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Customer-based Execution Strategy in a Global Digital Economy

J. Andrew Petersen

JeeWon Brianna Paulich

Farnoosh Khodakarami

Stavroula Spyropoulou

V. Kumar

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J. Andrew Petersen (jap57@psu.edu) is an Associate Professor of Marketing at the Smeal College of Business, The Pennsylvania State University, University Park, PA 16802.

JeeWon Brianna Paulich (paulich@usf.edu) is an Assistant Professor of Marketing at the Muma College of Business, University of South Florida, Tampa, FL 33620.

Farnoosh Khodakarami (farnoosh@broad.msu.edu) is an Assistant Professor of Marketing at the Eli Broad College of Business, Michigan State University, East Lansing, MI 48824.

Stavroula Spyropoulou (S.Spyropoulou@lubs.leeds.ac.uk) is Professor of Marketing at the Leeds University Business School, University of Leeds, Leeds, LS2 9JT, UK.

V. Kumar (kumarv1@stjohns.edu) is a Professor of Marketing at the Peter J. Tobin College of Business, St. John's University, Queens, NY 11439.

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Abstract

Multinational corporations (MNCs) are continuing to invest more in expanding into new markets around the world. These firms are faced with determining the optimal go-to-market strategy in these heterogeneous new markets to attract and retain profitable customers. This paper provides an organizing framework to help firms develop profitable customer-level strategies across countries in the digital environment. We start by providing a summary of the marketing literature on a customer-based execution strategy. Next, we discuss how the evolving digital landscape is affecting firms' relationships with customers and describe some of the current digital product and process innovations in the marketplace. We discuss boundary conditions for how these digital product and process innovations might affect profitable customer strategies in a global context. In addition, we discuss implementation challenges that MNCs will likely face in deploying these customer-level strategies and other stakeholders (outside of customers) that will likely play a role in the execution of these customer-level strategies. Finally, we summarize set of research questions to guide future research on customer-level strategies in a global digital context.

1. Introduction

The worldwide growth of multinational corporations (MNCs) has been strong and continues to increase steadily. A recent report by the Bureau of Economic Analysis[1] shows that the value added by MNCs based out of the U.S. increased by around 2% to approximately $5.3 trillion from 2016 to 2017 and is expected to continue to grow in the future. This represents a significant investment in the global economy in the form of foreign direct investments by MNCs. However, within the past decade, we have seen a major transformation to Industry 5.0 (Kumar 2021), the so-called fifth phase of the industrial revolution that was brought about by developments in interconnectivity, automation, machine learning, and real-time data (Guha et al., 2021). This revolution has led to a digital transformation for marketers (Marketing 5.0) causing firms to rethink investments in digital products and services, decisions to enter new markets, and ways to engage customers (Verhoef et al., 2021).

Traditionally, firms involved in business operations across a variety of overseas markets face different economic, cultural, technological, political, and legal environments that, in turn, may account for the presence of differences in customer characteristics, attitudes, and behavior (e.g., Spyropoulou, Katsikeas, Sharmeas, & Morgan, 2018; Spyropoulou, Skarmeas, & Katsikeas, 2010). Research in marketing has shown that it is imperative for MNCs to understand differences among countries when making strategic go-to-market decisions, often in pursuit of scale and profit-related benefits from the deployment of relatively similar marketing programs and strategies across foreign markets (e.g., Katsikeas, Samiee, & Theodosiou, 2006). Historically, MNCs have paid particular attention to developing and implementing appropriate firm-level strategies when considering and making choices as to how to go-to-market. For instance,

[1] https://www.bea.gov/system/files/2019-08/omne0819.pdf

Szymanski, Bharadwaj, and Varadarajan (1993) propose that a standardized strategy may be more effective in terms of performance outcomes when there are considerable similarities across countries. Meanwhile, Wills, Samli, and Jacobs (1991) suggest that an adaptation strategy may be more optimal when there are major differences across countries. Another school of thought argues that, to achieve enhanced performance, firms need to achieve a fit or co-alignment between environmental imperatives and global marketing strategy, whether standardization, customization, or any combination between the two (e.g., Hultman, Robson, & Katsikeas, 2009). Even though this seems intuitive, there is insufficient empirical evidence to provide support for these strategic approaches.

MNCs are now facing the distinct challenge of how to make go-to-market investments effectively across countries when there are not just traditional differences across these countries (e.g., cultural, political, regulatory, and economic), but also differences in each country's stage of digital transformation. These new developments toward Industry and Marketing 5.0 have led to a need for firms to evolve (Kotler, Kartajaya, & Setiawan, 2021) and create capabilities to integrate digital marketing practices with traditional marketing practices. It is likely that these marketing strategies are further complicated by the fact that there is substantial heterogeneity within each country that will affect the MNC's ability to obtain profitable customer loyalty in different countries (Kumar, Sharma, Shah, & Rajan, 2013).

For example, at least from an economic perspective, traditional emerging markets vary dramatically in terms of their stage of digital transformation and customer heterogeneity. On the other hand, emerging countries such as India and China have been world leaders in building digital infrastructure and adopting digital product and process innovations.[2] Therefore, in this

[2] https://www.bcg.com/publications/2018/global-challengers-2018-digital-leadership-emerging-markets

study, we aim to provide a organizing framework that can help MNCs develop and implement successful marketing strategies represented by the star in Figure 1 that lie at the intersection of Digital-, Global-, and Customer-based execution strategies. Figure 1 illustrates a few examples of customer-based execution strategies that Coca-Cola is implementing in a global digital context. For instance, Coca-Cola applied AI to analyze the customer data collected by self-serving vending machines across markets to identify cherry as a popular flavor and launch Cherry Sprite as a successful new product.[3] Similarly, Coca-Cola is working on AI-powered vending machine app which adapts the vending machine behavior based on local preferences and allows customers to personalize their drink.[4]

--- Insert Figure 1 about here ---

Marketing literature and practice have emphasized customer-level strategies based on forward-looking measures, such as customer lifetime value (CLV). Since customer relationship with firms constantly evolves over time (Kumar & Petersen, 2005), compared to backward-looking metrics (e.g., recency frequency monetary value (RFM) and past customer value (PCV)), forward-looking approaches allowed firms to improve targeted marketing decisions (Kumar, Venkatesan, Bohling, & Beckmann, 2008). As a result, CLV has become a widely used metric for customer selection and optimal resource allocation. More recently, the indirect financial contributions such as the referral, influence, and knowledge values of each customer allowed customer-level strategies to measure and manage overall customer engagement with the firm (Kumar, 2013).

[3] https://www.forbes.com/sites/bernardmarr/2017/09/18/the-amazing-ways-coca-cola-uses-artificial-intelligence-ai-and-big-data-to-drive-success/?sh=2f07a8e278d2
[4] https://venturebeat.com/2017/07/11/coca-cola-reveals-ai-powered-vending-machine-app/

These customer-based execution strategies (CBES) are defined as a tactical plan to create value for customers by obtaining value from these customers in return through enhancements in customer engagement. While these advances in customer-based strategies toward overall engagement provided superior results, MNCs still face new execution challenges in the global, digital markets. Hence, there is a need for an expanded framework that allows MNC to perform customer-based execution strategies globally in a digital environment.

We organize the remainder of this paper in the following way. First, we propose an organizing framework for creating multinational customer-based execution strategies in a digital context. We start by discussing the foundations of the framework, which are supported by past research in marketing. Then, we will expand on the foundations of this framework in three ways. First, we discuss two new factors that affect customer-based execution strategies in a digital context (digital product and process innovations). Second, we discuss some key global boundary conditions that will likely affect how these digital product and process innovations will impact the traditional customer-value framework. Third, we will discuss the implementation challenges MNCs are likely to face when developing and implementing strategies across and within countries. These include data collection and management, conducting analytics, and generating insights. Finally, we conclude by proposing an agenda for new research in marketing to empirically test and extend our organizing framework.

2. Customer-based Execution Strategies Framework in a Global and Digital Economy

To develop the Customer-Based Execution Strategy (CBES) organizing framework in a global and digital economy (see Figure 2), we first establish the core of the framework based on the customer relationship management (CRM) literature tested within a single country (Section

2.1). Next, in Section 2.2, we review the CRM research in a multinational context that expanded the CBES based on the differences across these countries.

Meanwhile, research on CBES thus far has failed to consider the rising trends of the digital context that affect the execution of CBES. While businesses are changing their product portfolio to more digital or digitally enabled products (especially due to the long haul of the COVID-19 pandemic),[5] existing studies do not explore the customer-based strategies in digitalized aspects and provide tactical solutions for these changes. Thus, in Section 2.3 we discuss the digital technologies and process and product innovations that affect CBES. In the current digitalized environment, MNCs face new sets of global boundary conditions to enter countries at different stages of digitalization. In Section 2.4, we expand our framework by considering global digital boundary conditions that impact CBES.

2.1. Customer-based Execution Strategies

As individual data became more accessible, marketing research relies on customer-level information when developing marketing strategies. Rust, Lemon, and Zeithaml (2004) suggested a strategic framework that assesses the return on marketing investment at the customer level. Kumar and Petersen (2005) further extended the existing framework by proposing a customer-focused framework that uses a firm's marketing strategy to maximize financial performance through measuring and managing customer value. These foundational studies make up the core of the customer-based framework, which is represented by the constructs located within the inner dotted lines of Figure 2. These include a firm's marketing initiatives, customer engagement, influence of other stakeholders, and firm performance. Table 1 summarizes a selection of major

[5] https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever#

marketing journals that conducted a customer-level study in a domestic market context (See ***Web Appendix Table A*** for a more detailed list of related literature).

---- Insert Table 1 and Figure 2 about here ----

2.1.1. Firm's Marketing Initiatives

A firm's marketing initiatives are strategic implementations of its marketing mix to improve financial performance (e.g., changes in prices, new product introductions) (Kotler, Kartajaya, & Setiawan, 2021). Among the 4Ps, the effectiveness of marketing communication in influencing customer responsiveness was evaluated extensively in the CRM literature. For instance, Venkatesan and Kumar (2004) find that marketing communication (in person, standardized, and web-based) across different channels influences CLV nonlinearly; the authors recommend managers to design marketing resource allocation strategies that can maximize CLV. Furthermore, given that the firm's email marketing intensity (Kumar, Zhang, and Luo 2014) and communication focus (Kim and Kumar 2018) affect consumer engagement in response to the marketing messages. These studies suggest that firms should allocate resources towards a communication approach that matches consumer interests, preferences, and purchase history.

2.1.2. Customer Engagement

Research also showed that it was essential to look at several types of customer engagement in response to a firm's marketing initiatives. Customer engagement is often conceptualized as customer behaviors measured by motivational drivers (Bowden, 2009; van Doorn et al., 2010). Kumar (2013) expanded the conceptualization and define customer engagement as both direct and indirect contributions of each customer that influence firm value. Direct customer engagement considers financial contribution through a consumer's purchases and is measured by customer lifetime value (CLV). Indirect customer engagement is a nonfinancial contribution

from each customer, such as referral (measured as customer referral value or CRV), social media influence (measured as customer influence value or CIV), and knowledge sharing (measured as customer knowledge value or CKV).

CLV estimates the net present value of a customer's profitability based on expected future purchase behavior and the firm's expected marketing spend on that customer. In response to marketing communications, customers not only make purchases but also financially engage with the firm in other ways such as through product returns (Petersen and Kumar 2009), cross-buying (Shah, Kumar, Qu, and Chen 2012), and exhibiting various shopping habits (Shah, Kumar, Kim, and Choi 2017). Consumer purchase activities that financially benefit the firm directly are important measures of CLV. Fader, Hardie, and Lee (2005) utilized CLV and propose marketing strategies based on a portfolio of customers.

The following studies considered both direct and indirect customer engagement to understand the impact on the firm performance. Kumar, Petersen, and Leone (2010) illustrate and test the importance of managing both CLV and CRV scores. The authors argue that rather than saturating each customer with multiple marketing communication, selectively marketing to a high CRV group of customers leads to more profitability. Next, using social media field experiment, Kumar, Bhaskaran, Michandani, and Shah (2013) quantify the customer's influence value (CIV) of an Indian retailer. They find that social media can be used to generate growth in financial performance, such as sales, ROI, positive WOM, and brand awareness. Consequently, customer engagement leads to firm performance, which is the final dependent variable of our core framework.

2.1.3. Influence of Other Stakeholders

Customer engagement is no longer influenced only by the firm. Other key stakeholders include people connected to the firm such as the employees, distributors and suppliers, community and society, and to some extent competitors. Stakeholder theory (Freeman 1999) is based on four assumptions that describe the relationship between the firm and its environment: Firms have relationships with many stakeholders who exhibit different rights, objectives, expectations, and responsibilities (e.g., Clarkson 1995); Top managers show considerations to other stakeholders while making decisions and allocating resources that address the demands of the other stakeholder groups; Differing interests of the firm and its stakeholders can create conflict and therefore, managers focus on creating a balance in terms of meeting the requirements of the stakeholders.; and firms operate in markets that focus on creating a steady state environment.

Implementing a customer-based execution strategy can be made more efficient and more effective depending on the level of influence exerted by other stakeholders. For example, when a customer calls with a complaint, an empowered employee will be able to resolve the complaint sooner and to the satisfaction of the customer. If the complaint is about the raw material used in the product bought by the customer, then the employee must connect with the supplier to get additional information and ensure that the stated materials are only being used in the preparation/manufacturing of the product. Grocery stores (i.e., distributors) insisting on customers bringing their own cloth/jute bags to avoid using plastic bags focuses on the environmental/society well-being. American Marketing Association (AMA) defined marketing "as the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (Keefe

2008). In other words, every strategic and tactical marketing action toward customers should be executed in a way that there is value added for all the stakeholders involved.

Kumar and Pansari (2016a) show that a higher level of employee engagement can result in higher levels of customer engagement, provided the employees are empowered to make decisions. Similarly, Sharma et al. (2019) show that by managing the distributors and suppliers' network, it is possible to satisfy customer needs and thereby improve firm performance. These authors illustrate that it is possible to monitor multiple tiers (levels) of suppliers and distributors and their influence on customer buying behavior. Firms can communicate to the customers that their supplier's network provides specific raw materials (e.g., Halal meat and absence of harmful chemicals) to suit their customers' preferences, thereby enhancing the customer-based execution strategy. The role of community and society's influence can be captured in the form of cultural differences through the practice of *ritualization* (Sharma, Kumar, & Borah 2017) and how that shapes the preferences of customers resulting in positioning of the brands differentially withing and across foreign markets. The influence of competition (e.g., Tesla) on other electric vehicle manufacturers with respect to the capacity of the car battery has collectively raised the economic well-being of multiple stakeholders through reducing pollution and reducing the demands on electricity. Thus, marketing to customers now is influenced collectively by many stakeholders as communication in a digital environment has made it easy to personalize the communication and customize the products and services.

2.1.4. Firm Performance

Marketing studies empirically tested the links between customer engagement and the firm performance measures (i.e., sales, profits, returns, and market capitalization). The customer-based corporate valuation studies suggest that customer engagement measures, derived from

customer responses to the firm's marketing initiatives, can be used to assess the firm's value in the market (McCarthy & Fader, 2018). Rust et al. (2004) finds that the total customer value, measured as the product of the average CLV and the total number of airline passengers in the U.S., was comparable to the market capitalization. Gupta, Lehmann, and Stuart (2004) unveil that customer value, using CLV measures, provides a good proxy for firm value. Similarly, Kumar and Shah (2009) reveal that their proposed customer equity-based framework can reliably predict the firm's market capitalization. Hence, we also expect well-devised and implemented customer-based execution strategies to improve overall firm performance.

2.2. Global Context Impacting Customer-based Execution Strategies

With the increasingly unified marketplace, MNCs need to understand how their marketing initiatives impact customer engagement worldwide. Kumar, Sharma, Shah, and Rajan (2013) conceptualize how MNCs can establish profitable customer loyalty in emerging economies and propose country-specific moderators. National culture has a long-lasting personal experience that is considered the "collective programming of the mind" and can distinguish one group of people from another (Hofstede, 2001, p. 9). Hence, national culture and economic and regulatory conditions describe the systematic differences in consumer responses to marketing across countries. While there is little work that empirically tested customer-based execution strategy globally, we summarize the most relevant studies in Table 2.

---- Insert Table 2 about here ----

Petersen, Kushwaha, and Kumar (2015) use customer-level data from a multi-culture country, the United Arab Emirates (UAE), to determine how national culture dimensions and marketing communication type affect financial customers' banking decisions. While this study was not conducted with data from different countries, this is a step toward a multinational study

given the nature of the population that resides in the UAE. Alternatively, Kumar and Pansari (2016b) use a 6-year customer level data of a global retailer and compare the CLV of customers across 30 countries. The authors show that both the cultural and economic dimensions of a country are necessary to maximize CLV worldwide. Furthermore, a survey-based study by Krautz and Hoffmann (2017) interviewed customers across 30 countries and find that MNCs should adjust marketing efforts based on national culture, customer purchase history, and relationship tenure.

Besides culture, Kumar, Sharma, Shah, and Rajan (2013) propose country-specific moderators such as infrastructure, socioeconomic environment, political/legal regulation, and privacy issues that explain the differences in customer groups across different countries. Thus, our framework includes the country-specific contexts that impact CBES. Despite developing a customer-based execution strategy in domestic and global markets, prior research does not fully capture the heterogeneity within and across the countries based on digitalization. Therefore, in the next section, we review the digital context impacting CBES.

2.3. Digital Context Impacting Customer-based Execution Strategies

Research on CBES thus far has failed to consider the rising trends of the digital context that affect the execution of CBES. Since the beginning of the 21st century, digital technologies have changed consumers' lives dramatically. Digitalization has enhanced many existing business processes, such as customer relationship management, firm-customer, and customer-customer communications (Verhoef et al., 2021). Digital technologies have transformed how customers search and shop for products and how firms create and deliver offerings (Kumar, 2018). Mobile marketing has blurred the divide between online and offline marketing. Omni-channel integration has enabled firms to provide a seamless customer experience (Reinartz, Wiegand, &

Imsfchloss, 2019). Social media has provided unique opportunities for customer engagement and for harnessing the power of word-of-mouth (Appel, Grewal, Hadi, & Stephen, 2020; Aral, Dellarocas, & Godes, 2013; Hudson, Huang, Roth, & Madden, 2016). Artificial intelligence (AI) and new-age technologies represent the next wave of technological advancement and are revolutionizing the world of business through smart agents (e.g., service bots) and micro-targeted offerings facilitated by deep learning and predictive analytics (Kumar, Rajan, Gupta, & Dalla Pozza, 2019).

As Varadarajan (2018) proposes, "certain environmental developments have a transformative effect on marketing" (p. 18). In the context of global marketing, digital and data-rich environments can have a transformative effect on customer-based execution strategies within and across markets (Varadarajan, 2018). These technological enhancements have transformed how business is conducted and how consumers behave. Consequently, successful businesses must continuously adapt their customer-based execution strategies to meet the needs and expectations of customers in today's ever-changing digital landscape. This raises the following questions:

RQ1: How do we define, measure, and manage digital metrics to measure value to customers and value from customers in a global digital environment?

RQ2: What are the challenges to implementing a digital marketing strategy in a global environment, and how to overcome such challenges?

RQ3: How can we define, measure, and manage a global customer experience?

We first discuss digital technologies that have enabled organizations to enhance their business processes and create more efficiency and accuracy in their predictions and planning (Verhoef et al., 2021). We specifically discuss the impact of these technologies as they pertain to customer-based execution strategies. Next, we discuss how boundary conditions in the global business context impact the applicability and effectiveness of digitalization across markets that

have different digital infrastructure, cultural values, and sociopolitical governance structures. The greater heterogeneity of digital infrastructure and technology adoption in less-developed countries means that while MNCs can benefit from digitalization as a key to market success, they must also adapt their customer-based execution strategies to the available digital infrastructure and government regulations when entering new markets.

2.3.1. Digital Technologies

Digitalization and artificial intelligence (AI) have led to the development of new products and services that have transformed marketing through enhancing customer experience (e.g., in-store technologies), facilitating interaction with customers (e.g., chatbots), and customization and personalization of firms' offerings (e.g., shopbots and smart devices) (Davenport et al., 2020, Grewal et al., 2020; Kumar et al., 2016; Verhoef, Kannan, & Inman, 2015).

AI refers to "programs, algorithms, systems, and machines that demonstrate intelligence" (Shankar, 2018, p. vi) and possesses the capabilities of "learning, autonomy, social ability, reactivity, and pro-activeness" (Wooldridge, 2002, p. 15). Global spending on AI systems reached approximately $35.8 billion in 2019 and is expected to more than double to $79.2 billion in 2022 (IDC, 2019). What makes AI superior to other technologies is its ability to "interpret external data correctly, learn from such data, and exhibit flexible adaptation" (Kaplan & Haenlein, 2019, p. 17). AI's predictive analytics serve as a useful tool for marketers to gain a deeper understanding of customer behavior and offer superior, personalized products and promotions to enhance customer experience (Kumar, Rajan, Venkatesan, & Lecinski, 2019). An analysis of AI use cases by McKinsey & Co. (2018) shows that AI's predictive analytics have immense potential to improve business processes. Specifically, in the retail sector, AI provides an 87% boost in performance beyond that provided by other analytical techniques.

Advances in AI have led to the development of an array of marketing applications known as intelligent agents. Kumar, Dixit, Javalgi, and Dass (2016) provide a marketing-centric definition of intelligent agent technologies (IATs) as systems that can scan and analyze market environments continuously and interpret information about the market, competitors, and customers. This aids in solving complex marketing issues and implementing customer-based execution strategies that are tailored to customer preferences. Most investments in IATs gravitate toward the development of automated customer service agents, sales recommendations and automation, and program advisors and recommendation systems (IDC, 2019).

2.3.2 Digital Process Innovations

Digitalization and integration of new technologies into business processes enable firms to provide superior value to customers and enhance customer experiences (Verhoef, Kannan, & Inman, 2015). This raises the following questions:

RQ4: What digital process innovations readily lend themselves to CBES in a global digital environment? Why, and why not?

IATs can interpret customers' data and provide customers with real-time, personalized solutions. Digitalization enables unique opportunities to enhance business processes in several domains, including information sharing, customer-to-customer influence, customer experience management, and customization and personalization of firms' offerings.

Information Sharing. Digitization enables the collection of customer data to guide the development and execution of customer-based strategies. Digital touchpoints allow firms to track customers throughout the purchase funnel, from information search through the purchase decision to post-purchase interactions. Smart shop bots facilitate access to information regarding price and product attributes (Diehl, Kornish, & Lynch Jr, 2003). Customers are also increasingly using mobile devices to search for information on the go (Statista, 2020a). This has led to an

increase in "showrooming" behavior that impacts retailers' revenue (e.g., Rapp et al., 2015). Quick access to a firm's product information reduces the search cost and allows customers to compare prices across competitive offerings, forcing firms to rethink their pricing strategies (Chen & Sudhir, 2004; Diehl et al., 2003).

Customer-to-Customer Influence. As customers spend more time on social media, firms are increasingly investing in social media marketing. Last year, customers spent approximately 1 of every 3 hours online on social media platforms (GlobalWebIndex, 2020). As a result, social media constitutes a viable channel for customer engagement (Aral et al., 2013; Kumar et al., 2013). Besides connecting with friends, many customers now use social media as a means of interacting with brands, searching for products, and accessing and contributing to digital content such as news and product reviews (Appel et al., 2020; GlobalWebIndex, 2020; Hudson et al., 2016).

Social media can be utilized as a powerful platform to amplify a firm's message and harness the power of customer-to-customer influence. WOM referral is proven to be an effective marketing strategy for customer acquisition and increase in sales (e.g., Babić Rosario et al., 2016; Hennig-Thurau, Wiertz, & Feldhaus, 2015; Hudson et al., 2016; Kumar et al., 2013; Trusov, Bucklin, & Pauwels, 2009). Further, firms are increasingly investing in micro-influencers to generate social media buzz (Forbes, 2018a). Unlike celebrities who are expensive and sometimes too controversial to partner with, micro-influencers are "average Joes" with a sizable network of followers. Micro-influencers can promote the product at a much lower cost, create engaging content, and connect with their followers at a more personal level than celebrity influencers (Appel et al., 2020; Forbes, 2018a; Sysomos, 2018).

Customer Experience Management. Lemon and Verhoef (2016, p. 74) define customer experience as "a customer's journey with a firm over time during the purchase cycle across multiple touchpoints." Digitalization and IATs are influential forces in every step of the customer journey, from pre-purchase to purchase and post-purchase (Grewal et al., 2020). Omni-channel integration has enabled firms to provide a seamless customer experience across multiple touchpoints, both online and in-store (Lemon & Verhoef, 2016; Reinartz et al., 2019; Verhoef, Kannan, & Inman, 2015). Mobile bridges the gap between online and offline experiences by allowing customers to search for information in-store and use personalized mobile coupons, thus increasing the convenience of payment through secure mobile payment apps (e.g., Bart, Stephen, & Sarvary, 2014; Grewal et al., 2018; Hui et al., 2013; Lemon & Verhoef, 2016; Rapp et al., 2015). In-store technologies provide both convenience and personalized experiences for customers. Augmented reality (AR) apps and smart fitting rooms allow customers to virtually try products (Grewal et al., 2020). Digital kiosks make it easy to access information regarding product attributes and in-store availability. Interactive kiosks can scan a customer's face and body and offer product recommendations.[6] For instance, Sephora uses in-store kiosks to help customers find the right beauty and skincare products that match their skin tone. They also offer fragrances to sniff, then email customers information about, and coupons for, their preferred choices.[7]

Enhancing customer experience is a leading motivation for most marketers to adopt AI (Statista, 2020b). Chatbots enhance service experiences by detecting service failures and providing customized remedies (Bitner, Brown, & Meuter, 2000; Kumar, Rajan, Gupta, et al., 2019). IATs can identify customer preferences and make product recommendations with high

[6] https://cmo.adobe.com/articles/2017/10/10-technologies-helping-to-overhaul-the-retail-experience.html#gs.8ssrgb
[7] https://realityi.com/2016/10/05/great-examples-of-experiential-retail/

predictive accuracy (Reinartz et al., 2019). This has led to a transformation of the online shopping model from the "shopping-then-shipping" to "shipping-then-shopping" business model with which Amazon has been experimenting (Agrawal, Gans, & Goldfarb, 2017; Davenport et al. 2020).

Personalization and Customization. Using machine learning, AI provides a deeper understanding of customer behavior and enhances customer-based execution strategies in several ways. First, AI's predictive capabilities can detect churn with high accuracy and reengage customers with targeted communication and promotions (Kumar, Rajan, Venkatesan, et al., 2019). Second, recommendation agents provide highly relevant product recommendations that are tailored to customers' preferences (Kumar, Rajan, Gupta, et al., 2019; Reinartz et al., 2019). Companies such as Amazon and Netflix are successfully using AI to recommend the next product to buy (or next show to watch) by interpreting and learning from customer search and purchase patterns. Third, the digital advertising industry mostly relies on AI programmatic advertising to match the demand and supply and place ads in front of the right customers on the best available platform (Forbes, 2019). Furthermore, businesses can create personalized landing pages and personalized advertising video content for marketing at the customer level.[8] Fourth, AI's ability to create and curate messages has immense potential to facilitate content marketing. For instance, *The Washington Post*'s robot reporter, Heliograf, generated more than 500 articles to cover the 2016 elections and has enabled the media outlet to cover all Washington, D.C.-area high school football games every week since 2017.

In a multinational setting, AI can help MNCs develop a better understanding of customer culture and local trends. IATs can learn cultural differences and adapt product recommendations

[8] For some examples, see Vidyard (https://www.vidyard.com/video-marketing/personalized-video/), and Purlem (http://purlem.com/)

to match customers' cultural values. AI's potential to curate such predefined content-based parameters as cultural values and beliefs can be an invaluable tool for MNCs to adapt their communication messages to be consistent with the cultural values of each market (Forbes, 2019).

The fact that about half of the time customers spend daily on the internet is via mobile devices (Hootsuite Global Digital Report, 2019) provides ample opportunities for personalized customer experiences. Firms across the world are ramping up their investments in mobile marketing, with the global mobile marketing expenditure expected to reach $183.5 billion by 2024 (BusinessWire, 2019). One-to-one interaction with customers and access to real-time location data has enabled businesses to successfully micro-target customers with personalized offerings at the right time and location (e.g., Fong, Fang, & Luo, 2015; Hui et al., 2013; Lemon & Verhoef, 2016; Tong, Luo, & Xu, 2020).

2.3.3. Digital Product Innovations

Digital product innovations come from different sources. Digital products may have been developed internally through R&D processes, with the help of customers (co-production), or through crowdsourcing platforms (Allen, Chandrasekaran, & Basuroy, 2018; Etgar, 2008). Regardless of the source of innovations, digital products provide unique opportunities as well as challenges for MNCs that hope to expand their businesses into new markets globally. This raises the following questions:

> *RQ5: What digital product innovations readily lend themselves to CBES in a global digital environment? Why, and why not?*

Digitalization has facilitated the distribution of digital products globally. Digital products such as streaming and on-demand services transformed the entertainment industry. Compared to physical products, digital products are more flexible and accessible, as they can be easily distributed globally through various digital channels. Furthermore, digital products can be easily

customized, and companies such as Spotify and Netflix utilize AI to personalize recommendations at the customer level.

Further, some digital products serve as an interface between the firm and customers, facilitating the collection of customer data and management of customer experience. Growth in internet network infrastructure has paved the way for smart, connected devices, commonly referred to as the Internet of Things (IoT). IoT is broadly defined as a network of connected devices and virtual objects that have the capability to collect and exchange information (Novak & Hoffman, 2019). The number of IoT-connected devices worldwide is expected to reach 75.4 billion by 2025 (Statista, 2020c). Many consumer products ranging from small objects such as smart speakers to smart home appliances and household security systems are all part of the IoT network. These connected devices can record and transmit a wide range of information about device usage, customers' physical surroundings, and even biological data (as in the case of smart wearables). Despite the lack of academic literature articulating the implications of IoT for marketing, practitioners continue to advocate for IoT's immense potential to enhance customer experience and provide customized solutions for customers. For instance, smart speakers are being utilized as a novel digital touchpoint that facilitates "conversational commerce" (Forbes, 2018b). Appliances such as smart thermostats, smart plugs, and smart light bulbs not only provide convenience for customers but also help to reduce energy consumption at home (Beebom Tech News, 2020). Wearable medical devices such as closed-loop (automated) insulin delivery systems, smart asthma monitors, and smart coagulation testing devices are revolutionizing how patients monitor their health and receive treatments (Econsultancy, 2019).

2.4. Global Digital Boundary Conditions Impacting Customer-based Execution Strategies

While digitalization has been a driver of commercial success in developed countries, MNCs should consider the heterogeneity of digitalization within and across global markets when developing their customer-based execution strategy. For example, while internet penetration is at an all-time high in developed countries, there are significant variations in internet penetration globally. According to the Hootsuite Global Digital Report (2019), South Asia shows only 42% internet penetration, largely relegated to urban areas, while in parts of Africa internet penetration is as low as 12%. There is also considerable variation in structures of sociopolitical governance across markets that may limit customers' access to digital channels and firms' ability to collect and use customer data for marketing purposes (Sheth, 2011).

Successful implementation of customer-based execution strategies in a multinational context requires a deep understanding of customer culture and technological capabilities across markets. Several factors may limit the impact of digitalization and IATs to support business processes globally. First, cultural differences may hinder the application of IATs and customers' willingness to share their personal information with businesses. Second, there is a greater heterogeneity in digital infrastructure and technology adoption rates in less-developed countries. Third, government regulations and privacy protection laws may limit customers' access to digital channels, as well as firms' ability to collect and use customer data for personalization and customization.

2.4.1. Cultural Differences in Technology Adoption

Customers' willingness to adopt new technologies can significantly impact the utilization of digital technologies to support business processes in a multinational context. This raises the following important question:

RQ6: How do the relative influences of the firm-specific, cultural, and digital factors vary in affecting customer behavior? Do these effects vary across countries and over time?

National culture plays an important role in customers' propensity to embrace new technologies (Nam & Kannan, 2020; Steenkamp, Ter Hofstede, & Wedel, 1999). Uncertainty avoidance is an influential factor in the adoption of new products and technologies (Singh, 2006; Steenkamp et al., 1999; Yeniyurt & Townsend, 2003). Kumar and Pansari (2016b) propose that customers in high certainty avoidance cultures are less likely to adopt new channels. Similarly, Nam and Kannan (2020) argue that customers in high uncertainty avoidance cultures are less likely to embrace digital touchpoints. Blut and Wang's (2019) meta-analysis of customers' technology readiness (TR) shows significant heterogeneity across high-GDP vs. low-GPD markets in motivations behind the adoption of new technologies. Therefore, MNCs need to rethink their reliance on digital channels and IATs across markets with different cultural values (for a comprehensive discussion on the role of national culture in technology adoption and utilization refer to Nam and Kannan (2020) seminal paper).

Privacy concerns are another important issue that may limit the use of technologies by MNCs across cultures. Many customers worldwide are voicing their concerns over how companies collect and use their personal information (Acquisti, Brandimarte, & Loewenstein, 2015; Martin & Murphy, 2017). This raises an important question:

RQ7: How do customers' privacy concerns impact CBES in a global digital environment?

In recent surveys of American customers, many customers (79% and 95% in different surveys) were concerned about businesses collecting and selling their personal information without permission (Secure Swiss Data, 2017; Pew Research Center, 2019). Another survey reports that 40% of American customers (42% worldwide) believe that their data is being misused online (Hootsuite Global Digital Report, 2019).

MNCs should be aware of customers' sensitivity to privacy violations across cultures. For instance, Nam and Kannan (2020) propose that privacy mitigations are more important for individualists, high uncertainty avoidance, and high-power distance cultures. In response to cultural sensitivities to privacy protection, MNCs should adapt their policies for the collection and use of customer data when entering a new market.

Regarding the use of IAT, there are unique challenges that may limit the applicability of these technologies across markets. An important barrier to utilization of IAT is the customers' lack of trust or interest in interacting with AI. This raises several questions regarding the use of IAT to facilitate customer-based execution strategies in a multinational context:

RQ8: Under what conditions would IATs work more efficiently and effectively than a human intervention for CBES in a global environment?

RQ9: Which of IATs are expected to be more feasible for CBES in developed vs. emerging markets?

RQ10: What are the factors that make the use of IATs acceptable for CBES across markets?

While intelligent agents may function as well as, or even better than human agents, many customers are still reluctant to adopt IATs (Castelo, Bos, & Lehmann, 2019). Privacy and security concerns may inhibit the widespread use of AI in general (Kumar, Rajan, Venkatesan, et al., 2019). For some customers, interacting with a machine rather than human triggers a negative response (e.g., Davenport et al., 2020; Longoni, Bonezzi, & Morewedge, 2019; Luo, Tong, Fang, & Qu, 2019; Mende, Scott, van Doorn, Grewal, & Shanks, 2019). For instance, in an outbound sales call field experiment, Luo et al. (2019) show that AI chatbots work as effectively as an experienced salesperson and four times more effective than an inexperienced salesperson. Disclosure of chatbot identity before the conversation, however, led to a 79.9% decrease in purchase rate and a substantially shorter call duration. In the context of healthcare, Longoni et al.

(2019) show that consumers are reluctant to utilize AI healthcare and derive negative utility from interacting with an AI healthcare provider. Mende et al. (2019) explore how customers respond to humanoid robots in several roles, including medical service providers and restaurant staff. Their study shows that humanoid service robots can elicit eeriness and human identity threats (the "uncanny valley" feeling) that trigger compensatory responses. The negative response to IATs is attributed to bias against machines (Dietvorst, Simmons, & Massey, 2018; Schmitt, 2019). This bias is rooted in customers' perception of AI as less knowledgeable and empathic (Luo et al., 2019), less able to perform subjective tasks (Castelo et al., 2019), less able to sense customers' uniqueness (Longoni et al., 2019), and lacking in creativity and imagination (Loughnan & Haslam, 2007).

Such bias might be further substantiated in cultures that are high in uncertainty avoidance. Awareness of these cultural biases can guide MNCs in their application of IATs across markets. MNCs should develop strategies to address any resistance to AI to successfully use such tools. Past research on IATs recommends that AI will be more effective if it supports rather than replaces human agents (Davenport et al., 2020; Longoni et al., 2019). This is particularly important in cultures with high uncertainty avoidance and low trust in AI. Thus, one viable multinational strategy would be to limit the customers' direct interaction with IATs in markets that exhibit higher distrust in machine agents. Instead, IATs can be used as a support tool for salespeople and customer service reps to feed them with real-time insight and personalized recommendations. Furthermore, IATs can be trained to predict customers' emotional states by analyzing their tone of voice (McKinsey and Co., 2018). In cases where distress or negative emotions are detected, IATs can reroute the call to human agents to take over the conversation.

Finally, MNCs should invest in building trust in IATs and train employees on how to address customer concerns over IATs (Castelo et al., 2019).

To sum up, national culture plays an important role in customers' adoption of new technologies. However, MNCs also need to consider within-county heterogeneity and adapt to variances in customers' technology adoption within each market for successful implementation of CBES (Kumar, Sharma, Shah, & Rajan, 2013).

2.4.2. Digital Infrastructure

While digitalization is a driving force of a business's success in developed markets, the prevalent heterogeneity of digital infrastructure in less-developed countries warrants further consideration by MNCs. Specifically, it raises the question:

RQ11: Which digital touchpoints (mobile, social media, email, etc.) are better for CBES in a technology-influenced global environment?

There are several factors that need to be considered to answer this question. First, there is significant heterogeneity in internet penetration rates across markets. Internet penetration is at a much lower rate in less-developed countries and is mainly concentrated in urban areas. There is also a significant disparity in social media penetration worldwide, ranging from 70% in the US to only a 24% penetration rate in East Asia (Hootsuite Global Digital Report, 2019). Limited access to the internet and sparse digital infrastructure may inhibit the use of digital channels and IATs.

Second, there is heterogeneity in the adoption of digital technologies across markets. Some digital technologies such as mobile have developed far more rapidly in emerging markets than other technologies. For instance, among African countries, there is an 80% penetration rate for mobile subscriptions while the internet penetration rate is as low as 36% (Hootsuite Global Digital Report, 2019). Payment services such as mobile wallets (Mwallet) are growing much faster in emerging markets such as China and India than in developed countries (Kumar, Nim, &

Agarwal 2020), with China producing the highest transaction value that is projected to reach over US$1.3 trillion in 2021 (Statista 2021). The rapid adoption of some technologies led to leapfrogging over some stages of technological development. This could create challenges for MNC implementing CBES in emerging markets, but it could also provide unique opportunities for utilizing the available technologies. For instance, the widespread use of mobile phones in emerging markets has enabled millions of customers to get access to financial services that were not otherwise available to them. Mobile phones in the rural part of India helped fishermen to increase their profit by arbitraging price differences across markets (Jensen 2007). Mobile banking service M-pesa in Kenya has enabled poor families to significantly increase their household income (Suri and Jack 2016).

Third, digital infrastructure is particularly important for the distribution and widespread adoption of digital products. Customers are not able to access digital products or fully utilize these products in the absence of a reliable internet connection. For instance, streaming movies online require fast-speed internet and sufficient bandwidth; otherwise, customer experience will be negatively affected. Heterogeneity in digital infrastructure and internet penetration creates additional challenges for the successful adoption of digital products across markets.

Further, an issue closely related to digital infrastructure and technology use is the occurrence of technology failures. When customers use new technologies to interact with a firm, there is a potential for the technology to malfunction. This raises the following question:

RQ12: How does the effect of a technology failure affect customers' future engagement with the firm across markets?

Several reasons may contribute to technology failure. The available digital infrastructure may not have the potential to support the smooth operation of the technology (e.g., low internet bandwidth could slow down online services). The technology may have bugs that need to be

fixed (e.g., mobile apps may crash). Technology failures not only impact a customer's future willingness to use new technologies but could also be detrimental to the customer's future engagement with the firm. For instance, if the technology failure is attributed to the firm and its inability to provide quality services, the dissatisfied customer may churn or spread negative WOM and prevent other customers from engaging with the firm.

Besides, customers may lack the knowledge and skills to efficiently use new technologies. This is particularly critical for digital products that require some level of digital literacy and a learning curve to fully utilize the products' features. Heterogeneity in customers' digital intelligence across markets can be a challenge for MNCs that offer digital products. MNCs may need to invest more in educating customers in markets with lower digital intelligence.

2.4.3. Digital Laws and Regulations

Government regulations of customer privacy and access to the internet create boundaries for digitalization to facilitate customer-based execution strategies across markets. This raises an important question:

RQ13: How do government regulations impact CBES in a global digital environment?

There is significant heterogeneity in government regulations worldwide. Some countries and regions, such as the European Union, have strict laws to protect customer privacy,[9] while others have fewer laws in place to regulate the collection and use of customer data. Privacy protection laws may inhibit the use of customer data for macro-targeting and personalization. In emerging markets, government and sociopolitical institutions are highly influential in terms of customers' free and uninterrupted access to digital technologies (Sheth, 2011). MNCs should be aware of the regulations when entering a new market and comply with customer data privacy laws that

[9] European Union's General Data Protection Regulation (GDPR), https://gdpr-info.eu/

regulate each market. In markets with less restrictive laws, MNCs should uphold ethical practices when using customer data for marketing purposes. While concerns about the ethical use of AI are a hot topic for discussion, a recent report on global AI regulations shows that no country or region thus far has developed specific legislation regarding ethical and responsible AI (Cognilytica Research, 2020). Nonetheless, many countries are in the process of establishing rules and regulations pertaining to the use, as well as potential misuse, of AI systems (Forbes 2020). Clearly, there is a need to regulate AI applications as AI becomes an integral part of consumers' daily life.

Further, governments may limit their citizens' access to the internet or to certain platforms (such as Google in China). They may even ban or restrict disruptive businesses such as Uber and cryptocurrencies (Library of Congress, 2018; Telegraph, 2018). Such heterogeneity in government regulations creates challenges for MNCs to operate efficiently across markets and may require a revision of strategies.

3. Implementation

Our organizing framework describes how firms can deploy CBES in a global digital context. Nevertheless, several potential implementation issues may arise in the deployment of effective CBES. Lack of implementation capabilities may hinder the adoption of these strategies, adversely influence the role of other stakeholders, and undermine customer engagement and firm performance outcomes. Here, our discussion of strategy implementation can be organized around the process involved in data generation, processing, and utilization. Therefore, it raises the following questions:

RQ14: What are the issues of customer data collection and management across markets in a global environment?

RQ15: What are the issues of conducting analytics across markets in a global environment?

RQ16: What are the issues of generating insights across markets in a global environment?

We discuss implementation issues in each of these domains subsequently.

3.1. Data Collection and Management

Operating in diverse markets across the globe involves dealing not only with geographical and time distance but also with psychic and familiarity differences in terms of culture, laws and regulations, technology and communications infrastructure, business practices, channel structure, and customer attitudes and behavior across markets (Morgan, Katsikeas, & Vorhies, 2012). To deploy successful CBES in a global digital context, MNCs need to gather large amounts of country market-specific data on macro- and micro-environmental factors, drivers of and actual customer behavior and performance outcomes in each of its target markets. For instance, as a result of a crackdown on advertised rental properties that did not meet local housing and tourism regulations, Airbnb was fined in Spain for breaching local tourism laws in Barcelona (Reynolds, 2017). Variation in local laws and regulations across markets in which the firm operates may unexpectedly result in such punishments. Broadly, collecting information in different markets is a major task that entails considerable resources for the acquisition of relevant CBES data and the development of an appropriate data acquisition and management infrastructure and monitoring system within each country market in which the MNC has established presence.

Further, differences in the measurement and collection methods used in different countries for factors influencing CBES make comparisons between national markets difficult and sometimes impossible (Mennecke & West Jr., 2001). Procter & Gamble's joint value creation program, offering data and analysis to retail customers and suppliers to help improve responsiveness, reduce costs, and increase performance, involves standardized stage-wise procedures followed across markets but is also adapted to incorporating the requirements of local

markets (Davenport, 2006). In developing countries, obtaining reliable data, not only from primary sources but mainly from secondary ones, is particularly challenging, which may also create difficulties in formulating coherent global customer-based digital strategies. In addition, while IT developments enable MNCs to collect, for example, attitudinal, behavioral, and performance customer data across individual markets, the presence of significant differences among countries makes the compatibility and meaningfulness of such data problematic for global marketing strategy formation and decision making. Finally, MNCs face significant data management challenges including privacy, security, ownership, and ethical aspects (Sivarajah, Kamal, Irani, & Weerakkody, 2017), which are governed by different legal and regulatory frameworks of the countries in which these firms have chosen to compete.

3.2. Conducting Analytics

The effective implementation of global customer-based execution digital strategies requires that MNCs have the capabilities to analyze huge amounts of data on a rich array of factors, attitudes, behaviors, and outcomes collected from various countries. In addition to the high costs of big data infrastructure (e.g., hardware equipment), the development of business analytics capability is vitally important to value creation in successfully deploying such strategies. Such a capability entails building an operational balance among the organization of the data analytics used (e.g., types and scope of analytics, managing costs, working with external specialists), data ownership (e.g., privacy, governance) technology required to conduct analytics (e.g., restrictions of existing IT platforms, managing huge cross-cultural data volumes), processes followed in analyzing cross-country data, and people possessing the right skills (Vidgen, Shaw, & Grant, 2017). An MNC needs to align this specialized capability with its global customer-based execution digital strategy, which involves consideration of many different parameters that

underpin its worldwide business operations. The diversity of factors that typically marks the operations of MNCs poses a major problem for achieving and maintaining such an alignment.

A related issue that requires attention also concerns where the different types of analytics are conducted within the MNC's global organizational framework. Specifically, a series of particularly challenging decisions are required pertaining to which analytics should be conducted at the headquarters and which ones must be undertaken by specific subsidiaries in the firm's global business network. Some of the regulatory issues faced across countries may force MNCs to keep certain data within a specific country. For instance, the root of a recent dispute between China and the U.S. pertained to the computer code underlying TikTok, perceived as posing a national security threat to the U.S. (Xiao, 2021). Countries worldwide are building digital walls and treating user data like a sovereign asset, implying that MNCs need to analyze at least some of their data in that country.

Coordination problems thus are likely to emerge in effectively distributing and organizing this analytical work within the MNC. Even when such problems are dealt with and the whole analytics-related task is effectively organized, developments in a dynamic global marketplace, along with the MNC's new product-market strategies, would create the need to adapt the structure of this task (i.e., who does what) in the light of new imperatives. Relatedly, problems may arise from diverse data collection and analysis requirements associated with considerable differences among international markets. For instance, Netflix's pursuit of rapid globalization experienced significant problems in penetrating major emerging markets like India, due in part to insufficient local market-specific content and the lack of high-speed broadband and limited internet penetration. In addition to technological investments in big data and analytics and the deployment of local dedicated servers, Netflix has paid focal attention to sourcing regionally

produced content through licensing deals in India, thus providing an internationalization avenue for these producers whose local content could find a global audience. The continuous expansion of Netflix's blending of global and regional content underpins its fast growth and development in international markets (Brennan, 2018; Chauhan, 2019). Inter-country differences in the interplay between global and regional content, along with variations in customer preferences and behavior, add complexity to the data that the company needs to collect in individual countries and subsequently analyze for the deployment of effective CBES in a global digital context.

Further, the type of analytical methods that MNCs use to inform their customer-based execution digital strategies depends on the available data that may differ from one market to another. Enhanced quality global strategy decisions and choices require the use of suitable analytical approaches that facilitate the extraction of useful insights from the data. Such approaches range from descriptive analytics (which can help understand what happened in foreign market operations), through predictive analytics (which can help anticipate what is likely to happen in future international market operations), to prescriptive analytics (which can help respond to 'so what' and 'now what' questions in international business) (see Sivarajah et al., 2017). The problem facing MNCs is that likely incompatibility in the available customer-based execution digital strategy data across markets may restrict analytical rigor and sophistication for extracting meaningful conclusions for a global digital context. Realistically, differences among international markets would prevent conducting analytics using worldwide market data on customer-based attitudinal, behavioral, and performance outcomes.

3.3. Generating Insights

Making data understandable for users and meaningful for effective decision-making at the headquarters and individual subsidiaries of the MNC is critical for the pursuit of a highly

performing CBES in a global digital context. One common challenge facing global firms is the dissemination or availability of useful information to those decision-makers in the MNC's network of business units when they need it. MNCs are huge, highly bureaucratic business organizations, a size that often makes it difficult to easily locate and access relevant and useful information enabling optimal, or at least ad hoc, decision making. MNCs need to establish, develop, and maintain a well-organized and flexible structure of readily available information that supports the deployment of effective global customer-based execution digital strategies.

In addition, the data needed and insights generated are likely to differ from one country's market to another, and this is particularly the case between developed and developing countries. This might pose a challenge for an MNC not only in terms of deploying a *coherent* CBES in a global digital context because of differences across country markets targeted by the firm but also in terms of the effective implementation of the strategy at the local level—a task inherently undertaken by each of the firm's subsidiaries. Providing managers with guidelines for strategy implementation and evaluative insights for assessing the effectiveness of its implementation and deployment at individual markets is vitally important. Broadly, MNCs may find it prudent to invest in people with analytical skills able to interpret data and generate such insights for managers at both the headquarters and individual subsidiaries in different countries (c.f., Phillips-Wren and Hoskisson, 2015; Sivarajah et al., 2017).

4. Conclusion

This study highlights the needs of the marketplace by presenting a strategic framework that links firms' marketing initiatives to customer engagement (along with the influence of other stakeholders) and firm performance in a global digital context. While it is never easy to implement without any challenges, the benefits of following the suggested framework can be

multifold. First, customers are engaged more. Next, firms benefit with respect to both product and market metrics. Most importantly, every relevant stakeholder's interests are considered while delivering a customer-based execution strategy. Finally, the global digital context provides faster learnings that can be used for introducing other product categories or services. The research questions posed in the study should spawn more research opportunities that are both rigorous and relevant. We provide a summary of these research questions we raise throughout this paper in Table 3.

---- *Insert Table 3 about here* ----

The growth in digitalization and applications of new-age technologies to assist business processes, accompanied by fluctuations in the global business environment, have had a considerable impact on the success of MNCs across markets in recent years. In order to successfully develop and implement CBES in today's digitally infused global business environment, MNCs need a deeper understanding of how digital and global forces impact customers' engagement with firms across different economic, cultural, and technological contexts.

This paper provides an integrated framework for researchers to think about developing and implementing customer-based execution strategies in a global, digital environment. We hope this inspires significant advances in research topics that span contributions in the areas of substantive issues of customer engagement (e.g., the role of gifting through Amazon e-cards and how it influences both the giver and the recipient in terms of future buying behavior), digitalization (e.g., how Artificial Intelligence can help personalize messages and customize product offerings), and the ever-changing global environment (e.g., how the instant spread of information across the world helps to reach out to customers worldwide through direct selling).

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Figure 1: Customer 5.0: The Intersection of Global, Digital, and Customer Strategies

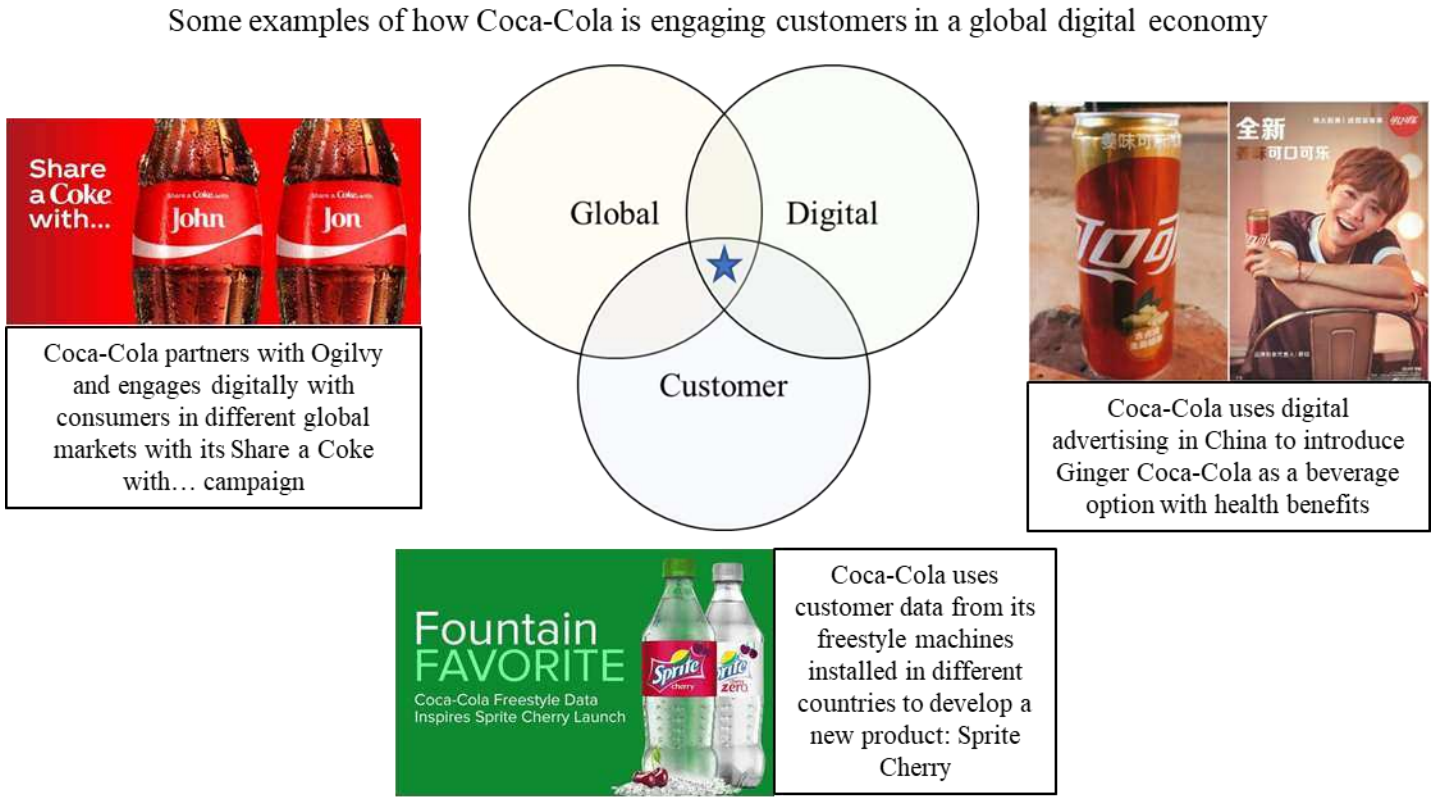

Figure 2: Organizing Framework of Customer-Based Execution Strategies in a Global Digital Context

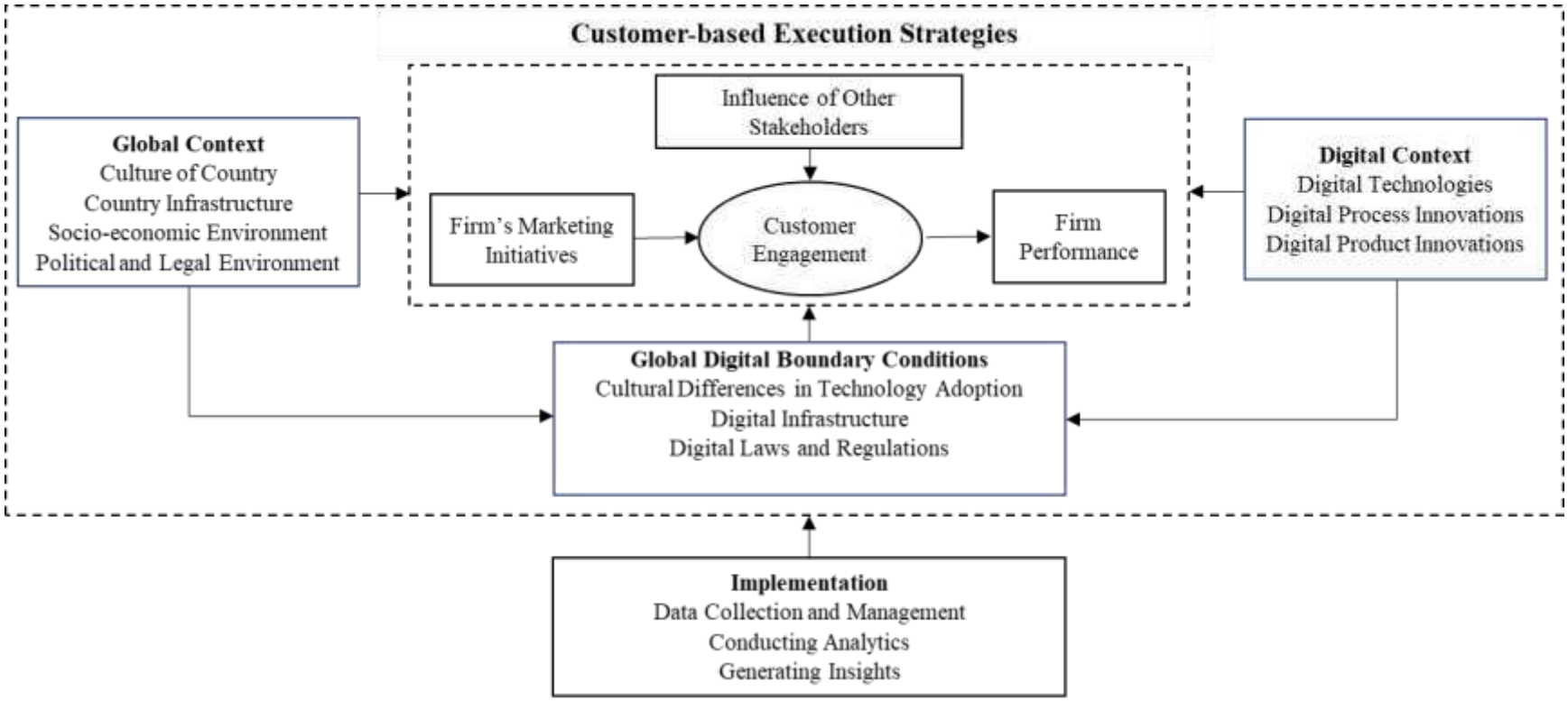

Table 1: Sample of Empirical Studies in Domestic Market

Paper	Country	Data	Firm- Marketing Initiatives	Customer Engagement	Digital Context
Venkatesan and Kumar (2004)	U.S.A.	B2B computer hardware and software manufacturer	Marketing and channel communications	CLV	No
Rust, Lemon, and Zeithaml (2004)	U.S.A.	B2C airline companies	Marketing communication	CLV	No
Gupta, Lehman, and Stuart (2004)	U.S.A.	B2C Amazon.com, Ameritrade, Capital One, eBay, E*Trade	Acquisition cost	CLV	No
Fader, Hardie, and Lee (2005)	U.S.A	B2C online music site (CDNOW)	n/a	CLV	No
Petersen and Kumar (2009)	U.S.A.	B2C catalog retailer	Return Policy	CLV	No
Kumar and Shah (2009)	U.S.A.	B2B computer hardware and software manufacturer; B2C catalog retailer	Marketing Communication	CLV	No
Kumar et al. (2010)	U.S.A.	B2C financial services and retailing company	Marketing communication	CLV and CRV	No
Shah et al. (2012)	U.S.A.	B2B Financial service and IT firms; B2C retail bank; catalog retailer; fashion retailer	Marketing communication and policies	CLV	No
Kumar, Bhaskaran, Mirchandani, and Shah (2013)	India	B2C Ice Cream retailer (Hokey Pokey)	Marketing Communication	CLV and CIV	No
Kumar, Zhang, and Luo (2014)	U.S.A.	B2C home improvement company	Marketing communication	CLV	No
Datta, Foubert, and Van Heerde (2015)	Europe	B2C interactive TV (iTV) provider	Marketing communication	CLV	Yes
Shah et al. (2017)	U.S.A.	B2C; home improvement company	Marketing communication	CLV	No
Kim and Kumar (2018)	U.S.A.	B2B shipping company	Marketing communication	CLV	No

*****CLV: Customer Lifetime Value, CRV: Customer Referral Value, CIV: Customer Influence Value, CKV: Customer Knowledge Value.

Table 2: Select Empirical Studies in Global Market

Paper	Country	Data	Firm- Marketing Initiatives	Customer Engagement	Global Context	Digital Context
Krautz and Hoffmann (2017)	Multinational (30 Countries)	Multinational Automotive customer level data	Marketing communication	CLV	Hofstede's national cultural factors	No
Kumar and Pansari (2016b)	Multinational (30 Countries)	Customer level data of a global retailer	Marketing communication	CLV	Hofstede's national cultural factors	No
Petersen et al. (2015)	UAE (but multi-culture customer dataset), This is a sstep towards multinational study	Multinational financial services firm based in the UAE, with customers originating from 34 countries	Marketing communication	CLV	Hofstede's national cultural factors	No

*CLV: Customer Lifetime Value, CRV: Customer Referral Value, CIV: Customer Influence Value, CKV: Customer Knowledge Value.

Table 3: Future Research Opportunities Pertaining to Development and Implementation of CBES in a Global Digital Context

Research Topic	Opportunities for Future Research
Digitalization	RQ1: How do we define, measure, and manage digital metrics to measure value to customers and value from customer in a global digital environment? RQ2: What are the challenges to implementing a digital marketing strategy in a global environment, and how to overcome such challenges? RQ3: How can we define, measure, and manage a global customer experience? RQ4: What digital process innovations readily lend themselves to CBES in a global digital environment? Why, and why not? RQ5: What digital product innovations readily lend themselves to CBES in a global digital environment? Why, and why not?
Cultural Differences in Technology Adoption	RQ6: How do the relative influences of the firm specific, cultural, and digital factors vary in affecting customer behavior? Do these effects vary across markets and over time? RQ7: How do customers' privacy concerns impact CBES in a global digital environment? RQ8: Under what conditions would IATs work more efficiently and effectively than human intervention for CBES in a global environment? RQ9: Which of IATs are expected to be more feasible for CBES in developed vs. emerging markets? RQ10: What are the factors that make the use of IATs acceptable for CBES across markets?
Digital Infrastructure	RQ11: Which digital touchpoints (mobile, social media, email, etc.) is better for CBES in a technology influenced global environment? RQ12: How does the effect of a technology failure affect customers' future engagement with the firm across markets?
Digital Laws and Regulations	RQ13: How do government regulations impact CBES in a global digital environment?
Implementation Challenges	RQ14: What are the challenges of customer data collection and management across markets in a global environment? RQ15: What are the challenges of conducting analytics across markets in a global environment? RQ16: What are the challenges of generating insights across markets in a global environment?