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7. Customer experience measurement: implications for customer loyalty

Francisco Villarroel Ordenes, David Díaz Solis and Dennis Herhausen

INTRODUCTION

Customer experience (CX) management is increasingly concerned with the long-term evolution of customer journeys across multiple service cycles (Siebert et al. 2020) and touchpoints (Herhausen et al. 2019a). In this regard, constantly monitoring CX plays a critical role in a firm's long-term assessment of customer loyalty. A positive journey experience should enhance not only short-term sales but also long-term customer retention (Court et al. 2009). This is particularly relevant in the experience economy where 32% of consumers say that they would churn to the competition if their experience does not meet their expectations (PwC 2018). As such, creating customer loyalty by satisfying and inspiring customers during their journey is crucial for firms in order to sustain their competitive advantage.

Firms must become fast at capturing relevant CX data and leveraging loyalty related insights from it (Holmlund et al. 2020). CX data is solicited by companies primarily through traditional customer feedback surveys (Markey 2020), employing metrics such as customer satisfaction (i.e., 'all in all, how satisfied or unsatisfied are you with [company X]?', 1 = very unsatisfied, 7 = very satisfied) or the Net Promoter Score (NPS; percentage of customers rating their likelihood to recommend a product/service/company to a friend or colleague as 9 or 10 minus the percentage rating this at 6 or below on a scale from 0 to 10). These metrics are simple to administer, easily understood by managers, and have shown good predictive power to customer retention and churn (De Haan, Verhoef and Wiesel 2015). Yet, while 93% of CX leaders report using these survey metrics to assess CX performance, 85% of them remain not fully satisfied with these surveys because of the low response rates, data lags and unclear link to financial results (McKinsey 2021). Furthermore, related research has questioned these metrics by arguing that they do not correlate with open-ended responses accompanying them: For example, 90% of customers giving an NPS of 8.5 or higher use text to voice relevant complaints, which – if not addressed – might result in churn despite the high NPS score (Zaki, McColl-Kennedy and Diaz 2020).

However, to date literature at the intersection between CX measurement and loyalty is scarce. Thus, the present chapter aims to fill this important gap. A recent conceptualization (de Keyser et al. 2020) suggests that CX can be subdivided into the touchpoints, context and qualities (TCQ) nomenclature, which can help in segmenting the types of insights that can be gathered from CX. Methods to gather TCQ

insights should be based on quantitative and qualitative analyses of different data types such as numbers, text and images. Existing methods for example are concerned with capturing granular insights from open-ended responses in firm-solicited surveys (McCull-Kennedy et al. 2019; De Haan and Menichelli 2019), chatbot interactions (Sidaoui, Jaakkola and Burton 2020), or other behavioural cues along the digital customer journey such as product/service search patterns or social media interactions (e.g., e-word-of-mouth (e-WOM); Herhausen et al. 2019b). Finally, these new CX measurements should go beyond customer loyalty and prove implications for firm profitability (Kumar and Shah 2004) such as customer lifetime or customer-based corporate valuation (Markey 2020; McCarthy and Fader 2020).

The rest of this chapter is structured as follows. First, we provide a summary of the three building blocks of this chapter: (i) CX, (ii) emerging methods to extract insights from CX, and (iii) customer loyalty metrics. Then, we develop a conceptual framework with examples that integrates these components into a four-step process that can help researchers and managers to bridge CX metrics with customer loyalty. We conclude with further considerations to promote research at the intersection of CX measurement and customer loyalty.

CUSTOMER EXPERIENCE

CX has been approached at different theoretical, conceptual and empirical levels, from both an organizational as well as a customer perspective. At the heart of CX are touchpoints,¹ context and qualities (de Keyser et al. 2020). Touchpoints are the interaction episodes which can occur at pre-purchase, purchase and post-purchase stages; in a human, digital or social realm (or a combination, e.g., mixed reality [de Jong et al. 2021]); and in a firm-controlled or non-firm-controlled environment. Context refers to the internal and external situation that has an impact on how consumers interpret their experience; contextual factors might occur at the individual (e.g., emotional state), social (e.g., social network characteristics), market (e.g., competition) and environmental (e.g., political situation) levels. Qualities concern the aspects of participation (e.g., effort that is needed for the experience), dimensionality (e.g., emotional, cognitive, sensorial, social and behavioural), valence (sentiment; positive, negative or neutral), ordinariness (e.g., common or unique service; transactional vs hedonic industry) and time-flow (e.g., duration), that describe qualitatively customer evaluations to their experience.

With the unprecedented developments in information and communication technologies, organizations have shifted their attention from managing discrete touchpoints to managing customers' entire journey with the organization. CX management has, thus, emerged to capture the creation and delivery of dynamic, holistic CX over time (before, during and after a purchase), across channels and across touchpoints (Lemon and Verhoef 2016). Furthermore, while some customer journeys revolve around purchases, other journeys do not have a purchase focus (e.g., digital services such as Google do not require an explicit purchase transaction, nor public services).

Hence, organizations need to adopt a ‘touchpoint journey orientation’ (Herhausen et al. 2019a; Homburg et al. 2017) and manage all touchpoints in the marketplace simultaneously to uncover and manage moments of truth (i.e., critical encounters that can significantly impact the customer’s impression of the organization). Doing so effectively requires an organization-wide management approach that encompasses cultural mindsets, strategic directions and capabilities with the goal of attaining and maintaining loyalty and long-term customer relationships (Homburg et al. 2017).

Recent research on CX also makes an important distinction between two very different types of journeys that are greatly attuned to the type of business (Court et al. 2009). First, a smooth journey is defined as a journey that, through repetitive loyalty loops, makes customer tasks easy and intuitive, resulting in a cyclical pattern that builds customer loyalty over time. Second, a sticky journey is defined as a journey characterized by involvement spirals, which make experiences exciting, unpredictable and unforgettable. While a smooth journey with a loyalty loop is recurrent in instrumental services (e.g., online banking, retail), a sticky journey with involvement spirals is typical in recreational services (e.g., online gaming or dating) that facilitates never-ending adventures. Underlying the smooth journey model is a historical assumption that firms should try to make customers’ lives easier by means of consistency, cohesion and context sensitivity. However, these assumptions might not hold in contexts such as entertainment where key success factors are unpredictable such as plot lines (e.g., movies) and rewards (e.g., gambling, videogames). Siebert et al. (2020) suggest that CX in several industries is often a combination of both types of journeys. As such, identifying the type of journey seems crucial to the development of adequate CX metrics, which can monitor (and act) based on the right causes of customer loyalty.

EMERGING METHODS TO EXTRACT INSIGHTS FROM CUSTOMER EXPERIENCE

Nowadays, organizations can get CX insights from more data sources than ever before, on a massive scale, and in real time (Grewal et al. 2021). This ever-growing data comes in different formats, ranging from highly structured to highly unstructured (Balducci and Marinova 2018). While highly structured data is represented by countable numbers (e.g., the result of a survey, sales and attribution), unstructured data is represented in hard-to-count multimedia formats such as text (e.g., customer reviews), sound (e.g., call centre recordings), images (e.g., Instagram feeds) and videos (e.g., consumer-generated videos in TikTok). Despite the notion that nowadays 80% to 90% of all customer feedback data is unstructured, most customer experience research is still conducted with structured data. Table 7.1 provides an overview of different data formats, their characteristics and consequences, and some examples of CX touchpoints generating data in different formats.

The extensive availability of data has increased the usability of methods for dealing with this wide array of formats. In fact, recent business literature has given

Table 7.1 Different types of data for customer experience measurement

	Numbers	Text	Voice	Image	Video
Examples of each type of data	Survey data, online reviews (ratings), product RFID data, store density data, number of likes and shares on social media	Emails, customer reviews, text messages, interactions with chatbots, social media, online communities	Face-to-face interactions, call centre interactions, interactions with digital assistants (Alexa, Siri)	Pictures posted on social media (e.g., Instagram) or websites such as on customer review sites	Videos posted on social media pages, chats, in-store video recordings
Number of facets to the data	Low (Just numbers)	High (Semantics, syntax, speech acts)	High (Pitch, speech rate, pauses, prosody)	High (Static vs dynamic, perspective, quality, products depicted, selfies)	High (Combination of text, sound and/or image)
Complexity of data preparation and analysis	Low	Medium	Medium	High	High
Selected papers relating to CX	Herhausen et al. (2019a); Santana et al. 2020	McColl-Kennedy et al. (2019); de Haan and Menichelli 2019	Bawack et al. (2021); Hildebrand et al. (2020)	Bakri et al. (2020); Klostermann et al. (2018)	Li et al. (2019); Schwenzow et al. (2021)

increasing attention to how marketers can wrestle large volumes and varieties of data (Du et al. 2020). In line with Grewal et al. (2021), we can identify two main characteristics of CX data: modalities and dynamics

Modalities refer to the all-different data types ranging from structured to unstructured, and the challenges they pose in terms of measuring relevant constructs for customer experience (e.g., journey types from surveys [Herhausen et al. 2019a]; sentiment analysis from online text [Heitmann et al. 2020]; brand perceptions from social media images [Liu, Dzyabura and Mizik 2020]), and assessing their implications in marketing outcomes (e.g., customer satisfaction, WOM, sales). Dynamics emphasizes the speed at which more data is generated because of multiple touch-points through the customer journey. As such, it might not be enough using average aggregations of customer experience constructs, but assessing dynamic aspects such as peak, trends, variations, seasonality, etc. For example, variation might be an important construct to compare concerning journey types (Siebert et al. 2020); while consumers might expect little variation (across several qualities of the journey; de Keyser et al. 2020) in smooth customer journey types, greater variation will be expected in sticky journeys.

Ultimately, CX measurement resulting from structured or unstructured data and static or dynamic aggregation needs to result in business insights. Importantly, the type of insight required should drive the selection of the data type and the aggrega-

tion technique. For example, if a manager is concerned with brand perceptions along the customer journey, the firm might decide to collect user-generated images within social media. Then CX measurement out of this data can help organizations to unveil different types of insight depending on the analytics models used. Holmlund et al. (2020) identified four big data analytics resulting from CX measurements that can contribute to generate managerial insight: descriptive (e.g., Google analytics dashboard), explanatory (e.g., A/B testing to assess causality), predictive (e.g., customer churn models) and prescriptive (e.g., optimization for resource allocation; getting ahead of customer needs by sending them the right products; stitchfix.com). As such, when assessing the loyalty implications of customer experience, managers have at their disposal a wide array of data types and streams, together with a variety of big data analytics to assess various types of customer loyalty concerns (De Luca et al. 2021).

CUSTOMER LOYALTY METRICS

Customer loyalty is the central thrust of marketing efforts and is defined as a collection of attitudes, aligned with a series of purchase behaviours that systematically favour one entity over competing entities (Watson et al. 2015). Previous literature (Kumar and Shah 2004; Watson et al. 2015) identifies two main branches to measure customer loyalty: behavioural and attitudinal. Behavioural measures (actual or intention) include transactional assessments such as usage intensity, share of purchase, purchase frequency, purchase sequence, churn/retention, and RFM (Recency, Frequency and Monetary Value), among others. Traditionally transactions consider a monetary aspect, such as paying for a product or service, or paying a subscription fee. However, transactions may also encompass or relate to interactions that do not involve monetary exchange (Ascarza et al. 2018); for instance, visiting a store, using a music streaming service, an email account, or other digitally provided services. Attitudinal measures of loyalty concern the affective and cognitive aspects of brand loyalty. Attitudinal loyalty represents a long-term commitment of a customer to the organization, which cannot be captured by only observing repeat purchase behaviour. Traditional measures of attitudinal loyalty in industry are the NPS and other customer satisfaction indicators (Markey 2020); yet recent marketing research (Watson et al. 2015) suggests the use of specific scales (e.g., ‘I prefer [X] over competitors’) that differentiate from antecedents of loyalty (e.g., satisfaction) and outcomes of it (word-of-mouth; related to NPS).

Previous research has shown that some of these attitudinal loyalty measurements such as customer satisfaction, NPS and share of wallet are good predictors of behavioural metrics like customer churn or retention (De Haan, Verhoef and Wiesel 2015). Yet, cautions must be taken as customer satisfaction and NPS might at the same time be considered an antecedent and an outcome of loyalty. In fact, a recent meta-analysis of loyalty research from Watson et al. (2015) delineates an ‘ideal’ conceptual framework around customer loyalty with *commitment*, *trust*, *satisfaction*

and *rewards* as antecedents, and *WOM* and *performance* as outcomes. Furthermore, these authors point out that it should be taken into account that while reward programmes might influence behavioural loyalty (Kumar and Shah 2004), consumers might develop loyalty only to a specific reward programme, rather than with the (in) tangible attributes of a brand. As such, in order to build customer loyalty, organizations should go beyond reward programmes, including also relational aspects such as trust, commitment and satisfaction (Watson et al. 2015).

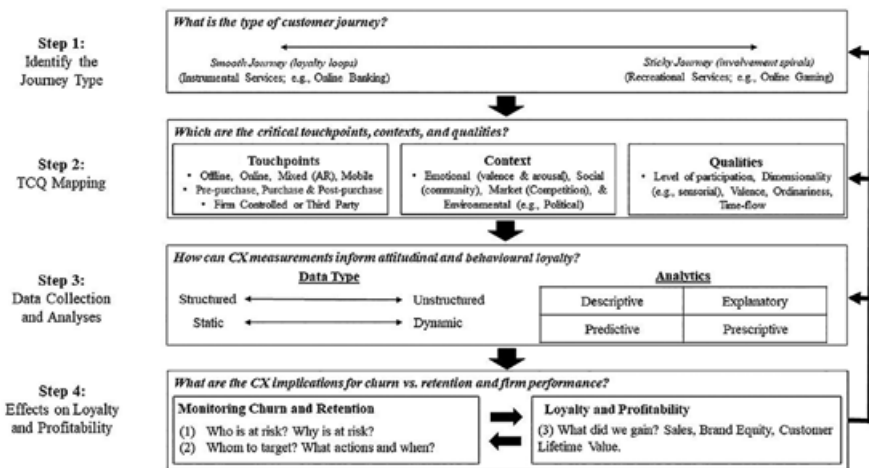
Another aspect that has received a great deal of attention in relation to loyalty metrics is predicting *who is at risk* of churn (a behavioural outcome) by assigning a score or probability to the event of a customer churning (Ascarza et al. 2018). There are several methods to create these types of models ranging from statistical to machine learning models with a greater focus on identifying causes of churn (e.g., negative sentiment in digital customer service; de Haan and Menichelli 2019) to cutting-edge deep learning algorithms focused on prediction accuracy (Spanoudes and Nguyen 2017). In terms of churn predictors, statistical models use a plethora of data sources with a focus on structured sources, including customer satisfaction, usage behaviour, switching costs, customer characteristics, and marketing efforts (Zaki, McColl-Kennedy and Diaz 2020). Current machine learning and deep learning approaches extend the possible data types that can be used in these models now considering unstructured data, such as text, images, audio and videos.

BRIDGING CUSTOMER EXPERIENCE MEASUREMENT WITH LOYALTY METRICS

In light of the increasing relevance of CX management, the Marketing Science Institute (2018) considers understanding sources of loyalty during the customer journey as one of its most important research challenges and priorities. Resent research at this intersection (Herhausen et al. 2019a) defines customer loyalty as a customer's intention to engage again in a journey of touchpoints provided by a given retailer and to transit from post-purchase to repurchase at this retailer. Building on this definition and our coverage of previous literature, we introduce a four-step framework (see Figure 7.1) that bridges the key aspects that should guide the strategic analysis and developments of CX measurement for loyalty research.

Each of the four steps builds on the preceding one, and the last step provides feedback to the previous steps after the assessment of loyalty implications for firm performance. In the first step, it is crucial to understand what is the type of customer journey in the industry of interest. The strategic choice between the smooth and sticky journeys boils down to whether the service is more instrumental or recreational in nature. While in instrumental services customers aim for greater efficiency in their journey, in recreational services customers are more like adventurers looking for excitement and unforgettable moments.

The type of journey will have relevant implications in the second step of the framework guided by TCQ mapping. This step will help to map and identify what are the



Note: Based on Ascarza et al. (2018), de Keyser et al. (2020), Grewal et al. (2021), Holmlund et al. (2020), McCarthy and Fader (2020) and Siebert et al. (2020).

Figure 7.1 Framework to bridge customer experience measurement and loyalty

drivers that might explain consumer interests and motivations to buy/use a service or product. Analysing CX through the lens of TCQ will support the implementation of structured audits to better understand the customer journey, and, in turn, identify the areas in which greater insights are needed to enhance attitudinal and behavioural loyalty. This step is crucial to understand which data will be needed to monitor and activate a loyalty retention programme.

The third step, data collection and analyses, will be influenced by the types of interactions between the customer, firm, partners and competitors, and the data that results from those interactions. In addition, the TCQ mapping will allow one to understand the feasibility of the planned data collection. For example, depending on the political *context* (e.g., privacy regulation) different types of structured data (e.g., click-through rates) and unstructured data (e.g., customer service chats) could be collected and analysed. It is expected that new technologies such as machine learning, text mining and deep learning will continue to be of great use to find the underpinnings of the propensity to churn or other key outcomes of CX. In particular, advances in these domains will help to distinguish variables that correlate with churn from variables that really cause it.

Finally, the fourth step relates to effects on loyalty and profitability. As described earlier, researchers and managers alike are interested in attitudinal and behavioural loyalty monitoring. Yet, as noted by Ascarza et al. (2018), this is only part of a more complex dynamic process that needs to be addressed. One needs to consider *why the customer is at risk* of churning, *whom to target*, *when to target*, with *what incentives*, and also one needs to measure *what did the firm gain* by implementing different

retention campaigns. As such, once the churn probability is measured at an individual or aggregate level (predictive analytics), firms must identify drivers of it (explanatory analytics) and potential actions to retain customers at the risk of churn (prescriptive analytics). Ultimately, it is crucial to assess the implications of actions to retain customers (e.g., changes in journey type or quality dimensions) on firm performance in the short, medium and long term. At the last stage of this retention management cycle, firms need to evaluate the results of the different campaigns, using metrics related to firm performance such as sales, brand equity and customer lifetime value. The next section presents two instrumental examples that can help to analyse loyalty based on CX measurement.

Examples for the Framework Implementations

Consumers in a gaming journey (e.g., Fortnite or Pokémon Go) follow the sticky journey model (Siebert et al. 2020) and are prone to start their patronage with *quick spins*, meaning spontaneous sparks of curiosity mainly driven by peers' recommendations (e.g., forums or reviews). Once 'in the game', consumers will be characterized by seeking endless service/product configurations (e.g., hundreds of Pokémon and reward structures) that bring them to discover and enjoy unique experiences. The TCQ framework allows the dissection of these *quick spins* and *involvement spirals* into manageable pieces. For example, the *quality* aspects of their experience could be mainly a function of emotions and social interactions with peers; in addition, gamers will be more likely to relate to the digital and augmented reality realm of *touchpoints*; the *context* will pertain potentially to the millennial or centennial generation with a persistent role of social networks in their lives. In turn, this will impact the *type of data* that can be collected. Millennials and centennials are less prone to respond to a satisfaction survey or NPS but are much more likely to engage in online conversations to share their experiences and their intention to keep playing. This means that social listening on gaming forums through methods such as sentiment analysis, topic models (e.g., game features that they [dis]like), and time playing might be the best ways to monitor attitudinal and behavioural loyalty. If the *probability of churn* is high, sentiment or conversational topics will help to identify the causes of churn, and, in turn, strategies to re-engage that customer through experiences that might bring back their excitement about the game (i.e., new involvement spirals). At an aggregate level, firms then should assess the *implications of their retention practices* on sales, brand equity and customer lifetime value, to maintain them or modify them over time.

In contrast, consumers in an online banking journey follow the *smooth journey model* (Siebert et al. 2020), where firms enrol customers in loyalty loops to make the resulting customer journey predictable, easy and smooth. In this case, internal or external triggers motivate customers to undertake a deliberate decision-making process consisting of initial consideration of multiple brands, active evaluation, moment of purchase, and consumption experience. Once 'in the game', consumers will be served by the service design principles of eliminating unnecessary service ele-

ments, anticipating customer preferences and providing just-in-time information at each service encounter. The TCQ framework again dissects these loyalty loops into manageable pieces, where the *quality* aspects of their experience could be mainly a function of rationale advantages (i.e., interest rates); in addition, some online banking customers will still value ‘human’ *touchpoints* for certain services or in case of service failures; the *context* will pertain potentially to a more adult audience active in different social media networks with more textual communication (e.g., LinkedIn). This will impact the *type of data* that can be collected and analysed. In particular, such customers are more likely to respond to a satisfaction survey or NPS. This means that traditional surveys might still be a good way to monitor attitudinal and behavioural loyalty. If the *probability of churn* is high, direct communication (also via phone) will help to identify the causes of loyalty-weakening incidents, and, in turn, strategies to re-engage that customer through experiences that might bring back their loyalty. Similar to the first example, firms should assess the *implications of their retention practices* on relevant outcomes to maintain them or modify them over time.

FUTURE CONSIDERATIONS FOR CUSTOMER EXPERIENCE METRICS AND LOYALTY

Previous literature in customer loyalty has highlighted the relevance of the type of contract and its implications for experience management and monitoring. For firms in a contractual setting (e.g., streaming services) it is easy to identify a churning customer when they do not renew the service, but for a firm in a non-contractual setting (e.g., online retailer) it may not be so evident, given the fact that customers who had an unfavourable CX could stop using the services without a formal declaration (Ascarza, Netzer and Hardie 2018). Thus, a portion of customers in non-contractual settings could be considered to be ‘latent’ churners, and it is necessary to find alternative metrics to identify them. For instance, RFM or platform-product-service usage type of metrics can be used to monitor the transactional dimension, and others related to attitudinal loyalty like expressed sentiments towards the brand can be used to monitor the non-transactional dimension.

Another aspect that may be of interest relates to cultural differences that may arise, especially when analysing unstructured CX data. Reasons and justifications for types and levels of loyalty and the way they are communicated and expressed can be different across cultures, countries and languages, sometimes even for the same product or service. For instance, English-speaking players of Pokémon Go may value action-prone game play and use the in-game chat to provide feedback and comments regarding their experience. Thus, the firm should ensure that new features and updates guarantee a fair level of fast action during game play, as well as deploy text-mining models that continuously monitor the in-game chat to measure loyalty and early signs of churn in unsatisfied players. In contrast, Japanese players may prefer more multi-player social experiences, and to use external channels, such as a discord server, to engage and provide feedback related to their experiences.

Consequently, firms should develop new features and updates that enrich the multi-player experience, perhaps creating new levels, events or ways to interact in the platform, as well as deploying text-mining models that listen to the chats in the discord server. Finding, extracting, analysing and managing these differences in how loyalty arises are very difficult tasks, and although machine learning algorithms will make some of these tasks easier to perform they will need future research to create and propose a unified framework before they become mainstream.

Finally, new contexts, such as the changes in purchase behaviours and lifestyle in general due to COVID restrictions, may also play an important role in how loyalty and CX will be managed in the near future. Once sanitary restrictions have been lifted or at least made less stringent, customers will not return to the same purchase and usage patterns that were in place before the pandemic and new configurations will surely appear across different industries. For instance, it is expected that online touchpoints and channels will become even more important and ubiquitous, and, as such, customers will probably change the way services are valued, and these will probably change the dimensions taken into consideration for loyalty formation. Aspects such as ease of use of online platforms and mobile apps, as well as logistical aspects such as sanitary protocols, delivery times and formats, are very likely to become even more important than they are now, and firms will have to be very aware of and attentive to how these changes could shift their CX and corresponding levels of satisfaction and loyalty.

NOTE

1. Also referred to as service encounters (Bitner, Booms and Tetreault 1990; Voorhees et al. 2017).

REFERENCES

- Ascarza, Eva, Oded Netzer and Bruce G. S. Hardie (2018), 'Some customers would rather leave without saying goodbye', *Marketing Science*, 37(1), 54–77.
- Ascarza, Eva, Scott Neslin, Oded Netzer, Zachery Anderson, Peter Fader, Sunil Gupta, Bruce Hardie, Aurelie Lemmens, Barak Libai, David Neal, Foster Provost and Rom Shrift (2018), 'In pursuit of enhanced customer retention management: Review, key issues, and future directions', *Customer Needs and Solutions*, 5, 65–81.
- Bakri, M., J. Krisjanous and J. E. Richard (2020), 'Decoding service brand image through user-generated images', *Journal of Services Marketing*, 34(4), 429–442.
- Balducci, Bitty and Detelina Marinova (2018), 'Unstructured data in marketing', *Journal of the Academy of Marketing Science*, 46(4), 557–590.
- Bawack, Ransome Epie, Samuel Fosso Wamba and Kevin Daniel André Carillo (2021), 'Exploring the role of personality, trust, and privacy in customer experience performance during voice shopping: Evidence from SEM and fuzzy set qualitative comparative analysis', *International Journal of Information Management*, 58, 102309.
- Bitner, Mary Jo, Bernard H. Booms and Mary Stanfield Tetreault (1990), 'The service encounter: Diagnosing favorable and unfavorable incidents', *Journal of Marketing*, 54(1), 71–84.

- Court, David, Dave Elzinga, Susan Mulder and Ole Jorgen Vetvik (2009), 'The consumer decision journey', *McKinsey Quarterly*, 3, 96–107.
- De Haan, Evert and Elena Menichelli (2019), 'The incremental value of unstructured data in predicting customer churn', Marketing Science Institute Working Paper Series, Report No. 20–105.
- De Haan, Evert, Peter Verhoef and Thorsten Wiesel (2015), 'The predictive ability of different customer feedback metrics for retention', *International Journal of Research in Marketing*, 32(2), 195–206.
- de Jong, Ad, Ko De Ruyter, Debbie Isobel Keeling, Alexandra Polyakova and Torsten Ringberg (2021), 'Key trends in business-to-business services marketing strategies: Developing a practice-based research agenda', *Industrial Marketing Management*, 93, 1–9.
- de Keyser, Arne, Katrien Verleye, Katherine N. Lemon, Timothy L. Keiningham and Philipp Klaus (2020), 'Moving the customer experience field forward: Introducing the touchpoints, context, qualities (TCQ) nomenclature', *Journal of Service Research*, 23(4), 433–455.
- De Luca, Luigi, Dennis Herhausen, Gabriele Troilo and Andrea Rossi (2021), 'How and when do big data investments pay off? The role of marketing affordances and service innovation', *Journal of the Academy of Marketing Science*, forthcoming.
- Du, Rex Yuxing, Oded Netzer, David A. Schweidel and Debanjan Mitra (2020), 'Capturing marketing information to fuel growth', *Journal of Marketing*, 85(1), 163–183.
- Fader, P. S. and B. G. S. Hardie (2010), 'Customer-base valuation in a contractual setting: The perils of ignoring heterogeneity', *Marketing Science*, 29(1), 85–93.
- Grewal, Dhruv, Dennis Herhausen, Stephan Ludwig and Francisco Villarroel Ordenes (2021), 'The future of digital communication research, considering dynamics and multimodality', *Journal of Retailing*, forthcoming.
- Heitmann, Mark, Christian Siebert, Jochen Hartmann and Christina Schamp (2020), 'More than a feeling: Benchmarks for sentiment analysis accuracy'. Available at SSRN 3489963.
- Herhausen, Dennis, Kristina Kleinlercher, Peter C. Verhoef, Oliver Emrich and Thomas Rudolph (2019a), 'Loyalty formation for different customer journey segments', *Journal of Retailing*, 95(3), 9–29.
- Herhausen, Dennis, Stephan Ludwig, Dhruv Grewal, Jochen Wulf and Marcus Schoegel (2019b), 'Detecting, preventing, and mitigating online firestorms in brand communities', *Journal of Marketing*, 83(3), 1–21.
- Hildebrand, Christian, Fotis Efthymiou, Francesc Busquet, William H. Hampton, Donna L. Hoffman and Thomas P. Novak (2020), 'Voice analytics in business research: Conceptual foundations, acoustic feature extraction, and applications', *Journal of Business Research*, 121, 364–374.
- Holmlund, Maria, Yves Van Vaerenbergh, Robert Ciuchita, Annika Ravald, Panagiotis Sarantopoulos, Francisco Villarroel Ordenes and Mohamed Zaki (2020), 'Customer experience management in the age of big data analytics: A strategic framework', *Journal of Business Research*, 116, 356–365.
- Homburg, Christian, Danijel Jozić and Christina Kuehnl (2017), 'Customer experience management: Toward implementing an evolving marketing concept', *Journal of the Academy of Marketing Science*, 45(3), 377–401.
- Klostermann, Jan, Anja Plumeyer, Daniel Böger and Reinhold Decker (2018), 'Extracting brand information from social networks: Integrating image, text, and social tagging data', *International Journal of Research in Marketing*, 35(4), 538–556.
- Kumar, V. and Denish Shah (2004), 'Building and sustaining profitable customer loyalty for the 21st century', *Journal of Retailing*, 80(4), 317–329.
- Lemon, Katherine N. and Peter C. Verhoef (2016), 'Understanding customer experience throughout the customer journey', *Journal of Marketing*, 80(6), 69–96.
- Li, X., M. Shi and X. S. Wang (2019), 'Video mining: Measuring visual information using automatic methods', *International Journal of Research in Marketing*, 36(2), 216–231.

- Liu, Liu, Daria Dzyabura and Natalie Mizik (2020), 'Visual listening in: Extracting brand image portrayed on social media', *Marketing Science*, 39(4), 669–686.
- McCarthy, Daniel and Peter Fader (2020), 'How to value a company by analyzing its customers', *Harvard Business Review*, January–February.
- McColl-Kennedy, Janet R., Mohamed Zaki, Katherine N. Lemon, Florian Urmetzer and Andy Neely (2019), 'Gaining customer experience insights that matter', *Journal of Service Research*, 22(1), 8–26.
- McKinsey (2021), 'Prediction: The future of CX', accessed on 1 March 2021, available online at: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/prediction-the-future-of-cx?cid=other-eml-alt-mcq-mck&hdpid=2556cbd8-f259-4cf5-8049-817fc8add6f7&hctky=1760676&hlkid=1d51b2a92c4e4500b360aa4e9733e527#>
- Markey, Rob (2020), 'Are you undervaluing your customers?', *Harvard Business Review*, January–February.
- PwC (2018), 'Experience is everything: Here's how to get it right', accessed on 1 March 2020, available online at: <https://www.pwc.com/us/en/advisory-services/publications/consumer-intelligence-series/pwc-consumer-intelligence-series-customer-experience.pdf#page=9>
- Rust, R. T., J. Kim, Y. Dong, T. J. Kim and S. Lee (2015), *Drivers of Customer Equity. Handbook of Research on Customer Equity in Marketing*, Edward Elgar, pp. 17–43.
- Santana, S., M. Thomas and V. G. Morwitz (2020), 'The role of numbers in the customer journey', *Journal of Retailing*, 96(1), 138–154.
- Schwenzow, Jasper, Jochen Hartmann, Amos Schikowsky and Mark Heitmann (2021), 'Understanding videos at scale: How to extract insights for business research', *Journal of Business Research*, 123, 367–379.
- Sidaoui, Karim, Matti Jaakkola and Jamie Burton (2020), 'AI feel you: Customer experience assessment via chatbot interviews', *Journal of Service Management*, 31(4), 1757–5818.
- Siebert, Anton, Ahir Gopaldas, Andrew Lindridge and Cláudia Simões (2020), 'Customer experience journeys: Loyalty loops versus involvement spirals', *Journal of Marketing*, forthcoming.
- Spanoudes, Philip and Thomson Nguyen (2017), 'Deep learning in customer churn prediction: Unsupervised feature learning on abstract company independent feature vectors', arXiv preprint arXiv:1703.03869.
- Voorhees, Clay M., Paul W. Fombelle, Yany Gregoire, Sterling Bone, Anders Gustafsson, Rui Sousa and Travis Walkowiak (2017), 'Service encounters, experiences and the customer journey: Defining the field and a call to expand our lens', *Journal of Business Research*, 79, 269–280.
- Watson, George F., Joshua T. Beck, Conor M. Henderson and Robert W. Palmatier (2015), 'Building, measuring, and profiting from customer loyalty', *Journal of the Academy of Marketing Science*, 43(6), 790–825.
- Zaki, Mohamed, Janet R McColl-Kennedy and David Diaz (2020), 'Unlocking the secrets of customer loyalty', White Paper, <https://cambridgeservicealliance.eng.cam.ac.uk/resources/Downloads/customerloyalty>