLOY1. For Convenience, the removal of CONV1 and CONV 4 resulted in substantial improvement for both the remaining low-loading indicators, making them exceed the recommended threshold. All indicators for Switching Costs demonstrated the lowest reliability in the model, with some resulting in negative loadings, suggesting they measure different constructs. SWC4 and SWC5 were removed, while SWC1, SWC2, and SWC3 were retained. Although such step resulted in SWC1 and SWC2 exceeding the recommended threshold, SWC3 outer loading was still slightly lower than recommended (see Table 18). The decision was made to keep the SWC3 indicator to ensure the validity of the construct Switching Costs, as SWC1, SWC2, and SWC3 respectively relate to the financial, effort, and time costs, while SWC4 and SWC5 refers to perceived risk and uncertainty. For Personalization and Perceived Value, although their indicators (VIUPER1, and PERCVAL2, respectively) yielded a slightly lower outer loadings than recommended threshold, the indicators were retained. The removal of VIUPER1 would have reduced the construct to only two items, which could undermine its reliability and theoretical coverage. For PERCVAL2, the decision to retain the indicator was made based on an insignificant difference between the obtained loading (0,700) and the recommended threshold (>0,708), which does not meaningfully affect the construct's reliability. For Trust, all low-loading indicators had to be removed, as the removal of any single indicator did not result in improvement for the remaining indicators.

Table 18. Final outer loadings of reflective constructs.

Indicator	Associated construct	Outer loadings
AFFCX1	Affective Customer Experience	0,864
AFFCX2		0,903
AFFCX3		0,864
AFFLOY1	Affective Loyalty	0,873
AFFLOY2		0,869
AFFLOY3		0,844
BEHLOY1	Behavioral Loyalty	0,749
BEHLOY3		0,786
BEHLOY4		0,736
BREQ1	Brand Equity	0,774
BREQ2		0,874
BREQ3		0,895
BREQ4		0,852
CKS1	Customer Knowledge Sharing	0,884
CKS2		0,812
CKS3		0,713

Indicator	Associated construct	Outer loadings
COGCX1	Cognitive Customer Experience	0,776
COGCX2		0,781
COGCX3		0,805
COGLOY1	Cognitive Loyalty	0,847
COGLOY2		0,745
COGLOY3		0,807
COGLOY4		0,88
CONLOY1	Conative Loyalty	0,84
CONLOY2		0,861
CONLOY3		0,856
CONLOY4		0,734
CONV2	Convenience	0,719
CONV3		0,823
CONV5		0,762
EMATBR1	Emotional Attachment to a Brand	0,887
EMATBR2		0,889
EMATBR3		0,864
EMATBR4		0,846
EMATBR5		0,898
FOA1	Firm's Organizational Agility	0,861
FOA2		0,903
FOA3		0,8
HAB1	Habit	0,832
HAB2		0,878
HAB3		0,881
PERCVAL1	Perceived Value	0,813
PERCVAL2		**0,7**
PERCVAL3		0,862
PERCVAL4		0,852
REP1	Repurchase	0,774
REP2		0,823
REP3		0,716
REPINT1	Repurchase Intentions	0,827
REPINT2		0,877
REPINT3		0,734
SAT1	Customer Satisfaction	0,89
SAT2		0,906
SAT3		0,766
SWC1	Switching Costs	0,968
SWC2		0,786
SWC3		**0,617**

Indicator	Associated construct	Outer loadings
TRUST2	Trust	0,719
TRUST3		0,732
TRUST4		0,825
TRUST5		0,814
TRUST6		0,715
VIUEXP1	Experience	0,819
VIUEXP2		0,818
VIUEXP3		0,76
VIUPER1	Personalization	**0,661**
VIUPER2		0,776
VIUPER3		0,804
VIUREL1	Relationship	0,798
VIUREL2		0,886
VIUREL3		0,888
WOM1	Word-of-Mouth	0,91
WOM2		0,89
WOM3		0,906
WOM4		0,818

Source: author's own elaboration based on SmartPLS 4 output.

Table 18 presents the final list of indicators and their outer loadings, confirming indicators are reliable for further assessment of reflective constructs. Three indicators with slightly lower loadings were retained to preserve the related constructs' content validity, as their removal would have reduced the conceptual completeness of the measurement. Overall, indicator loadings exceeded 0,708, with most above 0,80, confirming that the items strongly represent their respective latent constructs. Three retained indicators remained below this threshold: PERCVAL2 (0,700) and VIUPER1 (0,661) fall marginally below it, while SWC3 (0,617) is the lowest retained loading, kept to preserve the effort-related dimension of the Switching Costs construct.

Internal consistency reliability was assessed using Cronbach's alpha (α), composite reliability (ρC), Dijkstra-Henseler's rho (ρA), while convergent validity was evaluated using the average variance extracted (AVE) (see Table 19).

Table 19. Consistency reliability and convergent validity of constructs.

Construct	α	ρA	ρC	AVE
Affective Customer Experience	0,85	0,853	0,909	0,769
Affective Loyalty	0,827	0,829	0,897	0,743
Behavioral Loyalty	**0,633**	**0,632**	0,801	0,573
Brand Equity	0,872	0,884	0,912	0,723
Cognitive Customer Experience	**0,696**	**0,7**	0,83	0,62
Cognitive Loyalty	0,839	0,859	0,892	0,674
Conative Loyalty	0,842	0,848	0,894	0,68
Convenience	**0,657**	**0,671**	0,812	0,592
Customer Knowledge Sharing	0,763	0,925	0,847	0,65
Customer Satisfaction	0,817	0,839	0,891	0,733
Emotional Attachment to a Brand	0,925	0,929	0,943	0,769
Experience	0,718	0,719	0,842	0,64
Firm's Organizational Agility	0,817	0,834	0,891	0,732
Habit	0,831	0,844	0,898	0,747
Perceived Value	0,826	0,852	0,883	0,655
Personalization	**0,607**	**0,617**	0,792	0,562
Relationship	0,82	0,824	0,893	0,737
Repurchase	**0,66**	**0,665**	0,816	0,597
Repurchase Intentions	0,747	0,777	0,855	0,664
Switching Costs	0,854	**0,425**	0,841	0,645
Trust	0,82	0,825	0,874	0,581
Word-of-Mouth	0,904	0,907	0,933	0,777

Note: α = Cronbach's alpha; ρC = composite reliability; ρA = Dijkstra-Henseler's rho; AVE = average variance extracted. Source: author's own elaboration based on SmartPLS 4 output.

The Cronbach's alpha values ranged from 0,607 to 0,925, composite reliability values were well above the recommended threshold of 0,70, ranging from 0,792 to 0,943, and all AVE values exceeded the minimum threshold of 0,50. In PLS-SEM research, Cronbach's alpha values above 0,70 indicate acceptable internal consistency reliability, while values between 0.60 and 0.70 being acceptable when supported by sufficient composite reliability and AVE (Hair et al., 2021), which provide additional evidence of construct reliability and convergent validity. Therefore, since Behavioral Loyalty (α = 0,633), Cognitive Customer Experience (α = 0,696), Convenience (α = 0,657), Repurchase (α = 0,66), and Personalization (α = 0,607) showed Cronbach's alpha values above the minimum acceptable value of 0,60, and their composite reliability and average variance extracted (AVE > 0,50) were well within the acceptable range, they were deemed having appropriate internal consistency and convergent validity.

Although the Dijkstra–Henseler's rho for Switching Costs was below the recommended threshold of 0,70 (ρA = 0,425), both Cronbach's alpha (α = 0,854) and

composite reliability (ρC = 0,841) exceeded the 0,70, with AVE exceeding 0,50. This can be attributed to the multidimensional nature of the construct, capturing distinct cost dimensions (financial, time, and effort). Given acceptable Cronbach's alpha, composite reliability, and AVE values, the construct was retained for further analysis.

Finally, discriminant validity of constructs was assessed through heterotrait-monotrait ratio (HTMT). The HTMT ratio matrix for all construct pairs is provided in Annex 2. All HTMT values were below the threshold of 0,90, confirming satisfactory discriminant validity. Two construct pairs exhibited relatively higher HTMT value, nearing the threshold of 0,90. The correlation between indicators for Trust and Convenience (HTMT = 0,85) lies near the HTMT ratio acceptable boundary. The highest HTMT value was observed between Conative Loyalty and Word-of-Mouth (HTMT = 0,881), indicating the closest empirical relationship among the examined construct pairs while remaining below the established discriminant validity threshold. As none of the HTMT values exceeded 0,90, discriminant validity was considered established for all constructs in the measurement model.

In summary, the measurement model's reflective indicators demonstrated satisfactory reliability and validity. Most outer loadings of indicators were well above 0,70, confirming strong representation of the latent constructs. Three indicators with outer loading slightly below the threshold was retained to ensure their associated constructs' content validity. A few constructs exhibited slightly lower Cronbach's alpha values than the recommended threshold but were deemed consistent and valid based on composite reliability and AVE results. Low Dijkstra-Henseler's rho value was observed for the Switching Costs construct, which suggests the heterogeneity of its indicators, capturing distinct types of switching costs (financial, time, and effort). Nevertheless, all constructs met the recommended thresholds for composite reliability and AVE, indicating satisfactory internal consistency and convergent validity. Furthermore, discriminant validity was confirmed, as none of the HTMT ratios exceeded the threshold of 0,90. The reflective measurement model thus demonstrated satisfactory reliability and validity across all constructs. The following subsection presents the assessment of the measurement model's formative construct.

3.2.2. Assessment of formative constructs

The model of this empirical study includes a Type II reflective-formative higher-order construct, Value-in-use. The assessment of the measurement model's formative constructs comprised the evaluation of convergent validity, indicator collinearity, and the statistical significance and relevance of indicator weights. Redundancy analysis was not deemed necessary in this context, as no single reflective item was available to represent the higher-order construct. The formative higher-order construct Value-in-use is formed by three reflective first-order dimensions (experience, personalization, and relationship), each measured by three reflective indicators. The higher-order formative construct demonstrated satisfactory convergent validity based on the significance and relevance of formative weights, acceptable multicollinearity levels, and

theoretical coherence of its dimensions. The assessment of Value-in-use followed a two-stage approach.

As part of the two-stage approach, the first stage is an assessment of first-order constructs. As shown in Table 20, all indicators showed satisfactory outer loadings, exceeding the desired threshold of 0,708, with the exception of VIUPER1 with a slightly lower outer loading of 0,661.

Table 20. Reliability and convergent validity of first-order constructs.

Indicator	Associated construct	Outer loadings	α	ρA	ρC	AVE
VIUEXP1	Experience	0,819	0,718	0,719	0,842	0,64
VIUEXP2		0,818				
VIUEXP3		0,76				
VIUPER1	Personalization	**0,661**	**0,607**	**0,617**	0,792	0,562
VIUPER2		0,776				
VIUPER3		0,804				
VIUREL1	Relationship	0,798	0,82	0,824	0,893	0,737
VIUREL2		0,886				
VIUREL3		0,888				

Note: α = Cronbach's alpha; ρC = composite reliability; ρA = Dijkstra-Henseler's rho; AVE = average variance extracted. Source: author's own elaboration based on SmartPLS 4 output.

The indicator VIUPER1 was retained for further analysis due to its theoretical relevance and due to the Personalization construct's overall acceptable reliability (α = 0,607; ρC = 0,792) as well as convergent validity (AVE = 0,562). Although the Dijkstra–Henseler's ρA value of 0,617 was below the recommended threshold, the construct's overall reliability and validity were still deemed sufficient for inclusion in further analysis.

Across the three constructs, the composite reliability values exceeded the recommended 0,70 threshold, and AVE values were confirmed to be above 0,50. Additionally, the HTMT ratios (see Annex 2) confirm the discriminant validity has been established among the constructs. The results obtained in the evaluation of the first-order constructs validated that all three constructs reliably measure their respective concepts. The latent variable scores were extracted for use in the subsequent stage, serving as formative indicators for Value-in-use construct.

The second stage of the two-stage approach involves extraction of latent variable scores (LVS) from the first-order constructs to be used as indicators of the second-order formative construct, the Value-in-use. Further, collinearity among the formative indicators is assessed, along with relevance and significance.

The VIF values of the formative indicators were 1,645 (LVS - Experience), 1,527 (LVS - Personalization), and 1,513 (LVS - Relationship), all below the recommended

threshold of 3,3, indicating absence of collinearity issues, and confirming that all indicators capture distinct features of Value-in-use. Before the next step in the analysis, a two-tailed bootstrapping procedure with 10 000 resamples was carried out. As presented in Table 21, the LVS – Personalization indicator exhibited a high p-value (>0,05) and a low t-value (<1,96; α = 0,05), suggesting non-significant contribution to the Value-in-use construct. Both the LVS – Experience and LVS – Relationship indicators showed significant outer weights, thereby establishing significant contribution to the construct.

Table 21. Statistical significance of indicator weights of the Value-in-use construct's formative indicators.

Indicator	Outer weights	STDEV	*t*-value	*p*-value	2,5%	97,5%
LVS - Experience	0,749	0,064	11,785	<0,001	0,615	0,864
LVS - Personalization	-0,007	0,07	0,106	**0,916**	-0,143	0,135
LVS - Relationship	0,379	0,071	5,34	<0,001	0,238	0,514

Note: STDEV – standard deviation; 2,5% and 97,5% - lower and upper bounds of the 95% confidence interval.

Source: author's own elaboration based on SmartPLS 4 output.

While LVS – Personalization indicator's high p-value and low t-value indicate low relative contribution to the construct, the deciding action before removing such indicator is the assessment of its absolute contribution to the construct (see Table 22).

Table 22. Absolute significance of formative indicators.

Indicator	Asociated construct	Outer loadings	*p*-value
LVS - Experience	Value-in-use	0,948	<0,001
LVS - Personalization		0,581	<0,001
LVS - Relationship		0,777	<0,001

Source: author's own elaboration based on SmartPLS 4 output.

Although the LVS – Personalization indicator exhibited a non-significant formative weight, its statistically significant loading (0,581, $p < 0,05$), indicated a meaningful absolute contribution to the formation of the Value-in-use construct. Therefore, the indicator was considered relevant and was retained.

In summary, the formative measurement model of Value-in-use showed acceptable validity and consistency. The Experience and Relationship dimensions made strong and statistically significant contributions to the construct. Meanwhile, Personalization had a non-significant outer weight, but a sufficient and statistically significant outer loading for a formative indicator. In turn, such results indicate that Personalization

does not add much new information beyond what the other dimensions already explain, but it still represents an important part of the Value-in-use construct and therefore was kept in the model for theoretical completeness. As both reflective and formative measurement models' assessments were completed and all necessary adjustments were made, the following section proceeds with the evaluation of the structural model.

3.3. Structural model assessment

After reliability and validity of the measurement model was established, the subsequent step included evaluation of structural model for the analysis of hypothesized relationships among latent constructs. The structural model, otherwise described as the inner model, contains a framework based on theoretical assumptions about causal paths between exogenous (independent) and endogenous (dependent) constructs. Structural model assessment reveals if proposed relationships between the constructs are statistically significant, meaningful from theoretical perspective and can explain variance in endogenous constructs. The assessment of the structural model was conducted through several steps. Before the assessment of relationships between constructs, collinearity was tested to ensure that the predictor constructs were not excessively correlated. Then, the significance and relevance of path coefficients were evaluated using a bootstrapping procedure, which estimates the stability and reliability of the model's results by repeatedly resampling the data. Further, the model's explanatory power was examined through the coefficient of determination (R^2) and effect sizes (f^2), which indicate how much variance each predictor explains in its corresponding endogenous construct. Finally, the model's predictive power was assessed using the Q^2predict statistic, which shows how well the model would predict outcomes if new data was collected from a similar sample.

The structural model's assessment for collinearity among predictor constructs was carried out using the variance inflation factor, VIF (see Annex 3). All VIF values ranged from 1,00 to 1,992, remaining well below the conservative threshold of 3,3 and the commonly accepted upper limit of 5,0. These results confirm that multicollinearity is not a concern in the structural model. Overall, the inner model demonstrates strong statistical stability and meets the collinearity criteria required for valid interpretation of the path coefficients.

3.3.1. Significance and relevance of direct effects

The significance and relevance of path coefficients were estimated using a two-tailed bootstrapping procedure with 10 000 resamples. Table 23 presents the significance and relevance of structural model's path coefficients, indicating *t*- and *p*- statistics, with lower and upper bounds of 95% confidence interval.

Table 23. Significance and relevance of direct effects in structural model.

Structural path	β	STDEV	*t*-value	*p*-value	2,5%	97,5%
Affective Customer Experience -> Brand Equity	0,458	0,046	9,975	<0,001	0,368	0,549
Affective Customer Experience -> Emotional Attachment to a Brand	0,587	0,033	17,547	<0,001	0,519	0,65
Affective Customer Experience -> Trust	0,477	0,046	10,438	<0,001	0,385	0,561
Affective Loyalty -> Conative Loyalty	0,367	0,055	6,62	<0,001	0,254	0,469
Behavioral Loyalty -> Repurchase	0,142	0,065	2,181	0,029	0,021	0,276
Behavioral Loyalty -> Word-of-Mouth	0,344	0,063	5,489	<0,001	0,221	0,465
Brand Equity -> Cognitive Loyalty	0,141	0,048	2,927	0,003	0,045	0,234
Cognitive Customer Experience -> Cognitive Loyalty	0,092	0,051	1,795	**0,073**	**-0,013**	**0,188**
Cognitive Customer Experience -> Conative Loyalty	0,142	0,046	3,113	0,002	0,053	0,232
Cognitive Customer Experience -> Convenience	0,416	0,049	8,519	<0,001	0,32	0,512
Cognitive Customer Experience -> Customer Satisfaction	0,201	0,043	4,657	<0,001	0,116	0,285
Cognitive Customer Experience -> Perceived Value	0,437	0,044	9,967	<0,001	0,351	0,522
Cognitive Customer Experience -> Repurchase Intentions	0,14	0,044	3,201	0,001	0,054	0,226
Cognitive Customer Experience -> Value-in-use	0,559	0,041	13,592	<0,001	0,475	0,636
Cognitive Loyalty -> Affective Loyalty	0,236	0,049	4,79	<0,001	0,138	0,33
Conative Loyalty -> Behavioral Loyalty	0,415	0,059	7,006	<0,001	0,298	0,53
Conative Loyalty -> Repurchase Intentions	0,537	0,056	9,581	<0,001	0,421	0,642
Convenience -> Repurchase	0,049	0,061	0,815	**0,415**	**-0,069**	**0,167**
Customer Knowledge Sharing -> Conative Loyalty	-0,033	0,038	0,864	**0,388**	**-0,1**	**0,051**
Customer Satisfaction -> Affective Loyalty	0,286	0,054	5,309	<0,001	0,182	0,393
Customer Satisfaction -> Conative Loyalty	0,379	0,052	7,346	<0,001	0,275	0,478
Emotional Attachment to a Brand -> Affective Loyalty	0,402	0,042	9,59	<0,001	0,319	0,483

Structural path	β	STDEV	*t*-value	*p*-value	2,5%	97,5%
Emotional Attachment to a Brand -> Habit	0,374	0,049	7,648	<0,001	0,276	0,469
Firm's Organizational Agility -> Repurchase Intentions	0,049	0,046	1,066	**0,286**	**-0,039**	**0,143**
Habit -> Repurchase	0,198	0,059	3,382	0,001	0,083	0,312
Perceived Value -> Cognitive Loyalty	0,344	0,054	6,362	<0,001	0,238	0,449
Repurchase Intentions -> Repurchase	0,247	0,079	3,112	0,002	0,085	0,395
Switching Costs -> Cognitive Loyalty	-0,08	0,075	1,067	**0,286**	**-0,159**	**0,115**
Trust -> Customer Satisfaction	0,575	0,036	15,788	<0,001	0,503	0,645
Value-in-use -> Cognitive Loyalty	0,245	0,053	4,649	<0,001	0,139	0,346

Note: β – path coefficient; STDEV – standard deviation; 2,5% and 97,5% - lower and upper bounds of the 95% confidence interval.

Source: author's own elaboration based on SmartPLS 4 output.

Out of 30 estimated structural paths, 25 were statistically significant ($p < 0,05$). The standardized path coefficients ranged from -0,08 to 0,587, indicating small to large effects depending on the relationship. Additionally, the 95% confidence intervals (CI) were examined to validate the significance results. Consistent with the *p*-values, 25 paths showed confidence intervals that did not include zero, confirming their statistical significance, while 5 paths had intervals crossing zero, indicating non-significance. This consistency between the *p*-values and CIs supports the reliability of the model's estimated relationships.

Among the strongest effects, Affective Customer Experience demonstrated a substantial effect on Emotional Attachment to a Brand (β = 0,587), highlighting the importance of emotionally engaging experiences in fostering emotional bonds. It also had medium effects on Trust (β = 0,477) and Brand Equity (β = 0,458), suggesting that emotional experiences strengthen confidence in the service provider and enhance perceived brand value.

The Cognitive Customer Experience also exhibited several significant relationships, including a large effect on Value-in-use (β = 0,559) and medium effects on Perceived Value (β = 0,437) and Convenience (β = 0,416), confirming that information-rich and problem-solving experiences directly contribute to the perceived benefits of using the particular service provider, and thus facilitates the entire service provision process from the decision-making to post-service interactions. However, the effect of Convenience on Repurchase was found statistically non-significant, with a minimal effect size (β = 0,049), suggesting that a smooth service provision does not significantly increase the likelihood of a repurchase behavior. Smaller yet statistically significant effects of Cognitive Customer Experience were observed on Conative Loyalty (β = 0,142) and Customer Satisfaction (β = 0,201), indicating that cognitive experiences modestly influence customers' intentions of continuing or repeating business

with a particular service provider and has limited influence on overall satisfaction with the provided service since information-rich service does not always guarantee meeting expectations. This is further supported by Cognitive Customer Experience's small effect on Repurchase Intentions (β = 0,14). Meanwhile, the limited and statistically non-significant effect on Cognitive Loyalty (β = 0,092) suggests that informational, problem-solving experiences with B2B digital services do not necessarily elevate the service provider as a superior company in the eyes of the customer.

Trust exhibited a large effect on Customer Satisfaction (β = 0,575), indicating that sincerely and honestly provided service strengthens the likelihood of meeting customer expectations. Customer satisfaction, in turn, had a moderate direct effect on Conative Loyalty (β = 0,379) and a moderate effect on Affective Loyalty (β = 0,286), reinforcing the notion that meeting customers' expectations is one of the key loyalty drivers.

Behavioral loyalty demonstrated a medium effect on Word-of-Mouth (β = 0,344) and a smaller effect on Repurchase (β = 0,142), indicating that customers who consistently partner with a particular service provider are likely to engage in advocacy, but only slightly increase the likelihood of repeated purchasing in the future.

Brand Equity showed a small effect on Cognitive Loyalty (β = 0,141), while Perceived Value had a moderate effect on Cognitive Loyalty (β = 0,344), which suggests that from a B2B customer's perspective, perceived service provider excellence stems primarily from rational evaluations of price-performance ratio rather than brand-related preferences. However, Emotional Attachment to a Brand demonstrated a medium effect on Affective Loyalty (β = 0,402) and Habit (β = 0,374), indicating that customers who feel emotionally connected and derive joy or comfort from the brand are more likely to develop genuine affection toward the service provider and use their services automatically. Habit, in turn, showed a small but significant effect on Repurchase (β = 0,198), while Repurchase Intentions had a slightly stronger effect (β = 0,247) on Repurchase, implying that repeated purchasing results both from habitual use and conscious intentions to maintain an ongoing relationship with the service provider. Finally, Value-in-use had a small (yet close to moderate) and significant effect on Cognitive Loyalty (β = 0,245), suggesting that customers' recognition of service provider superiority is also influenced by the perceived problem-solving capacity and adaptability to the customer, as well as personalized benefits obtained through service use.

The path coefficients of the model's three moderators were tested against the endogenous variable as well to determine if a direct effect exists. Non-significant paths were found between Firm's Organizational Agility and Repurchase Intentions, between Customer Knowledge Sharing and Conative Loyalty, and between Switching Costs and Cognitive Loyalty. Each of these relationships had path coefficients lower than 0,10, which is below the threshold, indicating small effect sizes. These paths were nevertheless retained in the model to allow a complete empirical assessment of the proposed mediating and moderating relationships.

Finally, effect sizes (f^2) were checked to assess how much a predictor construct contributes to the explained variance (R^2) of an endogenous construct when it is included

or excluded from the model (see Annex 4). The comparison of f^2 values and standardized path coefficients confirmed a consistent and coherent pattern across the model, thus f^2 values do not provide substantial additional explanatory insight at this stage. However, f^2 values will be discussed moderation analysis section, where effect sizes are critical for assessing interaction effects. In addition, significance and relevance of moderating effects were omitted from Table 23, as they will be reported in moderation analysis section.

3.3.2. Explanatory and predictive power of the structural model

Explanatory power of the structural model. The explanatory power of the structural model was evaluated to assess the extent to which exogenous constructs account for the variance in endogenous constructs. This assessment is conducted using the coefficient of determination (R^2), which reflects the proportion of variance in each endogenous variable attributable to its respective predictors (see Table 24). In particular, elevated R^2 values indicate greater explanatory power, signifying that the model successfully captures the interrelationships among constructs.

Table 24. Explained variance in model's endogenous constructs.

Construct	R^2	R^2 adjusted
Affective Loyalty	0,597	0,593
Behavioral Loyalty	0,172	0,17
Brand Equity	0,21	0,208
Cognitive Loyalty	0,45	0,441
Conative Loyalty	0,56	0,555
Convenience	0,173	0,171
Customer Satisfaction	0,471	0,468
Emotional Attachment to a Brand	0,345	0,343
Habit	0,14	0,138
Perceived Value	0,191	0,189
Repurchase	0,235	0,227
Repurchase Intentions	0,393	0,387
Trust	0,227	0,225
Value-in-use	0,312	0,31
Word-of-Mouth	0,118	0,116

Source: author's own elaboration based on SmartPLS 4 output.

As presented in Table 24, the adjusted R^2 values were very close to the R^2 values, suggesting that all predictors meaningfully contributed to the explanation of corresponding endogenous constructs and the model is not overfitted to the data. Therefore, model's explanatory power was evaluated based on the values of R^2.

The R^2 values of the endogenous constructs ranged from 0,118 to 0,597. The dimensions of loyalty exhibited the highest explained variance – Affective (R^2 = 0,597), Conative (R^2 = 0,56), and Cognitive Loyalty (R^2 = 0,45), along with Customer Satisfaction (R^2 = 0,471). Value-in-use (R^2 = 0,312), Repurchase Intentions (R^2 = 0,393) and Emotional Attachment to a Brand (R^2 = 0,345) also showed meaningful, albeit weaker, explanatory levels. Repurchase demonstrated comparatively lower level of explained variance, indicating that its predictors included in the model explain only about 24% of the variability of the construct. This suggests that other factors not captured in the model or additional relationships between existing constructs in the model may also play an important role in shaping the repurchase behavior.

Overall, the R^2 values indicate that the model achieves satisfactory explanatory power, particularly related to loyalty dimensions and repurchase intentions, which are central to this empirical study. The results suggest that the model effectively captures the mechanisms through which customer experience drives loyalty in B2B digital service relationships. Meanwhile, weaker explanatory level for repurchase behavior implies that actual behavioral outcomes may be influenced by numerous other factors (contextual, organizational, contractual, etc.). Nevertheless, the model's ability to explain nearly one quarter of repurchasing behavior provides meaningful insights into how customer experience contributes to sustaining an ongoing business partnership.

Predictive power of the structural model. The R^2 values presented above indicate how much variance in each endogenous construct is explained by their predictors within the sample. To assess whether the model has predictive power for out-of-sample observations as well, the PLSpredict procedure was carried out, focusing on key endogenous constructs – Cognitive Loyalty, Affective Loyalty, Conative Loyalty, Behavioral Loyalty, Repurchase Intentions, and Repurchase.

Table 25 presents the PLSpredict summary at the indicator level, showing Q^2predict values, PLS-SEM prediction errors (RMSE), the linear model (LM) benchmark performance for all predicted indicators, and the resulting predictive power of a target construct.

Table 25. Results of PLSpredict procedure with predictive power outcomes.

Indicators	Q^2predict	PLS-SEM RMSE	LM RMSE	Predictive power
AFFLOY1	0,443	**0,622**	0,62	Medium
AFFLOY2	0,427	0,663	0,672	
AFFLOY3	0,431	0,65	0,65	
BEHLOY1	0,131	**0,735**	0,735	Medium
BEHLOY3	0,07	0,83	0,833	
BEHLOY4	0,065	0,801	0,805	
COGLOY1	0,326	0,672	0,687	Medium
COGLOY2	0,133	**0,947**	0,936	
COGLOY3	0,278	0,724	0,727	
COGLOY4	0,374	0,638	0,655	
CONLOY1	0,379	**0,564**	0,553	None
CONLOY2	0,378	**0,701**	0,673	
CONLOY3	0,336	**0,612**	0,602	
CONLOY4	0,373	**0,737**	0,721	
REP1	0,1	0,735	0,747	Medium
REP2	0,141	0,641	0,657	
REP3	0,116	**0,834**	0,796	
REPINT1	0,237	**0,699**	0,694	Low
REPINT2	0,368	**0,653**	0,651	
REPINT3	0,125	0,89	0,9	

Source: author's own elaboration based on SmartPLS 4 output.

Across most indicators of the key endogenous constructs, the PLS-SEM model demonstrated lower RMSE values compared to the LM benchmark, resulting in medium predictive power (see Table 25). The Q^2predict values ranging from 0,1 to 0,443 indicate positive out-of-sample predictive ability across the endogenous constructs. Relative to other constructs in the model, the highest predictive power was observed for Affective Loyalty, exhibiting better PLS-SEM RMSE values compared to LM RMSE, and highest Q^2predict scores. Medium predictive power was established for Cognitive Loyalty, Behavioral Loyalty, and Repurchase. While these constructs show satisfactory Q^2predict values, each construct had at least one indicator which had PLS-SEM RMSE lower than LM benchmark. In contrast, Conative Loyalty demonstrated no predictive power, as none of its indicators produced lower, albeit very close, prediction errors than LM benchmark.

In summary, predictive power assessment shows that the model is capable of moderately predicting key outcomes of B2B digital service customer experience, including cognitive, affective, and behavioral dimensions of loyalty, along with repurchase behavior. These findings reinforce the structural model's applicability for subsequent mediation and moderation analyses by exhibiting not only explanatory, but also predictive capability of key outcomes examined in this empirical investigation.

3.4. Mediation and moderation analysis

Mediation analysis. All quality criteria of the measurement and structural models were met prior to conducting the mediation analysis. The assessment of the measurement model confirmed satisfactory indicator reliability, internal consistency reliability, and convergent and discriminant validity across constructs. Several reflective indicators with low factor loadings were removed to improve indicator reliability. The final loadings exceeded the threshold of 0,708 for the retained items, with the exception of three indicators that remained below the threshold (PERCVAL2 at 0,700; VIUPER1 at 0,661; and SWC3 at 0,617), but were retained due to their theoretical relevance to their respective constructs. Cronbach's alpha values ranged from 0,607 to 0,925, and composite reliability values from 0,792 to 0,943, indicating satisfactory internal consistency. Although some constructs exhibited slightly lower Cronbach's alpha values, their composite reliability and AVE values exceeded recommended thresholds, confirming adequate reliability and convergent validity. Discriminant validity, assessed using the HTMT criterion, was satisfactory for all construct pairs, with values below the 0,90 threshold.

The higher-order construct Value-in-Use was modelled as a Type II reflective-formative construct and was assessed using a two-stage approach. The first stage confirmed that all three reflective first-order constructs demonstrated acceptable reliability, convergent and discriminant validity. The second stage showed that the indicators did not exhibit multicollinearity, and that two out of the three formative indicators made significant contributions to the higher-order construct Value-in-use. Although the weight of one indicator was not statistically significant, it was retained based on its absolute contribution and preservation of the conceptual completeness of the construct. Overall, the Value-in-use construct was validated as a reliable representation of its formative indicators.

The evaluation of the structural model revealed no collinearity issues among predictor constructs (VIF < 3,3), and 25 out of 30 estimated structural paths were statistically significant ($p < 0,05$). The remaining non-significant paths were retained due to their theoretical relevance and potential mediating roles. The model's explanatory power ranged from low to moderate (R^2 values ranged 0,118–0,597), which is considered satisfactory given the high model complexity and the multidimensional nature of customer experience in B2B digital services.

Overall, both measurement and structural models satisfy the quality criteria necessary to proceed with mediation analysis, confirming that the estimated effects are unbiased and suitable for testing indirect effects.

Following the establishment of the measurement and structural model quality criteria, mediation analysis was conducted to examine the mechanisms linking customer experience dimensions with loyalty-related outcomes. The analysis applied a bootstrapping procedure with 10 000 resamples to estimate the significance and magnitude of specific and total indirect effects. This approach ensures that the results are statistically reliable and not dependent on the assumption of normal data distribution, which

is particularly important in complex PLS-SEM models. All indirect effects were evaluated based on their path coefficients, standard deviations, t-values, and p-values, and the 95% confidence intervals. Indirect effects were considered statistically significant when $p < 0,05$ and confidence intervals did not include zero. Also, the path coefficient thresholds in mediation analysis differ from the structural paths because indirect effects are considered to be smaller than their constituent direct paths. Thus, the magnitude of an indirect effect is evaluated within more conservative ranges.

Table 26 presents the results of the specific indirect effects, which provides a detailed overview of hypothesized mediating mechanisms (see Section 1.3.2., hypotheses H1-H8), the corresponding mediation type classification, and indicates whether the indirect path through one or more constructs is statistically significant. The full SmartPLS 4 output of specific indirect effects, including non-hypothesized paths, is provided in Annex 5.

Table 26. Specific indirect effects.

Mediation path	Direct path	β	*STDEV*	*t*-value	*p*-value	2,5%	97,5%	Mediation type
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty	-	0,065	0,024	2,731	0,006	0,02	0,113	Indirect-only mediation (no direct path)
Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty	-	0,236	0,03	8,005	<0,001	0,18	0,295	Indirect-only mediation (no direct path)
Affective Customer Experience -> Emotional Attachment to a Brand -> Habit	-	0,22	0,031	7,126	<0,001	0,16	0,281	Indirect-only mediation (no direct path)
Affective Customer Experience -> Trust -> Customer Satisfaction	-	0,274	0,034	8,034	<0,001	0,209	0,342	Indirect-only mediation (no direct path)

Mediation path	Direct path	β	*STDEV*	*t-value*	*p-value*	2,5%	97,5%	Mediation type
Cognitive Customer Experience -> Convenience -> Repurchase	-	0,021	0,026	0,795	**0,427**	**-0,029**	**0,074**	No-effect non-mediation
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty	-	0,057	0,017	3,404	0,001	0,028	0,094	Indirect-only mediation (no direct path)
Cognitive Customer Experience -> Customer Satisfaction -> Conative Loyalty	Cognitive Customer Experience -> Conative Loyalty	0,076	0,019	4,013	<0,001	0,041	0,115	Comple-mentary mediation
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty	Cognitive Customer Experience -> Cognitive Loyalty	0,15	0,028	5,428	<0,001	0,1	0,208	Indirect-only mediation (direct path's p > 0,05)
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty	Cognitive Customer Experience -> Cognitive Loyalty	0,137	0,03	4,541	<0,001	0,079	0,198	Indirect-only mediation (direct path's p > 0,05)
Trust -> Customer Satisfaction -> Affective Loyalty	-	0,164	0,034	4,843	<0,001	0,102	0,234	Indirect-only mediation (no direct path)
Conative Loyalty -> Repurchase Intentions -> Repurchase	-	0,133	0,046	2,857	0,004	0,044	0,226	Indirect-only mediation (no direct path)

Note: β – path coefficient; STDEV – standard deviation; 2,5% and 97,5% - lower and upper bounds of the 95% confidence interval.

Source: author's own elaboration based on SmartPLS 4 output.

As presented in Table 26, all except one of the mediating paths are statistically significant based on their *p*-values and 95% confidence intervals. Affective Customer Experience showed several substantial positive indirect effects through Trust and Emotional Attachment to a Brand, notably in the path *Affective Customer Experience → Emotional Attachment to a Brand → Affective Loyalty*. This path demonstrates that emotional attachment works as a relevant mechanism in leading customers' affective experiences towards affective loyalty. In addition, affective experiences are indirectly linked to Habit through Emotional Attachment to a Brand, indicating that emotionally engaging experiences may foster habitual use of particular provider's services.

Mediation analysis also revealed that the relationship between Cognitive Customer Experience and Cognitive Loyalty is positively mediated by Value-in-use and Perceived Value (indirect-only mediation), meaning that the customers' evaluation of the service value serves as a mechanism that links positive cognitive experiences with service provider's superiority compared to competitors. Also, cognitive experiences are indirectly linked to both affective and conative dimensions of loyalty through Customer Satisfaction, suggesting that fulfilled customer's expectations foster emotional responses towards the service provider and strengthen intentions to continue the relationship. In contrast, Convenience did not exhibit a mediating role between Cognitive Customer Experience and Repurchase, indicating that repurchasing behavior is based more on rational evaluations rather than the perceived easiness of repurchasing process itself.

Several mediation types were identified across the model. The relationship *Cognitive Customer Experience → Customer Satisfaction → Conative Loyalty* represents complementary mediation, where both direct and indirect effects are significant and point in the same direction. Several paths, such as *Affective Customer Experience → Trust → Customer Satisfaction* represent indirect-only mediation, since only the indirect paths are significant, and no corresponding direct paths are hypothesized in the model (or the direct path is non-significant). The full range of specific indirect effects estimated by the model, including the paths that were not hypothesized in this empirical investigation, is provided in Annex 5. Finally, non-significant indirect path, *Cognitive Customer Experience → Convenience → Repurchase*, is categorized as no-effect non-mediation, since indirect paths are non-significant and the direct path is not present in the model.

Table 27 summarizes the total indirect effects, which aggregate all specific indirect effects between each indirectly connected pair of exogenous and endogenous constructs in the model. These results show the overall magnitude of the mediated relationships when all indirect mechanisms are considered together, also known as multiple mediation.

Table 27. Total indirect effects.

Mediation path	Direct path	β	*STDEV*	*t*-value	*p*-value	2,5%	97,5%	Mediation type
Affective Customer Experience -> Affective Loyalty	-	0,33	0,029	11,44	<0,001	0,273	0,386	Indirect-only mediation
Affective Customer Experience -> Behavioral Loyalty	-	0,093	0,02	4,618	<0,001	0,057	0,137	Indirect-only mediation
Affective Customer Experience -> Cognitive Loyalty	-	0,065	0,024	2,731	0,006	0,02	0,113	Indirect-only mediation
Affective Customer Experience -> Conative Loyalty	-	0,225	0,028	8,158	<0,001	0,171	0,279	Indirect-only mediation
Affective Customer Experience -> Repurchase	-	0,087	0,017	4,984	<0,001	0,055	0,124	Indirect-only mediation
Affective Customer Experience -> Repurchase Intentions	-	0,121	0,022	5,543	<0,001	0,079	0,165	Indirect-only mediation
Affective Loyalty -> Repurchase	-	0,07	0,018	3,823	<0,001	0,037	0,109	Indirect-only mediation
Affective Loyalty -> Repurchase Intentions	-	0,197	0,036	5,443	<0,001	0,126	0,269	Indirect-only mediation
Cognitive Customer Experience -> Affective Loyalty	-	0,147	0,026	5,637	<0,001	0,096	0,199	Indirect-only mediation

Mediation path	Direct path	β	*STDEV*	*t*-value	*p*-value	2,5%	97,5%	Mediation type
Cognitive Customer Experience -> Behavioral Loyalty	-	0,113	0,026	4,345	<0,001	0,066	0,167	Indirect-only mediation
Cognitive Customer Experience -> Cognitive Loyalty	Cognitive Customer Experience -> Cognitive Loyalty	0,287	0,034	8,35	<0,001	0,222	0,358	Indirect-only mediation (direct path's p > 0,05)
Cognitive Customer Experience -> Conative Loyalty	Cognitive Customer Experience -> Conative Loyalty	0,13	0,024	5,349	<0,001	0,081	0,177	Comple-mentary mediation
Cognitive Customer Experience -> Repurchase	-	0,107	0,031	3,513	<0,001	0,052	0,172	Indirect-only mediation
Cognitive Customer Experience -> Repurchase Intentions	Cognitive Customer Experience -> Repurchase Intentions	0,146	0,031	4,676	<0,001	0,088	0,21	Comple-mentary mediation
Cognitive Loyalty -> Repurchase	-	0,017	0,006	2,765	0,006	0,007	0,03	Indirect-only mediation
Cognitive Loyalty -> Repurchase Intentions	-	0,046	0,014	3,36	0,001	0,022	0,076	Indirect-only mediation
Conative Loyalty -> Repurchase	-	0,192	0,042	4,604	<0,001	0,112	0,275	Indirect-only mediation

Note: β – path coefficient; STDEV – standard deviation; 2,5% and 97,5% - lower and upper bounds of the 95% confidence interval.

Source: author's own elaboration based on SmartPLS 4 output.

The largest total indirect effect was found between Affective Customer Experience and Affective Loyalty (β = 0,33, t = 11,44, p < 0,001), indicating that their relationship (indirect-only type) is transmitted through mediators such as Trust, Customer

Satisfaction, Brand Equity, Emotional Attachment to a Brand, and Cognitive Loyalty. Other strong and statistically significant total indirect effects include *Affective Customer Experience → Conative Loyalty* ($\beta = 0{,}225$, $t = 8{,}158$, $p < 0{,}001$) through Customer Satisfaction and Trust, and *Cognitive Customer Experience → Cognitive Loyalty* ($\beta = 0{,}287$, $t = 8{,}35$, $p < 0{,}001$) through Perceived Value and Value-in-use, confirming the importance of value-based evaluations in driving cognitive loyalty.

In addition, several meaningful total indirect effects link customer experience dimensions to loyalty related outcomes. The total indirect effect *Cognitive Customer Experience → Repurchase* ($\beta = 0{,}107$, $t = 3{,}513$, $p < 0{,}001$) was found to be of similar strength and significance compared to *Affective Customer Experience → Repurchase* ($\beta = 0{,}087$, $t = 4{,}984$, $p < 0{,}001$), suggesting that while both experience dimensions contribute to repurchasing behavior, cognitive experiences play a slightly more important role through loyalty related mechanisms and repurchase intentions. Moreover, the indirect paths *Cognitive Customer Experience → Repurchase Intentions* ($\beta = 0{,}146$, $t = 4{,}676$, $p < 0{,}001$) and *Conative Loyalty → Repurchase* ($\beta = 0{,}192$, $t = 4{,}604$, $p < 0{,}001$) further demonstrate that repurchasing behavior emerges as the outcome of accumulated experiential, intentional processes rather than a direct response to isolated service encounters.

For the mediation type classifications, most of the total indirect effects were indirect-only, with two complementary mediations *Cognitive Customer Experience → Conative Loyalty and Cognitive Customer Experience → Repurchase Intentions* where a direct path between exogenous and endogenous constructs is significant.

The analysis of both specific and total indirect effects provides a comprehensive understanding of how the proposed mediators function. The specific effects demonstrate the role of each individual mediator, while the total indirect effects provide a summary of the combined impact of all mediating paths between any two indirectly linked constructs. These analyses confirm which indirect mechanisms are statistically supported and which appear weaker or absent.

Another perspective on the same estimation results is provided by the total effects estimation, which combines the direct and indirect pathways between each pair of constructs and show the overall influence of a construct on a given outcome (Hair et al., 2022). While the indirect effects isolate the mediated component of each relationship, the estimation of total effects indicates the extent to which each loyalty dimension, as well as repurchase intentions and repurchase behavior, is associated with the individual constructs of the model. Table 28 presents the largest total effects on these outcomes. The complete total effects matrix covering all constructs is provided in Annex 6.

Table 28. Largest total effects by outcome.

Outcome	Rank	Predictor	β	*p*-value
Cognitive loyalty	1	Cognitive customer experience	0,379	<0,001
	2	Perceived value	0,344	<0,001
	3	Value-in-use	0,245	<0,001
	4	Brand equity	0,141	0,003
Affective loyalty	1	Emotional attachment to a brand	0,402	<0,001
	2	Affective customer experience	0,330	<0,001
	3	Customer satisfaction	0,286	<0,001
	4	Trust	0,164	<0,001
	5	Cognitive customer experience	0,147	<0,001
Conative loyalty	1	Customer satisfaction	0,483	<0,001
	2	Trust	0,278	<0,001
	3	Cognitive customer experience	0,272	<0,001
	4	Affective customer experience	0,225	<0,001
	5	Emotional attachment to a brand	0,148	<0,001
Behavioral loyalty	1	Customer satisfaction	0,200	<0,001
	2	Trust	0,115	<0,001
	3	Cognitive customer experience	0,113	<0,001
Repurchase intentions	1	Cognitive customer experience	0,287	<0,001
	2	Customer satisfaction	0,260	<0,001
	3	Trust	0,149	<0,001
	4	Affective customer experience	0,121	<0,001
Repurchase	1	Habit	0,198	0,001
	2	Cognitive customer experience	0,107	<0,001
	3	Emotional attachment to a brand	0,103	<0,001

Note: β – standardized total effect combining the direct and indirect pathways between the two constructs. Only total effects with β ≥ 0,10 and p < 0,05 are reported. Total effects of the loyalty dimensions on subsequent loyalty dimensions and on repurchase outcomes, as well as the confidence intervals of all estimates, are reported in Annex 6.

Source: author's own elaboration based on SmartPLS 4 output.

As shown in Table 28, several recurring priorities emerge across all the outcomes examined. Cognitive customer experience is particularly important, since it is the only construct that appears across all loyalty and repurchase outcomes, and among the constructs listed in Table 28, it has the greatest overall impact on cognitive loyalty and repurchase intentions. Customer satisfaction is the second most important area of managerial focus, showing the largest effects on conative and behavioral loyalty, as well as a significant effect on repurchase intentions. Trust also remains significant in nearly all stages of loyalty (affective, conative, behavioral). Emotional attachment to a brand

has the highest impact on affective loyalty, and it is also one of the few constructs that retains a meaningful total effect on repurchase behavior. Thus, the results indicate that in order to strengthen customer loyalty, a focus should be placed primarily on the cognitive customer experience, satisfaction, and trust. Meanwhile, to convert that loyalty into repeat purchases, additional attention should be given to fostering emotional attachment to a brand and developing the customer's habit of service use.

It is also worth noting that the magnitude of the total effect consistently decreases as the sequence of constructs is examined. Starting with the dimensions of loyalty and ending with actual repurchase behavior, the observed effect of one construct on another is attenuated at each step throughout the sequence. Consequently, the more mediating mechanisms separate a construct from the desired outcome, the more these mediating mechanisms absorb the construct's influence on that outcome. Consequently, value-related constructs, which have the strongest influence on cognitive loyalty, ultimately show a minor effect on repurchase behavior due to the length of the construct chain, while those constructs closest to repurchase behavior, such as habit or emotional attachment to the brand, retain the strongest influence on it.

In summary, the mediation analysis demonstrates that multiple theoretically proposed indirect relationships are empirically supported and explain the mechanisms through which connecting customer experience dimensions influence the dimensions of loyalty, as well as repurchase intentions and behavior. The findings suggest that the model provides a sound representation of the system of mediated relationships among customer experience, value, satisfaction, and loyalty-related outcomes. The results also indicate that the relative weight of these mechanisms is not uniform across the outcomes, since the overall influence of a construct depends not only on the strength of its individual paths, but also on its position in the mediation path sequence.

Moderation analysis. The final stage of the PLS model evaluation involved assessing the moderating effects hypothesized in the research model. In this empirical investigation, three continuous latent moderators were included, each measured reflectively using five-point Likert scale indicators. Specifically, Switching Costs was hypothesized to moderate the relationship between Cognitive Customer Experience and Cognitive Loyalty, Firm's Organizational Agility was expected to moderate the link between Cognitive Customer Experience and Repurchase Intentions, and Customer Knowledge Sharing was hypothesized to moderate the relationship between Cognitive Customer Experience and Conative Loyalty. The moderation analysis was conducted using the two-stage approach based on latent variable scores from the main effects model, which allows for precise estimation of the interaction terms while maintaining the theoretical integrity of the structural relationships. Each moderating effect's significance and relevance was evaluated using the percentile bootstrapping procedure with 10 000 resamples, providing percentile-based confidence intervals and p-values, with path coefficients (β) and effect sizes (f^2) for each moderating effect.

The moderation effect significance results, presented in Table 29, indicate that none of the hypothesized moderating effects reached statistical significance. Although the path coefficients of the interaction terms were not equal to zero, signaling some

trace of significance, the *t*-values (path coefficient divided by standard deviation) were lower than the marginal significance threshold of 1,65, and all *p*-values were well above the 0,05 threshold. Also, all of the interaction terms' 95% confidence intervals included zero.

Table 29. Significance of moderation effects.

Interaction term	β	*STDEV*	*t*-value	*p*-value	2,5%	97,5%
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty	0,005	0,033	0,161	**0,872**	**-0,063**	**0,065**
Firm's Organizational Agility x Cognitive Customer Experience -> Repurchase Intentions	0,051	0,032	1,596	**0,111**	**-0,014**	**0,113**
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty	0,02	0,045	0,437	**0,662**	**-0,077**	**0,102**

Note: β – path coefficient; STDEV – standard deviation; 2,5% and 97,5% - lower and upper bounds of the 95% confidence interval.

Source: author's own elaboration based on SmartPLS 4 output.

The effect sizes f^2 (see Table 30), showed that none of the interaction terms demonstrated even a small practical effect.

Table 30. Relevance of moderation effects.

Interaction term	f^2	*STDEV*	*t*-value	*p*-value	2,5%	97,5%
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty	0	0,004	0,018	**0,986**	**0**	**0,014**
Firm's Organizational Agility x Cognitive Customer Experience -> Repurchase Intentions	0,005	0,007	0,764	**0,445**	**0**	**0,025**
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty	0,001	0,006	0,127	**0,899**	**0**	**0,022**

Note: f^2 – effect size; STDEV – standard deviation; 2,5% and 97,5% - lower and upper bounds of the 95% confidence interval.

Source: author's own elaboration based on SmartPLS 4 output.

In summary, the results of moderation analysis show no evidence that the contextual factors alter the strength or direction of the corresponding relationships in the model. All interaction terms were statistically non-significant, their confidence

intervals included zero, and the effect sizes were trivial. Together, these results suggest that the relationships between cognitive customer experience and loyalty, as well as repurchase-related outcomes are unaffected by tested moderators, i.e., Customer Knowledge Sharing, Firm's Organizational Agility, or Switching Costs.

3.5. Necessary condition analysis for repurchase

In addition to PLS-SEM results, which explain the mechanisms through which the constructs in the model influence repurchase outcomes, a necessary condition analysis (NCA) was conducted to determine which conditions must be present for high levels of repeat purchase to occur. That is, while PLS-SEM results reveal which constructs act as drivers of repurchase behavior, NCA complements these findings by identifying minimum enabling conditions that need to be present for higher repurchase outcomes to be achieved.

Three conditions, habit, trust, and behavioral loyalty, met the threshold for medium effect sizes $d \geq 0{,}10$, and statistical significance $p < 0{,}05$. However, the effect size of behavioral loyalty was exactly $d = 0{,}10$, with $p = 0{,}037$. Although the threshold was reached, such effect is considered marginal and should be interpreted cautiously as the effect is marginal and the constructs is conceptually close to repurchase, both reflecting related manifestations of repeated customer behavior. In addition, while repurchase intentions, perceived value, and brand equity yielded statistically significant permutation results, their effect sizes remained below the medium effect threshold ($d < 0{,}10$), indicating weak necessity effects with limited practical relevance. Full NCA results for repurchase, including weak necessity effects, are provided in Annex 7. Table 31 presents the necessary conditions for repurchase exhibiting medium necessity effects.

Table 31. Medium necessary conditions for repurchase.

Condition	Effect size, *d* (CE-FDH)	*p*-value	Interpretation
Habit	0,132	0,031	Necessary (medium effect)
Trust	0,114	0,001	Necessary (medium effect)
Behavioral loyalty	0,100	0,037	Marginally necessary

Source: author's own elaboration based on SmartPLS 4 output.

To further interpret the identified necessary conditions, a bottleneck analysis was conducted to determine minimum levels of these conditions required to achieve different levels of repurchase. Bottleneck analysis shows that the necessary conditions become more constraining at higher levels of repurchase. Detailed bottleneck analysis results are provided in Annex 8.

Based on bottleneck analysis, trust functions as an enabling condition even at lower levels of repurchase construct, meaning that even modest repeat purchasing in B2B

digital service relationships requires at least a minimal level of confidence in the service provider. In contrast, habit and behavioral loyalty become constraining at higher repurchase levels, indicating that higher repurchase outcomes are unlikely to occur without at least minimum levels of habit and behavioral loyalty.

Such pattern suggests that trust may act as a foundational condition for maintaining continued business relationships, while habit becomes more relevant when repeated purchasing manifests as an organizational buying routine. The overall influence of trust on repurchase behavior is small (see Annex 6), yet its absence constrains the possibility of repurchasing even at low levels. In turn, habit is both a necessary condition and, after repurchase intentions, the strongest predictor of repurchase behavior (see Table 28). Behavioral loyalty, as a bottleneck, acts in a similar pattern to habit, but given its conceptual proximity to repurchase, this insight should be interpreted cautiously.

Overall, the NCA findings complement PLS-SEM results by adding a necessity perspective to the analysis of repurchase. While PLS-SEM explains the sufficiency logic underlying repurchase through structural relationships, NCA identifies conditions whose absence constrains the achievement of higher repurchase levels, particularly trust and habit, and to a lesser extent, behavioral loyalty. Together, these findings offer both sufficiency and necessity perspectives for repeat purchasing behavior in B2B digital service relationships.

3.6. Summary of hypothesis testing results and empirically validated model

This section presents the results of the hypotheses H1–H16 (see Section 1.3.2.) and the final empirically validated model. Each hypothesis corresponds to the relationships between the constructs in the conceptual model (see Figure 10). Table 32 describes which relationships proposed in the conceptual model are empirically supported, based on the results of the structural, mediation, and moderation analyses.

Table 32. Hypotheses testing results.

Hypothesis		Empirical support
H1	Perceived value acts as a mediator between cognitive customer experience and cognitive loyalty.	Supported
H2	Brand equity acts as a mediator between affective customer experience and cognitive loyalty.	Supported
H3	Value-in-use acts as a mediator between cognitive customer experience and cognitive loyalty.	Supported
H4a	Emotional attachment to a brand acts as a mediator between affective customer experience and habit.	Supported
H4b	Emotional attachment to a brand acts as a mediator between affective customer experience and affective loyalty.	Supported
H5a	Customer satisfaction acts as a mediator between cognitive customer experience and affective loyalty.	Supported
H5b	Customer satisfaction acts as a mediator between trust and affective loyalty.	Supported
H5c	Customer satisfaction acts as a mediator between cognitive customer experience and conative loyalty.	Supported
H6	Trust acts as a mediator between affective customer experience and customer satisfaction.	Supported
H7	Convenience acts as a mediator between cognitive customer experience and repurchase.	Not supported
H8	Repurchase intentions act as a mediator between conative loyalty and repurchase.	Supported
H9	Customer's switching costs moderate the relationship between cognitive customer experience and cognitive loyalty.	Not supported
H10	Firm's organizational agility moderates the relationship between cognitive customer experience and repurchase intentions.	Not supported
H11	Customer knowledge sharing moderates the relationship between cognitive customer experience and conative loyalty.	Not supported
H12	Cognitive loyalty significantly and positively influences affective loyalty.	Supported
H13	Affective loyalty significantly and positively influences conative loyalty.	Supported
H14	Conative loyalty significantly and positively influences behavioral loyalty.	Supported
H15a	Behavioral loyalty significantly and positively influences word-of-mouth.	Supported
H15b	Behavioral loyalty significantly and positively influences repurchase.	Supported
H16	Habit significantly and positively influences repurchase.	Supported

Source: created by the author.

Overall, the hypothesis testing results indicate that the majority of the proposed relationships in the conceptual model are empirically supported. The findings highlight

the importance of mediation mechanisms that enable customer experience dimensions' influence on loyalty dimensions and repurchase outcomes. In particular, many hypothesized relationships were supported only through indirect mechanisms (e.g., H1-H5b, H6, H8). While the direct relationship of cognitive customer experience and cognitive loyalty was found non-significant, their relationship was strengthened and signified through value-focused mediators such as value-in-use and perceived value. In contrast to mediators, none of the hypothesized moderating effects were empirically supported, suggesting that the strength of examined relationships does not vary across different contextual conditions represented by the moderators in the conceptual model.

Based on the results of hypothesis testing, Figure 12 presents the model which includes only empirically supported hypothesized relationships.

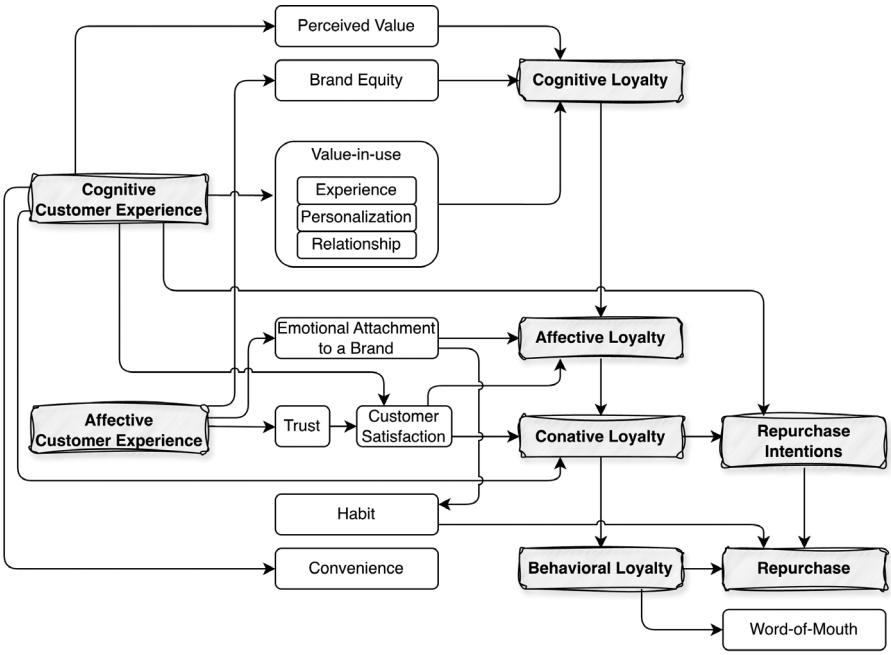


Figure 12. Empirical model of B2B digital service customer experience outcomes.

Source: created by the author.

While the model illustrated in Figure 12 includes all empirically supported relationships, Figure 13 presents the final model that aligns with the aim of the dissertation by explaining the mechanisms through which customer experience results in loyalty and repeat purchase behavior. Although cognitive customer experience demonstrated a significant influence on convenience, the subsequent path towards repurchase was empirically unsupported, which eliminated convenience as a mediating mechanism

in the final model. Similarly, while word-of-mouth was confirmed as an outcome of behavioral loyalty, providing valuable insights for the empirical analysis, it has no consequent relationships with other factors. This is because word-of-mouth represents an outward-facing outcome, directed from the customer towards other customers rather than back into the customer-provider relationship. Therefore, it was excluded from the final model to maintain the focus on customer experience, loyalty, repurchase and the linking mechanisms.

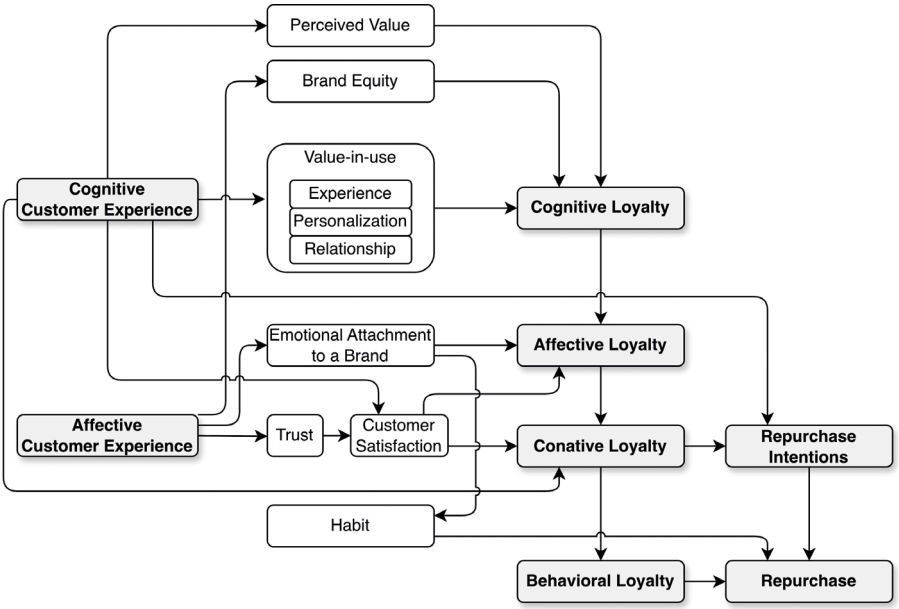


Figure 13. Final empirically validated model of customer experience effects on loyalty and repurchase in B2B digital services.

Source: created by the author.

The final model is further discussed in the following section, highlighting how the empirically supported relationships contribute to a more integrated understanding of customer experience and their scientific and managerial relevance.

3.7. Discussion of empirical findings

The results of the study show that customer experience influences both loyalty and repeat purchases through clearly distinct and different mechanisms. Loyalty behavior was found to be better explained than repeat purchases, which is consistent with expectations expressed in the literature in a B2B context, where decision-making processes are more complex, more structured, and often collective compared to decisions

made by individuals (Feike & Rösch, 2024; Homburg et al., 2017).

Repurchase in B2B contexts is challenging to predict due to complex, multi-stage decision processes involving multiple stakeholders (Fehl et al., 2023; Mohan et al., 2022). It is precisely this complexity that determines the value of research seeking to explain the managerial and experiential factors that lead to repurchase, as repurchase is directly related to one of the main goals of organizations – generating revenue to ensure business growth, and profitability. However, the complex structure of decisions means that even positive individual experiences do not necessarily translate directly into actual repurchases (Molinari et al., 2008). The complementary NCA findings further reinforce this observation by suggesting that repurchase in B2B digital service relationships is also shaped by minimum enabling conditions. Specifically, trust and habit emerged as necessary conditions for achieving higher repurchase outcomes, indicating that stronger repeat purchasing may be constrained in the absence of at least minimal confidence in the provider and routinized purchasing behavior. Trust constrains repeat purchasing already at its lower levels and thus functions as a foundational condition, while habit becomes constraining at higher levels of repeat purchasing, where higher levels of repurchasing require a higher degree of routinized organizational buying.

Moreover, repurchase intentions are predominantly examined in the scientific literature because, as Paulssen & Birk (2007) suggested, validating relationships with actual repurchasing behavior may require longitudinal study designs, which are particularly complex and sometimes even infeasible in B2B contexts. A similar result to the study of Paulssen & Birk (2007) of the explained variance of repurchase behavior was observed in the empirical study of this dissertation, where repurchase variance was explained up to about a quarter. However, this does not mean that the result is inadequate or problematic when viewed from the perspective of the objective of this dissertation, as the explained influence on the construct should be viewed from the perspective of the study objectives. Methodological literature emphasizes that striving to explain behavior to the maximum extent possible (approaching a hundred percent) is neither realistic nor desirable, as it can lead to problems of multicollinearity, model overfitting, and artificial explanatory power (Hair et al., 2019). Furthermore, human behavior is essentially characterized by limited predictability, and in a B2B context, this uncertainty is further reinforced by the fact that organizational buying behavior is shaped by the decisions of multiple individuals within the buying center, as well as by external factors such as economic conditions, existing contractual arrangements, and technological constraints (Johnston & Lewin, 1996; Webster & Wind, 1972). Therefore, repurchase in a B2B environment cannot be considered solely the result of psychological or attitudinal factors. Furthermore, the magnitude of the explained variance generally depends heavily on the context of the study, the scope of the mechanisms analyzed, and the level of contextual embeddedness of the variables included. Given that this study is complex, covers a broad system of interrelated constructs, and is conducted in a highly dynamic B2B digital services' environment, the level of explanation of repurchase produced is considered an acceptable result. Although some

influencing factors remain unaccounted for, the model sufficiently reveals the essential mechanisms linking customer experience to behavioral outcomes. Finally, the results of the study suggest that the impact of customer experience is not deterministic but rather acts through a probability-increasing mechanism: a positive customer experience increases the probability that, given favorable internal and external conditions, the client company will repeatedly choose the same service provider.

The results of the study also reveal that customer experience should not be conceptualized and measured as a single, one-dimensional construct, but as a multidimensional phenomenon that allows the impact of different dimensions of experience on outcomes to be assessed separately. Aggregating customer experience into a single construct, even when measured on a scale that encompasses both emotional and cognitive aspects, results in significant granularity loss. Since customer experience is by definition multidimensional and dynamic (L. Becker & Jaakkola, 2020; Lemon & Verhoef, 2016), it should be analyzed in studies through separate dimensions rather than being reduced to a single index.

Empirical findings show that the affective and cognitive dimensions of customer experience activate different psychological, evaluation, and decision-making mechanisms through which desired behavioral and attitudinal outcomes are achieved. These differences become difficult to notice or disappear altogether when customer experience is viewed as a single construct. In such cases, more aggregated results are obtained, which allow the existence of a link between customer experience and its outcomes to be identified, but do not explain the nature of this link or the logic behind it.

Research shows that customer experience is often conceptualized and sometimes measured through separate dimensions, which allows for the analysis of their differentiated impact on outcomes (e.g., Cepeda-Carrión et al., 2023; Gounaris & Almoraish, 2024; Kuppelwieser & Klaus, 2021), but research also includes studies that recognize the multidimensionality of customer experience but nevertheless aggregate it into a single construct in their empirical analysis (e.g., Pires et al., 2025; Rejikumar & Asokan-Ajitha, 2022). Although such aggregation, depending on the objectives of the study, can provide generalized and theoretically valuable insights, it significantly limits the practical applicability of the results when the aim is not only to prove the existence of a certain relationship but also to answer the question of how customer experience affects certain outcomes. In such cases, it becomes difficult to formulate specific management guidelines, for example, to identify which aspects of service provision or interaction should be strengthened in order to achieve a certain behavioral or attitudinal outcome.

The aggregation of customer experience into a single construct, as well as the simplification of its measurement scales by reducing the number of items in order to achieve methodological efficiency and reliability, most likely stems from the desire to accelerate the breadth of specific empirical research and adapt the measurement scales to broader contexts, as proposed by Kuppelwieser & Klaus (2021). Although such argument is reasonable, especially when discussing scientific productivity and broader research in the context of B2B services, this approach is more focused on increasing

scientific productivity rather than analytical accuracy. The results of the empirical study show that analyzing customer experience through separate dimensions allows for richer theoretical insights and more precise practical recommendations. Therefore, although aggregated measurement solutions may be useful at certain stages or for certain purposes of research, in order to fully explain the impact mechanisms and their managerial implications, examining customer experience through separate dimensions remains methodologically and practically more advantageous.

In the context of B2B digital service customer experience literature, to the best of the author's knowledge, the empirical study presented in this dissertation is one of the first in which customer experience is conceptualized as a multidimensional construct, clearly divided into separate dimensions, and their impact on loyalty-repurchase outcomes is empirically investigated. Due to the limited number of similar empirical studies in the context of B2B digital services, it is appropriate to refer to studies of non-digital services or the broader context of B2B services, in which customer experience is analyzed through separate dimensions, for comparison of results.

One of the works conceptually closest to the empirical research of this dissertation is the study by Gounaris & Almoraish (2024), in which customer experience is divided into cognitive and emotional dimensions, the latter being further detailed into four types of experience: factual and sagacious (cognitive dimension) and emotional and social (emotional dimension). The conceptual framework used in their study is essentially consistent with the approach taken in this dissertation: dimensions of customer experience influence relationship quality, which is operationalized as a set of constructs of satisfaction, trust, and commitment. Such modelling allows Gounaris & Almoraish (2024) to empirically test the impact of each of the experience dimension on the elements that make up relationship quality.

The results of the study by Gounaris & Almoraish (2024) showed that all customer experience dimensions have a statistically significant impact on relationship quality, so no dimension was found to be non-significant. However, it was precisely the more detailed breakdown of customer experience that made it possible to reveal which dimensions of experience have a relatively stronger impact, which is particularly important in a practical context when deciding on the allocation of resources and investments for service development. It is important to note that Gounaris & Almoraish (2024) analyze the impact of customer experience dimensions on satisfaction, trust, and commitment as a single integrated set of consequences, whereas in the empirical study of this dissertation, trust and satisfaction are conceptualized as separate constructs, between which a direct causal relationship is modelled. To measure commitment, Gounaris & Almoraish (2024) use the relationship scale proposed by (N. Sharma & Patterson, 1999), which includes statements related to maintaining the relationship in the future, feelings of loyalty, actions of loyalty, and lack of seeking alternatives. In comparison, the constructs of customer experience consequences examined in this dissertation - brand equity, emotional attachment, dimensions of loyalty, and repurchase intentions - not only cover but also elaborate and more accurately operationalize customer commitment. This approach provides a more comprehensive understanding

of customer's commitment.

Due to the more detailed and granular operationalization of customer experience and its consequences in the empirical study of this dissertation, a direct comparison of the results with previous studies is limited, as the existing literature often aggregates at least part of their model. Nevertheless, the overall trend of the results remains consistent: both this dissertation and the study by Gounaris & Almoraish (2024) find that different dimensions of customer experience have a differentiated impact on commitment-related consequences, and no conflicting empirical evidence was found.

The empirical investigation demonstrated that the affective customer experience exerts its influence through emotional and relational mediators. Through trust in the service provider, satisfaction, and emotional attachment to a brand, affective experience encourages customers to form positive attitudes towards working with the service provider, manifested in affective loyalty, and increases the likelihood that customers will continue their business relationship with the provider in the future, even if this is only at the level of intention (conative loyalty). The hypotheses for these mediating relationships were supported (H2, H4b, H5b, H6). The role of emotional attachment corresponds closely to Iglesias et al. (2011), where brand experience reached brand loyalty exclusively through affective commitment and its direct effect on loyalty was not significant in any of the examined product categories. In addition, the findings are consistent with Thomson et al. (2005), who established that emotional attachment drives brand loyalty and remains empirically distinct from satisfaction, attitude favorability and involvement. The mediating role of brand equity is consistent with Kamath et al. (2020), who found brand equity to mediate the customer experience-loyalty relationship, although in their model the mediation was partial and both customer experience and loyalty were modelled as aggregated constructs. Further, the influence of affective experience through trust into satisfaction corresponds to the direction reported by Jeon et al. (2021).

In the classical B2B literature, purchasing decisions were often conceptualized as the result of rational, objective, and multi-stage decision-making processes in which the role of emotions was minimized or ignored (J. C. Anderson & Narus, 1990; Webster & Wind, 1972). This approach was consistent with the dominant organizational purchasing paradigm of the time, in which the organization was treated as a unified decision-maker. Later B2B research increasingly acknowledges that even in organizational contexts, decisions are made not by organizations as abstract units, but by individuals, whose evaluations include emotional, experiential, and relational processes (De Keyser et al., 2025; Zolkiewski et al., 2017). Contemporary B2B literature also shows that emotions not only accompany decision-making, but also play an important role in shaping trust, satisfaction, and long-term relationships between the service recipient and the provider (Pandey & Mookerjee, 2018). Therefore, the results of this study contribute to the B2B customer experience literature by empirically substantiating that emotions in the B2B context operate not directly or impulsively, but through mechanisms of long-term relationship building. Affective customer experience contributes to relationship strengthening through mediating constructs that gradually

shape loyalty and the intention to continue cooperation. In this way, the study confirms that emotions are an integral and systemically operating part of the B2B customer experience, rather than a secondary or episodic component of decision-making.

Regarding cognitive customer experience, the empirical study showed that it does not have a direct effect on cognitive loyalty, while its direct effect on conative loyalty and repurchase intentions is weak. The research results revealed that cognitive loyalty is formed indirectly, through perceived value and value-in-use (H1, H3). The role of perceived value is consistent with Yang & Peterson (2004), who found perceived value as a strong driver of loyalty in online services, while the role of value-in-use corresponds to the theoretical assumptions of Service-Dominant Logic (Grönroos & Voima, 2013; Vargo & Lusch, 2004, 2008), where value-in-use is conceptualized as the customer's own evaluation of the actual benefits derived from a service (Sandström et al., 2008). In this empirical study, cognitive customer experience is positioned as the initial point of the value creation process, which continues throughout service provision and use. According to Service-Dominant Logic, value is not embedded in the service itself or its attributes but is co-created and achieved in the context of use (value-in-use). This perspective helps explain why an informative, rational, or thought-provoking experience does not in itself create cognitive loyalty if it does not transform into value that is relevant to and experienced by the customer. In this process, cognitive experience functions as an enabling condition that, through value creation, transforms into long-term loyalty, rather than as a direct determinant of loyalty.

At the same time, the conducted empirical study helps explain why customer satisfaction is often identified in the B2B services literature as one of the most important antecedents of loyalty (E. W. Anderson & Sullivan, 1993; Bolton et al., 2008; Homburg et al., 2005; Oliver, 1999). The results of the study show that satisfaction has a significant positive effect on both affective and conative loyalty, acting as a mediator through which experience is transformed into those dimensions of loyalty (H5a, H5c), and corresponds to the mediating role of satisfaction established in service research, including B2B service settings (Roy et al., 2019; Saputra et al., 2023). This finding once again emphasizes the methodological and theoretical necessity of separating both customer experience and loyalty into distinct dimensions, as their aggregation may mask different mechanisms of influence and lead to overly simplified conclusions about value creation and the formation of loyalty. Aggregated constructs particularly limit the ability to explain how different aspects of experience contribute to the development of long-term relationships in the context of B2B services. Therefore, the results of the empirical study are consistent with earlier works in which satisfaction is treated as a necessary but insufficient condition for the formation of loyalty (Lam et al., 2004; Oliver, 1999; Palmatier et al., 2006), and with Service-Dominant Logic according to which value-in-use is a central condition through which experience is transformed into long-term commitment and loyalty (Vargo & Lusch, 2008).

As in the case of customer experience, modelling loyalty into separate dimensions provided additional insights. The results confirmed that in B2B digital services, loyalty develops sequentially from cognitive, to affective and conative loyalty (H12, H13), and

further to behavioral loyalty (H14), as proposed by Oliver (1999), with the strength of the relationships increasing along the sequence. However, behavioral loyalty was in comparison explained weaker, indicating that loyalty dimensions do not always or necessarily transform into observable behavioral outcomes. This suggests that cognitive and affective loyalty may exist without direct behavioral manifestations, especially in the context of B2B services, where behavior is often constrained by other (e.g., contractual or organizational) factors. At the same time, loyal behavior may manifest in different forms, for example, as positive recommendations to other customers (word-of-mouth) or as repeat purchasing, which reflect different aspects of behavioral loyalty and do not necessarily arise from the same psychological mechanisms (Dick & Basu, 1994; Gremler & Brown, 1996). Both of these manifestations of behavioral loyalty were confirmed (H15a, H15b). Repurchase was also reached through repurchase intentions (H8), in line with sequential view of loyalty, and through habit (H16), supporting the argument that repeated behavior becomes more automatic over time (Verplanken & Aarts, 1999). Habit formed through emotional attachment to a brand (H4a) and provided a parallel route from affective experience to behavior. It should be noted that Limayem et al. (2007) modelled habit as a condition that weakens the predictive power of intentions, while this dissertation's empirical investigation specified it as a direct antecedent of repurchase. Nevertheless, consistent with their research, it can be argued that the intention-based explanations alone are insufficient for predicting routinized behavior.

Although the multidimensionality of loyalty is widely acknowledged in the academic literature, empirical studies still frequently reduce loyalty to a single aggregated construct, likely due to convenience, time constraints, and the management of model complexity. A similar logic can be observed in customer experience research, where customer experience is sometimes aggregated into a single construct. Such a decision is not necessarily inferior, especially in cases where the aim of the study is to establish the existence of the relationship itself rather than its underlying mechanisms. This is illustrated, for example, by the study of Padilla et al. (2017), who analyze the relationship between service value and loyalty, or by the work of Jang et al. (2022), who examine the relationship between customer experience and a conative outcome of loyalty, repurchase intentions. In the empirical study of this dissertation, the relationships between both cognitive and affective customer experience and repurchase intentions were also confirmed. Moreover, although not formally tested through hypotheses, the full results of specific indirect effects presented in Annex 5 allow an observation that both perceived value and value-in-use also have a weak but statistically significant relationship with repurchase intentions.

Nevertheless, the results of this empirical study allow for considerably deeper insights than merely establishing the existence of a relationship. A differentiated approach to customer experience and loyalty makes it possible to identify alternative mechanisms of influence and to explain through which processes some relationships are stronger while others are weaker. In this way, the study contributes to an understanding of more precise processes of value creation and loyalty formation in the

context of B2B services.

Significant insights also emerge from the analysis of the mechanisms that were not supported in the model between customer experience, loyalty, and repurchase. The results of the empirical study showed that convenience did not function as a mediator (H7), and the hypothesized moderators (H9-H11) did not demonstrate statistically significant moderating effects, although prior research provided theoretical and, in part, empirical grounds to expect the effect of these factors. It should be noted that the earlier studies did not test identical relationship structures, as these constructs were positioned differently and examined in different service contexts. In the case of convenience, Saini & Singh (2020), for example, associated convenience-driven repurchasing with situational rather than genuinely loyal patronage, which is consistent with this dissertation's empirical finding that convenience did not carry the influence of cognitive customer experience towards repurchase in a B2B context which is primarily relationship-based. Such results suggest that in the context of B2B digital services, the logic of how these factors operate may differ from that in other types of services. When discussing specifically about digital services, aspects such as convenience, speed, security, or accessibility are often integrated in advance into the service design and managed at the technological level. Due to the very nature of digital services, these elements often become part of basic requirements, hygiene factors, rather than differentiating factors (Parasuraman et al., 2005; Voss et al., 2008). In such cases, their variation across service providers or across user experiences may be too small to allow the identification of a significant mediating or moderating effect in respondents' evaluations. In addition, while convenience and trust were treated as conceptually distinct constructs in the model, the empirical results revealed a strong relationship between them. One possible explanation is that in B2B digital services, convenient and effortless service interactions may contribute directly to perceptions of service provider trustworthiness, making these evaluations closely intertwined from the customer perspective (Wuyts et al., 2009). In B2B digital service context, where reliability and operational continuity are critically important, convenience may emerge as a less separate evaluative factor and more a contributor to the formation of trust. Moreover, the importance of these aspects may be strongly dependent on the specific type of service and the context of use, which further complicates empirically capturing them in structural models.

Similarly, in the context of B2B digital services, switching costs are often less visible than in the case of more tangible B2B services (e.g., logistics, facilities, etc.), where service delivery processes are often tied to physical resources, equipment, or infrastructure. In such situations, changing a service provider may incur immediate financial and operational costs associated with the replacement or loss of physical assets (Blut et al., 2016; Huo et al., 2018). Nevertheless, this does not mean that switching costs are not relevant at all in digital B2B services. Especially in the context of software-as-a-service, switching costs may become significant due to investments that accumulate over time in system customization, integrations, employee training, and process alignment (Xiao et al., 2020). In such cases, customers may face a choice between already

incurred sunk costs and future switching costs, particularly if certain aspects of the software no longer meet changing needs. However, in the context of this investigation, it is also important to consider the position of switching costs in the conceptual model (H9) – affecting the link between cognitive customer experience and cognitive loyalty. The empirical results showed that the direct relationship between cognitive experience and cognitive loyalty was not supported, as cognitive experience affects loyalty indirectly, through perceived value and value-in-use. Therefore, the findings are more consistent with the view that switching costs operate as a direct antecedent of loyalty, as identified by Aydin & Özer (2005), rather than as a condition shaping the strength of other relationships. The findings are also consistent with the study of Yang & Peterson (2004), who tested switching costs as a moderator and likewise found no significant interaction. Thus, the unsupported mediating and moderating mechanisms should be interpreted as a contextual insight, indicating that in the environment of B2B digital services, the formation of loyalty and repurchase is more dependent on value creation and relational mechanisms than on operational or service-structure factors.

When discussing the role of moderators, it is also important to note that not all theoretically grounded relationships operate simultaneously within the same empirical model. Moderation effects are considered among the most sensitive elements of structural models, as they are highly dependent on measurement accuracy, construct operationalization, sample characteristics, and research context. For this reason, unsupported moderation effects are not uncommon in the academic literature on B2B services, even in studies that employ strong theoretical foundations and advanced analytical methods (Heredia et al., 2022; Piwowar-Sulej et al., 2024; Steinhoff et al., 2025). Such results indicate that unsupported moderation effects should be regarded as a typical and informative part of similar studies, providing meaningful scientific and practical insights. They demonstrate not only the model's ability to identify statistically significant relationships, but also the critical testing of theoretical assumptions, revealing where and under what conditions certain explanations proposed in the literature do not add additional explanatory power. For example, the results of this study show that mechanisms such as customer knowledge sharing, although theoretically grounded, do not have a significant impact on customer intentions in the examined context of B2B digital services (H11). Building on the ideas of Cepeda-Carrión et al. (2023), the model thus becomes theoretically more accurate, reflecting what actually works in digital service transactions. In addition, the findings do not contradict prior research. As noted when developing the hypotheses, Jang et al. (2022) modelled organizational agility as a mediator and customer knowledge sharing as a moderator of the experience-agility relationship, while Chiou et al. (2002) examined customer knowledge as customer's expertise regarding a service rather than sharing it with the provider, and found moderation to hold for the paths originating from trust but not for the remaining ones. The empirical investigation shows that these constructs did not moderate the specific relationships tested in H10 and H11.

It is also important to discuss the logic behind the structure of the final model. The constructs word-of-mouth (WOM) and convenience were included in the initial

theoretical model based on the literature on services and customer experience, where these factors are treated as important outcomes of customer experience or behavioral responses. However, empirical results showed that convenience does not act as a mediating mechanism between customer experience and repurchase. For this reason, this construct was not included in the final model. Its inclusion would mean treating convenience as a result of a positive experience rather than as an intermediate mechanism influencing loyalty or repurchase. Such a decision would not be consistent with the aim of the dissertation research to find and explain the mediating mechanisms through which customer experience influences loyalty and repeat purchases. Similarly, the present investigation interprets WOM as an external behavioral outcome rather than as a mechanism operating within the model. WOM manifests itself through recommendations passed on to other potential customers, whose customer journey may begin from such recommendations (Marder et al., 2022). Therefore, although WOM is a beneficial outcome for the service provider, it operates outside the CX-loyalty-repurchase chain under investigation, acting as a behavioral outcome that is relevant in a broader market context.

Since behavioral loyalty can manifest itself both through actual purchases and through recommendations, WOM was empirically investigated in this study in order not to lose important insights into the behavioral manifestations of loyalty. This is also supported by the empirical findings, which showed a comparatively strong relationship between behavioral loyalty and WOM (H15a). Such a relationship is theoretically plausible, as loyalty-related intentions are often closely associated with customers' willingness to recommend the service provider to others (Dick & Basu, 1994; Fullerton, 2005; Zeithaml et al., 1996). The main behavioral outcomes of loyalty in the context of B2B services are repeat purchases and recommendations, and removing one of them would limit the ability to accurately assess the impact of customer experience dimensions and mediating mechanisms on behavior. For this reason, although the impact of loyalty on WOM was measured and discussed as a significant result of loyalty, the final model is deliberately focused on the research objective of examining the chain of customer experience, loyalty, and repeat purchases. This decision enables the model to maintain theoretical consistency, clearly define causal relationships, and avoid excessive model complexity. Examining WOM as an antecedent for the customer journey of organizations that are not yet customers presents a promising direction for future research.

The key scientific contribution of the investigation presented in this dissertation is the systematic integration of customer experience, emotional, value, and loyalty mechanisms into a single empirically validated model. Although previous studies have examined individual relationships between customer experience, trust, satisfaction, value, loyalty, or repurchase, these relationships have mostly been analyzed in a fragmented manner, in isolated theoretical or empirical contexts, using limited operationalizations of loyalty and, in some cases, customer experience itself. This study contributes to the literature by showing not only which mechanisms proposed in theory prove to be significant, but also which of them remain and which lose their explained

variance when tested in an integrated model. This allows the study to empirically distinguish structurally stable customer experience–loyalty pathways from the mechanisms whose impact is contextual, circumstantial, or potentially overestimated in the literature. Therefore, the contribution of the dissertation to the customer experience literature is not the declaration of new connections, but the refinement of theoretical boundaries and the validation of mechanisms, allowing for a more accurate understanding of how and under what conditions customer experience is transformed into loyalty and its behavioral consequences. Specifically, the presented holistic yet analytically detailed perspective addresses the issue of fragmented customer experience research by offering a more consistent, causal approach to loyalty formation and its consequences in the context of digital B2B services.

As with any empirical investigation, the discussed findings are bounded by the design of the study. These boundaries indicate potential directions for future research. First, the collected data was cross-sectional, therefore the causal direction of the modelled relationships rests on theory and the logic of construct sequence rather than on temporal change in respondent behavior. This is particularly relevant for repurchase, which in B2B digital services unfolds across contract renewal cycles rather than at a single moment, and for this reason it is often examined through repurchase intentions rather than actual behavior (Paulssen & Birk, 2007). Performing a longitudinal study would allow establishing whether the identified mediating mechanisms hold across the customer relationship cycle. Second, the empirical research subject is deliberately narrowed, covering digital B2B services and examined through purposively selected decision-makers within the European Economic Area. The results are therefore analytically informative rather than statistically representative of all B2B decision-makers. The transferability of insights to non-digital B2B services, B2C settings, or other geographical regions could be addressed through replication and multi-group analysis in future research.

The scope of the model also has some limitations. Since the structure of the model was developed based on extant empirical literature analyzing antecedents, components, consequences, mediators, and moderators of customer experience in B2B services, other contextual factors, such as contractual arrangements and buying center dynamics, were not modelled, which may partly explain the lower explained variance in repurchase behavior ($R^2 = 0{,}235$). Incorporating such contextual factors could provide a meaningful extension of the model in future research. Moreover, the effects transmitted through long mediation paths become progressively smaller and depend on the model's structure. In comparison to narrowly defined empirical models in extant research, comprehensiveness of the model developed in this dissertation is considered a contribution to the research field. However, because of the attenuation of effects through long mediation paths, more parsimonious model alternatives could be tested for even better understanding of relationship effects between model's constructs.

Three additional methodological considerations should be acknowledged. First, the constructs were assessed using self-reports from a single respondent per organization.

Although the collinearity diagnostics did not indicate CMB, a marker variable or full collinearity assessment was not feasible with the collected data, and future research could benefit from collecting responses from multiple informants within one organization and additionally cross-referencing transaction and contract renewal records. Second, the data for PLS-SEM were collected using Likert scales, and the analysis treated the scale points as positioned at approximately equal intervals. This practice is common in survey research, particularly when multiple items are combined to measure latent constructs (Harpe, 2015). Prior methodological research indicates that analyses based on correlation and regression are generally not substantially affected by the ordinal nature of Likert data (Norman, 2010). Nevertheless, future research could examine the findings using methods specifically designed for ordinal data. Finally, the NCA bottleneck thresholds are specific to the studied context and should be validated across other B2B digital service settings. Table 33 presents the key findings of the empirical investigation with their interpretation, the corresponding limitations, and the resulting directions for future research.

Table 33. Key findings, their interpretation, limitations, and future research directions.

Key findings	Interpretations	Limitations	Future research directions
Customer experience is empirically differentiated into cognitive and affective dimensions, which operate through different mechanisms	Customer experience should be modelled through separate dimensions, as aggregation may mask differentiated mechanisms	Experience dimensions, along with other constructs, were measured using self-reports from a single respondent per organization	Research designs with multiple informants within one organization; integration of transaction or contract renewal data
The influence of customer experience on loyalty and repurchase is realized mainly through indirect, value creation and relational mechanisms	Customer experience acts as an enabling condition rather than as a direct determinant of loyalty. Positive experience increases the probability, rather than determines, repeated service provider patronage	Mediation was inferred from cross-sectional data	Longitudinal research designs establishing whether the identified mechanisms hold across the customer relationship cycle

Key findings	Interpretations	Limitations	Future research directions
Loyalty develops sequentially from cognitive to affective and conative loyalty, while behavioral loyalty and repurchase behavior show comparatively lower explained variance	Loyalty dimensions do not always or necessarily transform into observable behavioral outcomes in B2B digital services	Contractual arrangements and buying center dynamics were not modelled, which may partly explain the comparatively lower explained variance of repurchase behavior (R^2 = 0,235)	Incorporating contractual and buying center factors as an extension of the model
Trust and habit emerged as necessary conditions for achieving higher repurchase outcomes	Each condition sets a ceiling on attainable repurchasing. Trust functions as a foundational condition and is required already at lower levels of repurchasing. Habit becomes constraining at higher levels, where repurchasing requires a routinized organizational buying	NCA bottleneck thresholds are specific to the studied context	Validation of the necessary conditions and bottleneck thresholds across other B2B digital service settings
Neither the hypothesized moderating effects nor convenience as a mediating mechanism were supported	The examined moderators and convenience did not provide additional explanatory power, indicating that the formation of loyalty and repurchase depends more on value creation and relational mechanisms than on operational or service-structure factors	Moderation effects are sensitive to measurement, operationalization, and sample characteristics, and the variation of the examined conditions across service providers may have been too small for their identification	Replication and multi-group analysis within digital and non-digital B2B service contexts
The integrated model distinguishes structurally stable customer experience–loyalty pathways from mechanisms whose impact is contextual or circumstantial	The comprehensiveness of the model is a contribution to the research field, relative to narrowly defined models in extant research	Effects transmitted through long mediation paths attenuate and depend on the structure of the model	Testing more parsimonious model alternatives to clarify the relationships between constructs

Source: created by the author.

Summarizing the discussion above and based on the final empirical model, the study in this dissertation reveals how customer experience works in the context of digital B2B services by revealing the mechanisms through which the impact on loyalty and repurchases is realized. Within the boundaries outlined above, the findings show not only which mechanisms strengthen loyalty and repeat purchasing, but also which conditions have to be present for higher repurchase behavior to be attainable at all. Further sections present conclusions as well as summarized and structured scientific and practical recommendations.

CONCLUSIONS

1. Based on the analysis of scientific literature, customer experience is conceptualized as an individual-level, subjective, and multidimensional phenomenon, encompassing cognitive, affective, and physical responses to service-related stimuli. The experience forms for each individual, and thus the personal level is the smallest unit at which it manifests and can be examined. In the context of B2B digital services, it is shaped through ongoing interactions within a digitally mediated service ecosystem involving multiple actors and touchpoints. The B2B context does not alter the nature of the customer experience construct, but combines specific circumstances, such as collective decision-making, long-term contractual relationships, and an emphasis on utilitarian evaluation, which together justify investigating customer experience in B2B in its own right, rather than transferring insights from B2C research. Adopting an interaction-based perspective grounded in Service-Dominant Logic, customer experience in B2B digital services is defined as customer's subjective interpretation of verbal and nonverbal, direct, and indirect interactions with people, objects, and the environment, within a network of service actors, throughout the entire length of service provision, inducing customer's cognitive, affective, and physical responses.

   The experience dimensions distinguished in extant literature tend to conceptually overlap, as intellectual aspects might fall within the cognitive dimension, and social and relational aspects might fall within the affective dimension of customer experience. Therefore, cognitive and affective dimensions are adopted as key dimensions of customer experience in B2B digital services, while physical responses remain part of the broader conceptual field but are not operationalized as a separate dimension in empirical investigation. This conceptual distinction provides the foundation for the first defended statement.
2. The literature analysis shows that customer experience research in B2B service contexts remains underdeveloped and fragmented. The scarcity of research was established empirically. The scientific publications' database search that was limited to customer experience in B2B digital services returned only 14 records in Scopus and 27 records in Web of Science databases. A broader search, covering customer experience within the broader context of B2B services, returned only 111 records in Scopus and 80 records in Web of Science databases. These numbers represent all identified records before screening for duplicates between identified records. Such numbers remain below the dataset sizes indicated in the literature as an analytical minimum for bibliometric mapping and highlight the scarcity of research on the topic. Therefore, final bibliometric analysis was conducted on a dataset of 3682 unique records, covering both B2B and B2C service settings, while the B2B-specific research was examined through a systematic literature review, in which 431 identified articles translated into final number of 21 articles meeting the review's inclusion criteria.

   The field-level bibliometric mapping shows accelerated growth of customer

experience research, particularly pronounced after 2020, when the annual publication count rose from 239 in 2020 to 645 in 2025. The conceptual structure of the field positions customer experience consistently as an antecedent of loyalty and behavioral intentions. This research is grounded in an established, multidisciplinary literature, combining psychology, service quality, relationship marketing, Service-Dominant Logic, and experiential marketing, and often relies on validated measurement methods and structural equation modelling techniques, showing the methodological maturity of the field. However, a tension is observed between the phenomenological understanding of customer experience and the positivist testing approaches that are often applied. This tension stems from the positivist requirement to operationalize the construct, without phenomenologically oversimplifying it through standardized measurement scales. In this dissertation, the tension is addressed by measuring customer experience through separate dimensions and multiple item measurement scales rather than a single aggregated index.

Extant studies in B2B settings tend to focus on narrow, specific aspects of customer experience, and there is a noticeable absence of systematic literature reviews that actively develop the construct rather than provide a limited overview of the research field. Very few studies empirically test differentiated dimensions of customer experience together with mediating and moderating pathways. Based on the results of the systematic literature review, mediating factors were addressed in 9 and moderating factors only in 6 of the 21 reviewed studies. Conceptually, the customer experience construct remains fragmented and its positioning in relation to mediating mechanisms and outcomes is inconsistent. Empirically, the mechanisms through which customer experience translates into customer outcomes in B2B digital services remain largely uninvestigated, and no study covers the set of constructs and relationships proposed in this dissertation. These conceptual and empirical research gaps substantiate the fourth defended statement.

3. The theoretical synthesis identifies customer experience in B2B services as a construct structured through three interrelated elements: antecedents, experience components, and consequences. Antecedents represent conditions enabling experience formation, components define the internal structure of the construct, and consequences capture relational and value-based outcomes such as engagement, satisfaction, and loyalty. This synthesis positions customer experience as a central mechanism linking service inputs with customer-related outcomes.

   These three elements are addressed unevenly in extant research. Out of 21 reviewed studies, antecedents were identified in 9, components in 15, and consequences in 14 studies. Antecedents are modelled either as external factors preceding the formation of customer experience, or as proxies representing the preconditions to the formation of positive customer experience. Components are grouped into layer-based, dimension-based, scale-based, model-based, and standalone factors, most frequently derived from the experience quality scale EXQ. In some cases, components are derived from service quality instruments, which measure a related but distinct construct. Such components were included in the final integrative map

of B2B service customer experience construct only in the modified form found within the studies. Consequences form four areas, ranging from the most to least represented: engagement and relationships, satisfaction and value, loyalty, and organizational benefits. Specific behavioral outcomes of customer experience, such as loyalty behavior and repurchase, are consistently positioned among the consequences, rather than among the components of customer experience, which substantiates the first defended statement.

Within the systematic literature review, the integration of the reviewed studies was structured using an adapted antecedents-decisions-outcomes (ADO) framework, where the central stage represents the components of customer experience, while mediators and moderators refine the antecedent-outcome pathways. This modelling logic was found to be a leading approach in customer experience modelling research. However, the integrative map developed through systematic literature review shows that the reviewed literature does not fully fulfill this modelling logic. Not all factors are linked across the stages, and the relationships between them are specified at different granularity levels. Moreover, mediating factors mostly belong to the group of consequences, and one such factor is found among the antecedents, instead of forming a distinct mediating layer between antecedents and consequences. Only one mediator, value-in-use, was found to be a standalone mediator and did not belong to any other main ADO group. In addition, the entire subgroup of experience value factors within the consequences group also performs a mediating role. Layer-based components appear in the reviewed studies, but a structuring in which the individual, dyadic relationship, and institutional environment layers would contain the experience dimensions with their underlying constructs was not found, presenting an avenue for future research. Overall, the synthesis revealed a fragmented modelling of B2B customer experience, particularly in the integration of the construct across the ADO stages and experience layers, which substantiates the fourth defended statement.

4. An empirical research framework was developed to examine the relationships between customer experience, customer loyalty, and repeat purchase behavior and intentions in B2B digital services. The framework structure contains latent constructs and enables the analysis of direct, mediating, and moderating relationships. Modelling customer experience requires specifying both the internal structure of the construct and its relationships within the system of constructs in which it operates. The internal structure was specified by distinguishing between the cognitive and affective experience dimensions, and by modelling value-in-use as a reflective-formative higher-order construct formed by the first-order dimensions (experience, personalization, and relationship). Customer experience is positioned as the starting point of the model, and customer loyalty and repurchase were selected as the key outcomes for assessing the effects of customer experience dimensions based on the theoretical prominence of loyalty and the consistent representation of both outcomes among the consequences identified in the systematic literature review, with repurchase representing the point at which loyalty translates into

observable action directly linked to business revenue.

The research framework operationalizes 20 hypotheses, formulated as H1-H16, including sub-hypotheses. For the analytical method, structural equation modelling was selected, since the tested model features unobservable, latent constructs that are inferred from observed, measured indicators. In addition, the hypothesized relationships form a system that must be estimated as a whole, for which single equation techniques such as regression or correlation analysis are not suitable. This choice corresponds to the established practice of the research field, where structural equation modelling is the dominant analytical method for modelling customer experience. The partial least squares technique of structural equation modelling (PLS-SEM) was selected over the covariance-based technique based on the complexity of the tested model, its prediction-oriented objectives, and the inclusion of a formative higher-order construct, whose estimation in PLS-SEM does not require the additional specification and identification conditions applied in covariance-based modelling. In addition to PLS-SEM, necessary condition analysis was performed as a complementary testing. While the sufficiency logic of PLS-SEM explains which constructs affect the outcomes, the necessity logic identifies which conditions must be present for the outcomes to be fulfilled. This combination of analyses allows examining the mechanisms that increase repeat purchasing and the conditions required for it within a single empirical investigation.

The sample size was determined by statistical power calculation, using the inverse square root method. For the statistical power calculation, the minimum meaningful effect size was set as $\beta = 0{,}15$ and statistical power of 0,80. The resulting required sample was approximately 350 observations, and the actual data was gathered from 386 respondents, which provided sufficient power to detect even relatively weak structural relationships.

Respondent selection was based on purposive, role-based sampling. Eligibility was verified through the survey's screening questions, confirming the respondents' involvement in service-related decision-making and the digital nature of the services they make decisions about. Such sampling method is established in B2B research, where access to organizational decision-makers is limited. However, while it ensures the relevance of the collected data, statistical generalization is limited. The research instrument consisted of 83 Likert scale items, and its measurement items were revised through expert review prior to data collection. Overall, the designed empirical framework provides a modelling logic in which the dimensions of customer experience are separated from their mediating and moderating mechanisms, and outcomes, and substantiates the fourth defended statement.

5. The empirical findings show that customer experience influences customer loyalty and repurchase behavior and intentions in B2B digital services primarily through indirect mechanisms rather than direct effects. Out of 30 estimated relationships, 25 were statistically significant, and 4 out of 20 hypotheses were not supported. The path coefficients ranged from -0,080 to 0,587, indicating small to large effects, depending on the relationship. In addition, the measurement model confirmed

that the cognitive and affective dimensions of customer experience are empirically distinct, as all HTMT ratios remained below the 0,90 threshold.

The cognitive and affective dimensions of customer experience operate through distinct mediation pathways, highlighting their differentiated impact on outcomes. Cognitive customer experience has no significant direct effect on cognitive loyalty (β = 0,092; p = 0,073). It notably influences cognitive loyalty through customer's evaluation of the service value, particularly through perceived value (β = 0,150) and value-in-use (β = 0,137). Cognitive customer experience also shows a modest effect on affective loyalty (β = 0,057) and conative loyalty (β = 0,076) through customer satisfaction. In total, the indirect effect of cognitive customer experience on cognitive loyalty is substantial (β = 0,287), while the direct effect remains non-significant. In a similar way, the affective customer experience influences loyalty dimensions only indirectly, by substantially influencing affective loyalty through emotional attachment to a brand (β = 0,236), and customer satisfaction through trust (β = 0,274). Meanwhile, the indirect effect of affective customer experience on cognitive loyalty through brand equity is weak (β = 0,065), but the total indirect effect of affective customer experience on affective loyalty is the largest among the hypothesized mediating paths (β = 0,330). The obtained results indicate that both dimensions of customer experience influence loyalty predominantly through indirect pathways, where cognitive experience translates into loyalty through customer's evaluation of the service value, and affective experience first converts into emotional bonds and trust in the service provider. The only significant direct path from a customer experience dimension to a loyalty dimension is the small effect of cognitive customer experience on conative loyalty (β = 0,142).

The direct effects of cognitive and affective dimensions of customer experience on the loyalty dimensions and repurchase outcomes were found to be weak. Cognitive customer experience was found to have small direct effects on conative loyalty (β = 0,142) and repurchase intentions (β = 0,140). However, its strongest direct effects were on the mediating constructs, namely a large effect on value-in-use (β = 0,559) and moderate effects on perceived value (β = 0,437) and convenience (β = 0,416). Affective customer experience followed the same pattern, where it showed a large direct effect on emotional attachment to a brand (β = 0,587) and moderate effects on trust (β = 0,477) and brand equity (β = 0,458). This shows the effect of customer experience on the mediating mechanisms rather than a direct effect on the outcomes themselves.

Loyalty was found to develop sequentially from cognitive to behavioral loyalty, and the effects to strengthen further down its sequence. Starting from a small effect from cognitive to affective loyalty (β = 0,236), it becomes moderate towards conative loyalty (β = 0,367) and reaches its strongest point in the step towards behavioral loyalty (β = 0,415). Yet the step from behavioral loyalty to actual repurchase is small (β = 0,142), indicating that consistent partnering with a service provider only slightly increases the likelihood of repurchasing in the future. Repurchase is more strongly driven by repurchase intentions (β = 0,247) and habit (β = 0,198), which

shows that repeated purchasing results both from conscious intentions and routinized use of the provider's services. Accordingly, the model explains the highest variance in affective loyalty (59,7%), conative loyalty (56%), customer satisfaction (47,1%), and cognitive loyalty (45%), and a meaningful, albeit weaker, variance of repurchase intentions (39,3%). Meanwhile, lower levels of explained variance were found for behavioral loyalty (17,2%) and repurchase behavior (23,5%). In other words, the model explains substantially more variance in the attitudinal loyalty dimensions than in the behavioral outcomes. This suggests that actual repurchasing is also shaped by other contextual, organizational, and contractual factors that were not captured in the model.

Finally, the model showed no statistically significant moderating effects on the relationships between cognitive customer experience and the downstream constructs. The interaction effects of customer knowledge sharing (p = 0,872), firm's organizational agility (p = 0,111), and switching costs (p = 0,662) were all statistically non-significant, and their interaction effect sizes were below f^2 = 0,006, which is well under the threshold of a small effect. In addition to these three unsupported hypotheses, convenience also did not act as a mediating mechanism between cognitive customer experience and repurchase (β = 0,021; p = 0,427). Therefore, no evidence was found that the examined contextual conditions moderate the identified relationships. These findings substantiate the second and third defended statements.

6. Empirically validated model of B2B digital service customer experience retains the empirically supported relationships that belong to the customer experience-loyalty-repurchase sequence. Convenience and word-of-mouth, therefore, were excluded from the final model. Convenience did not act as a mediator and word-of-mouth operates outside the customer experience-loyalty-repurchase sequence. Thus, while word-of-mouth was included in the conceptual model, the aim of the empirical investigation was focused on the mediators between the customer experience dimensions and loyalty, as well as repurchase outcomes. The empirically validated model shows that customer experience affects the loyalty and repurchase outcomes through value-based, emotional, and relational mechanisms.

   The assessment of total effects, the sum of effect paths from source to target constructs, showed that cognitive customer experience was the only construct with a total effect of at least β = 0,10 on all of the loyalty dimensions and repurchase outcomes (see Table 28). Affective customer experience showed statistically significant total effects on all of these outcomes, but on cognitive loyalty (β = 0,065), behavioral loyalty (β = 0,093), and repurchase (β = 0,087) they remained below this level. Among the customer experience and mediating constructs, that is, excluding the loyalty dimensions themselves, cognitive customer experience had the largest total effect on repurchase intentions (β = 0,287). Meanwhile, customer satisfaction had the largest total effects on conative loyalty (β = 0,483) and behavioral loyalty (β = 0,200). Finally, trust remains significant throughout affective, conative, and behavioral dimensions of loyalty.

Meanwhile, the total effects on repurchase behavior were smallest in the model. The largest effects belong to the constructs modelled closest to the repurchase behavior construct, namely repurchase intentions (β = 0,247), habit (β = 0,198), conative loyalty (β = 0,192), and behavioral loyalty (β = 0,142). Among the antecedents positioned further upstream in the model, the largest total effects on repurchase were found for cognitive customer experience (β = 0,107) and emotional attachment to a brand (β = 0,103). It was found that while the mediating mechanisms carry the effect of the originating construct towards the target construct, the effect generally diminished along the pathway. That is, the further a construct is positioned in the model from repurchase, the smaller tends to be its total effect on the actual repurchasing behavior. However, constructs transmitting their effect through several downstream pathways, such as conative loyalty, can retain a larger total effect than some constructs positioned closer to repurchase.

The necessary condition analysis (NCA) complements these findings. Total effects show which constructs increase the outcomes, and NCA shows which conditions must be present for higher outcomes to be attained at all. After conducting the NCA, trust (d = 0,114; p = 0,001) and habit (d = 0,132; p = 0,031) were found to be necessary conditions for higher repurchase outcomes, both with a medium effect size, while behavioral loyalty was found to be only marginally necessary (d = 0,100; p = 0,037). Trust is required already at lower levels of repurchase and acts as a foundational condition, while habit becomes a constraining condition at higher levels of repurchase, where the higher repurchase requires a higher degree of routinized organizational buying.

The two logics, PLS-SEM and NCA, provide complementary insights. Trust has a comparatively small total effect on repurchase behavior (β = 0,053), while habit is among its strongest predictors (β = 0,198), yet both were identified as necessary conditions, without which higher repurchasing levels do not occur. Thus, a construct can be a weak driver for a particular outcome, as in the case of trust, while still being a necessary condition for it. Neither analytical method reveals such findings on its own.

From a theoretical point of view, the results show that customer experience should be modelled through separate dimensions and through separate mediating mechanisms. Aggregation of experience or loyalty dimensions would mask the pathways identified in this dissertation. From a practical management point of view, in order to strengthen loyalty and foster repurchasing, it is crucial to strengthen the mediators in addition to the customer experience itself. As the NCA showed, minimum levels of trust and habit are necessary for attaining higher levels of repurchase in the examined context. These conditions should therefore be considered alongside the mechanisms identified through PLS-SEM when interpreting and managing repurchase outcomes. These findings substantiate the fifth defended statement.

The validated model is bounded by the design of the empirical investigation. It was estimated on cross-sectional data obtained from purposively sampled

decision-makers in digital B2B services within the European Economic Area, and the model examines value-based, emotional and relational mechanisms. Thus, the model describes how customer experience operates within this context, rather than establishing effects that hold universally across contexts or over time.

Further research could extend the empirical model in several directions. Longitudinal research designs would establish whether the identified mediating mechanisms and necessary conditions hold across the customer relationship cycle. Incorporating contextual factors, such as contractual arrangements and buying center dynamics, as well as testing more parsimonious model alternatives, would clarify how the estimated effects depend on the structure of the model. Finally, replication in other service, geographical and organizational contexts would reveal to what extent the findings depend on the context analyzed in this dissertation.

RECOMMENDATIONS

Drawing on the theoretical and empirical findings of this dissertation, recommendations are presented for two groups – the academic community examining customer experience and the practitioners operating within the B2B digital service industry.

Recommendations for researchers

The following recommendations are intended for researchers examining customer experience in B2B and digital service contexts, particularly those modelling its relationships with loyalty and repurchase outcomes.

1. Position customer experience as a multidimensional construct encompassing cognitive and affective dimensions in research on customer experience in B2B digital services. Behavioral outcomes, such as customer loyalty and repurchase behavior, should be analytically separated from customer experience itself, as experiential responses reflect customers' internal cognitive and affective states that precede and enable subsequent value creation and relationship building processes. Treating behavioral outcomes as part of the customer experience may risk blending experiential processes with their consequences and contributes to further conceptual fragmentation. In the empirical investigation presented in this dissertation, the two dimensions were confirmed as empirically distinct and were found to reach the outcomes through different mediating pathways, which supports separating them instead of aggregating them into a single index. To increase the clarity of the concept and the comparability of research, future studies are encouraged to consistently apply cognitive and affective dimensions as the core of customer experience in B2B digital service contexts.

2. Conceptually separate mediation mechanisms from the structure of customer experience when modelling customer experience in B2B digital services. Clear conceptual boundaries should be established between the dimensions of customer experience, the processes through which positive customer experience is formed and operates, and the outcomes it influences. The systematic literature review conducted in this dissertation showed that mediating factors are most often placed within the group of consequences instead of forming a distinct mediating layer, which blurs the boundary between a mechanism and an outcome. Stating explicitly which constructs represent the components of customer experience, which represent the mechanisms, and which represent the outcomes would reduce this ambiguity. This separation improves model interpretation and facilitates the development of cumulative knowledge in customer experience research.

3. Model customer experience outcomes in B2B digital services such as customer loyalty and repurchase behavior as indirect consequences of customer experience

through mediating mechanisms rather than through direct effects. This approach emphasizes how these outcomes arise through mediating processes. The results of this dissertation demonstrate the possible consequences of disregarding such a modelling approach, as the direct effect of cognitive customer experience on cognitive loyalty was not statistically significant, while its indirect effect through value-related mechanisms was substantial. Reporting total effects in addition to direct and indirect ones would additionally show how much of a construct's influence is retained once it passes through the mediating mechanisms. Accordingly, a mechanism-based modelling approach helps more accurately theorize the pathways through which customer experience translates into relevant outcomes.

4. Only include moderating variables in research on customer experience in B2B digital services when there is a clear theoretical rationale explaining why such factors are important and how they affect specific relationships in the model. The use of theory-based and structurally informed moderating variables helps reduce unnecessary model complexity and improve the comparability of customer experience research results. In this dissertation, three theoretically grounded moderators produced no statistically significant interaction effects, with effect sizes below the threshold of a small effect. Such results are still informative, as reporting them contributes to establishing the conditions under which the explanations proposed in the literature do not add explanatory power.

5. Apply consistent modelling logic that clearly defines the role of customer experience in B2B digital services. Researchers may benefit from distinguishing whether customer experience is treated as the primary construct or as an explanatory component within a broader model. When treated as the primary construct, its multifaceted nature should be preserved. When used as a supporting explanatory construct, it should retain its cognitive and affective content without absorbing conceptually related concepts such as user experience or service quality. When the goal of modelling relates to behavioral outcomes, the logic of sufficiency in structural modelling can also be supplemented by the logic of necessity, since a construct may have a relatively weak influence on an outcome while simultaneously limiting the levels of that outcome that can be achieved at all. Neither of these analytical logics, taken separately, reveals such conclusion.

Recommendations for practitioners

The following recommendations are intended for B2B digital service providers, particularly the roles in an organization which manage customer experience: product and service owners, customer success managers, marketing and communication managers, service operations managers, and senior managers responsible for retaining customers.

1. For customer success managers and account management teams to secure at least

a minimum level of trust and routinized service use from the customer before investing in other mechanisms of customer experience management. Both trust and habit are necessary conditions for higher levels of repurchase, where trust constrains repeat purchasing already at its lower levels, while habit becomes the binding condition at higher levels of repurchasing (i.e., when a customer keeps buying consistently instead of sporadically). Investing in emotional bonding and perfecting the communication might not necessarily convert into a repeated purchase if the customer does not have trust in the organization and its services. Meanwhile, routinized service use makes the customer more bound to the service, increasing the likelihood of repurchasing in the future. In practice, trust is built through predictable service delivery, transparent pricing and contract terms, honesty and sincerity, and showing interest in supporting the customer by responding to their needs. Habit is built through routinization of the service, for instance, embedding an information system's use into the customer's daily routines through integration with the customer's existing IT systems, recurring reporting on service performance or benefits, such as system downtime reports or costs saved compared to not using the service, and other recurring interactions with the purchased service that would position it as an obvious choice for future purchases.

2. For product and service owners to improve cognitive customer experience by focusing on the value that the customer obtains from using the service instead of focusing on loyalty as such. Customer experience design should be treated as an enabler for loyalty building and not as a direct goal on its own. The design choices should be evaluated by the value creation and relational mechanisms they enable. Out of the customer experience and mediating constructs, cognitive customer experience has the largest overall influence on cognitive loyalty and repurchase intentions, but it does not directly affect cognitive loyalty, since this effect manifests through mediators it strongly influences in between, namely the perceived value and value-in-use. Therefore, the return on customer experience improvements depends on increasing the customer's perception of attained value rather than on evaluating the customer's experience with a service on its own. In practice, it means that in order to drive a customer with positive customer experience towards loyalty and future repurchasing, the service should be reasonably priced and have a decent price to performance ratio, be seen as a better alternative in terms of quality compared to other providers' offerings, help the customer solve their operational problems and build their own knowledge and capabilities through using the service, and include the customer in the co-creation of a service for it to better respond to the customer's needs.

3. For marketing and communication managers to direct the affective customer experience towards emotional attachment and trust rather than towards the brand image alone. Affective customer experience has the biggest influence on emotional attachment to a brand, trust, and brand equity, and through these mediators, it reaches loyalty, especially its affective aspects. Emotional attachment, meanwhile, has the largest overall influence on affective loyalty and is one of the few constructs retaining a

significant influence on repurchase behavior. The overall influence of brand equity on loyalty is comparatively modest, which indicates that for existing customers the communication resources provide more value when they are directed towards true relationship building rather than staying on the brand communication level. In practice, this means fostering a sense of connection with the service provider itself, which makes purchasing from a particular provider feel more natural to the customer even when competitors offer similar service features. This might be achieved by the continuity of an assigned contact person throughout the contract cycle, notification of service issues before the customer identifies them themselves, and consistent recognition of the results the customer achieves due to partnering with the service provider.

4. For service operations managers to treat customer satisfaction as a KPI which needs to be managed on individual account and separate interaction levels. Among the mediating constructs, customer satisfaction has the largest overall influence on conative and behavioral loyalty, with significant influence on repurchase intentions, thus making it the strongest single construct connecting customer experience and behavioral outcomes. In practice, customer satisfaction should be measured at defined points of the customer journey, such as at the completion of onboarding, the resolution of a support request or during a renewal of a contract, rather than in a single point in time, such as during a yearly review. Each measurement point should be connected to a defined response from the provider's side, in order to capture a decline in satisfaction early on and mitigate it at the account or service level instead of evaluating it as an aggregate statistic.

5. For senior managers responsible for retaining customers to plan the development of loyalty in stages and match the expected outcome to the stage of the relationship. Customer experience works as a strategic loyalty development starting point, and its role in this process should be clearly defined. Loyalty develops in stages, and the effects grow stronger along the sequence from cognitive loyalty to affective loyalty, to conative and, finally, to behavioral loyalty. The likelihood of loyal behavior converting to actual repurchase remains comparatively small, as it is driven more directly by repurchase intentions and habit. Because the effects attenuate along the mediation chain, the constructs positioned further from repurchase are more likely to shape the attitude towards the service provider rather than to drive repurchase. Thus, depending on the customer's loyalty stage, the customer experience should target the customer's attitude in early stages of a relationship, while repurchase should be supported additionally by mechanisms operating closer to a purchase decision, such as contract renewal planning, forming a habit of service use, and continuity of the relationship.

6. For managers responsible for customer feedback and reporting systems to measure the cognitive and affective dimensions of customer experience separately from loyalty and repurchase KPIs. Aggregating experience indicators with loyalty or repurchase KPIs into a single metric may obscure the mechanisms through which

experience operates, as the two dimensions are empirically distinct and reach the outcomes through different pathways. In practice, cognitive customer experience should be evaluated based on the usefulness of information, learning and idea generation during service provision, and affective experience through optimism, enthusiasm and other positive emotional responses from the customer. In addition, trust and habit should be monitored as separate account-level indicators due to their role as necessary conditions for higher levels of repurchase. Such measurement allows identifying which mechanisms are strengthening or weakening loyalty or repurchase metrics, instead of simply recording the fact of a decline or an increase in loyalty or repurchasing.

These recommendations should be considered as guidance rather than a fixed set of actions and should be applied in an organization by adapting to the specific service structure and business context. The implementation of these recommendations in an organization should also be considered within the boundaries and limitations of the empirical study discussed in this dissertation.

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ANNEXES

Annex 1. Research instrument used in the empirical investigation.

The questionnaire was administered online through the Qualtrics survey platform and is reproduced below. During data collection, consent was obtained through the introductory statement, where proceeding to the questionnaire indicated agreement to participate. Following the assessment by the Research Ethics Compliance Committee, an explicit confirmation question (Q1) was added to the instrument, and it is included below. The company name placeholder "XYZ" denoted the company name entered by the respondent in Question 4, which the platform dynamically inserted into subsequent statements. Item codes are given for reference purposes only and were not shown to the respondents. The theoretical sources of the measurement items are presented in Table 16.

Part A. Introductory statement, informed consent and screening questions

Thank you for considering participation in this academic survey conducted by Simonas Juozapas Raišys, researcher at the Faculty of Public Governance and Business, Mykolas Romeris University, examining how B2B customer experience influences loyalty and repeat purchases.

The survey will take approximately 10 minutes to complete and participation is entirely voluntary — you may withdraw at any time without any negative consequences.

No personally identifiable information such as your name, email address, or IP address is collected. Because no personally identifiable information is collected and your responses cannot be linked back to you, once submitted, your answers cannot be withdrawn individually.

The collected responses will be used solely for scientific research purposes in the context of a doctoral dissertation.

For questions or concerns, you may contact the researcher at: simonas.raisys@mruni.eu

Q1. I confirm that I have read and understood the information above, that my participation is voluntary, and that I may withdraw from the survey at any time without any negative consequences. I agree to take part in this research study.

Yes, I agree to participate / No, I do not agree to participate

Q2. Are you involved in making decisions regarding a particular service in your organization? E.g., evaluating, purchasing, or repurchasing of a service?

Yes / No

Q3. Regarding what kind of a service(s) are you involved in making decisions?

Digital / Mixed

Q4. Please enter the name of one company whose services your organization uses and for which you are involved in evaluating, purchasing, or repurchasing decisions. By your choice, this name can be real or made up. It will be used only in this specific survey and will not be included in the analysis of the study results. This is required so that in the following questions, the company name can replace "XYZ" placeholder, helping you better relate to the context.

(Open-ended text entry)

Note: *Respondents who did not confirm involvement in decision-making in regard to services in Q2 did not proceed to Part B of the survey.*

Part B. Measurement items

All statements listed below were measured on a five-point Likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree). The statements were presented in six thematic blocks in the order shown below, with each construct presented as a separate matrix question.

Construct	Item code	Item
Questionnaire block 1		
Affective Customer Experience	AFFCX1	Using XYZ makes me feel good
	AFFCX2	Using XYZ makes me feel optimistic
	AFFCX3	Using XYZ makes me feel enthusiastic
Cognitive Customer Experience	COGCX1	The information obtained from XYZ is useful
	COGCX2	I learned a lot from using XYZ
	COGCX3	The information obtained from XYZ brings interesting ideas to mind
Questionnaire block 2		
Cognitive Loyalty	COGLOY1	The XYZ provides superior service quality as compared to other firms
	COGLOY2	No other company provides better services than XYZ
	COGLOY3	I believe XYZ provides more benefits than other service providers in the same category
	COGLOY4	Overall, service quality of XYZ was excellent compared to other providers
Affective Loyalty	AFFLOY1	I love doing business with XYZ
	AFFLOY2	I feel better when I do business with XYZ
	AFFLOY3	I like XYZ more than other similar service providers
Conative Loyalty	CONLOY1	I intend to continue doing business with XYZ
	CONLOY2	I consider the XYZ as my first choice
	CONLOY3	I am strongly willing to purchase again from the XYZ
	CONLOY4	I would like to recommend the XYZ to my close friends

Behavioral Loyalty	BEHLOY1	When my company requires this specific service, we consistently partner with XYZ
	BEHLOY2	Compared with other providers, we spent more money with XYZ
	BEHLOY3	Compared with other providers in this service category, we have done business mostly with XYZ
	BEHLOY4	Compared with other providers in this category, we used a larger number of the services offered by XYZ
Questionnaire block 3		
Repurchase Intentions	REPINT1	I will do more business with this provider in the next few years
	REPINT2	I expect the relationship with this provider to last a long time
	REPINT3	I would continue doing business with this provider even if prices increased somewhat
Perceived Value	PERCVAL1	Compared to other firms, XYZ provides the best value
	PERCVAL2	XYZ charges a reasonable price
	PERCVAL3	XYZ provides better services at a competitive price
	PERCVAL4	XYZ provides better quality for the price
Customer Satisfaction	SAT1	Services of XYZ is of superior quality
	SAT2	Services of XYZ are excellent
	SAT3	Services of XYZ are done right the first time
Word-of-Mouth	WOM1	I will highly recommend XYZ to others
	WOM2	I will say positive things about XYZ to others
	WOM3	I will encourage others to use services of XYZ
	WOM4	I will refer other companies to XYZ
Questionnaire block 4		
Trust	TRUST1	XYZ's services give me security
	TRUST2	I trust the quality of XYZ's services
	TRUST3	XYZ is committed to providing services on agreed conditions
	TRUST4	XYZ is sincere with its customers
	TRUST5	XYZ is honest with its customers
	TRUST6	XYZ shows interest in its customers
	TRUST7	I think XYZ renews its services to take into account advances in research
	TRUST8	I believe that XYZ is continually seeking to improve its responses to customer needs
Repurchase	REP1	I did business with this provider more than once in the last few years
	REP2	The relationship with this provider lasts for some time now
	REP3	I repeatedly do business with this provider regardless of service price fluctuations

Brand Equity	BREQ1	It makes sense to buy XYZ instead of any other brand, even if they are the same
	BREQ2	Even if another brand has the same features as XYZ, I would prefer to buy XYZ
	BREQ3	If there is another brand as good as XYZ, I prefer to buy XYZ
	BREQ4	If another brand is not different from XYZ in any way, it seems smarter to purchase XYZ
Questionnaire block 5		
Value-in-use	VIUEXP1	XYZ provides a memorable experience for me
	VIUEXP2	XYZ's services stimulate my ability to solve problems
	VIUEXP3	It was possible for a customer to improve the process by experimenting and trying new things
	VIUPER1	The benefit, value or fun from the service provisioning process depended on the user and the usage scenario
	VIUPER2	XYZ tries to serve the individual needs of each of its customers
	VIUPER3	Different customers, depending on their taste, choice or knowledge, can involve themselves differently in the process
	VIUREL1	By using the XYZ's services, I feel connected to XYZ
	VIUREL2	By using the XYZ's services, XYZ offers even greater benefits to me
	VIUREL3	By using the XYZ's services, XYZ provides higher quality services to me
Emotional Attachment to a Brand	EMATBR1	I have a lot of affection for this brand
	EMATBR2	The purchase of this brand gives me a lot of joy, pleasure
	EMATBR3	I find some comfort in buying or owning this brand
	EMATBR4	I am very related to this brand
	EMATBR5	I am very attracted to this brand
Habit	HAB1	Using the XYZ services has become automatic for me
	HAB2	Using the XYZ services is natural to me
	HAB3	When faced with a particular task, using the XYZ services is an obvious choice for me
Questionnaire block 6		
Convenience	CONV1	XYZ provides clear information, simplifying our decision-making process
	CONV2	XYZ provides service support when needed
	CONV3	Our company can quickly see intended benefits from using XYZ services
	CONV4	It is convenient for our company to continue (repurchase), change or cancel the service as needed
	CONV5	After the service is purchased, XYZ allows for arranging the service modifications quickly and simply

Customer Knowledge Sharing	CKS1	I share my experiences with the services with XYZ and with other customers
	CKS2	I provide feedback to XYZ about their new services
	CKS3	I provide suggestions to XYZ for developing new services
Firm's Organizational Agility	FOA1	XYZ is able to rapidly respond to market/customers' needs
	FOA2	XYZ is quick to make and implement appropriate decisions
	FOA3	XYZ treats market-related changes and apparent chaos as opportunities
Switching Costs	SWC1	It would cost my company a lot of money to switch from XYZ to another service provider
	SWC2	It would take my company a lot of effort to switch from XYZ to another service provider
	SWC3	It would take my company a lot of time to switch from XYZ to another service provider
	SWC4	If my company changed from XYZ to another company, some new technological problems would arise
	SWC5	My company will feel uncertain if we have to choose a new service provider

Source: compiled by the author.

Annex 2. Measurement model's discriminant validity assessment using heterotrait-monotrait ratio.

	Heterotrait-monotrait ratio (HTMT)
Affective Loyalty <-> Affective Customer Experience	0,798
Behavioral Loyalty <-> Affective Customer Experience	0,278
Behavioral Loyalty <-> Affective Loyalty	0,388
Brand Equity <-> Affective Customer Experience	0,526
Brand Equity <-> Affective Loyalty	0,672
Brand Equity <-> Behavioral Loyalty	0,41
Cognitive Customer Experience <-> Affective Customer Experience	0,603
Cognitive Customer Experience <-> Affective Loyalty	0,618
Cognitive Customer Experience <-> Behavioral Loyalty	0,413
Cognitive Customer Experience <-> Brand Equity	0,521
Cognitive Loyalty <-> Affective Customer Experience	0,597
Cognitive Loyalty <-> Affective Loyalty	0,724
Cognitive Loyalty <-> Behavioral Loyalty	0,357
Cognitive Loyalty <-> Brand Equity	0,554
Cognitive Loyalty <-> Cognitive Customer Experience	0,558
Conative Loyalty <-> Affective Customer Experience	0,639

Conative Loyalty <-> Affective Loyalty	0,799
Conative Loyalty <-> Behavioral Loyalty	0,549
Conative Loyalty <-> Brand Equity	0,66
Conative Loyalty <-> Cognitive Customer Experience	0,615
Conative Loyalty <-> Cognitive Loyalty	0,729
Convenience <-> Affective Customer Experience	0,523
Convenience <-> Affective Loyalty	0,614
Convenience <-> Behavioral Loyalty	0,543
Convenience <-> Brand Equity	0,644
Convenience <-> Cognitive Customer Experience	0,597
Convenience <-> Cognitive Loyalty	0,563
Convenience <-> Conative Loyalty	0,698
Customer Knowledge Sharing <-> Affective Customer Experience	0,294
Customer Knowledge Sharing <-> Affective Loyalty	0,388
Customer Knowledge Sharing <-> Behavioral Loyalty	0,143
Customer Knowledge Sharing <-> Brand Equity	0,256
Customer Knowledge Sharing <-> Cognitive Customer Experience	0,454
Customer Knowledge Sharing <-> Cognitive Loyalty	0,195
Customer Knowledge Sharing <-> Conative Loyalty	0,244
Customer Knowledge Sharing <-> Convenience	0,374
Customer Satisfaction <-> Affective Customer Experience	0,676
Customer Satisfaction <-> Affective Loyalty	0,782
Customer Satisfaction <-> Behavioral Loyalty	0,417
Customer Satisfaction <-> Brand Equity	0,638
Customer Satisfaction <-> Cognitive Customer Experience	0,575
Customer Satisfaction <-> Cognitive Loyalty	0,783
Customer Satisfaction <-> Conative Loyalty	0,807
Customer Satisfaction <-> Convenience	0,722
Customer Satisfaction <-> Customer Knowledge Sharing	0,274
Emotional Attachment to a Brand <-> Affective Customer Experience	0,656
Emotional Attachment to a Brand <-> Affective Loyalty	0,752
Emotional Attachment to a Brand <-> Behavioral Loyalty	0,269
Emotional Attachment to a Brand <-> Brand Equity	0,621
Emotional Attachment to a Brand <-> Cognitive Customer Experience	0,593
Emotional Attachment to a Brand <-> Cognitive Loyalty	0,522
Emotional Attachment to a Brand <-> Conative Loyalty	0,587
Emotional Attachment to a Brand <-> Convenience	0,512
Emotional Attachment to a Brand <-> Customer Knowledge Sharing	0,413
Emotional Attachment to a Brand <-> Customer Satisfaction	0,582
Experience <-> Affective Customer Experience	0,741
Experience <-> Affective Loyalty	0,704
Experience <-> Behavioral Loyalty	0,318

Experience <-> Brand Equity	0,546
Experience <-> Cognitive Customer Experience	0,77
Experience <-> Cognitive Loyalty	0,64
Experience <-> Conative Loyalty	0,592
Experience <-> Convenience	0,615
Experience <-> Customer Knowledge Sharing	0,427
Experience <-> Customer Satisfaction	0,613
Experience <-> Emotional Attachment to a Brand	0,735
Firm's Organizational Agility <-> Affective Customer Experience	0,471
Firm's Organizational Agility <-> Affective Loyalty	0,495
Firm's Organizational Agility <-> Behavioral Loyalty	0,264
Firm's Organizational Agility <-> Brand Equity	0,458
Firm's Organizational Agility <-> Cognitive Customer Experience	0,445
Firm's Organizational Agility <-> Cognitive Loyalty	0,496
Firm's Organizational Agility <-> Conative Loyalty	0,424
Firm's Organizational Agility <-> Convenience	0,668
Firm's Organizational Agility <-> Customer Knowledge Sharing	0,423
Firm's Organizational Agility <-> Customer Satisfaction	0,545
Firm's Organizational Agility <-> Emotional Attachment to a Brand	0,496
Firm's Organizational Agility <-> Experience	0,634
Habit <-> Affective Customer Experience	0,29
Habit <-> Affective Loyalty	0,396
Habit <-> Behavioral Loyalty	0,572
Habit <-> Brand Equity	0,474
Habit <-> Cognitive Customer Experience	0,416
Habit <-> Cognitive Loyalty	0,378
Habit <-> Conative Loyalty	0,519
Habit <-> Convenience	0,448
Habit <-> Customer Knowledge Sharing	0,149
Habit <-> Customer Satisfaction	0,347
Habit <-> Emotional Attachment to a Brand	0,421
Habit <-> Experience	0,372
Habit <-> Firm's Organizational Agility	0,281
Perceived Value <-> Affective Customer Experience	0,581
Perceived Value <-> Affective Loyalty	0,675
Perceived Value <-> Behavioral Loyalty	0,362
Perceived Value <-> Brand Equity	0,588
Perceived Value <-> Cognitive Customer Experience	0,551
Perceived Value <-> Cognitive Loyalty	0,663
Perceived Value <-> Conative Loyalty	0,737
Perceived Value <-> Convenience	0,681
Perceived Value <-> Customer Knowledge Sharing	0,201

Perceived Value <-> Customer Satisfaction	0,811
Perceived Value <-> Emotional Attachment to a Brand	0,558
Perceived Value <-> Experience	0,555
Perceived Value <-> Firm's Organizational Agility	0,43
Perceived Value <-> Habit	0,351
Personalization <-> Affective Customer Experience	0,548
Personalization <-> Affective Loyalty	0,52
Personalization <-> Behavioral Loyalty	0,31
Personalization <-> Brand Equity	0,438
Personalization <-> Cognitive Customer Experience	0,502
Personalization <-> Cognitive Loyalty	0,446
Personalization <-> Conative Loyalty	0,446
Personalization <-> Convenience	0,703
Personalization <-> Customer Knowledge Sharing	0,52
Personalization <-> Customer Satisfaction	0,517
Personalization <-> Emotional Attachment to a Brand	0,448
Personalization <-> Experience	0,827
Personalization <-> Firm's Organizational Agility	0,585
Personalization <-> Habit	0,371
Personalization <-> Perceived Value	0,433
Relationship <-> Affective Customer Experience	0,629
Relationship <-> Affective Loyalty	0,701
Relationship <-> Behavioral Loyalty	0,397
Relationship <-> Brand Equity	0,635
Relationship <-> Cognitive Customer Experience	0,532
Relationship <-> Cognitive Loyalty	0,53
Relationship <-> Conative Loyalty	0,541
Relationship <-> Convenience	0,675
Relationship <-> Customer Knowledge Sharing	0,434
Relationship <-> Customer Satisfaction	0,643
Relationship <-> Emotional Attachment to a Brand	0,724
Relationship <-> Experience	0,697
Relationship <-> Firm's Organizational Agility	0,63
Relationship <-> Habit	0,383
Relationship <-> Perceived Value	0,586
Relationship <-> Personalization	0,671
Repurchase <-> Affective Customer Experience	0,211
Repurchase <-> Affective Loyalty	0,335
Repurchase <-> Behavioral Loyalty	0,519
Repurchase <-> Brand Equity	0,422
Repurchase <-> Cognitive Customer Experience	0,355
Repurchase <-> Cognitive Loyalty	0,239

Repurchase <-> Conative Loyalty	0,431
Repurchase <-> Convenience	0,41
Repurchase <-> Customer Knowledge Sharing	0,15
Repurchase <-> Customer Satisfaction	0,347
Repurchase <-> Emotional Attachment to a Brand	0,29
Repurchase <-> Experience	0,204
Repurchase <-> Firm's Organizational Agility	0,206
Repurchase <-> Habit	0,499
Repurchase <-> Perceived Value	0,317
Repurchase <-> Personalization	0,218
Repurchase <-> Relationship	0,239
Repurchase Intentions <-> Affective Customer Experience	0,444
Repurchase Intentions <-> Affective Loyalty	0,592
Repurchase Intentions <-> Behavioral Loyalty	0,539
Repurchase Intentions <-> Brand Equity	0,592
Repurchase Intentions <-> Cognitive Customer Experience	0,533
Repurchase Intentions <-> Cognitive Loyalty	0,496
Repurchase Intentions <-> Conative Loyalty	0,749
Repurchase Intentions <-> Convenience	0,59
Repurchase Intentions <-> Customer Knowledge Sharing	0,168
Repurchase Intentions <-> Customer Satisfaction	0,622
Repurchase Intentions <-> Emotional Attachment to a Brand	0,527
Repurchase Intentions <-> Experience	0,493
Repurchase Intentions <-> Firm's Organizational Agility	0,34
Repurchase Intentions <-> Habit	0,477
Repurchase Intentions <-> Perceived Value	0,545
Repurchase Intentions <-> Personalization	0,408
Repurchase Intentions <-> Relationship	0,558
Repurchase Intentions <-> Repurchase	0,573
Switching Costs <-> Affective Customer Experience	0,074
Switching Costs <-> Affective Loyalty	0,066
Switching Costs <-> Behavioral Loyalty	0,254
Switching Costs <-> Brand Equity	0,074
Switching Costs <-> Cognitive Customer Experience	0,113
Switching Costs <-> Cognitive Loyalty	0,064
Switching Costs <-> Conative Loyalty	0,075
Switching Costs <-> Convenience	0,072
Switching Costs <-> Customer Knowledge Sharing	0,087
Switching Costs <-> Customer Satisfaction	0,097
Switching Costs <-> Emotional Attachment to a Brand	0,035
Switching Costs <-> Experience	0,116
Switching Costs <-> Firm's Organizational Agility	0,086

Switching Costs <-> Habit	0,145
Switching Costs <-> Perceived Value	0,07
Switching Costs <-> Personalization	0,18
Switching Costs <-> Relationship	0,044
Switching Costs <-> Repurchase	0,296
Switching Costs <-> Repurchase Intentions	0,159
Trust <-> Affective Customer Experience	0,554
Trust <-> Affective Loyalty	0,694
Trust <-> Behavioral Loyalty	0,387
Trust <-> Brand Equity	0,659
Trust <-> Cognitive Customer Experience	0,546
Trust <-> Cognitive Loyalty	0,546
Trust <-> Conative Loyalty	0,71
Trust <-> Convenience	0,85
Trust <-> Customer Knowledge Sharing	0,425
Trust <-> Customer Satisfaction	0,788
Trust <-> Emotional Attachment to a Brand	0,569
Trust <-> Experience	0,592
Trust <-> Firm's Organizational Agility	0,58
Trust <-> Habit	0,41
Trust <-> Perceived Value	0,667
Trust <-> Personalization	0,617
Trust <-> Relationship	0,646
Trust <-> Repurchase	0,413
Trust <-> Repurchase Intentions	0,613
Trust <-> Switching Costs	0,072
Word-of-Mouth <-> Affective Customer Experience	0,695
Word-of-Mouth <-> Affective Loyalty	0,801
Word-of-Mouth <-> Behavioral Loyalty	0,441
Word-of-Mouth <-> Brand Equity	0,595
Word-of-Mouth <-> Cognitive Customer Experience	0,574
Word-of-Mouth <-> Cognitive Loyalty	0,689
Word-of-Mouth <-> Conative Loyalty	0,881
Word-of-Mouth <-> Convenience	0,622
Word-of-Mouth <-> Customer Knowledge Sharing	0,339
Word-of-Mouth <-> Customer Satisfaction	0,824
Word-of-Mouth <-> Emotional Attachment to a Brand	0,632
Word-of-Mouth <-> Experience	0,649
Word-of-Mouth <-> Firm's Organizational Agility	0,485
Word-of-Mouth <-> Habit	0,459
Word-of-Mouth <-> Perceived Value	0,715
Word-of-Mouth <-> Personalization	0,506

Word-of-Mouth <-> Relationship	0,625
Word-of-Mouth <-> Repurchase	0,314
Word-of-Mouth <-> Repurchase Intentions	0,655
Word-of-Mouth <-> Switching Costs	0,068
Word-of-Mouth <-> Trust	0,714
Word-of-Mouth <-> Value-in-use	0,672

Source: SmartPLS 4 output based on author's calculations.

Annex 3. Collinearity assessment of structural model using variance inflation factor.

	VIF
Affective Customer Experience -> Brand Equity	1
Affective Customer Experience -> Emotional Attachment to a Brand	1
Affective Customer Experience -> Trust	1
Affective Loyalty -> Conative Loyalty	1,929
Behavioral Loyalty -> Repurchase	1,345
Behavioral Loyalty -> Word-of-Mouth	1
Brand Equity -> Cognitive Loyalty	1,57
Cognitive Customer Experience -> Cognitive Loyalty	1,54
Cognitive Customer Experience -> Conative Loyalty	1,453
Cognitive Customer Experience -> Convenience	1
Cognitive Customer Experience -> Customer Satisfaction	1,231
Cognitive Customer Experience -> Perceived Value	1
Cognitive Customer Experience -> Repurchase Intentions	1,389
Cognitive Customer Experience -> Value-in-use	1
Cognitive Loyalty -> Affective Loyalty	1,883
Conative Loyalty -> Behavioral Loyalty	1
Conative Loyalty -> Repurchase Intentions	1,363
Convenience -> Repurchase	1,325
Customer Knowledge Sharing -> Conative Loyalty	1,166
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty	1,042
Customer Satisfaction -> Affective Loyalty	1,992
Customer Satisfaction -> Conative Loyalty	1,818
Emotional Attachment to a Brand -> Affective Loyalty	1,416
Emotional Attachment to a Brand -> Habit	1
Firm's Organizational Agility -> Repurchase Intentions	1,198
Firm's Organizational Agility x Cognitive Customer Experience -> Repurchase Intentions	1,078

Habit -> Repurchase	1,341
Perceived Value -> Cognitive Loyalty	1,582
Repurchase Intentions -> Repurchase	1,39
Switching Costs -> Cognitive Loyalty	1,018
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty	1,01
Trust -> Customer Satisfaction	1,231
Value-in-use -> Cognitive Loyalty	1,838

Source: SmartPLS 4 output based on author's calculations.

Annex 4. Effect sizes (f^2) for structural model paths.

	f^2
Affective Customer Experience -> Brand Equity	0,266
Affective Customer Experience -> Emotional Attachment to a Brand	0,526
Affective Customer Experience -> Trust	0,294
Affective Loyalty -> Conative Loyalty	0,159
Behavioral Loyalty -> Repurchase	0,02
Behavioral Loyalty -> Word-of-Mouth	0,134
Brand Equity -> Cognitive Loyalty	0,023
Cognitive Customer Experience -> Cognitive Loyalty	0,01
Cognitive Customer Experience -> Conative Loyalty	0,032
Cognitive Customer Experience -> Convenience	0,209
Cognitive Customer Experience -> Customer Satisfaction	0,062
Cognitive Customer Experience -> Perceived Value	0,236
Cognitive Customer Experience -> Repurchase Intentions	0,023
Cognitive Customer Experience -> Value-in-use	0,453
Cognitive Loyalty -> Affective Loyalty	0,073
Conative Loyalty -> Behavioral Loyalty	0,208
Conative Loyalty -> Repurchase Intentions	0,349
Convenience -> Repurchase	0,002
Customer Knowledge Sharing -> Conative Loyalty	0,002
Customer Satisfaction -> Affective Loyalty	0,102
Customer Satisfaction -> Conative Loyalty	0,179
Emotional Attachment to a Brand -> Affective Loyalty	0,283
Emotional Attachment to a Brand -> Habit	0,163
Firm's Organizational Agility -> Repurchase Intentions	0,003
Habit -> Repurchase	0,038
Perceived Value -> Cognitive Loyalty	0,136
Repurchase Intentions -> Repurchase	0,057
Switching Costs -> Cognitive Loyalty	0,011

Trust -> Customer Satisfaction	0,507
Value-in-use -> Cognitive Loyalty	0,059

Source: SmartPLS 4 output based on author's calculations.

Annex 5. Full range of SmartPLS 4 output of specific indirect effects, including non-hypothesized paths in the study.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	*p* value
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty	0,065	0,064	0,024	2,731	0,006
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty -> Affective Loyalty	0,015	0,015	0,007	2,346	0,019
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,006	0,006	0,003	2,106	0,035
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,002	0,002	0,001	1,9	0,057
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0	0	0	1,329	0,184
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,001	0,001	0,001	1,534	0,125
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,003	0,003	0,001	2,062	0,039
Affective Customer Experience -> Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,001	0,001	0	1,662	0,096
Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty	0,236	0,236	0,03	8,005	<0,001

Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty	0,087	0,086	0,017	5,027	<0,001
Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,036	0,036	0,009	3,892	<0,001
Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,005	0,005	0,003	1,854	0,064
Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,012	0,013	0,005	2,546	0,011
Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,047	0,046	0,011	4,33	<0,001
Affective Customer Experience -> Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,012	0,011	0,005	2,509	0,012
Affective Customer Experience -> Emotional Attachment to a Brand -> Habit	0,22	0,22	0,031	7,126	<0,001
Affective Customer Experience -> Emotional Attachment to a Brand -> Habit -> Repurchase	0,044	0,044	0,015	2,999	0,003
Affective Customer Experience -> Trust -> Customer Satisfaction	0,274	0,276	0,034	8,034	<0,001
Affective Customer Experience -> Trust -> Customer Satisfaction -> Affective Loyalty	0,078	0,079	0,019	4,19	<0,001
Affective Customer Experience -> Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty	0,029	0,029	0,008	3,557	<0,001
Affective Customer Experience -> Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,012	0,012	0,004	2,774	0,006
Affective Customer Experience -> Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,002	0,002	0,001	1,65	0,099

Affective Customer Experience -> Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,004	0,004	0,002	1,958	0,05
Affective Customer Experience -> Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,015	0,015	0,005	3,231	0,001
Affective Customer Experience -> Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,004	0,004	0,002	2,242	0,025
Affective Customer Experience -> Trust -> Customer Satisfaction -> Conative Loyalty	0,104	0,104	0,02	5,109	<0,001
Affective Customer Experience -> Trust -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty	0,043	0,044	0,012	3,733	<0,001
Affective Customer Experience -> Trust -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,006	0,006	0,003	1,915	0,056
Affective Customer Experience -> Trust -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,015	0,016	0,006	2,405	0,016
Affective Customer Experience -> Trust -> Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions	0,056	0,056	0,014	4,056	<0,001
Affective Customer Experience -> Trust -> Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,014	0,014	0,006	2,303	0,021
Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,152	0,152	0,034	4,48	<0,001
Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,022	0,022	0,011	1,956	0,05
Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,052	0,054	0,019	2,692	0,007
Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,197	0,196	0,036	5,443	<0,001
Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,049	0,048	0,018	2,704	0,007
Brand Equity -> Cognitive Loyalty -> Affective Loyalty	0,033	0,033	0,013	2,517	0,012

Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,012	0,012	0,005	2,24	0,025
Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,005	0,005	0,002	2,048	0,041
Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,001	0,001	0,001	1,41	0,159
Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,002	0,002	0,001	1,658	0,097
Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,007	0,006	0,003	2,202	0,028
Brand Equity -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,002	0,002	0,001	1,738	0,082
Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty	0,022	0,021	0,013	1,643	0,1
Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,008	0,008	0,005	1,587	0,112
Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,003	0,003	0,002	1,515	0,13
Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0	0	0	1,152	0,249
Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,001	0,001	0,001	1,311	0,19
Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,004	0,004	0,003	1,534	0,125
Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,001	0,001	0,001	1,363	0,173
Cognitive Customer Experience -> Conative Loyalty -> Behavioral Loyalty	0,059	0,059	0,021	2,862	0,004

Cognitive Customer Experience -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,008	0,009	0,005	1,586	0,113
Cognitive Customer Experience -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,02	0,021	0,009	2,206	0,027
Cognitive Customer Experience -> Conative Loyalty -> Repurchase Intentions	0,076	0,077	0,026	2,965	0,003
Cognitive Customer Experience -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,019	0,019	0,009	2,125	0,034
Cognitive Customer Experience -> Convenience -> Repurchase	0,021	0,022	0,026	0,795	0,427
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty	0,057	0,058	0,017	3,404	0,001
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty	0,021	0,021	0,007	3,172	0,002
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,009	0,009	0,003	2,706	0,007
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,001	0,001	0,001	1,702	0,089
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,003	0,003	0,002	1,982	0,047
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,011	0,011	0,004	2,977	0,003
Cognitive Customer Experience -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,003	0,003	0,001	2,133	0,033
Cognitive Customer Experience -> Customer Satisfaction -> Conative Loyalty	0,076	0,076	0,019	4,013	<0,001

Cognitive Customer Experience -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty	0,032	0,031	0,009	3,465	0,001
Cognitive Customer Experience -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,004	0,004	0,002	1,943	0,052
Cognitive Customer Experience -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,011	0,011	0,005	2,399	0,016
Cognitive Customer Experience -> Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions	0,041	0,041	0,012	3,494	<0,001
Cognitive Customer Experience -> Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,01	0,01	0,005	2,182	0,029
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty	0,15	0,152	0,028	5,428	<0,001
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty -> Affective Loyalty	0,035	0,036	0,011	3,307	0,001
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,013	0,013	0,004	2,92	0,004
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,005	0,006	0,002	2,513	0,012
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,001	0,001	0	1,547	0,122
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,002	0,002	0,001	1,871	0,061
Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,007	0,007	0,003	2,665	0,008

Cognitive Customer Experience -> Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,002	0,002	0,001	1,906	0,057
Cognitive Customer Experience -> Repurchase Intentions -> Repurchase	0,035	0,034	0,016	2,161	0,031
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty	0,137	0,137	0,03	4,541	<0,001
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty -> Affective Loyalty	0,032	0,032	0,01	3,215	0,001
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,012	0,012	0,004	2,733	0,006
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,005	0,005	0,002	2,398	0,016
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,001	0,001	0	1,469	0,142
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,002	0,002	0,001	1,852	0,064
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,006	0,006	0,002	2,573	0,01
Cognitive Customer Experience -> Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,002	0,002	0,001	2,01	0,044
Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,086	0,086	0,024	3,673	<0,001
Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,036	0,036	0,012	3,09	0,002
Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,005	0,005	0,003	1,695	0,09
Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,012	0,013	0,006	2,209	0,027

Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,046	0,046	0,014	3,36	0,001
Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,011	0,011	0,005	2,246	0,025
Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,059	0,06	0,028	2,143	0,032
Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,143	0,147	0,044	3,206	0,001
Conative Loyalty -> Repurchase Intentions -> Repurchase	0,133	0,132	0,046	2,857	0,004
Customer Knowledge Sharing -> Conative Loyalty -> Behavioral Loyalty	-0,014	-0,011	0,016	0,848	0,397
Customer Knowledge Sharing -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	-0,002	-0,002	0,003	0,714	0,476
Customer Knowledge Sharing -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	-0,005	-0,004	0,006	0,784	0,433
Customer Knowledge Sharing -> Conative Loyalty -> Repurchase Intentions	-0,018	-0,014	0,021	0,853	0,394
Customer Knowledge Sharing -> Conative Loyalty -> Repurchase Intentions -> Repurchase	-0,004	-0,003	0,005	0,812	0,417
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty -> Behavioral Loyalty	0,002	0,001	0,014	0,16	0,873
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0	0	0,002	0,144	0,886
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,001	0	0,005	0,151	0,88
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty -> Repurchase Intentions	0,003	0,001	0,018	0,161	0,872
Customer Knowledge Sharing x Cognitive Customer Experience -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,001	0	0,005	0,154	0,878

Customer Satisfaction -> Affective Loyalty -> Conative Loyalty	0,105	0,104	0,024	4,326	<0,001
Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,043	0,044	0,013	3,329	0,001
Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,006	0,006	0,003	1,85	0,064
Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,015	0,016	0,007	2,258	0,024
Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,056	0,056	0,014	3,94	<0,001
Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,014	0,014	0,006	2,438	0,015
Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty	0,157	0,157	0,032	4,98	<0,001
Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,022	0,022	0,01	2,157	0,031
Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,054	0,056	0,019	2,872	0,004
Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions	0,203	0,203	0,038	5,339	<0,001
Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,05	0,05	0,02	2,493	0,013
Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty	0,148	0,147	0,028	5,307	<0,001
Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,061	0,061	0,015	4,112	<0,001
Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,009	0,009	0,005	1,9	0,057
Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,021	0,022	0,008	2,652	0,008
Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,079	0,079	0,017	4,598	<0,001

Emotional Attachment to a Brand -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,02	0,019	0,008	2,537	0,011
Emotional Attachment to a Brand -> Habit -> Repurchase	0,074	0,075	0,024	3,042	0,002
Firm's Organizational Agility -> Repurchase Intentions -> Repurchase	0,012	0,012	0,013	0,969	0,332
Firm's Organizational Agility x Cognitive Customer Experience -> Repurchase Intentions -> Repurchase	0,013	0,013	0,01	1,291	0,197
Perceived Value -> Cognitive Loyalty -> Affective Loyalty	0,081	0,082	0,022	3,606	<0,001
Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,03	0,03	0,01	3,076	0,002
Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,012	0,013	0,005	2,664	0,008
Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,002	0,002	0,001	1,606	0,108
Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,004	0,004	0,002	1,986	0,047
Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,016	0,016	0,006	2,829	0,005
Perceived Value -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,004	0,004	0,002	1,995	0,046
Switching Costs -> Cognitive Loyalty -> Affective Loyalty	-0,019	-0,013	0,018	1,045	0,296
Switching Costs -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	-0,007	-0,005	0,007	1,03	0,303
Switching Costs -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	-0,003	-0,002	0,003	1,015	0,31
Switching Costs -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0	0	0	0,874	0,382
Switching Costs -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	-0,001	-0,001	0,001	0,942	0,346
Switching Costs -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	-0,004	-0,003	0,004	1,031	0,303

Switching Costs -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	-0,001	-0,001	0,001	0,942	0,346
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty	0,005	0,003	0,011	0,431	0,666
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,002	0,001	0,004	0,428	0,668
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,001	0	0,002	0,423	0,672
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0	0	0	0,375	0,708
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0	0	0,001	0,395	0,693
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,001	0,001	0,002	0,427	0,669
Switching Costs x Cognitive Customer Experience -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0	0	0,001	0,411	0,681
Trust -> Customer Satisfaction -> Affective Loyalty	0,164	0,165	0,034	4,843	<0,001
Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty	0,06	0,06	0,015	4,02	<0,001
Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,025	0,025	0,008	3,126	0,002
Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,004	0,004	0,002	1,803	0,071
Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,009	0,009	0,004	2,157	0,031
Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,032	0,032	0,009	3,618	<0,001

Trust -> Customer Satisfaction -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,008	0,008	0,003	2,31	0,021
Trust -> Customer Satisfaction -> Conative Loyalty	0,218	0,217	0,035	6,278	<0,001
Trust -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty	0,09	0,091	0,02	4,472	<0,001
Trust -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,013	0,013	0,006	2,103	0,035
Trust -> Customer Satisfaction -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,031	0,032	0,011	2,71	0,007
Trust -> Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions	0,117	0,117	0,025	4,69	<0,001
Trust -> Customer Satisfaction -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,029	0,029	0,012	2,363	0,018
Value-in-use -> Cognitive Loyalty -> Affective Loyalty	0,058	0,058	0,017	3,326	0,001
Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty	0,021	0,021	0,008	2,803	0,005
Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty	0,009	0,009	0,004	2,446	0,014
Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Repurchase	0,001	0,001	0,001	1,506	0,132
Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Behavioral Loyalty -> Word-of-Mouth	0,003	0,003	0,002	1,879	0,06
Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions	0,011	0,011	0,004	2,627	0,009
Value-in-use -> Cognitive Loyalty -> Affective Loyalty -> Conative Loyalty -> Repurchase Intentions -> Repurchase	0,003	0,003	0,001	2,024	0,043

Source: SmartPLS 4 output based on author's calculations.

Annex 6. Full range of SmartPLS 4 output of total effects estimation.

	β	*p* value	2.5%	97.5%
Affective Customer Experience -> Affective Loyalty	0,33	<0,001	0,273	0,386
Affective Customer Experience -> Behavioral Loyalty	0,093	<0,001	0,057	0,137
Affective Customer Experience -> Brand Equity	0,458	<0,001	0,368	0,549
Affective Customer Experience -> Cognitive Loyalty	0,065	0,006	0,02	0,113
Affective Customer Experience -> Conative Loyalty	0,225	<0,001	0,171	0,279
Affective Customer Experience -> Customer Satisfaction	0,274	<0,001	0,209	0,342
Affective Customer Experience -> Emotional Attachment to a Brand	0,587	<0,001	0,519	0,65
Affective Customer Experience -> Habit	0,22	<0,001	0,16	0,281
Affective Customer Experience -> Repurchase	0,087	<0,001	0,055	0,124
Affective Customer Experience -> Repurchase Intentions	0,121	<0,001	0,079	0,165
Affective Customer Experience -> Trust	0,477	<0,001	0,385	0,561
Affective Customer Experience -> Word-of-Mouth	0,032	0,008	0,014	0,061
Affective Loyalty -> Behavioral Loyalty	0,152	<0,001	0,09	0,223
Affective Loyalty -> Conative Loyalty	0,367	<0,001	0,254	0,469
Affective Loyalty -> Repurchase	0,07	<0,001	0,037	0,109
Affective Loyalty -> Repurchase Intentions	0,197	<0,001	0,126	0,269
Affective Loyalty -> Word-of-Mouth	0,052	0,007	0,022	0,096
Behavioral Loyalty -> Repurchase	0,142	0,029	0,021	0,276
Behavioral Loyalty -> Word-of-Mouth	0,344	<0,001	0,221	0,465
Brand Equity -> Affective Loyalty	0,033	0,012	0,009	0,061
Brand Equity -> Behavioral Loyalty	0,005	0,041	0,001	0,011
Brand Equity -> Cognitive Loyalty	0,141	0,003	0,045	0,234
Brand Equity -> Conative Loyalty	0,012	0,025	0,003	0,024
Brand Equity -> Repurchase	0,002	0,049	0,001	0,005
Brand Equity -> Repurchase Intentions	0,007	0,028	0,002	0,013
Brand Equity -> Word-of-Mouth	0,002	0,097	0	0,004
Cognitive Customer Experience -> Affective Loyalty	0,147	<0,001	0,096	0,199
Cognitive Customer Experience -> Behavioral Loyalty	0,113	<0,001	0,066	0,167
Cognitive Customer Experience -> Cognitive Loyalty	0,379	<0,001	0,277	0,47
Cognitive Customer Experience -> Conative Loyalty	0,272	<0,001	0,175	0,365
Cognitive Customer Experience -> Convenience	0,416	<0,001	0,32	0,512
Cognitive Customer Experience -> Customer Satisfaction	0,201	<0,001	0,116	0,285
Cognitive Customer Experience -> Perceived Value	0,437	<0,001	0,351	0,522
Cognitive Customer Experience -> Repurchase	0,107	<0,001	0,052	0,172
Cognitive Customer Experience -> Repurchase Intentions	0,287	<0,001	0,2	0,372
Cognitive Customer Experience -> Value-in-use	0,559	<0,001	0,475	0,636

Cognitive Customer Experience -> Word-of-Mouth	0,039	0,007	0,016	0,072
Cognitive Loyalty -> Affective Loyalty	0,236	<0,001	0,138	0,33
Cognitive Loyalty -> Behavioral Loyalty	0,036	0,002	0,017	0,062
Cognitive Loyalty -> Conative Loyalty	0,086	<0,001	0,044	0,136
Cognitive Loyalty -> Repurchase	0,017	0,006	0,007	0,03
Cognitive Loyalty -> Repurchase Intentions	0,046	0,001	0,022	0,076
Cognitive Loyalty -> Word-of-Mouth	0,012	0,027	0,004	0,026
Conative Loyalty -> Behavioral Loyalty	0,415	<0,001	0,298	0,53
Conative Loyalty -> Repurchase	0,192	<0,001	0,112	0,275
Conative Loyalty -> Repurchase Intentions	0,537	<0,001	0,421	0,642
Conative Loyalty -> Word-of-Mouth	0,143	0,001	0,069	0,24
Convenience -> Repurchase	0,049	0,415	-0,069	0,167
Customer Knowledge Sharing -> Behavioral Loyalty	-0,014	0,397	-0,043	0,021
Customer Knowledge Sharing -> Conative Loyalty	-0,033	0,388	-0,1	0,051
Customer Knowledge Sharing -> Repurchase	-0,006	0,406	-0,021	0,01
Customer Knowledge Sharing -> Repurchase Intentions	-0,018	0,394	-0,056	0,026
Customer Knowledge Sharing -> Word-of-Mouth	-0,005	0,433	-0,017	0,007
Customer Satisfaction -> Affective Loyalty	0,286	<0,001	0,182	0,393
Customer Satisfaction -> Behavioral Loyalty	0,2	<0,001	0,131	0,277
Customer Satisfaction -> Conative Loyalty	0,483	<0,001	0,383	0,578
Customer Satisfaction -> Repurchase	0,093	<0,001	0,051	0,14
Customer Satisfaction -> Repurchase Intentions	0,26	<0,001	0,179	0,343
Customer Satisfaction -> Word-of-Mouth	0,069	0,004	0,031	0,123
Emotional Attachment to a Brand -> Affective Loyalty	0,402	<0,001	0,319	0,483
Emotional Attachment to a Brand -> Behavioral Loyalty	0,061	<0,001	0,035	0,093
Emotional Attachment to a Brand -> Conative Loyalty	0,148	<0,001	0,094	0,204
Emotional Attachment to a Brand -> Habit	0,374	<0,001	0,276	0,469
Emotional Attachment to a Brand -> Repurchase	0,103	<0,001	0,058	0,154
Emotional Attachment to a Brand -> Repurchase Intentions	0,079	<0,001	0,048	0,115
Emotional Attachment to a Brand -> Word-of-Mouth	0,021	0,008	0,009	0,04
Firm's Organizational Agility -> Repurchase	0,012	0,332	-0,009	0,04
Firm's Organizational Agility -> Repurchase Intentions	0,049	0,286	-0,039	0,143
Habit -> Repurchase	0,198	0,001	0,083	0,312
Perceived Value -> Affective Loyalty	0,081	<0,001	0,042	0,129
Perceived Value -> Behavioral Loyalty	0,012	0,008	0,005	0,023
Perceived Value -> Cognitive Loyalty	0,344	<0,001	0,238	0,449
Perceived Value -> Conative Loyalty	0,03	0,002	0,014	0,051
Perceived Value -> Repurchase	0,006	0,017	0,002	0,011
Perceived Value -> Repurchase Intentions	0,016	0,005	0,007	0,029
Perceived Value -> Word-of-Mouth	0,004	0,047	0,001	0,01
Repurchase Intentions -> Repurchase	0,247	0,002	0,085	0,395

Switching Costs -> Affective Loyalty	-0,019	0,296	-0,04	0,028
Switching Costs -> Behavioral Loyalty	-0,003	0,31	-0,007	0,004
Switching Costs -> Cognitive Loyalty	-0,08	0,286	-0,159	0,115
Switching Costs -> Conative Loyalty	-0,007	0,303	-0,016	0,01
Switching Costs -> Repurchase	-0,001	0,326	-0,003	0,002
Switching Costs -> Repurchase Intentions	-0,004	0,303	-0,008	0,005
Switching Costs -> Word-of-Mouth	-0,001	0,346	-0,003	0,002
Trust -> Affective Loyalty	0,164	<0,001	0,102	0,234
Trust -> Behavioral Loyalty	0,115	<0,001	0,072	0,167
Trust -> Conative Loyalty	0,278	<0,001	0,207	0,352
Trust -> Customer Satisfaction	0,575	<0,001	0,503	0,645
Trust -> Repurchase	0,053	<0,001	0,028	0,085
Trust -> Repurchase Intentions	0,149	<0,001	0,097	0,209
Trust -> Word-of-Mouth	0,04	0,006	0,017	0,074
Value-in-use -> Affective Loyalty	0,058	0,001	0,027	0,095
Value-in-use -> Behavioral Loyalty	0,009	0,014	0,003	0,017
Value-in-use -> Cognitive Loyalty	0,245	<0,001	0,139	0,346
Value-in-use -> Conative Loyalty	0,021	0,005	0,009	0,038
Value-in-use -> Repurchase	0,004	0,019	0,001	0,008
Value-in-use -> Repurchase Intentions	0,011	0,009	0,004	0,021
Value-in-use -> Word-of-Mouth	0,003	0,06	0,001	0,007

Note: β – standardized total effect combining the direct and indirect pathways between the two constructs; 2,5% and 97,5% – lower and upper bounds of the 95% confidence interval. Standard deviations and t-values are not reported, as statistical significance is assessed through the p-values and bootstrap confidence intervals. Interaction terms used to estimate the moderating effects are not reported, as they do not represent constructs of the model. The corresponding moderation results are presented in Tables 29 and 30.

Source: SmartPLS 4 output based on author's calculations.

Annex 7. Full necessary condition analysis results for repurchase construct with ceiling line effect sizes and permutation results.

	Original effect size	95.0%	Permutation *p* value
Habit	0,132	0,123	0,031
Trust	0,114	0,072	0,001
Behavioral Loyalty	0,100	0,095	0,037
Repurchase Intentions	0,085	0,068	0,012
Cognitive Customer Experience	0,069	0,078	0,100
Perceived Value	0,068	0,067	0,045
Conative Loyalty	0,066	0,072	0,078
Brand Equity	0,054	0,048	0,028
Value-in-use	0,049	0,069	0,200
Cognitive Loyalty	0,041	0,060	0,242
Convenience	0,041	0,075	0,320
Affective Customer Experience	0,036	0,075	0,495
Affective Loyalty	0,036	0,062	0,294
Word-of-Mouth	0,034	0,043	0,138
Firm's Organizational Agility	0,033	0,058	0,364
Switching Costs x Cognitive Customer Experience	0,030	0,053	0,352
Switching Costs	0,023	0,025	0,068
Customer Satisfaction	0,020	0,049	0,483
Firm's Organizational Agility x Cognitive Customer Experience	0,020	0,040	0,410
Customer Knowledge Sharing x Cognitive Customer Experience	0,000	0,048	n/a
Customer Knowledge Sharing	-0,000	0,018	n/a
Emotional Attachment to a Brand	-0,000	0,008	n/a

Source: SmartPLS 4 output based on author's calculations.

Annex 8. Bottleneck analysis results for repurchase construct.

	LV scores - Behavioral Loyalty	LV scores - Habit	LV scores - Trust
0,00%	NN	NN	NN
10,00%	NN	NN	-3,685
20,00%	NN	NN	-3,685
30,00%	NN	NN	-3,685
40,00%	NN	NN	-3,685
50,00%	NN	NN	-3,685
60,00%	-4,276	-2,979	-3,685
70,00%	-4,276	-2,979	-3,685
80,00%	-3,784	-2,802	-3,027
90,00%	-1,814	-2,802	-3,027
100,00%	-1,706	-2,802	-1,943

Source: SmartPLS 4 output based on author's calculations.

MYKOLAS ROMERIS UNIVERSITY

Simonas Juozapas Raišys

MODELLING CUSTOMER EXPERIENCE IN BUSINESS-TO-BUSINESS DIGITAL SERVICE INDUSTRY

Summary of Doctoral Dissertation
Social Sciences, Management (S 003)

Vilnius, 2026

The doctoral dissertation was prepared in 2022–2026 at Mykolas Romeris University under the doctoral program right conferred to Vytautas Magnus University, Klaipėda University, Mykolas Romeris University and Vilnius University by the order of the Minister of Education, Science and Sport of the Republic of Lithuania No. V-160 dated February 22, 2019.

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The doctoral dissertation will be defended in the board of management research of Vytautas Magnus University, Klaipėda University, Mykolas Romeris University and Vilnius University Šiauliai Academy.

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SUMMARY

INTRODUCTION

Relevance of the topic. Since the introduction of the experience economy concept (Pine & Gilmore, 1998), customer experience has been regarded as an important antecedent of customer attitudes and behavior, associated with firms' financial performance. A positive customer experience is associated with higher customer satisfaction, which contributes to customer retention and encourages repurchase intentions, as well as with fostering attitudinal and behavioral loyalty. Businesses are increasingly shifting focus from goods to services and delivering them digitally, and business-to-business (B2B) services occupy a particularly important place in this area. The European Commission's Digital Decade policy programme sets the target that by 2030, 75% of enterprises use cloud computing, artificial intelligence or big data technologies. All of these technologies belong to the domain of B2B digital services. Managing business customer experience is more complex than in business-to-consumer (B2C) services due to multiple decision-makers, the long-term nature of relationships between the service provider and the customer, and more intensive resource integration by both parties to the transaction (Witell et al., 2020). Customer experience management is considered one of the most promising strategies for improving business performance, yet customer experience in B2B services remains under researched, as most studies have been conducted in the B2C domain, even though most organizations operate in B2B markets (Kuppelwieser & Klaus, 2021a). The limited research on customer experience in B2B digital services is not only a scientific gap. For businesses, it may hinder service design and differentiation, customer retention, business growth and digital transformation.

Novelty of the topic. Customer experience in B2B digital services is a new and rapidly expanding research area. The growth of digital services has been accelerated by the spread of cloud computing technologies, the COVID-19 pandemic and the development of artificial intelligence, and the number of publications on customer experience in the service context has grown particularly since 2020 (from 239 publications in 2020 to 645 publications in 2025). Nevertheless, studies dedicated specifically to customer experience in digital services in the B2B market remain very scarce (only 14 such records were found in the Elsevier Scopus database and 27 in Clarivate Web of Science).

State of research. Early customer experience research shifted attention away from purely functional value and emphasized that the consumption of a product or service creates an experience encompassing the consumer's cognition, emotions, senses and actions (Schmitt, 1999; Gentile et al., 2007). Later, a multidimensional conceptualization of customer experience grounded in the customer journey concept was developed (Verhoef et al., 2009; Lemon & Verhoef, 2016), and it was described how organizations can create and manage customer experience (Homburg et al., 2017). The research field was subsequently complemented by process- and stimulus-based approaches (L. Becker & Jaakkola, 2020) and by measurement scales such as EXQ

(customer experience quality scale) and SJQ (service journey quality scale) (Klaus & Maklan, 2012; Jaakkola & Terho, 2021). In B2B service research, the application of these ideas to an organizational, multi-actor context is so far found in a relatively small but growing body of research (Zolkiewski et al., 2017; Witell et al., 2020; Cepeda-Carrión et al., 2023; Gounaris & Almoraish, 2024). The systematic literature review conducted in the dissertation, whose final sample after the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) screening stages comprised 21 studies on customer experience in B2B services, revealed that most studies examine only individual aspects of customer experience, while mediating and moderating factors receive considerably less attention. Mediating factors were examined in 9 studies and moderating factors in only 6. In the Lithuanian research context, customer experience has mostly been examined indirectly, by analyzing closely related constructs such as service quality, perceived value, satisfaction, trust, commitment, switching costs and loyalty (e.g., Skačkauskienė et al., 2015; Dikčius et al., 2019; Meidutė-Kavaliauskienė et al., 2020; Zikienė et al., 2024). Research on customer experience itself is less common (e.g., Davidavičienė et al., 2020; Zikienė & Gagiškytė, 2021; Kaunaitė & Liorančaitė-Šukienė, 2023), and studies directly addressing B2B customer experience are lacking.

Research problem. Services differ considerably in terms of delivery, which is why customer experience needs to be modelled with regard to the service category, such as B2B digital services. Although customer experience research has advanced considerably since the introduction of the experience economy concept, its conceptual and empirical contribution remains largely confined to the B2C context. This knowledge gap stems from the limitations of existing models. First, customer experience is often modelled as an aggregated construct, which obscures the contribution of each of its dimensions to customer attitudes and behavior. Second, the links between customer experience and customer behavior are mostly examined assuming a direct relationship, while the mediating mechanisms remain under-researched. Third, the consequences of customer experience are addressed in a fragmented manner, often limited to service-specific outcomes, with attitudinal and behavioral consequences underexplored. Most customer experience models were developed for the B2C context, therefore their applicability to B2B digital services remains uncertain. In addition, customer experience dimensions, mediating mechanisms, and repurchase intentions and behavior are rarely examined within a single model. Moreover, in a B2B context, organizations themselves do not possess customer experience. It is experienced by the individuals who accept the service, co-create it with the provider and evaluate their experience throughout the entire service provision (Witell et al., 2020). Therefore, the **research problem** addressed in this dissertation is how business customer experience in B2B digital services can be modelled to explain its effects on customer loyalty and repeat purchase outcomes.

Research subject – customer experience in B2B digital services and its effects on customer loyalty and repeat purchase outcomes.

Research aim – to develop and empirically validate a model explaining how

customer experience in B2B digital services affects loyalty and repeat purchase outcomes.

Research objectives:

1. To conceptualize the phenomenon of customer experience in B2B digital service context based on scientific literature analysis.
2. To critically analyze and synthesize the literature on customer experience in B2B services and identify conceptual and empirical research gaps.
3. To identify and theoretically synthesize the antecedents, components, and consequences of customer experience in B2B services.
4. To design an empirical research framework for examining relationships between customer experience, customer loyalty, and repeat purchase behavior and intentions in B2B digital services.
5. To empirically assess the relationships between customer experience dimensions and customer loyalty dimensions, as well as repeat purchase behavior and intentions, through underlying mediating and moderating mechanisms in B2B digital services.
6. To prepare an empirically validated model of customer experience in B2B digital services and present theoretical and managerial insights for modelling and managing customer experience in pursuit of strengthening customer loyalty and fostering repeat purchase outcomes.

Defended statements:

1. In the context of B2B digital services, where customer-provider interactions are predominantly technologically mediated, customer experience is empirically and conceptually distinguishable into cognitive and affective dimensions. These dimensions conceptually encompass the intellectual, emotional, social, and relational aspects through which customer experience is formed, while behavioral responses are empirically positioned as consequences of these experiential dimensions rather than as constituent elements of customer experience itself. It is argued that other experience dimensions frequently discussed in the literature tend to conceptually overlap with these core dimensions and treating them as separate masks the differentiated mechanisms through which customer experience influences customer loyalty and repurchase.
2. In the tested model, the influence of customer experience on customer loyalty and repurchase outcomes operates primarily through value-based, emotional, and relationship-oriented mechanisms. This positions customer experience as an upstream driver rather than an isolated determinant of loyalty and repurchase outcomes and emphasizes the processual nature of the impact of customer experience in a B2B digital service context.
3. The relationships of cognitive customer experience with loyalty and repurchase intentions were not significantly moderated by the examined contextual conditions (switching costs, firm's organizational agility, and customer knowledge sharing).

4. The rapid growth of customer experience research has led to conceptual overlap and fragmented modelling practices. This has generated uncertainty regarding how customer experience should be positioned and modelled, particularly in relation to its mediating mechanisms and outcomes in B2B digital services. By separating customer experience dimensions from mediating mechanisms and outcomes and integrating them into a coherent structure, this dissertation provides a structured modelling logic that supports consistent theorizing and empirical research on customer experience and offers a basis for its integration into future explanatory models.
5. Trust and habit act as necessary conditions for achieving a higher level of repeat purchases. Without at least minimal levels of trust and habit, higher levels of repurchase were not observed, regardless of the strength or existence of the other mechanisms in the model. Thus, a construct may have a relatively small impact on purchasing behavior, as in the case of trust, but at the same time remain a necessary condition for achieving higher levels of repurchase.

Research methods. In the theoretical part, analysis, comparison, generalization and synthesis of scientific literature were applied. To reveal the structure of the research field, a bibliometric analysis of research on service customer experience was conducted (the Web of Science and Scopus databases were examined, and 3682 unique records were collected), and to systematize research on customer experience in B2B services, a systematic literature review following the PRISMA guidelines was performed (final reviewed sample – 21 scientific works). Its results were integrated using an adapted antecedents-decisions-outcomes (ADO) framework. In the empirical part, based on post-positivist philosophy and deductive logic, a quantitative cross-sectional study was conducted, namely a questionnaire survey of decision-makers in B2B digital services (sample n = 386 respondents). The data were analyzed using partial least squares structural equation modelling (PLS-SEM), including mediation, moderation and predictive power (PLSpredict) analysis. Additionally, a necessary condition analysis (NCA) with bottleneck analysis was performed.

Scientific novelty and theoretical significance. The dissertation develops and empirically validates an integrated model of customer experience in B2B digital services. From a theoretical perspective, it systematizes fragmented knowledge on the antecedents, components and consequences of customer experience, and identifies underexplored relationships and conceptual overlaps between constructs related to customer experience. The final model, built on a mechanism-based approach, reveals how customer experience relates to customer behavior through key mediating constructs. This makes it possible to move beyond the direct-effect models prevailing in the literature and to explain more accurately how customer loyalty and repurchase behavior are formed. The methodological novelty of the dissertation lies in combining the PLS-SEM and NCA methods. This methodological choice complements the analysis of relationships and indirect effects with the assessment of necessary conditions and allows the results to be interpreted from the perspective of both sufficiency

(additive) and necessity logic. Applying this combination of methods revealed that trust is a necessary condition for higher levels of repurchase, although its total effect on repurchase behavior is weak. Neither of these methods applied separately would have allowed such conclusion. In addition, the dissertation contributes to the empirical knowledge base of management science with data from the underexplored context of B2B digital services.

Practical significance. The research results provide B2B digital service providers with empirically grounded guidelines that help identify priority areas for customer retention. First, a good customer experience does not in itself ensure loyalty and repurchase. Its effect manifests indirectly, through the customer's perceived value and value-in-use, emotional attachment, trust and satisfaction, therefore these factors that should be consistently strengthened and monitored. Second, trust and the habit of using the service are necessary conditions for higher levels of repurchase. Without at least a minimum level of these, investments in emotional bonding or communication may not translate into repurchase. Third, loyalty develops in stages, and loyal behavior does not always translate into actual repurchase, therefore contract renewals should additionally be encouraged by factors operating closer to the purchase decision, i.e., contract renewal planning, forming a habit of service use and ensuring relationship continuity. The empirically validated model (see Figure 13) can be applied as a diagnostic and planning tool. It can help identify which factors strengthen or weaken customer loyalty, make resource allocation decisions, improve services and manage customer relationships more effectively. Specific recommendations for managers are presented at the end of the summary.

Structure and scope of the dissertation. The dissertation consists of an introduction, three parts, conclusions, recommendations, a bibliography and annexes. The first part presents the theoretical foundations of research on customer experience in B2B digital services (conceptualization, bibliometric analysis, systematic literature review, conceptual model and hypotheses), the second part presents the empirical research methodology, and the third part presents the empirical research results and their discussion. The text of the dissertation with the bibliography comprises 188 pages, and the annexes begin on page 189. The dissertation contains 33 tables, 13 figures and 8 annexes, and the bibliography comprises 343 sources.

OVERVIEW OF PART I
THEORETICAL FOUNDATIONS OF CUSTOMER EXPERIENCE IN B2B DIGITAL SERVICE RESEARCH

The first part conceptualizes customer experience in B2B services. Although customer experience has been studied for several decades, it is a complex concept, examined mostly in the B2C domain, while in the B2B domain the phenomenon is more heterogeneous (Lipkin, 2016). Having analyzed the stimulus-based, interaction-based and meaning-making perspectives (Lipkin, 2016), the dissertation adopts the interaction-based perspective grounded in Service-Dominant Logic, according to which market actors bound by mutual relationships form service ecosystems. Customer experience in B2B digital services is defined in the dissertation as customer's subjective interpretation of verbal and nonverbal, direct, and indirect interactions with people, objects, and the environment, within a network of service actors, throughout the entire length of service provision, inducing customer's cognitive, affective, and physical responses. Compared to B2C, the B2B context does not alter the nature of the customer experience construct, but it is characterized by specific circumstances, such as collective decision-making, long-term contractual relationships and the importance of utilitarian evaluation. These justify the need to investigate B2B customer experience in its own right, separately from other market contexts.

In digital service provision, most interactions take place through technological interfaces and self-service functions. Such services are intangible, often scalable and standardized, and many of them (especially software delivered as a service) are used continuously. When physical touchpoints are few, the customer's cognitive and affective responses to service use become particularly important (Godovykh & Tasci, 2020). Therefore, the theoretical position is taken that customer experience in B2B digital services is mainly reflected in cognitive and affective responses. Operational service attributes (e.g., convenience, speed, security, accessibility) are often embedded in the service interface itself in the digital environment and can be regarded as hygiene factors, while potential switching costs accumulate through investments in service customization, integrations and employee training. The scientific literature is dominated by an antecedents-components-consequences modelling scheme, consistent with the ADO modelling logic. Although the business-relevant consequences of positive customer experience remain similar, the antecedents and components depend on the domain under study. Thus, the results of studies conducted in the B2C context cannot be directly transferred to the B2B domain.

The bibliometric analysis of the customer experience phenomenon was based on 3682 scientific works covering both B2B and B2C contexts, since a search restricted to the B2B context yields too few works for bibliometric mapping. Three stages in the development of the customer experience research field were identified, with the fastest growth of scientific publications observed since 2020. The keyword analysis showed that customer experience is consistently regarded as an antecedent of loyalty

and behavioral intentions. The author co-citation analysis revealed a multidisciplinary research foundation and methodological maturity. A certain tension was also observed between the phenomenological roots of customer experience and the positivist approaches to its research.

The systematic literature review was conducted following the PRISMA guidelines: of the 431 identified scientific articles, 21 articles were selected for the final analysis (2 conceptual, 4 qualitative, 11 quantitative and 4 mixed-methods studies). The results of the systematic literature review were published in the author's scientific article (Raišys, 2026). Based on the review, an integrative map of customer experience in B2B services was developed, consisting of the antecedents, components and consequences of customer experience. The consequences cover four areas – engagement and relationships, satisfaction and value, loyalty, and organizational benefits. Loyalty behavior and repurchase are consistently classified as consequences. The integrative map showed that the ADO logic is often only partially implemented in the scientific literature. Not all factors within the groups of antecedents, components and consequences are linked by relationships, and the existing relationships are specified at different levels of granularity. In addition, mediating factors are mostly classified as consequences instead of forming a separate layer of mediators, and the only standalone mediating factor is value-in-use. Thus, B2B customer experience modelling is fragmented, and the mediating mechanisms through which customer experience in B2B digital services relates to customer behavior are underexplored in the empirical literature.

The systematic literature review showed that customer experience can lead to many different outcomes of the interaction between the service provider and the customer. Modelling customer experience specifies both its internal structure and its relationships with other constructs. Therefore, the empirical model needs to define the outcomes against which the associations of customer experience dimensions are assessed. Of the identified consequences, two were selected for the empirical research, namely customer loyalty and repurchase. This choice was driven by three reasons. First, from a theoretical perspective, loyalty is one of the most important consequences of positive customer experience and is considered one of the main goals of customer-centric management (Mascarenhas et al., 2006; Oliver, 1999; Khan et al., 2022). Second, both consequences consistently recur in the studies of the systematic review. Loyalty forms one of the four consequence areas, while outcomes related to purchase, repurchase and customer retention belong to the most frequently studied area of engagement and relationships. Third, repurchase is a behavioral outcome directly linked to firm revenue and the final stage of the loyalty chain, where cognitive, affective and conative loyalty translate into observable action (Dick & Basu, 1994; Oliver, 1999).

Customer loyalty is defined as the customer's cognitive, affective and conative commitment to a brand, service or firm. It manifests in repeated use of services, positive recommendations and resistance to competitors' offers (Morgan & Hunt, 1994; Oliver, 1999). According to the widely recognized conceptualization of Oliver (1999), loyalty develops in stages. Cognitive loyalty is based on an analytical comparison of costs and benefits, affective loyalty on an emotional bond with the firm or service, and conative

loyalty on a deliberate intention to behave favorably towards a particular firm. Behavioral loyalty manifests in customer actions, such as recommendations or repeat purchases. However, repeat purchases do not necessarily indicate loyalty, as they may also be driven by convenience or habit (Liu-Thompkins & Tam, 2013). Loyalty as a psychological commitment can also exist without repeat purchases (H. Han et al., 2011). Therefore, the loyalty stages and repurchase behavior are examined as separate but interrelated constructs. The literature identifies mediators of the customer experience-loyalty relationship, namely satisfaction, value-in-use, perceived value, brand equity, emotional attachment to a brand and trust. Moderators that may change the strength of this relationship were also identified, namely firm's organizational agility, customer knowledge sharing and switching costs.

On this basis, a conceptual model comprising 20 hypotheses (H1–H16 with sub-hypotheses) was formulated, in which each relationship is assigned to either the cognitive or the affective dimension of customer experience. The mediation hypotheses cover perceived value (H1), brand equity (H2), value-in-use (H3), emotional attachment to a brand (H4a, H4b), satisfaction (H5a–H5c) and trust (H6). Convenience mediates between cognitive customer experience and repurchase (H7), and repurchase intentions mediate between conative loyalty and repurchase (H8). Switching costs (H9), firm's organizational agility (H10) and customer knowledge sharing (H11) are modelled as moderators. The model also includes the relationships of sequential loyalty development (H12–H14), the effect of behavioral loyalty on word-of-mouth (H15a) and repurchase (H15b), and the effect of habit on repurchase (H16).

OVERVIEW OF PART II
EMPIRICAL RESEARCH METHODOLOGY OF CUSTOMER EXPERIENCE MODELLING IN B2B DIGITAL SERVICES

The object of the empirical research is the direct and indirect effect of customer experience on loyalty dimensions and repurchase intentions and behavior, analyzing mediating and moderating factors. The aim of the empirical research is to empirically test the hypothesized direct, mediation and moderation effects between customer experience dimensions, mediating constructs, loyalty dimensions, and repurchase intentions and behavior. Customer experience is treated in the model as the starting point of the examined sequence. Its antecedents are not included in the model, as the research seeks to reveal the mechanisms through which customer experience relates to loyalty and repurchase, rather than the conditions under which it is formed. The research is grounded in post-positivist philosophy. The complex phenomenon of customer experience is operationalized in the model as two separate latent constructs (dimensions). All constructs are treated as latent and measured indirectly, i.e., through observed indicators, and the research design allows the hypotheses to be rejected. Complete objectivity is not considered attainable, therefore its obstacles are reduced through dedicated procedures, such as expert evaluation of measurement items. A quantitative approach was chosen, as the aim is to simultaneously test the hypothesized relationships, including mediation and moderation effects, and to compare their strength. Cross-sectional data allow the relationships to be tested but do not reveal their change over time, which is acknowledged as a limitation of the research.

Structural equation modelling was chosen because the model constructs are latent, and their relationships, including several mediation and moderation relationships, form a system that must be estimated as a whole. Single-equation methods (correlation or regression analysis) do not allow this. The PLS-SEM variant was chosen due to the complexity of the model, the formative higher-order construct, whose estimation in PLS-SEM does not require additional specification and identification conditions, and its resilience to deviations from normal distribution. The measurement model of reflective constructs was assessed based on indicator loadings, internal consistency, convergent validity (AVE) and discriminant validity (HTMT), and that of formative constructs based on indicator weights, their significance and multicollinearity (VIF). The structural model was assessed based on construct VIF values, path coefficients (β) and their statistical significance (using bootstrapping), coefficients of determination R^2, effect sizes f^2 and predictive power (Q^2predict using PLSpredict procedure). In the mediation analysis, specific and total indirect effects were assessed, and mediation types were classified according to Zhao et al. (2010). The sufficiency logic of PLS-SEM was complemented by necessary condition analysis (NCA), which identified the constructs that are necessary conditions for higher levels of repurchase. The latent variable scores of the final PLS-SEM model were used for the analysis. Necessity effects were estimated using the CE-FDH method and their significance using a permutation test,

and effect sizes *d* were interpreted as small (< 0,10), medium (0,10–0,30) and large (> 0,30). For statistically significant necessary conditions, a bottleneck analysis was performed, determining the minimum level of the condition required to achieve different levels of repurchase.

The research instrument was developed based on measurement scales validated in the literature and adapted to the context of B2B digital services. For constructs lacking measurement scales, new items were developed. The reflective or formative measurement of constructs was determined according to the criteria of Jarvis et al. (2003). Value-in-use was modelled as a reflective-formative higher-order construct consisting of first-order dimensions (experience, personalization and relationship). The measurement items were verified through expert evaluation by purposively selected business management experts with 20 to 33 years of professional experience, holding strategic and managerial positions in B2B organizations and participating in decision-making related to digital services. The experts evaluated whether the items accurately reflect the respective constructs, and the wording of the items was refined based on their suggestions.

The target population of the empirical research consists of representatives of organizations in the European Economic Area who make (or influence) decisions on purchasing digital or digitally delivered B2B services. Since this population is defined by professional criteria and its size cannot be determined, the sample size was calculated using the statistical power method. The required sample was calculated using the inverse square root method of Kock and Hadaya (2018). A required sample of approximately 350 respondents was determined. Data were collected from 386 respondents between 14 April and 28 September 2025 through Prolific research platform, with the questionnaire administered via the Qualtrics survey platform. Purposive, role-based sampling was applied. Respondents had to reside in the European Economic Area, be fluent in English, work in for-profit organizations with B2B or mixed (B2B and B2C) operations and be responsible for decisions in at least one functional area of the company. Their eligibility was verified with screening questions, and to ensure data quality, only respondents with a 99-100% approval rate of previous submissions on the Prolific platform were allowed to participate. Since purposive sampling limits the possibilities for statistical generalization, the results should be considered analytically informative for the examined context but not representative of all B2B decision-makers. The questionnaire consisted of 83 five-point Likert scale items grouped into six thematic blocks, and the median completion time was 7 min 39 s. The research methodology was evaluated by the Research Ethics Compliance Committee of Mykolas Romeris University, which confirmed that it complies with research ethics principles (decision No. 10-563). Participation was voluntary and anonymous, and no data allowing the identification of respondents were collected.

OVERVIEW OF PART III
EMPIRICAL RESULTS OF CUSTOMER EXPERIENCE MODELLING IN B2B DIGITAL SERVICES

The preliminary analysis showed good data quality: no signs of common method bias were found, and there were no missing responses. In assessing the measurement model, low-loading indicators were removed while monitoring how this changed the loadings of the remaining indicators and construct validity. Three indicators with loadings slightly below the threshold were retained to preserve the content validity of the constructs. Most of the final indicator loadings exceeded 0,708, and the internal consistency and convergent validity indicators were acceptable. All HTMT values were below 0,90 and confirmed discriminant validity, including the empirical distinctness of the cognitive and affective dimensions of customer experience.

Of the 30 estimated structural model relationships, 25 were statistically significant, with path coefficients ranging from –0.080 to 0,587. The strongest direct relationships of customer experience dimensions were found with the mediating constructs. Cognitive customer experience was most strongly related to value-in-use (β = 0,559), perceived value (β = 0,437) and convenience (β = 0,416), and affective customer experience to emotional attachment to a brand (β = 0,587), trust (β = 0,477) and brand equity (β = 0,458). The direct relationships of customer experience dimensions with loyalty dimensions and repurchase intentions and behavior were weak. The direct relationship between cognitive customer experience and cognitive loyalty was non-significant. Only the relationships of cognitive customer experience with conative loyalty (β = 0,142) and repurchase intentions (β = 0,140) were significant, but not strong. Loyalty developed sequentially from cognitive to behavioral loyalty, with the relationships strengthening along the sequence (β from 0,236 to 0,415). Conative loyalty was strongly related to repurchase intentions (β = 0,537). The relationship between behavioral loyalty and actual repurchase was weak (β = 0,142). Repurchase was more strongly related to repurchase intentions (β = 0,247) and habit (β = 0,198). The model explained the largest share of variance in affective loyalty (59,7%), conative loyalty (56%), satisfaction (47,1%) and cognitive loyalty (45%). The share of explained variance was lower for repurchase intentions (39,3%), repurchase behavior (23,5%) and behavioral loyalty (17,2%). The PLSpredict procedure showed moderate predictive power of the model (Q^2predict from 0,1 to 0,443).

The mediation analysis revealed that the cognitive and affective dimensions of customer experience relate to loyalty through different mediation paths. The relationship between cognitive customer experience and cognitive loyalty is mediated by perceived value (β = 0,150) and value-in-use (β = 0,137), with a total indirect effect of β = 0,287. Cognitive customer experience is weakly related to affective (β = 0,057) and conative (β = 0,076) loyalty through satisfaction. Affective customer experience is related to the loyalty dimensions only indirectly. Its relationships with affective loyalty (β = 0,236) and habit (β = 0,220) are mediated by emotional attachment to a brand, and its

relationship with satisfaction by trust (β = 0,274). It is weakly related to cognitive loyalty through brand equity (β = 0,065). Satisfaction also mediates between trust and affective loyalty (β = 0,164), and repurchase intentions mediate between conative loyalty and repurchase (β = 0,133). The total indirect effect of affective customer experience on affective loyalty (β = 0,330) is the largest among the hypothesized mediation paths. Convenience did not mediate between cognitive customer experience and repurchase. The moderation analysis revealed no significant effects, as customer knowledge sharing, firm's organizational agility and switching costs did not statistically significantly moderate the examined relationships, and the interaction effect sizes were below f^2 = 0,006, i.e., well below the threshold of a small effect.

The necessary condition analysis showed that trust (d = 0,114, p = 0,001) and habit (d = 0,132, p = 0,031) are necessary conditions of medium size for higher levels of repurchase. Behavioral loyalty only reached the threshold of a medium effect (d = 0,100, p = 0,037). Considering its conceptual proximity to repurchase, this condition should be interpreted with caution. The bottleneck analysis revealed that trust is required already at lower levels of repurchase, while habit becomes a constraining condition at higher levels. In summary, 16 of the 20 hypotheses were supported, while H7, H9, H10 and H11 were not supported. The final empirically validated model (see Figure 13) retains the supported relationships forming the customer experience-loyalty-repurchase sequence. The convenience and word-of-mouth constructs were removed from the final model. Convenience did not mediate between customer experience and repurchase. Word-of-mouth was confirmed as a consequence of behavioral loyalty, but since it is an outcome directed at other customers rather than at the customer-provider relationship, it did not belong to the final examined sequence.

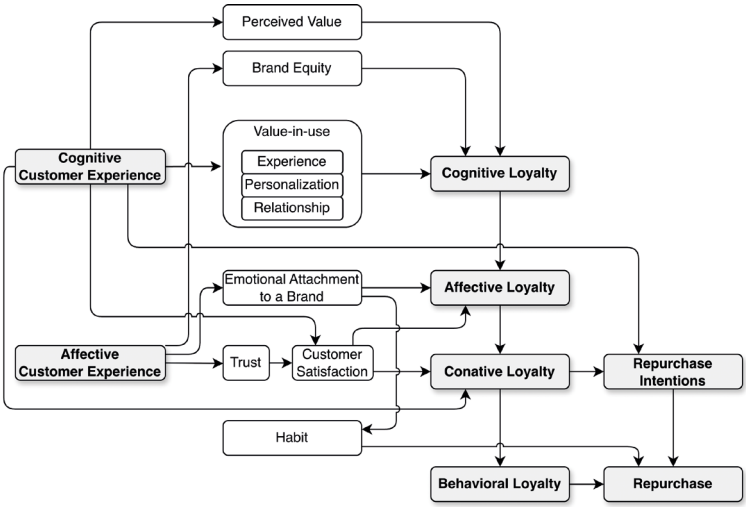


Figure 13. Empirically validated model of customer experience effects on loyalty and repurchase in B2B digital services.

Source: created by the author.

The discussion of the results notes that loyalty behavior was explained better than repurchase. This is consistent with the expectations raised in the literature for the B2B context, where decision-making is more complex, structured and often collective. In addition to individual experiences, organizational purchasing behavior is also determined by buying center decisions, contractual commitments and economic conditions. Therefore, even a positive customer experience does not necessarily translate directly into actual repurchase. The explained variance of repurchase is similar to the result obtained by Paulssen and Birk (2007). To the author's knowledge, the empirical study presented in the dissertation is one of the first studies of B2B digital services in which customer experience is separated into its cognitive and affective dimensions and their relationships with loyalty and repurchase are empirically examined. The pattern of the results is consistent with the conceptually closest study by Gounaris and Almoraish (2024), and no contradictory empirical evidence was found. The study provides empirical support that emotions in B2B relationships manifest through mechanisms of long-term relationship building. Affective experience is related to loyalty through trust, satisfaction and emotional attachment. Cognitive experience is related to cognitive loyalty only when it translates into value that is relevant to and experienced by the customer, i.e., perceived value and value-in-use.

The unsupported mechanisms are interpreted as a contextual insight. In digital service provision, convenience, speed, security or accessibility are often built into the architecture of the digital service in advance and become basic requirements (hygiene factors) rather than differentiating factors. The results are more consistent with the view that switching costs are a direct antecedent of loyalty rather than a condition that changes the strength of other relationships. Moderation effects are considered among the most sensitive elements of structural models. Thus, in B2B digital services, loyalty and repurchase depend more on value creation and relationship mechanisms than on operational or service structure factors. The limitations of the research (cross-sectional data, purposive sampling of respondents, unmodelled contractual and buying center factors, a single respondent per organization) define directions for further research.

CONCLUSIONS

1. Based on the analysis of scientific literature, customer experience is conceptualized as an individual-level, subjective, and multidimensional phenomenon, encompassing cognitive, affective, and physical responses to service-related stimuli. The experience forms for each individual, and thus the personal level is the smallest unit at which it manifests and can be examined. In the context of B2B digital services, it is shaped through ongoing interactions within a digitally mediated service ecosystem involving multiple actors and touchpoints. The B2B context does not alter the nature of the customer experience construct, but combines specific circumstances, such as collective decision-making, long-term contractual relationships, and an emphasis on utilitarian evaluation, which together justify investigating customer experience in B2B in its own right, rather than transferring insights from B2C research. Adopting an interaction-based perspective grounded in Service-Dominant Logic, customer experience in B2B digital services is defined as customer's subjective interpretation of verbal and nonverbal, direct, and indirect interactions with people, objects, and the environment, within a network of service actors, throughout the entire length of service provision, inducing customer's cognitive, affective, and physical responses.

   The experience dimensions distinguished in extant literature tend to conceptually overlap, as intellectual aspects might fall within the cognitive dimension, and social and relational aspects might fall within the affective dimension of customer experience. Therefore, cognitive and affective dimensions are adopted as key dimensions of customer experience in B2B digital services, while physical responses remain part of the broader conceptual field but are not operationalized as a separate dimension in empirical investigation. This conceptual distinction provides the foundation for the first defended statement.

2. The literature analysis shows that customer experience research in B2B service contexts remains underdeveloped and fragmented. The scarcity of research was established empirically. The scientific publications' database search that was limited to customer experience in B2B digital services returned only 14 records in Scopus and 27 records in Web of Science databases. A broader search, covering customer experience within the broader context of B2B services, returned only 111 records in Scopus and 80 records in Web of Science databases. These numbers represent all identified records before screening for duplicates between identified records. Such numbers remain below the dataset sizes indicated in the literature as an analytical minimum for bibliometric mapping and highlight the scarcity of research on the topic. Therefore, final bibliometric analysis was conducted on a dataset of 3682 unique records, covering both B2B and B2C service settings, while the B2B-specific research was examined through a systematic literature review, in which 431 identified articles translated into final number of 21 articles meeting the review's inclusion criteria.

The field-level bibliometric mapping shows accelerated growth of customer experience research, particularly pronounced after 2020, when the annual publication count rose from 239 in 2020 to 645 in 2025. The conceptual structure of the field positions customer experience consistently as an antecedent of loyalty and behavioral intentions. This research is grounded in an established, multidisciplinary literature, combining psychology, service quality, relationship marketing, Service-Dominant Logic, and experiential marketing, and often relies on validated measurement methods and structural equation modelling techniques, showing the methodological maturity of the field. However, a tension is observed between the phenomenological understanding of customer experience and the positivist testing approaches that are often applied. This tension stems from the positivist requirement to operationalize the construct, without phenomenologically oversimplifying it through standardized measurement scales. In this dissertation, the tension is addressed by measuring customer experience through separate dimensions and multiple item measurement scales rather than a single aggregated index.

Extant studies in B2B settings tend to focus on narrow, specific aspects of customer experience, and there is a noticeable absence of systematic literature reviews that actively develop the construct rather than provide a limited overview of the research field. Very few studies empirically test differentiated dimensions of customer experience together with mediating and moderating pathways. Based on the results of the systematic literature review, mediating factors were addressed in 9 and moderating factors only in 6 of the 21 reviewed studies. Conceptually, the customer experience construct remains fragmented and its positioning in relation to mediating mechanisms and outcomes is inconsistent. Empirically, the mechanisms through which customer experience translates into customer outcomes in B2B digital services remain largely uninvestigated, and no study covers the set of constructs and relationships proposed in this dissertation. These conceptual and empirical research gaps substantiate the fourth defended statement.

3. The theoretical synthesis identifies customer experience in B2B services as a construct structured through three interrelated elements: antecedents, experience components, and consequences. Antecedents represent conditions enabling experience formation, components define the internal structure of the construct, and consequences capture relational and value-based outcomes such as engagement, satisfaction, and loyalty. This synthesis positions customer experience as a central mechanism linking service inputs with customer-related outcomes.

   These three elements are addressed unevenly in extant research. Out of 21 reviewed studies, antecedents were identified in 9, components in 15, and consequences in 14 studies. Antecedents are modelled either as external factors preceding the formation of customer experience, or as proxies representing the preconditions to the formation of positive customer experience. Components are grouped into layer-based, dimension-based, scale-based, model-based, and standalone factors, most frequently derived from the experience quality scale EXQ. In some

cases, components are derived from service quality instruments, which measure a related but distinct construct. Such components were included in the final integrative map of B2B service customer experience construct only in the modified form found within the studies. Consequences form four areas, ranging from the most to least represented: engagement and relationships, satisfaction and value, loyalty, and organizational benefits. Specific behavioral outcomes of customer experience, such as loyalty behavior and repurchase, are consistently positioned among the consequences, rather than among the components of customer experience, which substantiates the first defended statement.

Within the systematic literature review, the integration of the reviewed studies was structured using an adapted antecedents-decisions-outcomes (ADO) framework, where the central stage represents the components of customer experience, while mediators and moderators refine the antecedent-outcome pathways. This modelling logic was found to be a leading approach in customer experience modelling research. However, the integrative map developed through systematic literature review shows that the reviewed literature does not fully fulfill this modelling logic. Not all factors are linked across the stages, and the relationships between them are specified at different granularity levels. Moreover, mediating factors mostly belong to the group of consequences, and one such factor is found among the antecedents, instead of forming a distinct mediating layer between antecedents and consequences. Only one mediator, value-in-use, was found to be a standalone mediator and did not belong to any other main ADO group. In addition, the entire subgroup of experience value factors within the consequences group also performs a mediating role. Layer-based components appear in the reviewed studies, but a structuring in which the individual, dyadic relationship, and institutional environment layers would contain the experience dimensions with their underlying constructs was not found, presenting an avenue for future research. Overall, the synthesis revealed a fragmented modelling of B2B customer experience, particularly in the integration of the construct across the ADO stages and experience layers, which substantiates the fourth defended statement.

4. An empirical research framework was developed to examine the relationships between customer experience, customer loyalty, and repeat purchase behavior and intentions in B2B digital services. The framework structure contains latent constructs and enables the analysis of direct, mediating, and moderating relationships. Modelling customer experience requires specifying both the internal structure of the construct and its relationships within the system of constructs in which it operates. The internal structure was specified by distinguishing between the cognitive and affective experience dimensions, and by modelling value-in-use as a reflective-formative higher-order construct formed by the first-order dimensions (experience, personalization, and relationship). Customer experience is positioned as the starting point of the model, and customer loyalty and repurchase were selected as the key outcomes for assessing the effects of customer experience dimensions

based on the theoretical prominence of loyalty and the consistent representation of both outcomes among the consequences identified in the systematic literature review, with repurchase representing the point at which loyalty translates into observable action directly linked to business revenue.

The research framework operationalizes 20 hypotheses, formulated as H1-H16, including sub-hypotheses. For the analytical method, structural equation modelling was selected, since the tested model features unobservable, latent constructs that are inferred from observed, measured indicators. In addition, the hypothesized relationships form a system that must be estimated as a whole, for which single equation techniques such as regression or correlation analysis are not suitable. This choice corresponds to the established practice of the research field, where structural equation modelling is the dominant analytical method for modelling customer experience. The partial least squares technique of structural equation modelling (PLS-SEM) was selected over the covariance-based technique based on the complexity of the tested model, its prediction-oriented objectives, and the inclusion of a formative higher-order construct, whose estimation in PLS-SEM does not require the additional specification and identification conditions applied in covariance-based modelling. In addition to PLS-SEM, necessary condition analysis was performed as a complementary testing. While the sufficiency logic of PLS-SEM explains which constructs affect the outcomes, the necessity logic identifies which conditions must be present for the outcomes to be fulfilled. This combination of analyses allows examining the mechanisms that increase repeat purchasing and the conditions required for it within a single empirical investigation.

The sample size was determined by statistical power calculation, using the inverse square root method. For the statistical power calculation, the minimum meaningful effect size was set as $\beta = 0{,}15$ and statistical power of 0,80. The resulting required sample was approximately 350 observations, and the actual data was gathered from 386 respondents, which provided sufficient power to detect even relatively weak structural relationships.

Respondent selection was based on purposive, role-based sampling. Eligibility was verified through the survey's screening questions, confirming the respondents' involvement in service-related decision-making and the digital nature of the services they make decisions about. Such sampling method is established in B2B research, where access to organizational decision-makers is limited. However, while it ensures the relevance of the collected data, statistical generalization is limited. The research instrument consisted of 83 Likert scale items, and its measurement items were revised through expert review prior to data collection. Overall, the designed empirical framework provides a modelling logic in which the dimensions of customer experience are separated from their mediating and moderating mechanisms, and outcomes, and substantiates the fourth defended statement.

5. The empirical findings show that customer experience influences customer loyalty and repurchase behavior and intentions in B2B digital services primarily through

indirect mechanisms rather than direct effects. Out of 30 estimated relationships, 25 were statistically significant, and 4 out of 20 hypotheses were not supported. The path coefficients ranged from -0,080 to 0,587, indicating small to large effects, depending on the relationship. In addition, the measurement model confirmed that the cognitive and affective dimensions of customer experience are empirically distinct, as all HTMT ratios remained below the 0,90 threshold.

The cognitive and affective dimensions of customer experience operate through distinct mediation pathways, highlighting their differentiated impact on outcomes. Cognitive customer experience has no significant direct effect on cognitive loyalty (β = 0,092; p = 0,073). It notably influences cognitive loyalty through customer's evaluation of the service value, particularly through perceived value (β = 0,150) and value-in-use (β = 0,137). Cognitive customer experience also shows a modest effect on affective loyalty (β = 0,057) and conative loyalty (β = 0,076) through customer satisfaction. In total, the indirect effect of cognitive customer experience on cognitive loyalty is substantial (β = 0,287), while the direct effect remains non-significant. In a similar way, the affective customer experience influences loyalty dimensions only indirectly, by substantially influencing affective loyalty through emotional attachment to a brand (β = 0,236), and customer satisfaction through trust (β = 0,274). Meanwhile, the indirect effect of affective customer experience on cognitive loyalty through brand equity is weak (β = 0,065), but the total indirect effect of affective customer experience on affective loyalty is the largest among the hypothesized mediating paths (β = 0,330). The obtained results indicate that both dimensions of customer experience influence loyalty predominantly through indirect pathways, where cognitive experience translates into loyalty through customer's evaluation of the service value, and affective experience first converts into emotional bonds and trust in the service provider. The only significant direct path from a customer experience dimension to a loyalty dimension is the small effect of cognitive customer experience on conative loyalty (β = 0,142).

The direct effects of cognitive and affective dimensions of customer experience on the loyalty dimensions and repurchase outcomes were found to be weak. Cognitive customer experience was found to have small direct effects on conative loyalty (β = 0,142) and repurchase intentions (β = 0,140). However, its strongest direct effects were on the mediating constructs, namely a large effect on value-in-use (β = 0,559) and moderate effects on perceived value (β = 0,437) and convenience (β = 0,416). Affective customer experience followed the same pattern, where it showed a large direct effect on emotional attachment to a brand (β = 0,587) and moderate effects on trust (β = 0,477) and brand equity (β = 0,458). This shows the effect of customer experience on the mediating mechanisms rather than a direct effect on the outcomes themselves.

Loyalty was found to develop sequentially from cognitive to behavioral loyalty, and the effects to strengthen further down its sequence. Starting from a small effect from cognitive to affective loyalty (β = 0,236), it becomes moderate towards conative loyalty (β = 0,367) and reaches its strongest point in the step towards

behavioral loyalty (β = 0,415). Yet the step from behavioral loyalty to actual repurchase is small (β = 0,142), indicating that consistent partnering with a service provider only slightly increases the likelihood of repurchasing in the future. Repurchase is more strongly driven by repurchase intentions (β = 0,247) and habit (β = 0,198), which shows that repeated purchasing results both from conscious intentions and routinized use of the provider's services. Accordingly, the model explains the highest variance in affective loyalty (59,7%), conative loyalty (56%), customer satisfaction (47,1%), and cognitive loyalty (45%), and a meaningful, albeit weaker, variance of repurchase intentions (39,3%). Meanwhile, lower levels of explained variance were found for behavioral loyalty (17,2%) and repurchase behavior (23,5%). In other words, the model explains substantially more variance in the attitudinal loyalty dimensions than in the behavioral outcomes. This suggests that actual repurchasing is also shaped by other contextual, organizational, and contractual factors that were not captured in the model.

Finally, the model showed no statistically significant moderating effects on the relationships between cognitive customer experience and the downstream constructs. The interaction effects of customer knowledge sharing (p = 0,872), firm's organizational agility (p = 0,111), and switching costs (p = 0,662) were all statistically non-significant, and their interaction effect sizes were below f^2 = 0,006, which is well under the threshold of a small effect. In addition to these three unsupported hypotheses, convenience also did not act as a mediating mechanism between cognitive customer experience and repurchase (β = 0,021; p = 0,427). Therefore, no evidence was found that the examined contextual conditions moderate the identified relationships. These findings substantiate the second and third defended statements.

6. Empirically validated model of B2B digital service customer experience retains the empirically supported relationships that belong to the customer experience-loyalty-repurchase sequence. Convenience and word-of-mouth, therefore, were excluded from the final model. Convenience did not act as a mediator and word-of-mouth operates outside the customer experience-loyalty-repurchase sequence. Thus, while word-of-mouth was included in the conceptual model, the aim of the empirical investigation was focused on the mediators between the customer experience dimensions and loyalty, as well as repurchase outcomes. The empirically validated model shows that customer experience affects the loyalty and repurchase outcomes through value-based, emotional, and relational mechanisms.

   The assessment of total effects, the sum of effect paths from source to target constructs, showed that cognitive customer experience was the only construct with a total effect of at least β = 0,10 on all of the loyalty dimensions and repurchase outcomes. Affective customer experience showed statistically significant total effects on all of these outcomes, but on cognitive loyalty (β = 0,065), behavioral loyalty (β = 0,093), and repurchase (β = 0,087) they remained below this level. Among the customer experience and mediating constructs, that is, excluding the loyalty

dimensions themselves, cognitive customer experience had the largest total effect on repurchase intentions (β = 0,287). Meanwhile, customer satisfaction had the largest total effects on conative loyalty (β = 0,483) and behavioral loyalty (β = 0,200). Finally, trust remains significant throughout affective, conative, and behavioral dimensions of loyalty.

Meanwhile, the total effects on repurchase behavior were smallest in the model. The largest effects belong to the constructs modelled closest to the repurchase behavior construct, namely repurchase intentions (β = 0,247), habit (β = 0,198), conative loyalty (β = 0,192), and behavioral loyalty (β = 0,142). Among the antecedents positioned further upstream in the model, the largest total effects on repurchase were found for cognitive customer experience (β = 0,107) and emotional attachment to a brand (β = 0,103). It was found that while the mediating mechanisms carry the effect of the originating construct towards the target construct, the effect generally diminished along the pathway. That is, the further a construct is positioned in the model from repurchase, the smaller tends to be its total effect on the actual repurchasing behavior. However, constructs transmitting their effect through several downstream pathways, such as conative loyalty, can retain a larger total effect than some constructs positioned closer to repurchase.

The necessary condition analysis (NCA) complements these findings. Total effects show which constructs increase the outcomes, and NCA shows which conditions must be present for higher outcomes to be attained at all. After conducting the NCA, trust (d = 0,114; p = 0,001) and habit (d = 0,132; p = 0,031) were found to be necessary conditions for higher repurchase outcomes, both with a medium effect size, while behavioral loyalty was found to be only marginally necessary (d = 0,100; p = 0,037). Trust is required already at lower levels of repurchase and acts as a foundational condition, while habit becomes a constraining condition at higher levels of repurchase, where the higher repurchase requires a higher degree of routinized organizational buying.

The two logics, PLS-SEM and NCA, provide complementary insights. Trust has a comparatively small total effect on repurchase behavior (β = 0,053), while habit is among its strongest predictors (β = 0,198), yet both were identified as necessary conditions, without which higher repurchasing levels do not occur. Thus, a construct can be a weak driver for a particular outcome, as in the case of trust, while still being a necessary condition for it. Neither analytical method reveals such findings on its own.

From a theoretical point of view, the results show that customer experience should be modelled through separate dimensions and through separate mediating mechanisms. Aggregation of experience or loyalty dimensions would mask the pathways identified in this dissertation. From a practical management point of view, in order to strengthen loyalty and foster repurchasing, it is crucial to strengthen the mediators in addition to the customer experience itself. As the NCA showed, minimum levels of trust and habit are necessary for attaining higher levels of repurchase in the examined context. These conditions should therefore be

considered alongside the mechanisms identified through PLS-SEM when interpreting and managing repurchase outcomes. These findings substantiate the fifth defended statement.

The validated model is bounded by the design of the empirical investigation. It was estimated on cross-sectional data obtained from purposively sampled decision-makers in digital B2B services within the European Economic Area, and the model examines value-based, emotional and relational mechanisms. Thus, the model describes how customer experience operates within this context, rather than establishing effects that hold universally across contexts or over time.

Further research could extend the empirical model in several directions. Longitudinal research designs would establish whether the identified mediating mechanisms and necessary conditions hold across the customer relationship cycle. Incorporating contextual factors, such as contractual arrangements and buying center dynamics, as well as testing more parsimonious model alternatives, would clarify how the estimated effects depend on the structure of the model. Finally, replication in other service, geographical and organizational contexts would reveal to what extent the findings depend on the context analyzed in this dissertation.

RECOMMENDATIONS

Drawing on the theoretical and empirical findings of this dissertation, recommendations are presented for two groups – the academic community examining customer experience and the practitioners operating within the B2B digital service industry.

Recommendations for researchers

The following recommendations are intended for researchers examining customer experience in B2B and digital service contexts, particularly those modelling its relationships with loyalty and repurchase outcomes.

1. Position customer experience as a multidimensional construct encompassing cognitive and affective dimensions in research on customer experience in B2B digital services. Behavioral outcomes, such as customer loyalty and repurchase behavior, should be analytically separated from customer experience itself, as experiential responses reflect customers' internal cognitive and affective states that precede and enable subsequent value creation and relationship building processes. Treating behavioral outcomes as part of the customer experience may risk blending experiential processes with their consequences and contributes to further conceptual fragmentation. In the empirical investigation presented in this dissertation, the two dimensions were confirmed as empirically distinct and were found to reach the outcomes through different mediating pathways, which supports separating them instead of aggregating them into a single index. To increase the clarity of the concept and the comparability of research, future studies are encouraged to consistently apply cognitive and affective dimensions as the core of customer experience in B2B digital service contexts.

2. Conceptually separate mediation mechanisms from the structure of customer experience when modelling customer experience in B2B digital services. Clear conceptual boundaries should be established between the dimensions of customer experience, the processes through which positive customer experience is formed and operates, and the outcomes it influences. The systematic literature review conducted in this dissertation showed that mediating factors are most often placed within the group of consequences instead of forming a distinct mediating layer, which blurs the boundary between a mechanism and an outcome. Stating explicitly which constructs represent the components of customer experience, which represent the mechanisms, and which represent the outcomes would reduce this ambiguity. This separation improves model interpretation and facilitates the development of cumulative knowledge in customer experience research.

3. Model customer experience outcomes in B2B digital services such as customer loyalty and repurchase behavior as indirect consequences of customer experience through mediating mechanisms rather than through direct effects. This approach emphasizes how these outcomes arise through mediating processes. The results of this

dissertation demonstrate the possible consequences of disregarding such a modelling approach, as the direct effect of cognitive customer experience on cognitive loyalty was not statistically significant, while its indirect effect through value-related mechanisms was substantial. Reporting total effects in addition to direct and indirect ones would additionally show how much of a construct's influence is retained once it passes through the mediating mechanisms. Accordingly, a mechanism-based modelling approach helps more accurately theorize the pathways through which customer experience translates into relevant outcomes.

4. Only include moderating variables in research on customer experience in B2B digital services when there is a clear theoretical rationale explaining why such factors are important and how they affect specific relationships in the model. The use of theory-based and structurally informed moderating variables helps reduce unnecessary model complexity and improve the comparability of customer experience research results. In this dissertation, three theoretically grounded moderators produced no statistically significant interaction effects, with effect sizes below the threshold of a small effect. Such results are still informative, as reporting them contributes to establishing the conditions under which the explanations proposed in the literature do not add explanatory power.

5. Apply consistent modelling logic that clearly defines the role of customer experience in B2B digital services. Researchers may benefit from distinguishing whether customer experience is treated as the primary construct or as an explanatory component within a broader model. When treated as the primary construct, its multifaceted nature should be preserved. When used as a supporting explanatory construct, it should retain its cognitive and affective content without absorbing conceptually related concepts such as user experience or service quality. When the goal of modelling relates to behavioral outcomes, the logic of sufficiency in structural modelling can also be supplemented by the logic of necessity, since a construct may have a relatively weak influence on an outcome while simultaneously limiting the levels of that outcome that can be achieved at all. Neither of these analytical logics, taken separately, reveals such conclusion.

Recommendations for practitioners

The following recommendations are intended for B2B digital service providers, particularly the roles in an organization which manage customer experience: product and service owners, customer success managers, marketing and communication managers, service operations managers, and senior managers responsible for retaining customers.

1. For customer success managers and account management teams to secure at least a minimum level of trust and routinized service use from the customer before investing in other mechanisms of customer experience management. Both trust and habit are necessary conditions for higher levels of repurchase, where trust constrains repeat purchasing already at its lower levels, while habit becomes the binding condition at

higher levels of repurchasing (i.e., when a customer keeps buying consistently instead of sporadically). Investing in emotional bonding and perfecting the communication might not necessarily convert into a repeated purchase if the customer does not have trust in the organization and its services. Meanwhile, routinized service use makes the customer more bound to the service, increasing the likelihood of repurchasing in the future. In practice, trust is built through predictable service delivery, transparent pricing and contract terms, honesty and sincerity, and showing interest in supporting the customer by responding to their needs. Habit is built through routinization of the service, for instance, embedding an information system's use into the customer's daily routines through integration with the customer's existing IT systems, recurring reporting on service performance or benefits, such as system downtime reports or costs saved compared to not using the service, and other recurring interactions with the purchased service that would position it as an obvious choice for future purchases.

2. For product and service owners to improve cognitive customer experience by focusing on the value that the customer obtains from using the service instead of focusing on loyalty as such. Customer experience design should be treated as an enabler for loyalty building and not as a direct goal on its own. The design choices should be evaluated by the value creation and relational mechanisms they enable. Out of the customer experience and mediating constructs, cognitive customer experience has the largest overall influence on cognitive loyalty and repurchase intentions, but it does not directly affect cognitive loyalty, since this effect manifests through mediators it strongly influences in between, namely the perceived value and value-in-use. Therefore, the return on customer experience improvements depends on increasing the customer's perception of attained value rather than on evaluating the customer's experience with a service on its own. In practice, it means that in order to drive a customer with positive customer experience towards loyalty and future repurchasing, the service should be reasonably priced and have a decent price to performance ratio, be seen as a better alternative in terms of quality compared to other providers' offerings, help the customer solve their operational problems and build their own knowledge and capabilities through using the service, and include the customer in the co-creation of a service for it to better respond to the customer's needs.

3. For marketing and communication managers to direct the affective customer experience towards emotional attachment and trust rather than towards the brand image alone. Affective customer experience has the biggest influence on emotional attachment to a brand, trust, and brand equity, and through these mediators, it reaches loyalty, especially its affective aspects. Emotional attachment, meanwhile, has the largest overall influence on affective loyalty and is one of the few constructs retaining a significant influence on repurchase behavior. The overall influence of brand equity on loyalty is comparatively modest, which indicates that for existing customers the communication resources provide more value when they are directed towards true relationship building rather than staying on the brand communication level. In practice, this means fostering a

sense of connection with the service provider itself, which makes purchasing from a particular provider feel more natural to the customer even when competitors offer similar service features. This might be achieved by the continuity of an assigned contact person throughout the contract cycle, notification of service issues before the customer identifies them themselves, and consistent recognition of the results the customer achieves due to partnering with the service provider.

4. For service operations managers to treat customer satisfaction as a KPI which needs to be managed on individual account and separate interaction levels. Among the mediating constructs, customer satisfaction has the largest overall influence on conative and behavioral loyalty, with significant influence on repurchase intentions, thus making it the strongest single construct connecting customer experience and behavioral outcomes. In practice, customer satisfaction should be measured at defined points of the customer journey, such as at the completion of onboarding, the resolution of a support request or during a renewal of a contract, rather than in a single point in time, such as during a yearly review. Each measurement point should be connected to a defined response from the provider's side, in order to capture a decline in satisfaction early on and mitigate it at the account or service level instead of evaluating it as an aggregate statistic.

5. For senior managers responsible for retaining customers to plan the development of loyalty in stages and match the expected outcome to the stage of the relationship. Customer experience works as a strategic loyalty development starting point, and its role in this process should be clearly defined. Loyalty develops in stages, and the effects grow stronger along the sequence from cognitive loyalty to affective loyalty, to conative and, finally, to behavioral loyalty. The likelihood of loyal behavior converting to actual repurchase remains comparatively small, as it is driven more directly by repurchase intentions and habit. Because the effects attenuate along the mediation chain, the constructs positioned further from repurchase are more likely to shape the attitude towards the service provider rather than to drive repurchase. Thus, depending on the customer's loyalty stage, the customer experience should target the customer's attitude in early stages of a relationship, while repurchase should be supported additionally by mechanisms operating closer to a purchase decision, such as contract renewal planning, forming a habit of service use, and continuity of the relationship.

6. For managers responsible for customer feedback and reporting systems to measure the cognitive and affective dimensions of customer experience separately from loyalty and repurchase KPIs. Aggregating experience indicators with loyalty or repurchase KPIs into a single metric may obscure the mechanisms through which experience operates, as the two dimensions are empirically distinct and reach the outcomes through different pathways. In practice, cognitive customer experience should be evaluated based on the usefulness of information, learning and idea generation during service provision, and affective experience through optimism, enthusiasm and other positive emotional responses from the customer. In addition, trust and habit should be monitored as separate

account-level indicators due to their role as necessary conditions for higher levels of repurchase. Such measurement allows identifying which mechanisms are strengthening or weakening loyalty or repurchase metrics, instead of simply recording the fact of a decline or an increase in loyalty or repurchasing.

These recommendations should be considered as guidance rather than a fixed set of actions and should be applied in an organization by adapting to the specific service structure and business context. The implementation of these recommendations in an organization should also be considered within the boundaries and limitations of the empirical study discussed in this dissertation.

APPROBATION OF THE RESEARCH RESULTS

Scientific publications on the topic of the dissertation:

1. Raišys, S. J. (2026). Structuring customer experience in B2B services. *Business: Theory and Practice, 27*(1), 143–155. https://doi.org/10.3846/btp.2026.25718
2. Raišys, S. J., & Raišienė, A. G. (2023). Management Theories' Potential for Better Digital Service Customer Experience. *Management of Organizations: Systematic Research*, *89*(1), 87–101. https://doi.org/10.2478/mosr-2023-0006

Manuscripts submitted for publication:

1. Raišys, S. J. (2026). From customer experience to repurchase: An empirical model of value-based and relational mechanisms in digital B2B services. *Central European Business Review*

Presentations at scientific conferences:

1. Raišys, S. J. "A Customer Experience Conversion Model for Competitiveness in Digital B2B Service Firms". IADERA 2026 International Scientific Conference, Zadar, Croatia, 15–16 October 2026.
2. Raišys, S. J. "From Customer Experience to Repurchase: Evidence from Digital B2B Services". 12th International Conference on Business, Management and Economics (ICBMECONF), Vienna, Austria, 12–14 June 2026.
3. Raišys, S. J. "Customer Experience in B2B Services: SLR Based Theoretical Model". 49th EBES Conference – Athens, Athens, Greece, 16–18 October 2024.

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MYKOLO ROMERIO UNIVERSITETAS

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KLIENTŲ PATIRTIES MODELIAVIMAS VERSLAS-VERSLUI SKAITMENINIŲ PASLAUGŲ INDUSTRIJOJE

Mokslo daktaro disertacijos santrauka
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Mokslo daktaro disertacija rengta 2022–2026 metais Mykolo Romerio universitete pagal Vytauto Didžiojo universitetui su Klaipėdos universitetu, Mykolo Romerio universitetu ir Vilniaus universitetu Lietuvos Respublikos švietimo, mokslo ir sporto ministro 2019 m. vasario 22 d. įsakymu Nr. V-160 suteiktą doktorantūros teisę.

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DISERTACIJOS SANTRAUKA

ĮVADAS

Temos aktualumas. Nuo patirties ekonomikos idėjos pristatymo (Pine ir Gilmore, 1998) klientų patirtis laikyta svarbia kliento nuostatų ir elgsenos prielaida, susijusia su įmonės finansiniais rezultatais. Teigiama klientų patirtis siejama su didesniu klientų pasitenkinimu, kuris prisideda prie klientų išlaikymo ir skatina pakartotinio pirkimo ketinimus, o taip pat su nuostatų ir elgsenos lojalumo skatinimu. Verslai vis dažniau pereina nuo prekių prie paslaugų pasiūlos ir jų skaitmeninio teikimo, o verslas-verslui (angl. *business-to-business*, toliau – B2B) tipo paslaugos šioje srityje užima ypač svarbią vietą. Europos Komisijos Skaitmeninio dešimtmečio politikos programoje numatytas siekis, kad iki 2030 m. 75 proc. įmonių naudotųsi debesijos, dirbtinio intelekto ar didžiųjų duomenų technologijomis. Visos šios technologijos priklauso skaitmeninių B2B paslaugų sričiai. Verslo klientų patirtį valdyti sudėtingiau nei verslo-vartotojui (angl. *business-to-consumer*, toliau – B2C) paslaugų tipo srityje dėl kelių sprendimų priėmėjų, ilgalaikio pobūdžio santykių tarp paslaugos teikėjo ir kliento, ir intensyvesnio abiejų sandorio šalių išteklių integravimo (Witell ir kt., 2020). Klientų patirties valdymas laikomas vienu perspektyviausių verslo rezultatų gerinimo strategijų, tačiau B2B paslaugų klientų patirtis ištirta nepakankamai, nes dauguma tyrimų atlikta B2C srityje, nors dauguma organizacijų veikia B2B rinkose (Kuppelwieser ir Klaus, 2021a). Ribotas skaitmeninių B2B paslaugų klientų patirties ištirtumas yra ne tik mokslinė spraga. Verslams jis gali apsunkinti paslaugų kūrimą ir diferencijavimą, klientų išlaikymą, veiklos plėtrą ir skaitmeninę transformaciją.

Temos naujumas. Skaitmeninių B2B paslaugų klientų patirtis yra nauja ir sparčiai besiplečianti tyrimų sritis. Skaitmeninių paslaugų plėtrą paspartino debesijos kompiuterijos technologijų paplitimas, covid-19 pandemija ir dirbtinio intelekto raida, o klientų patirties publikacijų paslaugų kontekste skaičius ypač išaugo po 2020 m. (nuo 239 publikacijų 2020 m. iki 645 publikacijų 2025 m.). Vis dėlto darbų, skirtų būtent B2B rinkos skaitmeninių paslaugų klientų patirčiai, tebėra labai nedaug (Elsevier Scopus duomenų bazėje rasta tik 14, o Clarivate Web of Science – 27 tokie įrašai).

Temos ištirtumo lygis. Ankstyvieji klientų patirties darbai perkėlė dėmesį nuo grynai funkcinės vertės ir pabrėžė, kad produkto ar paslaugos vartojimas sukuria patirtį, apimančią vartotojo kogniciją, emocijas, pojūčius ir veiksmus (Schmitt, 1999; Gentile ir kt., 2007). Vėliau suformuota daugiamatė, kliento kelionės koncepcija grįsta klientų patirties samprata (Verhoef ir kt., 2009; Lemon ir Verhoef, 2016), aprašyta kaip organizacijos gali kurti ir valdyti klientų patirtį (Homburg ir kt., 2017), o vėliau tyrimų lauką papildė procesais ir stimulais grįstos prieigos (L. Becker ir Jaakkola, 2020) bei matavimo skalės, pavyzdžiui, EXQ (angl. *customer experience quality scale*) ir SJQ (angl. *service journey quality scale*) (Klaus ir Maklan, 2012; Jaakkola ir Terho, 2021). B2B paslaugų tyrimuose šių idėjų pritaikymas organizaciniam, daugelio veikėjų kontekstui kol kas aptinkamas palyginti nedidelėje, tačiau augančioje mokslinių tyrimų visumoje (Zolkiewski ir kt., 2017; Witell ir kt., 2020; Cepeda-Carrión ir kt., 2023; Gounaris ir Almoraish, 2024). Disertacijoje atlikta sisteminė literatūros apžvalga, kurios

galutinę imtį po PRISMA (angl. *Preferred Reporting Items for Systematic reviews and Meta-Analyses*) atrankos etapų sudarė 21 B2B paslaugų klientų patirties tyrimas, atskleidė, kad dauguma tyrimų nagrinėja tik pavienius klientų patirties aspektus, o tarpininkaujantys ir moderuojantys veiksniai sulaukia gerokai mažiau dėmesio. Tarpininkaujantys veiksniai buvo tirti 9, o moderuojantys tik 6 tyrimuose. Lietuvos mokslo kontekste klientų patirtis daugiausia tiriama netiesiogiai, analizuojant artimus konstruktus, tokius kaip paslaugų kokybę, suvokiamą vertę, pasitenkinimą, pasitikėjimą, įsipareigojimą, keitimo kaštus ir lojalumą (pvz., Skačkauskienė ir kt., 2015; Dikčius ir kt., 2019; Meidutė-Kavaliauskienė ir kt., 2020; Zikienė ir kt., 2024). Pačios klientų patirties tyrimų aptinkama mažiau (pvz., Davidavičienė ir kt., 2020; Zikienė ir Gagiškytė, 2021; Kaunaitė ir Liorančaitė-Šukienė, 2023), o tyrimų, tiesiogiai nagrinėjančių B2B klientų patirtį, trūksta.

Tyrimo problema. Paslaugos tarpusavyje ženkliai skiriasi savo forma ir teikimo būdais, todėl klientų patirtį būtina modeliuoti atsižvelgiant į paslaugų kategoriją, pavyzdžiui, skaitmenines B2B paslaugas. Nors nuo patirties ekonomikos idėjos pristatymo klientų patirties tyrimai gerokai pažengė, jų konceptualus ir empirinis indėlis daugiausia lieka B2C konteksto ribose. Šią žinių spragą lemia esamų modelių ribotumai. Pirma, klientų patirtis dažnai modeliuojama kaip agreguotas konstruktas, todėl lieka nematomas kiekvienos atskiros jos dimensijos indėlis į kliento nuostatas ir elgseną. Antra, klientų patirties ir klientų elgsenos sąsajos dažniausiai nagrinėjamos darant prielaidą apie tiesioginį jų ryšį, o tarpininkaujantys mechanizmai iki šiol yra ištirti nepakankamai. Trečia, klientų patirties lemiamos pasekmės nagrinėjamos fragmentiškai, dažnai apsiribojant konkrečios paslaugos rezultatais ir nepakankamai nagrinėjant nuostatų ir elgsenos pasekmes. Dauguma klientų patirties modelių sukurti B2C kontekstui, todėl neaišku, ar jie tinka skaitmeninėms B2B paslaugoms. Be to, klientų patirties dimensijos, tarpininkaujantys veiksniai ir pakartotinio pirkimo ketinimai bei elgsena retai nagrinėjami viename modelyje. Taip pat, B2B kontekste organizacijos pačios neturi klientų patirties. Ją patiria asmenys, kurie priima paslaugą, kartu su teikėju ją kuria ir vertina savo patirtį viso paslaugos teikimo metu (Witell ir kt., 2020). Todėl disertacijoje sprendžiama **mokslinė problema** formuluojama klausimu: kaip modeliuojama skaitmeninių B2B paslaugų klientų patirtis veikia klientų lojalumą ir pakartotinio pirkimo ketinimus bei elgseną?

Tyrimo objektas – skaitmeninių B2B paslaugų klientų patirtis ir jos poveikis klientų lojalumui ir pakartotinio pirkimo ketinimams bei elgsenai.

Tyrimo tikslas – sukurti ir empiriškai validuoti modelį, paaiškinantį skaitmeninių B2B paslaugų klientų patirties poveikį klientų lojalumui ir pakartotinio pirkimo ketinimams bei elgsenai.

Tyrimo uždaviniai:

1. Remiantis mokslinės literatūros analize, konceptualizuoti klientų patirties reiškinį skaitmeninių B2B paslaugų kontekste.
2. Kritiškai išanalizuoti ir apibendrinti B2B paslaugų klientų patirties mokslinę literatūrą ir nustatyti konceptualias bei empirines tyrimų spragas.

3. Nustatyti ir teorinės sintezės būdu išskirti B2B paslaugų klientų patirties prielaidas, komponentus ir pasekmes.
4. Parengti empirinio tyrimo struktūrą klientų patirties, klientų lojalumo ir pakartotinio pirkimo elgsenos bei ketinimų ryšiams skaitmeninėse B2B paslaugose tirti.
5. Empiriškai įvertinti klientų patirties dimensijų ryšius su klientų lojalumo dimensijomis bei pakartotinio pirkimo elgsena ir ketinimais, atsižvelgiant į juos lemiančius tarpininkaujančius ir moderuojančius veiksnius skaitmeninėse B2B paslaugose.
6. Parengti empiriškai validuotą skaitmeninių B2B paslaugų klientų patirties modelį ir pateikti teorines bei praktines įžvalgas, kaip modeliuoti ir valdyti klientų patirtį siekiant stiprinti klientų lojalumą ir skatinti pakartotinio pirkimo ketinimus bei elgseną.

Ginamieji teiginiai:

1. Skaitmeninių B2B paslaugų kontekste, kur klientų ir paslaugų teikėjų sąveika daugiausia vyksta technologijų pagalba, klientų patirtį empiriškai ir konceptualiai galima suskirstyti į kognityvinę ir afektinę dimensijas. Šios dimensijos konceptualiai apima intelektinius, emocinius, socialinius ir santykių aspektus, per kuriuos formuojasi klientų patirtis, o elgesio reakcijos empiriškai vertinamos kaip šių dimensijų pasekmės, o ne kaip pačios klientų patirties sudedamosios dalys. Galima teigti, kad kitos patirties dimensijos, dažnai aptariamos literatūroje, konceptualiai dažnai sutampa su šiomis pagrindinėmis dimensijomis. Todėl laikant jas savarankiškomis lieka nematomi skirtingi tarpininkaujantys veiksniai, per kuriuos klientų patirtis daro įtaką klientų lojalumui ir pakartotiniams pirkimams.
2. Tirtame modelyje klientų patirties įtaka klientų lojalumui ir pakartotinio pirkimo ketinimams bei elgsenai pasireiškia visų pirma per verte, emocijomis ir santykiu grindžiamus tarpininkaujančius veiksnius. Todėl klientų patirtis laikytina ne savarankišku lojalumo ir pakartotinio pirkimo veiksniu, bet ankstesnėje sekos grandyje veikiančia jų varomąja jėga, o jos poveikis skaitmeninėse B2B paslaugose yra procesinio pobūdžio.
3. Tirtos kontekstinės sąlygos (keitimo kaštai, įmonės organizacinis lankstumas ir klientų dalijimasis žiniomis) statistiškai reikšmingai nemoderavo kognityvinės klientų patirties ir lojalumo bei pakartotinio pirkimo ketinimų ryšių.
4. Sparčiai gausėjant klientų patirties tyrimams, atsirado konceptualių persidengimų ir fragmentiškų modeliavimo praktikų. Dėl to neaišku, kokią vietą klientų patirtis turėtų užimti modeliuose ir kaip ją modeliuoti, ypač tarpininkaujančių veiksnių ir pasekmių atžvilgiu skaitmeninėse B2B paslaugose. Atskirdama klientų patirties dimensijas nuo tarpininkaujančių veiksnių ir pasekmių bei sujungdama jas į darnią struktūrą, disertacija pateikia modeliavimo logiką, kuri padeda nuosekliai teoriškai pagrįsti ir empiriškai tirti klientų patirtį bei suteikia pagrindą ją integruoti į būsimus aiškinamuosius modelius.
5. Pasitikėjimas ir įprotis yra būtinosios sąlygos, leidžiančios pasiekti aukštesnį pakartotinių pirkimų lygį. Nesant bent minimalaus pasitikėjimo ir įpročio lygio,

aukštesnio pakartotinių pirkimų lygis nebuvo stebimas, nepriklausomai nuo kitų modelyje esančių veiksnių stiprumo ar buvimo. Taigi, tam tikras konstruktas gali turėti santykinai nedidelį poveikį pirkimo elgsenai, kaip pasitikėjimo atveju, tačiau tuo pačiu metu išlikti būtinąja sąlyga, leidžiančia pasiekti aukštesnį pakartotinių pirkimų lygį.

Tyrimo metodai. Teorinėje dalyje taikyta mokslinės literatūros analizė, palyginimas, apibendrinimas ir sintezė. Tyrimų lauko struktūrai atskleisti atlikta paslaugų klientų patirties tyrimų bibliometrinė analizė (nagrinėtos Web of Science ir Scopus duomenų bazės, surinkti 3682 unikalūs įrašai), o B2B paslaugų klientų patirties tyrimams susisteminti pasitelkta sisteminė literatūros apžvalga pagal PRISMA gaires (galutinė apžvelgta imtis – 21 mokslinis darbas). Jos rezultatai integruoti taikant adaptuotą prielaidų-sprendimų-rezultatų struktūrą (angl. *antecedents-decisions-outcomes framework,* toliau – ADO). Empirinėje tyrimo dalyje, remiantis postpozityvistine filosofija ir dedukcine logika, atliktas kiekybinis skerspjūvio tyrimas – skaitmeninių B2B paslaugų sprendimų priėmėjų anketinė apklausa (tyrimo imtis $n = 386$ respondentai). Duomenys analizuoti dalinių mažiausių kvadratų struktūrinių lygčių modeliavimu (angl. *partial least squares structural equation modelling,* toliau – PLS-SEM), apimančiu mediacijos, moderacijos ir prognostinės galios (PLSpredict) analizę. Papildomai atlikta būtinųjų sąlygų analizė (angl. *necessary condition analysis,* toliau – NCA) su kliūčių (angl. *bottleneck*) analize.

Mokslinis naujumas ir teorinė reikšmė. Disertacijoje sukurtas ir empiriškai patikrintas integruotas skaitmeninių B2B paslaugų klientų patirties modelis. Teoriniu požiūriu joje susistemintos fragmentiškos žinios apie klientų patirties prielaidas, komponentus ir pasekmes, nustatyti mažai tirti ryšiai ir konceptualūs persidengimai tarp su klientų patirtimi susijusių konstruktų. Galutinis modelis, grindžiamas mechanizmų perspektyva, atskleidžia, kaip klientų patirtis per pagrindinius tarpininkaujančius konstruktus siejasi su klientų elgsena. Tai leidžia peržengti literatūroje vyraujančius tiesioginių ryšių modelius ir tiksliau paaiškinti, kaip formuojasi klientų lojalumas ir pakartotinio pirkimo elgsena. Metodologinį disertacijos naujumą lemia PLS-SEM ir NCA metodų derinimas. Toks metodinis sprendimas papildo ryšių ir netiesioginių efektų analizę būtinųjų sąlygų vertinimu bei leidžia rezultatus interpretuoti tiek pakankamumo (adityviosios), tiek būtinumo logikos požiūriu. Taikant šių metodų derinį nustatyta, kad pasitikėjimas yra būtinoji aukštesnio pakartotinio pirkimo lygio sąlyga, nors jo bendrasis efektas pakartotinio pirkimo elgsenai yra silpnas. Tokios išvados nebūtų leidęs padaryti nė vienas iš šių metodų, taikomas atskirai. Be to, disertacija papildo vadybos mokslo empirinių žinių bazę mažai tirto skaitmeninių B2B paslaugų konteksto duomenimis.

Praktinė reikšmė. Tyrimo rezultatai skaitmeninių B2B paslaugų teikėjams suteikia empiriškai pagrįstas gaires, padedančias nustatyti prioritetines klientų išlaikymo kryptis. Pirma, gera klientų patirtis savaime neužtikrina lojalumo ir pakartotinių pirkimų. Jos poveikis pasireiškia netiesiogiai, per kliento suvokiamą vertę ir naudojimosi vertę, emocinį prieraišumą, pasitikėjimą ir pasitenkinimą, todėl būtent šiuos veiksnius

tikslinga nuosekliai stiprinti ir stebėti. Antra, pasitikėjimas ir paslaugos naudojimo įprotis yra būtinosios aukštesnio pakartotinių pirkimų lygio sąlygos. Jei nėra bent minimalaus jų lygio, investicijos į emocinį ryšį ar komunikaciją gali ir nevirsti pakartotiniu pirkimu. Trečia, lojalumas formuojasi etapais, o lojali elgsena ne visada virsta faktiniu pakartotiniu pirkimu, todėl sutarčių atnaujinimą tikslinga papildomai skatinti veiksniais, veikiančiais arčiau pirkimo sprendimo, t. y. planuojant sutarties atnaujinimą, formuojant paslaugos naudojimo įprotį ir užtikrinant santykių tęstinumą. Empiriškai patikrintas modelis (žr. 13 pav.) gali būti taikomas kaip diagnostinė ir planavimo priemonė. Jis gali padėti nustatyti, kurie veiksniai stiprina arba silpnina klientų lojalumą, priimti išteklių paskirstymo sprendimus, tobulinti paslaugas ir veiksmingiau valdyti santykius su klientais. Konkrečios rekomendacijos vadovams pateikiamos santraukos pabaigoje.

Darbo struktūra ir apimtis. Disertaciją sudaro įvadas, trys dalys, išvados, rekomendacijos, literatūros sąrašas ir priedai. Pirmojoje dalyje pateikiami skaitmeninių B2B paslaugų klientų patirties tyrimų teoriniai pagrindai (konceptualizavimas, bibliometrinė analizė, sisteminė literatūros apžvalga, konceptualus modelis ir hipotezės), antrojoje – empirinio tyrimo metodologija, trečiojoje – empirinio tyrimo rezultatai ir jų aptarimas. Disertacijos tekstas su literatūros sąrašu užima 188 puslapius, priedai pateikti nuo 189 puslapio. Darbe yra 33 lentelės, 13 paveikslų ir 8 priedai, literatūros sąrašą sudaro 343 šaltiniai.

PIRMOSIOS DALIES APŽVALGA SKAITMENINIŲ B2B PASLAUGŲ KLIENTŲ PATIRTIES TYRIMŲ TEORINIAI PAGRINDAI

Pirmojoje dalyje konceptualizuojama B2B paslaugų klientų patirtis. Nors klientų patirtis tiriama kelis dešimtmečius, ji yra kompleksinė sąvoka, daugiausia nagrinėjama B2C srityje, o B2B srityje šis reiškinys labiau nevienalytis (Lipkin, 2016). Išanalizavus stimulų, sąveikos ir prasmės kūrimo perspektyvas (Lipkin, 2016), disertacijoje pasirinkta sąveikos perspektyva, grindžiama į paslaugas orientuota logika (angl. *Service-Dominant Logic*), pagal kurią tarpusavio ryšiais saistomi rinkos veikėjai sudaro paslaugų ekosistemas. Skaitmeninių B2B paslaugų klientų patirtis disertacijoje apibrėžiama kaip subjektyvus kliento žodinių ir nežodinių, tiesioginių ir netiesioginių sąveikų su žmonėmis, objektais ir aplinka paslaugų veikėjų tinkle interpretavimas per visą paslaugos teikimo laikotarpį, sukeliantis kliento kognityvines, afektines ir fizines reakcijas. Lyginant su B2C, B2B kontekstas nekeičia klientų patirties konstrukto pobūdžio, tačiau jam būdingos specifinės aplinkybės – kolektyvinis sprendimų priėmimas, ilgalaikiai sutartiniai santykiai ir utilitarinio vertinimo svarba. Jos pagrindžia būtinybę B2B klientų patirtį tirti savarankiškai nuo kitų rinkos kontekstų.

Teikiant skaitmenines paslaugas, dauguma sąveikų vyksta per technologines sąsajas ir savitarnos funkcijas. Tokios paslaugos yra nematerialios, dažnu atveju gali būti plečiamos teikimo apimtimi (angl. *scalable*) ir yra standartizuotos, o daugelis jų (ypač programinė įranga, teikiama paslaugos forma) yra naudojamos nuolat. Kai fizinių sąlyčio taškų mažai, ypač svarbios tampa kliento kognityvinės ir afektinės reakcijos į paslaugos naudojimą (Godovykh ir Tasci, 2020). Todėl laikomasi teorinės pozicijos, kad skaitmeninių B2B paslaugų klientų patirtį daugiausia atspindi kognityvinės ir afektinės reakcijos. Operaciniai paslaugos atributai (pvz., patogumas, greitis, saugumas, prieinamumas) skaitmeninėje aplinkoje dažnai įdiegti pačioje paslaugos naudojimo sąsajoje ir gali būti laikomi higieniniais veiksniais, o galimi paslaugos teikėjo keitimo kaštai kaupiasi investuojant į teikiamų paslaugų pritaikymą, integracijas ir darbuotojų mokymą. Mokslinėje literatūroje vyrauja prielaidų-komponentų-pasekmių modeliavimo schema, atitinkanti ADO modeliavimo logiką. Nors verslui aktualios pasekmės, kurias lemia teigiama klientų patirtis, išlieka panašios, vis dėlto prielaidos ir komponentai priklauso nuo tiriamos srities. Taigi B2C kontekste atliktų tyrimų rezultatų negalima tiesiogiai perkelti į B2B sritį.

Klientų patirties reiškinio bibliometrinė analizė atlikta remiantis 3682 moksliniais darbais, apimančiais B2B ir B2C kontekstus, kadangi specifiškai B2B konteksto ribose apibrėžta paieška lemia per mažą mokslinių darbų kiekį bibliometriniam kartografavimui atlikti. Nustatyti trys klientų patirties tyrimų lauko raidos etapai, o sparčiausias mokslinių publikacijų augimas stebimas nuo 2020 m. Raktažodžių analizė parodė, kad klientų patirtis nuosekliai laikoma lojalumo ir elgsenos ketinimų prielaida. Autorių bendro citavimo analizė atskleidė tarpdisciplininį tyrimų pagrindą ir metodologinę brandą. Taip pat pastebėta tam tikra priešprieša tarp klientų patirties fenomenologinių

šaknų ir pozityvistinių jos tyrimo prieigų.

Sisteminė literatūros apžvalga atlikta pagal PRISMA gaires: iš 431 identifikuoto mokslinio straipsnio galutinei analizei atrinktas 21 straipsnis (2 konceptualūs, 4 kokybiniai, 11 kiekybinių ir 4 mišrių metodų tyrimai). Sisteminės literatūros apžvalgos rezultatai paskelbti autoriaus moksliniame straipsnyje (Raišys, 2026). Apžvalgos pagrindu parengtas B2B paslaugų klientų patirties integracinis žemėlapis, sudarytas iš klientų patirties prielaidų, komponentų ir pasekmių. Pasekmės apima keturias sritis – įsitraukimą ir santykius, pasitenkinimą ir vertę, lojalumą bei organizacinę naudą. Pastebima, kad lojali elgsena ir pakartotinis pirkimas nuosekliai priskiriami pasekmėms. Integracinis žemėlapis parodė, kad mokslinėje literatūroje ADO logika dažnu atveju įgyvendinama nepilnai. Ne visi veiksniai prielaidų, komponentų ir pasekmių grupėse susieti ryšiais, o esami ryšiai aprašyti skirtingu detalumu. Taip pat tarpininkaujantys veiksniai daugiausia priskiriami pasekmėms, užuot sudarę atskirą mediatorių sluoksnį, o vienintelis savarankiškas tarpininkaujantis veiksnys yra naudojimosi vertė (angl. *value-in-use*). Taigi B2B klientų patirties modeliavimas yra fragmentiškas, o tarpininkaujantys veiksniai, kuriais skaitmeninių B2B paslaugų klientų patirtis siejasi su klientų elgsena, empirinėje literatūroje mažai tirti.

Sisteminė literatūros apžvalga parodė, kad klientų patirtis gali lemti daug skirtingų paslaugos teikėjo ir kliento sąveikos rezultatų. Modeliuojant klientų patirtį, apibrėžiama ir jos vidinė struktūra, ir jos ryšiai su kitais konstruktais. Todėl empiriniam modeliui būtina apibrėžti rezultatus, pagal kuriuos būtų vertinamos klientų patirties dimensijų sąsajos. Iš nustatytų pasekmių empiriniam tyrimui pasirinktos dvi – klientų lojalumas ir pakartotinis pirkimas. Šį pasirinkimą lėmė trys priežastys. Pirma, lojalumas teoriniu požiūriu yra viena svarbiausių teigiamos klientų patirties pasekmių ir laikomas vienu pagrindinių į klientą orientuotos vadybos tikslų (Mascarenhas ir kt., 2006; Oliver, 1999; Khan ir kt., 2022). Antra, abi pasekmės nuosekliai kartojasi sisteminės apžvalgos tyrimuose. Lojalumas sudaro vieną iš keturių pasekmių sričių, o su pirkimu, pakartotiniu pirkimu ir klientų išlaikymu susiję rezultatai priklauso dažniausiai tirtai įsitraukimo ir santykių sričiai. Trečia, pakartotinis pirkimas yra tiesiogiai su įmonės pajamomis susijęs elgsenos rezultatas ir galutinė lojalumo grandinės pakopa, kurioje kognityvinis, afektinis ir konatyvinis lojalumas virsta stebimu veiksmu (Dick ir Basu, 1994; Oliver, 1999).

Klientų lojalumas apibrėžiamas kaip kognityvinis, afektinis ir konatyvinis kliento įsipareigojimas prekės ženklui, paslaugai ar įmonei. Jis pasireiškia pakartotiniu naudojimusi paslaugomis, teigiamomis rekomendacijomis ir atsparumu konkurentų pasiūlymams (Morgan ir Hunt, 1994; Oliver, 1999). Pagal plačiai pripažintą Oliver (1999) sampratą, lojalumas vystosi etapais. Kognityvinis lojalumas grindžiamas analitiniu kaštų ir naudos palyginimu, afektinis – emociniu ryšiu su įmone ar paslauga, o konatyvinis – sąmoningu ketinimu elgtis palankiu būdu konkrečiai įmonei. Elgsenos lojalumas reiškiasi kliento veiksmais – rekomendacijomis ar pakartotiniais pirkimais. Vis dėlto pakartotiniai pirkimai nebūtinai reiškia lojalumą, nes juos gali lemti ir patogumas ar įprotis (Liu-Thompkins ir Tam, 2013). Lojalumas, kaip psichologinis įsipareigojimas, gali egzistuoti ir be pakartotinių pirkimų (H. Han ir kt., 2011). Todėl lojalumo

etapai ir pakartotinio pirkimo elgsena tiriami kaip atskiri, tačiau tarpusavyje susiję konstruktai. Literatūroje nustatyti klientų patirties ir lojalumo ryšio tarpininkai – pasitenkinimas, naudojimosi vertė, suvokiama vertė, prekės ženklo vertė, emocinis prieraišumas prie prekės ženklo ir pasitikėjimas. Taip pat nustatyti moderatoriai, galintys keisti šio ryšio stiprumą – įmonės organizacinis lankstumas, klientų dalijimasis žiniomis ir paslaugos teikėjų keitimo kaštai.

Šiuo pagrindu suformuluotas konceptualus modelis, apimantis 20 hipotezių (H1–H16 su subhipotezėmis), kuriose kiekvienas ryšys priskirtas kognityvinei arba afektinei klientų patirties dimensijai. Tarpininkavimo hipotezės apima suvokiamą vertę (H1), prekės ženklo vertę (H2), naudojimosi vertę (H3), emocinį prieraišumą prie prekės ženklo (H4a, H4b), pasitenkinimą (H5a–H5c) ir pasitikėjimą (H6). Patogumas tarpininkauja tarp kognityvinės klientų patirties ir pakartotinio pirkimo (H7), o pakartotinio pirkimo ketinimai – tarp konatyvinio lojalumo ir pakartotinio pirkimo (H8). Keitimo kaštai (H9), įmonės organizacinis lankstumas (H10) ir klientų dalijimasis žiniomis (H11) modeliuojami kaip moderatoriai. Modelis taip pat apima nuoseklaus lojalumo vystymosi ryšius (H12–H14), elgsenos lojalumo įtaką rekomendavimui (H15a) ir pakartotiniam pirkimui (H15b) bei įpročio įtaką pakartotiniam pirkimui (H16).

ANTROSIOS DALIES APŽVALGA SKAITMENINIŲ B2B PASLAUGŲ KLIENTŲ PATIRTIES MODELIAVIMO EMPIRINIO TYRIMO METODOLOGIJA

Empirinio tyrimo objektas – tiesioginis ir netiesioginis klientų patirties poveikis lojalumo dimensijoms ir pakartotinio pirkimo ketinimams bei elgsenai, analizuojant tarpininkaujančius ir moderuojančius veiksnius. Tyrimo tikslas – empiriškai patikrinti hipotetinius tiesioginius, mediacijos ir moderacijos efektus tarp klientų patirties dimensijų, tarpininkaujančių konstruktų, lojalumo dimensijų ir pakartotinio pirkimo ketinimų bei elgsenos. Klientų patirtis modelyje laikoma tiriamos sekos pradžios tašku. Jos prielaidos į modelį neįtrauktos, nes tyrimu siekiama atskleisti mechanizmus, kuriais klientų patirtis siejasi su lojalumu ir pakartotiniu pirkimu, o ne sąlygas, kuriomis ji formuojasi. Tyrimas grindžiamas postpozityvistine filosofija. Sudėtingas klientų patirties reiškinys modelyje redukuojamas į atskirus kintamuosius. Visi konstruktai laikomi latentiniais ir matuojami netiesiogiai, t. y., stebimais rodikliais, o tyrimo dizainas leidžia hipotezes atmesti. Visiškas objektyvumas nelaikomas pasiekiamu, todėl kliūtys jam mažinamos tam skirtomis procedūromis, pavyzdžiui, ekspertiniu matavimo teiginių vertinimu. Pasirinkta kiekybinė prieiga, nes siekiama vienu metu patikrinti hipotetinius ryšius, įskaitant mediacijos ir moderacijos efektus, ir palyginti jų stiprumą. Skerspjūvio tipo duomenys leidžia patikrinti ryšius, bet neatskleidžia jų kaitos laike, todėl tai pripažįstama tyrimo ribotumu.

Struktūrinių lygčių modeliavimas pasirinktas, nes modelio konstruktai yra latentiniai, o jų ryšiai, įskaitant kelis mediacijos ir moderacijos ryšius, sudaro sistemą, kurią būtina vertinti kaip visumą. Vienos lygties metodai (koreliacinė ar regresinė analizė) to neleidžia. PLS-SEM variantas pasirinktas dėl modelio kompleksiškumo, formatyvaus aukštesnės eilės konstrukto, kurio vertinimui PLS-SEM nereikia papildomų specifikavimo ir identifikavimo sąlygų, ir atsparumo nukrypimams nuo normaliojo skirstinio. Refleksyvių konstruktų matavimo modelis vertintas pagal rodiklių krūvius, vidinį nuoseklumą, konvergentinį (AVE) ir diskriminantinį (HTMT) validumą, formatyvių – pagal rodiklių svorius, jų reikšmingumą ir multikolinearumą (VIF). Struktūrinis modelis vertintas pagal konstruktų VIF reikšmes, kelio koeficientus (β) ir jų statistinį reikšmingumą (saviranka, angl. *bootstrapping*), determinacijos koeficientus R^2, efekto dydžius f^2 ir prognostinę galią (PLSpredict procedūra, Q^2predict). Mediacijos analizėje vertinti specifiniai ir bendrieji netiesioginiai efektai, o mediacijos tipai klasifikuoti pagal Zhao ir kt. (2010). PLS-SEM pakankamumo logika papildyta būtinųjų sąlygų analize (NCA), kuria nustatyta, kurie konstruktai yra būtinosios aukštesnio pakartotinio pirkimo lygio sąlygos. Analizei naudoti galutinio PLS-SEM modelio latentinių kintamųjų įverčiai. Būtinumo efektai vertinti CE-FDH metodu, jų reikšmingumas – permutaciniu testu, o efekto dydžiai *d* interpretuoti kaip silpni (< 0,10), vidutiniai (0,10-0,30) ir stiprūs (> 0,30). Statistiškai reikšmingoms būtinosioms sąlygoms atlikta kliūčių analizė, nustatanti minimalų sąlygos lygį, reikalingą skirtingiems pakartotinio pirkimo lygiams pasiekti.

Tyrimo instrumentas parengtas remiantis literatūroje validuotomis matavimo skalėmis, pritaikytomis skaitmeninių B2B paslaugų kontekstui. Konstruktams, kurių matavimo skalių trūko, sukurti nauji teiginiai. Refleksyvus ar formatyvus konstruktų matavimo būdas parinktas pagal Jarvis ir kt. (2003) kriterijus. Kognityvinė ir afektinė klientų patirtis matuota Barbu ir kt. (2021) teiginiais. Elgsenos lojalumas matuotas adaptuotais X. Han ir kt. (2008) teiginiais, kurie vertina ne tik lojalaus elgesio ketinimus, bet ir faktinį elgesį. Naudojimosi vertė modeliuota kaip refleksyvus-formatyvus aukštesnės eilės konstruktas, kurį sudaro pirmos eilės dimensijos (naudojimosi patirtis, personalizavimas ir santykiai). Matavimo teiginiai patikrinti ekspertiniu vertinimu, atliktu tiksline atranka parinktų verslo vadybos ekspertų, turinčių 20-33 metų profesinę patirtį, einančių strategines ir valdymo pareigas B2B organizacijose ir dalyvaujančių priimant su skaitmeninėmis paslaugomis susijusius sprendimus. Ekspertai vertino, ar teiginiai tiksliai atspindi atitinkamus konstruktus ir pagal jų pasiūlymus teiginių formuluotės buvo patikslintos.

Empirinio tyrimo tikslinę populiaciją sudaro Europos ekonominės erdvės organizacijų atstovai, kurie priima sprendimus (arba daro įtaką) dėl skaitmeninių ar skaitmeniniu būdu teikiamų B2B paslaugų pirkimo. Tokia populiacija apibrėžta profesiniais kriterijais, todėl jos dydžio nustatyti neįmanoma, o imties dydis apskaičiuotas statistinės galios metodu. Reikalingai respondentų imčiai apskaičiuoti taikytas Kock ir Hadaya (2018) atvirkštinės kvadratinės šaknies metodas. Esant minimaliam teoriškai reikšmingam efekto dydžiui $\beta = 0{,}15$, reikšmingumo lygmeniui $\alpha = 0{,}05$ ir statistinei galiai 0,80, nustatyta reikalinga maždaug 350 respondentų imtis. Duomenys surinkti iš 386 respondentų 2025 m. balandžio 14 – rugsėjo 28 d. Prolific tyrimų platformoje, anketą pateikiant Qualtrics apklausų platformoje. Taikyta tikslinė, pagal pareigas grįsta atranka. Respondentai turėjo gyventi Europos ekonominėje erdvėje, laisvai kalbėti angliškai, dirbti pelno siekiančiose B2B ar mišrios (B2B ir B2C) veiklos organizacijose ir būti atsakingi už sprendimus bent vienoje įmonės funkcinėje srityje. Jų tinkamumas patikrintas išankstinės atrankos (angl. *screening*) klausimais, o duomenų kokybei užtikrinti buvo leista dalyvauti tik respondentams, kurių ankstesnių atsakymų patvirtinimo rodiklis Prolific platformoje siekė 99-100 proc. Tikslinė atranka riboja statistinio apibendrinimo galimybes, todėl rezultatai laikytini analitiškai informatyviais tirtam kontekstui, bet ne reprezentatyviais visiems B2B sprendimų priėmėjams. Anketą sudarė 83 penkiabalės Likerto skalės teiginiai, suskirstyti į šešis teminius blokus, o anketos pildymo laiko mediana buvo 7 min. 39 s. Tyrimo metodiką įvertino Mykolo Romerio universiteto Atitikties mokslinių tyrimų etikai komitetas ir patvirtino, kad ji atitinka tyrimų etikos principus (sprendimas Nr. 10-563). Dalyvavimas buvo savanoriškas ir anonimiškas, nerinkta jokių duomenų, leidžiančių identifikuoti respondentą.

TREČIOSIOS DALIES APŽVALGA SKAITMENINIŲ B2B PASLAUGŲ KLIENTŲ PATIRTIES MODELIAVIMO EMPIRINIO TYRIMO REZULTATAI

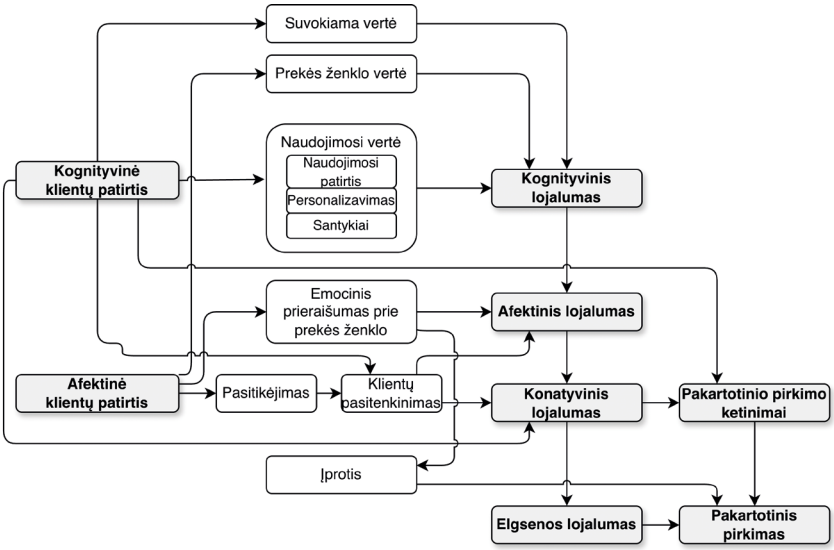
Parengiamoji analizė parodė gerą duomenų kokybę: bendrojo metodo paklaidos (angl. *common method bias*) požymių nenustatyta, trūkstamų atsakymų nebuvo. Vertinant matavimo modelį, mažų krūvių rodikliai šalinti, stebint, kaip tai keičia likusių rodiklių krūvius ir konstrukto validumą. Trys rodikliai, kurių krūviai buvo nežymiai mažesni už ribinę reikšmę, išlaikyti konstruktų turinio validumui išsaugoti. Dauguma galutinių rodiklių krūvių viršijo 0,708, o vidinio nuoseklumo ir konvergentinio validumo rodikliai buvo priimtini. Visos HTMT reikšmės buvo mažesnės už 0,90 ir patvirtino diskriminantinį validumą, taip pat ir kognityvinės bei afektinės klientų patirties dimensijų empirinį atskirumą.

Iš 30 įvertintų struktūrinio modelio ryšių 25 buvo statistiškai reikšmingi, o kelio koeficientai svyravo nuo -0,080 iki 0,587. Stipriausi tiesioginiai klientų patirties dimensijų ryšiai nustatyti su tarpininkaujančiais konstruktais. Kognityvinė klientų patirtis stipriausiai susijusi su naudojimosi verte (β = 0,559), suvokiama verte (β = 0,437) ir patogumu (β = 0,416), afektinė – su emociniu prieraišumu prie prekės ženklo (β = 0,587), pasitikėjimu (β = 0,477) ir prekės ženklo verte (β = 0,458). Tiesioginiai klientų patirties dimensijų ryšiai su lojalumo dimensijomis ir pakartotinio pirkimo ketinimais bei elgsena buvo silpni. Kognityvinės klientų patirties ir kognityvinio lojalumo tiesioginis ryšys buvo nereikšmingas. Reikšmingi, bet nestiprūs buvo tik kognityvinės klientų patirties ryšiai su konatyviniu lojalumu (β = 0,142) ir pakartotinio pirkimo ketinimais (β = 0,140). Lojalumas vystėsi nuosekliai nuo kognityvinio iki elgsenos lojalumo, o ryšiai sekos eigoje stiprėjo (β nuo 0,236 iki 0,415). Konatyvinis lojalumas buvo stipriai susijęs su pakartotinio pirkimo ketinimais (β = 0,537). Elgsenos lojalumo ir faktinio pakartotinio pirkimo ryšys buvo silpnas (β = 0,142). Su pakartotiniu pirkimu stipriau buvo susiję pakartotinio pirkimo ketinimai (β = 0,247) ir įprotis (β = 0,198). Modelis paaiškino didžiausią afektinio lojalumo (59,7 proc.), konatyvinio lojalumo (56 proc.), pasitenkinimo (47,1 proc.) ir kognityvinio lojalumo (45 proc.) dispersijos dalį. Pakartotinio pirkimo ketinimų (39,3 proc.), pakartotinio pirkimo elgsenos (23,5 proc.) ir elgsenos lojalumo (17,2 proc.) dispersijos dalis buvo mažesnė. PLSpredict procedūra parodė vidutinę modelio prognostinę galią (Q^2predict nuo 0,1 iki 0,443).

Mediacijos analizė atskleidė, kad kognityvinė ir afektinė klientų patirties dimensijos su lojalumu susijusios skirtingais tarpininkavimo keliais. Kognityvinės klientų patirties ir kognityvinio lojalumo ryšiui tarpininkauja suvokiama vertė (β = 0,150) ir naudojimosi vertė (β = 0,137), o bendrasis netiesioginis efektas siekia β = 0,287. Su afektiniu (β = 0,057) ir konatyviniu (β = 0,076) lojalumu kognityvinė klientų patirtis nestipriai susijusi tarpininkaujant pasitenkinimui. Afektinė klientų patirtis su lojalumo dimensijomis susijusi tik netiesiogiai. Jos ryšiui su afektiniu lojalumu (β = 0,236) ir įpročiu (β = 0,220) tarpininkauja emocinis prieraišumas prie prekės ženklo, ryšiui su pasitenkinimu – pasitikėjimas (β = 0,274). Su kognityviniu lojalumu, tarpininkaujant

prekės ženklo vertei, ji susijusi silpnai (β = 0,065). Pasitenkinimas taip pat tarpininkauja tarp pasitikėjimo ir afektinio lojalumo (β = 0,164), o pakartotinio pirkimo ketinimai – tarp konatyvinio lojalumo ir pakartotinio pirkimo (β = 0,133). Afektinės klientų patirties bendrasis netiesioginis efektas afektiniam lojalumui (β = 0,330) yra didžiausias iš hipotetinių tarpininkavimo kelių. Patogumas netarpininkavo tarp kognityvinės klientų patirties ir pakartotinio pirkimo. Moderacijos analizė reikšmingų efektų neatskleidė – klientų dalijimasis žiniomis, įmonės organizacinis lankstumas ir keitimo kaštai statistiškai reikšmingai nemoderavo nagrinėtų ryšių, o sąveikos efektų dydžiai buvo mažesni už $f^2 = 0{,}006$, t. y. gerokai mažesni už mažo efekto ribą.

Būtinųjų sąlygų analizė parodė, kad pasitikėjimas ($d = 0{,}114$, $p = 0{,}001$) ir įprotis ($d = 0{,}132$, $p = 0{,}031$) yra vidutinio dydžio būtinosios aukštesnio pakartotinio pirkimo lygio sąlygos. Elgsenos lojalumas tik pasiekė vidutinio efekto ribą ($d = 0{,}100$, $p = 0{,}037$), todėl, atsižvelgiant ir į jo konceptualų artumą pakartotiniam pirkimui, ši sąlyga interpretuotina atsargiai. Kliūčių analizė atskleidė, kad pasitikėjimas reikalingas jau žemesniuose pakartotinio pirkimo lygiuose, o įprotis tampa ribojančia sąlyga aukštesniuose lygiuose. Apibendrinant, patvirtintos 16 iš 20 hipotezių, nepatvirtintos – H7, H9, H10 ir H11. Galutiniame empiriškai patikrintame modelyje (žr. 13 pav.) išlaikyti patvirtinti ryšiai, sudarantys klientų patirties, lojalumo ir pakartotinio pirkimo seką. Patogumo ir rekomendavimo konstruktai iš galutinio modelio pašalinti. Patogumas netarpininkavo tarp klientų patirties ir pakartotinio pirkimo. Rekomendavimas patvirtintas kaip elgsenos lojalumo pasekmė, tačiau tai į kitus klientus, o ne į kliento ir teikėjo santykį nukreiptas rezultatas, todėl jis nepriklausė galutinei tiriamai sekai.



13 pav. Empiriškai validuotas skaitmeninių B2B paslaugų klientų patirties poveikio lojalumui ir pakartotiniam pirkimui modelis.

Šaltinis: sudaryta autoriaus.

Rezultatų aptarime pažymima, kad lojalumo elgsena paaiškinta geriau nei pakartotiniai pirkimai. Tai atitinka literatūroje keliamus lūkesčius B2B kontekstui, kur sprendimų priėmimas yra sudėtingesnis, struktūruotas ir dažnai kolektyvinis. Organizacijų pirkimo elgseną lemia ne tik individualios patirtys, bet ir pirkimo grupės sprendimai, sutartiniai įsipareigojimai bei ekonominės sąlygos, todėl net teigiama klientų patirtis nebūtinai tiesiogiai virsta faktiniais pakartotiniais pirkimais. Pakartotinio pirkimo dispersijos paaiškinimas (maždaug ketvirtadalis) panašus į Paulssen ir Birk (2007) gautą rezultatą. Autoriaus žiniomis, disertacijoje pristatytas empirinis tyrimas yra vienas pirmųjų skaitmeninių B2B paslaugų tyrimų, kuriame klientų patirtis išskaidyta į atskiras dimensijas ir empiriškai tirti jų ryšiai su lojalumu bei pakartotiniu pirkimu. Rezultatų tendencija dera su konceptualiai artimiausiu Gounaris ir Almoraish (2024) tyrimu, o prieštaraujančių empirinių įrodymų nerasta. Tyrimas empiriškai pagrindžia, kad emocijos B2B santykiuose reiškiasi ne tiesiogiai ar impulsyviai, bet per ilgalaikių santykių kūrimo mechanizmus. Afektinė patirtis su lojalumu susijusi tarpininkaujant pasitikėjimui, pasitenkinimui ir emociniam prieraišumui. Kognityvinė patirtis su kognityviniu lojalumu susijusi tik tada, kai virsta klientui aktualia ir jo patiriama verte – suvokiama ir naudojimosi verte.

Nepatvirtinti mechanizmai interpretuojami kaip kontekstinė įžvalga. Teikiant skaitmenines paslaugas, patogumas, greitis, saugumas ar prieinamumas dažnai iš anksto numatomi skaitmeninės paslaugos architektūroje ir tampa baziniais reikalavimais (higieniniais veiksniais), o ne diferencijuojančiais veiksniais. Rezultatai labiau atitinka požiūrį, kad paslaugų teikėjo keitimo kaštai yra tiesioginė lojalumo prielaida, o ne kitų ryšių stiprumą keičianti sąlyga. Moderacijos efektai laikomi vienais jautriausių struktūrinių modelių elementų. Taigi skaitmeninėse B2B paslaugose lojalumas ir pakartotinis pirkimas labiau priklauso nuo vertės kūrimo ir santykių mechanizmų nei nuo operacinių ar paslaugos struktūros veiksnių. Tyrimo ribotumai (skerspjūvio tipo duomenys, tikslinė respondentų atranka, nemodeliuoti sutartiniai ir pirkimo grupių veiksniai, vienas respondentas iš organizacijos) apibrėžia tolesnių tyrimų kryptis.

IŠVADOS

1. Remiantis mokslinės literatūros analize, klientų patirtis konceptualizuojama kaip individualaus lygmens, subjektyvus ir daugiamatis reiškinys, apimantis kognityvines, afektines ir fizines reakcijas į su paslauga susijusius stimulus. Patirtis formuojasi kiekvienam asmeniui, todėl asmens lygmuo yra mažiausias vienetas, kuriame ji pasireiškia ir gali būti tiriama. Skaitmeninių B2B paslaugų kontekste ji formuojasi nuolat sąveikaujant skaitmeninių technologijų tarpininkaujamoje paslaugų ekosistemoje, kurioje dalyvauja ne vienas veikėjas ir yra daug klientų kelionės sąlyčio taškų. B2B kontekstas nekeičia klientų patirties konstrukto prigimties, tačiau jame susijungia specifinės aplinkybės – kolektyvinis sprendimų priėmimas, ilgalaikiai sutartiniai santykiai ir utilitarinio vertinimo akcentas. Kartu jos pagrindžia, kad B2B klientų patirtį būtina tirti savarankiškai, o ne tiesiogiai perkelti B2C tyrimų įžvalgas. Remiantis sąveika grįsta perspektyva, kurios pagrindas yra į paslaugas orientuota logika (angl. *Service-Dominant Logic*), skaitmeninių B2B paslaugų klientų patirtis apibrėžiama kaip: kliento subjektyvus verbalinių ir neverbalinių, tiesioginių ir netiesioginių sąveikų su žmonėmis, objektais ir aplinka paslaugų veikėjų tinkle interpretavimas per visą paslaugos teikimo laikotarpį, sukeliantis kognityvines, afektines ir fizines kliento reakcijas.

   Mokslinėje literatūroje išskiriamos patirties dimensijos konceptualiai persidengia – intelektiniai aspektai gali būti priskirti kognityvinei, o socialiniai ir santykių aspektai – afektinei klientų patirties dimensijai. Todėl kognityvinė ir afektinė dimensijos laikytinos pagrindinėmis skaitmeninių B2B paslaugų klientų patirties dimensijomis. Fizinės reakcijos lieka platesnio konceptualaus lauko dalimi, tačiau empiriniame tyrime kaip atskira dimensija neoperacionalizuojamos. Ši konceptuali skirtis sudaro pirmojo ginamojo teiginio pagrindą.

2. Literatūros analizė rodo, kad B2B paslaugų klientų patirties tyrimai yra nepakankamai išplėtoti ir fragmentiški. Tyrimų stoka nustatyta empiriškai. Mokslinių publikacijų duomenų bazėse atlikta paieška, apribota skaitmeninių B2B paslaugų klientų patirtimi, davė tik 14 įrašų Scopus ir 27 įrašus Web of Science duomenų bazėse. Platesnė paieška, apimanti klientų patirtį B2B paslaugų kontekste, davė tik 111 įrašų Scopus ir 80 įrašų Web of Science duomenų bazėse. Šie skaičiai apima visus, įskaitant ir besidubliuojančius įrašus. Tokie publikacijų kiekiai nesiekia literatūroje nurodomo analitinio minimumo, reikalingo bibliometriniam kartografavimui, ir rodo, kad tyrimų šia tema stinga. Todėl galutinė bibliometrinė analizė atlikta su 3682 unikalių įrašų rinkiniu, apimančiu ir B2B, ir B2C paslaugų kontekstus. B2B tyrimai išnagrinėti sisteminės literatūros apžvalgos būdu, kur iš 431 nustatyto straipsnio pilnus apžvalgos įtraukimo kriterijus atitiko 21 straipsnis.

   Tyrimų lauko bibliometrinis kartografavimas rodo spartėjantį klientų patirties tyrimų augimą, ypač ryškiai stebimą nuo 2020 m. Tuomet kasmetinis

publikacijų skaičius išaugo nuo 239 (2020 m.) iki 645 (2025 m.). Tyrimų lauko konceptualioje struktūroje klientų patirtis nuosekliai laikoma lojalumo ir elgsenos ketinimų prielaida. Šie tyrimai remiasi nusistovėjusia tarpdisciplinine literatūra, jungiančia psichologiją, paslaugų kokybės tyrimus, santykių rinkodarą, į paslaugas orientuotą logiką ir patirtinę rinkodarą. Juose dažnai taikomi validuoti matavimo metodai ir struktūrinių lygčių modeliavimas, o tai rodo metodologinę tyrimų lauko brandą. Vis dėlto pastebima įtampa tarp fenomenologinės klientų patirties sampratos ir dažnai taikomų pozityvistinių tikrinimo prieigų. Ši įtampa kyla iš pozityvistinio reikalavimo operacionalizuoti konstruktą, fenomenologiniu požiūriu per daug jo nesupaprastinant standartizuotomis matavimo skalėmis. Disertacijoje ši įtampa sprendžiama klientų patirtį matuojant atskiromis dimensijomis ir kelių teiginių skalėmis, o ne vienu agreguotu indeksu.

Dažniausiai B2B tyrimai fokusuojasi į siaurus, specifinius klientų patirties aspektus. Pastebimai trūksta sisteminių literatūros apžvalgų, kurios plėtotų konstruktą, o ne tik ribotai apžvelgtų tyrimų lauką. Labai nedaug tyrimų empiriškai tikrina diferencijuotas klientų patirties dimensijas kartu su tarpininkavimo ir moderavimo keliais. Sisteminės literatūros apžvalgos rezultatai rodo, kad iš 21 apžvelgto tyrimo tarpininkaujantys veiksniai nagrinėti 9-iuose, o moderuojantys tik 6-iuose tyrimuose. Konceptualiu požiūriu klientų patirties konstruktas tebėra fragmentiškas, o jo vieta tarpininkavimo mechanizmų ir rezultatų atžvilgiu nenuosekli. Empiriniu požiūriu mechanizmai, kuriais skaitmeninių B2B paslaugų klientų patirtis virsta klientų elgsenos ar nuostatų rezultatais, iš esmės neištirti ir nė vienas tyrimas neapima konstruktų ir jų ryšių rinkinio, koks pasiūlytas šioje disertacijoje. Šios konceptualios ir empirinės tyrimų spragos pagrindžia ketvirtąjį ginamąjį teiginį.

3. Teorinė sintezė atskleidžia, kad B2B paslaugų klientų patirtis yra konstruktas, sudarytas iš trijų tarpusavyje susijusių elementų, t. y. prielaidų, patirties komponentų ir pasekmių. Prielaidos yra sąlygos, įgalinančios patirties formavimąsi, komponentai apibrėžia vidinę konstrukto struktūrą, o pasekmės apima santykių ir vertės rezultatus, tokius kaip įsitraukimas, pasitenkinimas ir lojalumas. Remiantis šia sinteze, klientų patirtis laikoma centriniu mechanizmu, siejančiu paslaugas su klientų elgsena ir nuostatomis.

   Moksliniuose šaltiniuose šie trys elementai nagrinėjami netolygiai. Iš 21 apžvelgto tyrimo prielaidos nustatytos 9-iuose, komponentai 15-oje, o pasekmės 14-oje tyrimų. Prielaidos modeliuojamos kaip išoriniai veiksniai, einantys prieš klientų patirties formavimąsi, arba kaip pakaitiniai rodikliai (angl. *proxies*), atspindintys teigiamos klientų patirties formavimosi prielaidas. Komponentai grupuojami į sluoksnių, dimensijų, skalių ir modelių pagrindu išskirtus bei savarankiškus veiksnius. 21 apžvelgto tyrimo apimtyje, komponentai dažniausiai kildinami iš patirties kokybės skalės EXQ. Kai kuriais atvejais komponentai kildinami iš paslaugų kokybės matavimo instrumentų,

kurie matuoja susijusį, tačiau kitą konstruktą. Tokie komponentai į galutinį integracinį B2B paslaugų klientų patirties konstrukto žemėlapį įtraukti tik ta modifikuota forma, kuria jie pateikiami tyrimuose. Pasekmės sudaro keturias sritis. Nuo dažniausiai iki rečiausiai tirtų tai yra įsitraukimas ir santykiai, pasitenkinimas ir vertė, lojalumas bei organizacinė nauda. Konkreti klientų patirties elgsena, kaip lojalumo išraiškos ir pakartotinis pirkimas, nuosekliai priskiriama pasekmėms, o ne klientų patirties komponentams, o tai pagrindžia pirmąjį ginamąjį teiginį.

Sisteminėje literatūros apžvalgoje tyrimai integruoti taikant adaptuotą prielaidų, sprendimų ir rezultatų (ADO) struktūrą. Joje centrinę pakopą sudaro klientų patirties komponentai, o tarpininkai ir moderatoriai patikslina kelius nuo prielaidų iki rezultatų. Nustatyta, kad tokia modeliavimo logika klientų patirties modeliavimo tyrimuose yra pasitelkiama dažniausiai. Tačiau sisteminės apžvalgos pagrindu parengtas integracinis žemėlapis rodo, kad apžvelgtoje literatūroje ši logika įgyvendinama ne iki galo. Ne visi veiksniai susieti tarp pakopų, o ryšiai tarp jų apibrėžti skirtingu detalumu. Be to, užuot sudarę atskirą tarpininkavimo sluoksnį tarp prielaidų ir pasekmių, tarpininkaujantys veiksniai daugiausia priskiriami pasekmių grupei, o vienas tarpininkaujantis veiksnys identifikuotas kaip klientų patirties prielaida. Tik vienas tarpininkaujantis veiksnys, naudojimosi vertė, yra savarankiškas ir nepriklauso jokiai kitai pagrindinei ADO grupei. Taip pat visas pasekmių grupei priklausantis patirties vertės veiksnių pogrupis atlieka tarpininkaujantį vaidmenį. Apžvelgtuose tyrimuose pasitaiko sluoksnių pagrindu išskirtų komponentų. Vis dėlto nerasta struktūros, kurioje individo, diadinių santykių ir institucinės aplinkos sluoksniai apimtų patirties dimensijas su joms priklausančiais konstruktais, ir tai atveria kryptį tolesniems tyrimams. Apibendrinant, sintezė atskleidė fragmentišką B2B klientų patirties modeliavimą, ypač integruojant konstruktą tarp ADO pakopų ir patirties sluoksnių, kas pagrindžia ketvirtąjį ginamąjį teiginį.

4. Parengta empirinio tyrimo struktūra skaitmeninių B2B paslaugų klientų patirties, klientų lojalumo ir pakartotinio pirkimo elgsenos bei ketinimų ryšiams tirti. Struktūrą sudaro latentiniai konstruktai, kuri leidžia analizuoti tiesioginius, tarpininkaujančius ir moderuojančius ryšius. Modeliuojant klientų patirtį, būtina apibrėžti ir vidinę konstrukto struktūrą, ir jo ryšius konstruktų sistemoje, kurioje jis veikia. Vidinė struktūra apibrėžta išskiriant kognityvinę ir afektinę patirties dimensijas. Naudojimosi vertė modeliuota kaip refleksyvus-formatyvus aukštesnės eilės konstruktas, kurį formuoja pirmos eilės dimensijos (naudojimosi patirtis, personalizavimas ir santykiai). Klientų patirtis modelyje laikoma ryšių sekos pradžios tašku. Pagrindiniais rezultatais, pagal kuriuos vertinami klientų patirties dimensijų efektai, pasirinkti klientų lojalumas ir pakartotinis pirkimas. Tai lėmė teorinė lojalumo svarba ir tai, kad abu rezultatai nuosekliai pasikartoja tarp sisteminėje literatūros apžvalgoje

nustatytų pasekmių. Pakartotinis pirkimas yra ta vieta, kurioje lojalumas virsta stebimu, tiesiogiai su įmonės pajamomis susijusiu veiksmu.

Tyrimo struktūra operacionalizuoja 20 hipotezių, suformuluotų kaip H1-H16 kartu su subhipotezėmis. Analizės metodu pasirinktas struktūrinių lygčių modeliavimas, nes tikrinamame modelyje yra nestebimų, latentinių konstruktų, kurie vertinami stebimais, matuojamais rodikliais. Be to, hipotetiniai ryšiai sudaro sistemą, kurią būtina vertinti kaip visumą, o vienos lygties metodai, tokie kaip regresinė ar koreliacinė analizė, tam netinka. Toks pasirinkimas atitinka nusistovėjusią tyrimų lauko praktiką, nes struktūrinių lygčių modeliavimas yra vyraujantis klientų patirties modeliavimo metodas. Vietoje kovariacija grįsto struktūrinių lygčių modeliavimo pasirinktas dalinių mažiausių kvadratų metodas (PLS-SEM). Pasirinkimą lėmė tikrinamo modelio sudėtingumas, prognostinė tyrimo orientacija ir formatyvus aukštesnės eilės konstruktas, kurio vertinimui PLS-SEM metodu nereikia papildomų specifikavimo ir identifikavimo sąlygų, taikomų kovariacija grįstame modeliavime. Be PLS-SEM, papildomai atlikta būtinųjų sąlygų analizė NCA. PLS-SEM pakankamumo logika paaiškina, kurie konstruktai daro įtaką rezultatams, o NCA būtinumo logika nustato, kurios sąlygos turi būti, kad rezultatai būtų pasiekti. Šis analizių derinys leidžia viename empiriniame tyrime nagrinėti ir pakartotinį pirkimą didinančius mechanizmus, ir jam būtinas sąlygas.

Imties dydis nustatytas statistinės galios skaičiavimu, taikant atvirkštinės kvadratinės šaknies metodą. Skaičiuojant statistinę galią, minimalus reikšmingas efekto dydis nustatytas $\beta = 0,15$, o statistinė galia 0,80. Reikalinga respondentų imtis buvo maždaug 350, o duomenys surinkti iš 386 respondentų. Tokios imties pakako aptikti net santykinai silpnus struktūrinius ryšius.

Respondentai atrinkti taikant tikslinę, pagal pareigas grįstą atranką. Jų tinkamumas patikrintas anketos atrankos klausimais, kurie patvirtino respondentų dalyvavimą priimant su paslaugomis susijusius sprendimus ir skaitmeninį paslaugų, dėl kurių jie priima sprendimus, pobūdį. Toks atrankos būdas yra įprastas B2B tyrimuose, kuriuose prieiga prie organizacijų sprendimų priėmėjų ribota. Jis užtikrina surinktų duomenų aktualumą, tačiau riboja statistinio apibendrinimo galimybes. Tyrimo instrumentą sudarė 83 Likerto skalės teiginiai, kurie prieš duomenų rinkimą patikslinti atlikus ekspertinį vertinimą. Apibendrinant, parengta empirinio tyrimo struktūra suteikia modeliavimo logiką, kurioje klientų patirties dimensijos atskirtos nuo tarpininkaujančių ir moderuojančių veiksnių bei galutinių rezultatų, ir pagrindžia ketvirtąjį ginamąjį teiginį.

5. Empiriniai rezultatai rodo, kad skaitmeninių B2B paslaugų klientų patirtis su klientų lojalumu ir pakartotinio pirkimo elgsena bei ketinimais siejasi daugiausia per mediatorius, o ne tiesioginiais efektais. Iš 30 įvertintų ryšių 25 buvo statistiškai reikšmingi, o 4 iš 20-ies hipotezių buvo nepatvirtintos. Kelio koeficientai svyravo nuo -0,080 iki 0,587, t. y., priklausomai nuo ryšio, efektų

dydžiai buvo nuo mažų iki didelių. Be to, matavimo modelis patvirtino, kad kognityvinė ir afektinė klientų patirties dimensijos yra empiriškai atskiros, nes visi HTMT santykiai buvo mažesni už ribinę 0,90 reikšmę.

Kognityvinė ir afektinė klientų patirties dimensijos su rezultatais siejasi skirtingais tarpininkavimo keliais, o tai rodo jų diferencijuotą įtaką rezultatams. Kognityvinės klientų patirties tiesioginis efektas kognityviniam lojalumui nėra reikšmingas (β = 0,092; p = 0,073). Su kognityviniu lojalumu ji reikšmingai susijusi per kliento atliekamą paslaugos vertės vertinimą, ypač tarpininkaujant suvokiamai vertei (β = 0,150) ir naudojimosi vertei (β = 0,137). Tarpininkaujant pasitenkinimui, kognityvinė klientų patirtis taip pat turi nedidelį efektą afektiniam (β = 0,057) ir konatyviniam (β = 0,076) lojalumui. Bendrasis kognityvinės klientų patirties netiesioginis efektas kognityviniam lojalumui yra reikšmingas (β = 0,287), o tiesioginis efektas lieka nereikšmingas. Panašiai ir afektinė klientų patirtis su lojalumo dimensijomis siejasi tik netiesiogiai. Ji reikšmingai veikia afektinį lojalumą per emocinį prieraišumą prie prekės ženklo (β = 0,236), o pasitenkinimą per pasitikėjimą (β = 0,274). Afektinės klientų patirties netiesioginis efektas kognityviniam lojalumui, tarpininkaujant prekės ženklo vertei, yra silpnas (β = 0,065). Vis dėlto jos bendrasis netiesioginis efektas afektiniam lojalumui yra didžiausias iš hipotetinių tarpininkavimo kelių (β = 0,330). Gauti rezultatai rodo, kad abi klientų patirties dimensijos su lojalumu siejasi daugiausia netiesioginiais keliais. Kognityvinė patirtis su lojalumu siejasi per kliento atliekamą paslaugos vertės vertinimą, o afektinė patirtis pirmiausia virsta emociniu ryšiu ir pasitikėjimu paslaugos teikėju. Vienintelis reikšmingas tiesioginis kelias nuo klientų patirties dimensijos iki lojalumo dimensijos yra nedidelis kognityvinės klientų patirties efektas konatyviniam lojalumui (β = 0,142).

Nustatyta, kad kognityvinės ir afektinės klientų patirties dimensijų tiesioginiai efektai lojalumo dimensijoms ir pakartotinio pirkimo ketinimams bei elgsenai yra silpni. Kognityvinės klientų patirties tiesioginiai efektai konatyviniam lojalumui (β = 0,142) ir pakartotinio pirkimo ketinimams (β = 0,140) buvo nedideli. Stipriausi jos tiesioginiai efektai nustatyti tarpininkaujantiems konstruktams, t. y., didelis efektas naudojimosi vertei (β = 0,559) ir vidutiniai efektai suvokiamai vertei (β = 0,437) ir patogumui (β = 0,416). Afektinė klientų patirtis pasižymėjo tokiu pačiu dėsningumu. Jos tiesioginis efektas emociniam prieraišumui prie prekės ženklo buvo didelis (β = 0,587), o pasitikėjimui (β = 0,477) ir prekės ženklo vertei (β = 0,458) vidutinis. Tai rodo, kad klientų patirtis pirmiausia susijusi su tarpininkaujančiais veiksniais, o ne tiesiogiai su pačiais rezultatais.

Nustatyta, kad lojalumas vystosi nuosekliai nuo kognityvinio iki elgsenos lojalumo, o efektai sekos eigoje stiprėja. Nuo nedidelio efekto tarp kognityvinio ir afektinio lojalumo (β = 0,236) jis tampa vidutinis konatyvinio lojalumo link (β = 0,367) ir stipriausias yra pereinant prie elgsenos lojalumo (β = 0,415). Tačiau elgsenos lojalumo efektas faktiniam pakartotiniam pirkimui yra

nedidelis (β = 0,142). Vadinasi, nuoseklus bendradarbiavimas su paslaugos teikėju tik nežymiai didina pakartotinio pirkimo ateityje tikimybę. Pakartotinis pirkimas stipriau susijęs su pakartotinio pirkimo ketinimais (β = 0,247) ir įpročiu (β = 0,198). Tai rodo, kad pakartotiniai pirkimai kyla ir iš sąmoningų ketinimų, ir iš rutininio naudojimosi teikėjo paslaugomis. Atitinkamai modelis paaiškina didžiausią afektinio lojalumo (59,7 proc.), konatyvinio lojalumo (56 proc.), klientų pasitenkinimo (47,1 proc.) ir kognityvinio lojalumo (45 proc.) dispersijos dalį, taip pat reikšmingą, nors mažesnę, pakartotinio pirkimo ketinimų (39,3 proc.) dispersijos dalį. Elgsenos lojalumo (17,2 proc.) ir pakartotinio pirkimo elgsenos (23,5 proc.) paaiškintos dispersijos dalis mažesnė. Kitaip tariant, modelis paaiškina gerokai didesnę nuostatų lojalumo dimensijų nei elgsenos rezultatų dispersijos dalį. Tai leidžia manyti, kad faktinį pakartotinį pirkimą lemia ir kiti kontekstiniai, organizaciniai bei sutartiniai veiksniai, kurie modelyje neįvertinti.

Galiausiai, modelyje nenustatyta statistiškai reikšmingų kognityvinės klientų patirties ir tolesnių konstruktų ryšių moderavimo efektų. Klientų dalijimosi žiniomis (p = 0,872), įmonės organizacinio lankstumo (p = 0,111) ir paslaugos teikėjo keitimo kaštų (p = 0,662) sąveikos efektai buvo statistiškai nereikšmingi, o jų dydžiai mažesni už f^2 = 0,006, t. y. gerokai mažesni už mažo efekto ribą. Be šių trijų nepatvirtintų hipotezių, patogumas taip pat netarpininkavo tarp kognityvinės klientų patirties ir pakartotinio pirkimo (β = 0,021; p = 0,427). Taigi įrodymų, kad tirtos kontekstinės sąlygos moderuoja nustatytus ryšius, nerasta. Šie rezultatai pagrindžia antrąjį ir trečiąjį ginamuosius teiginius.

6. Empiriškai patikrintame skaitmeninių B2B paslaugų klientų patirties modelyje (13 pav.) išlaikyti empiriškai patvirtinti ryšiai, priklausantys klientų patirties, lojalumo ir pakartotinio pirkimo sekai. Todėl patogumo ir rekomendavimo konstruktai iš galutinio modelio pašalinti. Patogumas neturėjo tarpininkaujančio efekto, o rekomendavimas yra už klientų patirties, lojalumo ir pakartotinio pirkimo sekos ribų. Nors rekomendavimas buvo įtrauktas į konceptualų modelį, empirinis tyrimas buvo sutelktas į tarpininkus tarp klientų patirties dimensijų ir lojalumo bei pakartotinio pirkimo ketinimų ir elgsenos. Empiriškai patikrintas modelis rodo, kad klientų patirtis su lojalumu ir pakartotinio pirkimo ketinimais bei elgsena siejasi per verte, emocijomis ir santykiu grįstus tarpininkaujančius konstruktus.

Vertinant bendruosius efektus, t. y., visų efektų kelių nuo pradinio iki tikslinio konstrukto sumą, nustatyta, kad kognityvinė klientų patirtis buvo vienintelis konstruktas, kurio bendrasis efektas visoms lojalumo dimensijoms ir pakartotinio pirkimo ketinimams bei elgsenai siekė bent β = 0,10. Afektinės klientų patirties bendrieji efektai visiems šiems rezultatams buvo statistiškai reikšmingi, tačiau kognityviniam lojalumui (β = 0,065), elgsenos lojalumui (β = 0,093) ir pakartotiniam pirkimui (β = 0,087) jie nesiekė šio lygio. Iš

klientų patirties ir tarpininkaujančių konstruktų (neįskaitant pačių lojalumo dimensijų) didžiausią bendrąjį efektą pakartotinio pirkimo ketinimams turėjo kognityvinė klientų patirtis (β = 0,287). Tuo tarpu klientų pasitenkinimo bendrieji efektai buvo didžiausi konatyviniam (β = 0,483) ir elgsenos (β = 0,200) lojalumui. Galiausiai, pasitikėjimo efektai išliko reikšmingi afektiniam, konatyviniam ir elgsenos lojalumui.

Bendrieji efektai pakartotinio pirkimo elgsenai buvo mažiausi modelyje. Didžiausi efektai būdingi konstruktams, kurie modelyje yra arčiausiai pakartotinio pirkimo elgsenos konstrukto, t. y., pakartotinio pirkimo ketinimams (β = 0,247), įpročiui (β = 0,198), konatyviniam lojalumui (β = 0,192) ir elgsenos lojalumui (β = 0,142). Iš toliau modelyje esančių prielaidų didžiausi bendrieji efektai pakartotiniam pirkimui nustatyti kognityvinei klientų patirčiai (β = 0,107) ir emociniam prieraišumui prie prekės ženklo (β = 0,103). Nustatyta, kad tarpininkaujantys mechanizmai perduoda pradinio konstrukto efektą tiksliniam konstruktui, tačiau kelio eigoje efektas paprastai silpnėja. Kitaip tariant, kuo toliau nuo pakartotinio pirkimo konstruktas yra modelyje, tuo mažesnis paprastai būna jo bendrasis efektas faktinei pakartotinio pirkimo elgsenai. Vis dėlto konstruktai, kurių efektas perduodamas keliais tolesniais keliais, pavyzdžiui, konatyvinis lojalumas, gali išlaikyti didesnį bendrąjį efektą nei kai kurie arčiau pakartotinio pirkimo esantys konstruktai.

Būtinųjų sąlygų analizė papildo šiuos rezultatus. Bendrieji efektai rodo, kurie konstruktai didina rezultatus, o NCA rodo, kurios sąlygos turi būti, kad aukštesnis rezultatų lygis apskritai būtų pasiektas. Atlikus NCA nustatyta, kad pasitikėjimas (d = 0,114; p = 0,001) ir įprotis (d = 0,132; p = 0,031) yra būtinosios aukštesnio pakartotinio pirkimo lygio sąlygos, abi su vidutinio dydžio efektu, o elgsenos lojalumas yra tik ribinė būtinoji sąlyga (d = 0,100; p = 0,037). Pasitikėjimas reikalingas jau žemesniuose pakartotinio pirkimo lygiuose ir yra pamatinė sąlyga. Įprotis tampa ribojančia sąlyga aukštesniuose pakartotinio pirkimo lygiuose, kur didesniam pakartotinių pirkimų lygiui reikia labiau rutinizuoto organizacinio pirkimo.

Abi logikos, pakankamumo (PLS-SEM) ir būtinumo (NCA), suteikia vieną kitą papildančių įžvalgų. Pasitikėjimo bendrasis efektas pakartotinio pirkimo elgsenai yra santykinai mažas (β = 0,053), o įprotis yra vienas stipriausių jos prediktorių (β = 0,198). Vis dėlto abu buvo identifikuoti kaip būtinosios sąlygos, be kurių aukštesnis pakartotinių pirkimų lygis nepasiekiamas. Taigi konstruktas gali būti silpnas tam tikro rezultato veiksnys, kaip pasitikėjimo atveju, ir kartu išlikti jo būtinąja sąlyga. Nė vienas analizės metodas atskirai tokių rezultatų neatskleidžia.

Teoriniu požiūriu rezultatai rodo, kad klientų patirtį reikia modeliuoti atskiromis dimensijomis ir atskirais tarpininkaujančiais konstruktais. Agreguojant patirties ar lojalumo dimensijas disertacijoje nustatyti keliai liktų nematomi. Praktiniu vadybiniu požiūriu, siekiant stiprinti lojalumą ir skatinti pakartotinius pirkimus būtina stiprinti ne tik pačią klientų patirtį, bet ir

tarpininkaujančius veiksnius. Kaip parodė NCA, tirtame kontekste minimalus pasitikėjimo ir įpročio lygis yra būtinas aukštesniam pakartotinio pirkimo lygiui pasiekti. Todėl analizuojant ir valdant pakartotinį pirkimą, šias sąlygas reikia vertinti kartu su PLS-SEM nustatytais mechanizmais. Šie rezultatai pagrindžia penktąjį ginamąjį teiginį.

Patikrintą modelį riboja empirinio tyrimo dizainas. Modelis įvertintas remiantis skerspjūvio tipo duomenimis, gautais iš tikslingai atrinktų skaitmeninių B2B paslaugų sprendimų priėmėjų Europos ekonominėje erdvėje, o jame nagrinėjami vertės, emociniai ir santykių mechanizmai. Taigi modelis apibūdina, kaip klientų patirtis veikia šiame kontekste, bet nenustato efektų, galiojančių visuose kontekstuose ar bėgant laikui.

Tolesniuose tyrimuose empirinį modelį galima plėtoti keliomis kryptimis. Longitudiniai tyrimai leistų nustatyti, ar įvardinti tarpininkaujantys veiksniai ir būtinosios sąlygos išlieka viso kliento santykių ciklo metu. Kontekstinių veiksnių, tokių kaip sutartiniai susitarimai ir pirkimo grupės dinamika, įtraukimas ir paprastesnių modelio alternatyvų tikrinimas padėtų išsiaiškinti, kiek įvertinti efektai priklauso nuo modelio struktūros. Galiausiai, replikavus tyrimą kitose paslaugų, geografinėse ir organizacinėse aplinkose, paaiškėtų, kiek rezultatai priklauso nuo disertacijoje analizuoto konteksto.

REKOMENDACIJOS

Remiantis teorinio ir empirinio tyrimo rezultatais, rekomendacijos formuluojamos klientų patirtį tiriantiems mokslininkams ir skaitmeninių B2B paslaugų srities praktikams.

Rekomendacijos tyrėjams

Šios rekomendacijos skirtos tyrėjams, nagrinėjantiems klientų patirtį B2B ir skaitmeninių paslaugų kontekstuose, ypač tiems, kurie modeliuoja jos ryšius su lojalumu ir pakartotinio pirkimo ketinimais bei elgsena.

1. Skaitmeninių B2B paslaugų klientų patirties tyrimuose klientų patirtį traktuoti kaip daugiamatį konstruktą, apimantį kognityvinę ir afektinę dimensijas. Elgsenos pasekmes, tokias kaip klientų lojalumas ir pakartotinio pirkimo elgsena, tikslinga analitiškai atskirti nuo pačios klientų patirties, nes patirtinės reakcijos atspindi vidines kliento kognityvines ir afektines būsenas, kurios yra ankstesnės už vėlesnius vertės kūrimo ir santykių formavimo procesus ir juos įgalina. Elgsenos pasekmes laikant klientų patirties dalimi, kyla rizika supainioti patirties procesus su jų pasekmėmis ir dar labiau fragmentuoti sampratą. Disertacijoje atliktas empirinis tyrimas patvirtino, kad abi dimensijos yra empiriškai atskiros ir su pasekmėmis siejasi skirtingais tarpininkavimo keliais. Tai pagrindžia jų atskyrimą, o ne sujungimą į vieną indeksą. Siekiant didesnio sąvokos aiškumo ir tyrimų palyginamumo, tolesniuose tyrimuose rekomenduojama nuosekliai taikyti kognityvinę ir afektinę dimensijas kaip skaitmeninių B2B paslaugų klientų patirties pagrindą.

2. Modeliuojant skaitmeninių B2B paslaugų klientų patirtį, tarpininkaujančius veiksnius konceptualiai atskirti nuo klientų patirties struktūros. Būtina aiškiai apibrėžti konceptualias ribas tarp klientų patirties dimensijų, procesų, kuriais teigiama klientų patirtis formuojasi ir veikia, bei pasekmių, kurioms ji daro įtaką. Disertacijoje atlikta sisteminė literatūros apžvalga parodė, kad tarpininkaujantys veiksniai dažniausiai priskiriami pasekmių grupei, užuot sudarę atskirą tarpininkavimo sluoksnį, todėl riba tarp tarpininkaujančio veiksnio ir pasekmės tampa neaiški. Šį neapibrėžtumą galima sumažinti tyrimuose aiškiai nurodant, kurie konstruktai laikomi klientų patirties komponentais, kurie tarpininkaujančiais veiksniais, o kurie pasekmėmis. Toks atskyrimas palengvina modelių interpretavimą ir sudaro sąlygas kaupti nuoseklias žinias klientų patirties tyrimų srityje.

3. Skaitmeninių B2B paslaugų klientų patirties pasekmes, tokias kaip klientų lojalumas ir pakartotinio pirkimo elgsena, modeliuoti kaip netiesiogines klientų patirties pasekmes, atsirandančias per tarpininkaujančius veiksnius, o ne per tiesioginius efektus. Tokia prieiga leidžia atskleisti, kaip šios pasekmės formuojasi tarpininkavimo procesų metu. Disertacijos rezultatai parodo, kokių pasekmių gali turėti tokios modeliavimo prieigos nepaisymas. Kognityvinės klientų patirties tiesioginis efektas

kognityviniam lojalumui nebuvo statistiškai reikšmingas, o netiesioginis efektas per su verte susijusius veiksnius buvo reikšmingas. Kartu su tiesioginiais ir netiesioginiais efektais pateikiami bendrieji efektai papildomai parodytų, kokia konstrukto įtakos dalis išlieka, kai ji perduodama per tarpininkaujančius veiksnius. Taigi tarpininkaujančiais veiksniais grįsta modeliavimo prieiga padeda tiksliau teoriškai pagrįsti kelius, kuriais klientų patirtis virsta atitinkamomis pasekmėmis.

4. Skaitmeninių B2B paslaugų klientų patirties tyrimuose moderuojančius kintamuosius įtraukti tik tada, kai yra aiškus teorinis pagrindimas, paaiškinantis, kodėl šie veiksniai svarbūs ir kaip jie veikia konkrečius modelio ryšius. Teoriškai pagrįsti ir su modelio struktūra suderinti moderuojantys kintamieji padeda išvengti nereikalingo modelio sudėtingumo ir didina klientų patirties tyrimų rezultatų palyginamumą. Disertacijoje trys teoriškai pagrįsti moderatoriai statistiškai reikšmingų sąveikos efektų neatskleidė, o jų efektų dydžiai nesiekė mažo efekto ribos. Tokie rezultatai vis tiek yra informatyvūs, nes jais galima nustatyti sąlygas, kuriomis literatūroje siūlomi paaiškinimai nesuteikia papildomos aiškinamosios galios.

5. Taikyti nuoseklią modeliavimo logiką, aiškiai apibrėžiančią klientų patirties vaidmenį skaitmeninių B2B paslaugų tyrimuose. Tyrėjams naudinga atskirti ar klientų patirtis modelyje yra pagrindinis konstruktas, ar vienas iš platesnio modelio aiškinamųjų komponentų. Kai klientų patirtis yra pagrindinis konstruktas, būtina išsaugoti jos daugialypiškumą. Kai ji naudojama kaip pagalbinis aiškinamasis konstruktas, jos turinys turėtų išlikti kognityvinis ir afektinis, neįtraukiant konceptualiai artimų sąvokų, tokių kaip naudotojo patirtis ar paslaugų kokybė. Kai modeliavimo tikslas susijęs su elgsenos pasekmėmis, struktūrinio modeliavimo pakankamumo logiką galima papildyti būtinumo logika. Konstruktas gali daryti santykinai silpną įtaką tam tikrai pasekmei ir kartu riboti, kokį jos lygį apskritai įmanoma pasiekti. Nė viena iš šių analizės logikų atskirai tokios išvados neatskleidžia.

Rekomendacijos praktikams

Toliau pateikiamos rekomendacijos skirtos skaitmeninių B2B paslaugų teikėjams, ypač organizacijų darbuotojams, atsakingiems už klientų patirties valdymą: produktų ir paslaugų savininkams, klientų santykių vadovams, rinkodaros ir komunikacijos vadovams, paslaugų teikimo vadovams bei aukščiausio lygio vadovams, atsakingiems už klientų išlaikymą.

1. Klientų santykių vadovams ir klientų portfelio valdymo komandoms prieš investuojant į kitas klientų patirties valdymo priemones rekomenduojama užsitikrinti bent minimalų kliento pasitikėjimo lygį ir rutininį naudojimąsi paslauga. Pasitikėjimas ir įprotis yra būtinosios aukštesnio pakartotinio pirkimo lygio sąlygos. Pasitikėjimas pakartotinius pirkimus riboja jau žemesniuose jų lygiuose, o įprotis tampa lemiama sąlyga aukštesniuose lygiuose, t. y. kai klientas perka nuosekliai, o ne epizodiškai. Investicijos į emocinį ryšį ir komunikacijos tobulinimą nebūtinai virs pakartotiniu

pirkimu, jei klientas nepasitiki organizacija ir jos paslaugomis. Tuo tarpu rutininis naudojimasis paslauga labiau susieja klientą su ja ir didina pakartotinio pirkimo tikimybę ateityje. Praktikoje pasitikėjimas kuriamas nuspėjamu paslaugos teikimu, skaidria kainodara ir sutarčių sąlygomis, sąžiningumu bei nuoširdumu ir dėmesiu kliento poreikiams, pasirengimu jam padėti. Įprotis formuojamas rutinizuojant paslaugos naudojimą. Pavyzdžiui, informacinės sistemos naudojimą galima įtraukti į kasdienę kliento veiklą, integruojant ją su esamomis kliento IT sistemomis. Taip pat galima reguliariai teikti ataskaitas apie paslaugos veikimą ar naudą, pavyzdžiui, sistemos prastovų ataskaitas ar sutaupytų sąnaudų, palyginti su situacija be paslaugos, apskaičiavimus. Įprotį stiprina ir kitos pasikartojančios sąveikos su įsigyta paslauga, dėl kurių ji tampa savaime suprantamu pasirinkimu ateities pirkimuose.

2. Produktų ir paslaugų savininkams rekomenduojama gerinti kognityvinę klientų patirtį, daugiausia dėmesio skiriant vertei, kurią klientas gauna naudodamasis paslauga, o ne pačiam lojalumui. Klientų patirties kūrimas turėtų būti laikomas lojalumo formavimą įgalinančia priemone, o ne savaime siektinu tikslu. Sprendimus, susijusius su klientų patirties kūrimu, tikslinga vertinti pagal tai, kokius vertės kūrimo ir santykių veiksnius jie įgalina. Iš klientų patirties ir tarpininkaujančių konstruktų kognityvinė klientų patirtis turi didžiausią bendrąją įtaką kognityviniam lojalumui ir pakartotinio pirkimo ketinimams. Tačiau kognityvinio lojalumo ji neveikia tiesiogiai, nes šis poveikis reiškiasi per tarpininkaujančius veiksnius, su kuriais ji stipriai susijusi, t. y. suvokiamą vertę ir naudojimosi vertę. Todėl investicijų į klientų patirties gerinimą grąža priklauso nuo to, ar didėja kliento suvokiama gaunama vertė, o ne nuo to, kaip klientas vertina pačią patirtį su paslauga. Praktikoje tai reiškia, kad norint teigiamą patirtį turintį klientą paskatinti tapti lojaliu ir pirkti pakartotinai, paslaugos kaina turėtų būti pagrįsta, o kainos ir naudos santykis tinkamas. Paslauga kliento turėtų būti vertinama kaip kokybiškesnė alternatyva, lyginant su kitų teikėjų pasiūlymais, padėti klientui spręsti jo veiklos problemas ir, ja naudojantis, ugdyti jo žinias bei gebėjimus. Be to, klientą verta įtraukti į bendrą paslaugos kūrimą, kad paslauga geriau atitiktų jo poreikius.

3. Rinkodaros ir komunikacijos vadovams rekomenduojama afektinę klientų patirtį kreipti į emocinio prieraišumo ir pasitikėjimo stiprinimą, o ne vien į prekės ženklo įvaizdį. Afektinė klientų patirtis labiausiai susijusi su emociniu prieraišumu prie prekės ženklo, pasitikėjimu ir prekės ženklo verte, o per šiuos tarpininkaujančius veiksnius ji siejasi su lojalumu, ypač afektiniu aspektu. Emocinis prieraišumas turi didžiausią bendrąją įtaką afektiniam lojalumui ir yra vienas iš nedaugelio konstruktų, išlaikančių reikšmingą įtaką pakartotinio pirkimo elgsenai. Prekės ženklo vertės bendroji įtaka lojalumui yra santykinai nedidelė. Tai rodo, kad esamų klientų atveju komunikacijos ištekliai sukuria daugiau vertės, kai jie nukreipiami į tikrų santykių kūrimą, o ne apsiriboja prekės ženklo komunikacija. Praktikoje tai reiškia, kad reikia stiprinti kliento ryšio su pačiu paslaugos teikėju jausmą. Dėl jo pirkimas iš konkretaus teikėjo klientui atrodo natūralesnis net tada, kai konkurentai siūlo panašias paslaugos

savybes. To galima siekti užtikrinant paskirto kontaktinio asmens tęstinumą visą sutarties laikotarpį, informuojant klientą apie paslaugos sutrikimus anksčiau, nei jis pats juos pastebi, ir nuosekliai atkreipiant dėmesį į rezultatus, kuriuos klientas pasiekia bendradarbiaudamas su paslaugos teikėju.

4. Paslaugų teikimo vadovams rekomenduojama klientų pasitenkinimą laikyti pagrindiniu veiklos našumo rodikliu, kurį būtina valdyti atskiro kliento ir atskirų sąveikų lygmeniu. Iš tarpininkaujančių konstruktų klientų pasitenkinimas turi didžiausią bendrąją įtaką konatyviniam ir elgsenos lojalumui bei reikšmingą įtaką pakartotinio pirkimo ketinimams. Todėl jis yra stipriausias atskiras konstruktas, siejantis klientų patirtį su elgsena. Praktikoje klientų pasitenkinimą tikslinga matuoti apibrėžtuose kliento kelionės taškuose, pavyzdžiui, užbaigus paslaugos diegimą, išsprendus pagalbos užklausą ar atnaujinant sutartį, o ne vieną kartą per metus, pavyzdžiui, metinės peržiūros metu. Kiekvienas matavimo taškas turėtų būti susietas su aiškiai apibrėžtu paslaugos teikėjo veiksmu. Taip pasitenkinimo mažėjimą galima pastebėti laiku ir jį sušvelninti konkretaus kliento ar paslaugos lygmeniu, užuot vertinus jį kaip suvestinį statistinį rodiklį.

5. Aukščiausio lygio vadovams, atsakingiems už klientų išlaikymą, rekomenduojama klientų lojalumo ugdymą planuoti etapais ir laukiamus rezultatus derinti su santykių etapu. Klientų patirtis yra strateginis lojalumo ugdymo atspirties taškas, todėl jos vaidmuo šiame procese turėtų būti aiškiai apibrėžtas. Lojalumas vystosi etapais, o efektai stiprėja pereinant nuo kognityvinio prie afektinio, vėliau konatyvinio ir galiausiai elgsenos lojalumo. Tikimybė, kad lojali elgsena virs faktiniu pakartotiniu pirkimu išlieka santykinai nedidelė, nes pakartotinį pirkimą labiau tiesiogiai lemia pakartotinio pirkimo ketinimai ir įprotis. Tarpininkavimo grandinėje efektai silpnėja, todėl disertacijoje pristatytame skaitmeninių B2B paslaugų klientų patirties modelyje toliau nuo pakartotinio pirkimo esantys konstruktai labiau formuoja kliento nuostatą paslaugos teikėjo atžvilgiu, o ne skatina pakartotinį pirkimą. Taigi, atsižvelgiant į kliento lojalumo etapą, ankstyvuose santykių etapuose klientų patirtis turėtų būti nukreipta į kliento nuostatas. Pakartotinį pirkimą tikslinga papildomai skatinti veiksniais, veikiančiais arčiau pirkimo sprendimo, pavyzdžiui, planuojant sutarties atnaujinimą, formuojant paslaugos naudojimo įprotį ir užtikrinant santykių tęstinumą.

6. Vadovams, atsakingiems už klientų grįžtamojo ryšio ir ataskaitų sistemas, rekomenduojama kognityvinę ir afektinę klientų patirties dimensijas matuoti atskirai nuo lojalumo ir pakartotinio pirkimo veiklos našumo rodiklių. Sujungus patirties rodiklius su lojalumo ar pakartotinio pirkimo rodikliais į vieną matą, gali likti nematomi veiksniai, per kuriuos patirtis veikia, nes abi dimensijos yra empiriškai atskiros ir su pasekmėmis siejasi skirtingais keliais. Praktikoje kognityvinę klientų patirtį tikslinga vertinti pagal informacijos naudingumą, mokymąsi ir idėjų kilimą paslaugos teikimo metu, o afektinę patirtį pagal kliento optimizmą, entuziazmą ir kitas teigiamas emocines reakcijas. Be to, pasitikėjimą ir įprotį verta stebėti kaip atskirus kliento lygmens

rodiklius, nes jie yra būtinosios aukštesnio pakartotinio pirkimo lygio sąlygos. Toks matavimas leidžia nustatyti, kurie veiksniai stiprina ar silpnina lojalumo ir pakartotinio pirkimo rodiklius, o ne tik užfiksuoti lojalumo ar pakartotinių pirkimų sumažėjimo ar padidėjimo faktą.

Šios rekomendacijos laikytinos gairėmis, o ne privalomų veiksmų rinkiniu. Organizacijose šios rekomendacijos turėtų būti taikomos atsižvelgiant į konkrečią paslaugų struktūrą bei verslo kontekstą. Jas įgyvendinant taip pat būtina atsižvelgti į disertacijoje aptartas empirinio tyrimo ribas ir ribotumus.

TYRIMO REZULTATŲ APROBAVIMAS

Mokslinės publikacijos disertacijos tema:

1. Raišys, S. J. (2026). Structuring customer experience in B2B services. *Business: Theory and Practice, 27*(1), 143–155. https://doi.org/10.3846/btp.2026.25718
2. Raišys, S. J., & Raišienė, A. G. (2023). Management Theories' Potential for Better Digital Service Customer Experience. *Management of Organizations: Systematic Research, 89*(1), 87–101. https://doi.org/10.2478/mosr-2023-0006

Recenzuoti pateikti moksliniai straipsniai:

1. Raišys, S. J. (2026). From customer experience to repurchase: An empirical model of value-based and relational mechanisms in digital B2B services. *Central European Business Review*

Pranešimai mokslinėse konferencijose:

1. Raišys, S. J. „A Customer Experience Conversion Model for Competitiveness in Digital B2B Service Firms". IADERA 2026 International Scientific Conference, Zadaras, Kroatija, 2026 m. spalio 15–16 d.
2. Raišys, S. J. „From Customer Experience to Repurchase: Evidence from Digital B2B Services". 12th International Conference on Business, Management and Economics (ICBMECONF), Viena, Austrija, 2026 m. birželio 12–14 d.
3. Raišys, S. J. „Customer Experience in B2B Services: SLR Based Theoretical Model". 49th EBES Conference – Athens, Atėnai, Graikija, 2024 m. spalio 16–18 d.

GYVENIMO APRAŠYMAS

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Raišys, Simonas Juozapas

MODELLING CUSTOMER EXPERIENCE IN BUSINESS-TO-BUSINESS DIGITAL SERVICE INDUSTRY: doctoral dissertation. – Vilnius: Mykolas Romeris University, 2026. P. 280.

Bibliogr. 163-188 p.

The dissertation examines customer experience in B2B digital services and its effects on customer loyalty and repurchase intentions and behavior. Based on bibliometric analysis and a systematic literature review, the antecedents, components, and consequences of customer experience are systematized, and customer experience is defined from the perspective of Service-Dominant Logic. A conceptual model was developed in which cognitive and affective customer experiences are linked to loyalty and repeat purchases through value-based, emotional, and relational factors. The model was tested through a survey of decision-makers in B2B digital services, and the data were analyzed using partial least squares structural equation modelling (PLS-SEM) and necessary condition analysis (NCA). Customer experience was found to influence loyalty and repurchase intentions and behavior primarily indirectly, through value-in-use, perceived value, satisfaction, trust, and emotional attachment. Trust and habit were also found to be necessary conditions for higher levels of repurchase, while loyalty develops sequentially from cognitive to behavioral loyalty. Based on the results, a final customer experience model for B2B digital services was developed, along with recommendations for researchers and practitioners focusing on distinguishing customer experience dimensions from mediating factors and consequences, strengthening value creation and relationship factors, and ensuring trust and habit formation.

Disertacijoje nagrinėjama skaitmeninių B2B paslaugų klientų patirtis ir jos poveikis klientų lojalumui bei pakartotinio pirkimo ketinimams ir elgsenai. Bibliometrinės analizės ir sisteminės literatūros apžvalgos pagrindu susistemintos klientų patirties prielaidos, komponentai ir pasekmės, o klientų patirtis apibrėžta remiantis į paslaugas orientuota logika. Sukurtas konceptualus modelis, kuriame kognityvinė ir afektinė klientų patirtis su lojalumu ir pakartotiniu pirkimu siejama per vertės, emocinius ir santykių veiksnius. Modelis empiriškai patikrintas atlikus skaitmeninių B2B paslaugų sprendimų priėmėjų apklausą, o duomenys analizuoti struktūrinių lygčių modeliavimo (PLS-SEM) ir būtinųjų sąlygų analizės (NCA) metodais. Nustatyta, kad klientų patirtis lojalumą ir pakartotinio pirkimo ketinimus bei elgseną daugiausia veikia netiesiogiai, per naudojimosi vertę, suvokiamą vertę, pasitenkinimą, pasitikėjimą ir emocinį prieraišumą. Taip pat nustatyta, kad pasitikėjimas ir įprotis yra būtinosios aukštesnio pakartotinio pirkimo lygio sąlygos, o lojalumas vystosi nuosekliai nuo kognityvinio iki elgsenos lojalumo. Tyrimo rezultatų pagrindu paruoštas galutinis skaitmeninių B2B paslaugų klientų patirties modelis ir rekomendacijos tyrėjams bei praktikams, orientuotos į klientų patirties dimensijų atskyrimą nuo tarpininkaujančių veiksnių ir pasekmių, vertės kūrimo ir santykių veiksnių stiprinimą bei pasitikėjimo ir įpročio užtikrinimą.

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MODELLING CUSTOMER EXPERIENCE IN BUSINESS-TO-BUSINESS DIGITAL SERVICE INDUSTRY

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