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A global perspective on the marketing mix across time and space

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ABSTRACT

The marketing mix (MM) is an integral part of a firm's marketing strategy sitting at the nexus between a company and the marketplace. As such, it evolves together with the marketplace and its stakeholders. Over the past decade, three fundamental global drivers have emerged—advancements in technology, socioeconomic and geopolitical shifts, and environmental changes—that have caused major ongoing and intensifying evolutions in the marketplace, its stakeholders, and, in turn, the MM. We describe the resulting evolutions in the MM along four central questions: *who* is involved in the MM, *what* constitutes the MM, *how* is it implemented, and *where* is it deployed. We identify a blurring of roles and responsibilities relating to the MM (who), an extension and integration of the MM instruments (what), an increase in customization and fragmentation of its actions (how), and a growing recognition of emerging-market idiosyncrasies (where). Taking a look into the future, we observe that along each of the four dimensions, the MM has arrived at a crossroad, with opposing scenarios for its future: (i) more inter-firm collaboration versus marketing-mix protectionism, (ii) added complexity versus increased simplicity, (iii) further automation versus an increased recognition of the human touch, and (iv) local adaptation versus global uniformity in the marketing mix. Applying a contingency approach, we derive relevant moderators for these forthcoming evolutions and provide an extensive set of future research questions.

1. Introduction

According to the American Marketing Association (AMA), the marketing mix (MM) "*refers to the combination of controllable marketing variables that the firm uses to pursue the desired level of sales in the target market*" (MASB 2021). As such, it is part of, and informed by, the firm's marketing strategy (Varadarajan 2010, p. 120) and implemented by means of concrete actions that utilize various customer-facing instruments and channels. Commonly grouped into price-, product-, promotion-, and distribution-related instruments (MASB 2021), the MM is at the core of the firm's activities and processes for "creating

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[product], communicating [promotion], delivering [distribution], and exchanging [price] offerings that have value for customers, clients, partners, and society at large" (AMA 2021). Extant research has repeatedly shown its short- and long-term effects, not only on sales (Hanssens et al. 2001) but also on brand equity (Datta et al. 2017) and firms' financial value (Srinivasan & Hanssens 2009). While there is constant debate on the concrete conceptualization of the MM, especially in terms of the classification of its instruments (e.g., Constantinides 2006; Van Waterschoot & Van den Bulte 1992), there is little disagreement on its general relevance.

Similarly, there is little disagreement that the market environment that companies are operating in is highly dynamic and subject to substantive evolutions, ranging from technological advances and environmental changes to socioeconomic shifts (e.g., Davenport et al. 2020; Rust 2020). These evolutions have profound effects on companies and other stakeholders, leading to, for example, new technologies to integrate suppliers, stronger consumer demand for ecological products, or new legal requirements regarding data collection. As the MM sits at the nexus between a company and its stakeholders, it is inevitably affected by these evolutions, which raises the central research question we seek to address in this paper: *How will the MM itself evolve*?

As depicted in our conceptual framework (Fig. 1), we identify three major shifts that have occurred on a global level over the past decade(s)—technological advances, socioeconomic and geopolitical shifts, and important environmental changes.[1] These shifts act as global drivers of the current and future evolutions in the MM space by affecting demand-side actors, supply-side parties, and legislators.[2] As the MM involves a firm's "controllable marketing variables" (MASB 2021), the supply side is crucial in implementing any changes in that mix. Market conditions, however, through their demand (demand side) and legal requirements (legislature), exercise a strong moderating force. That is, while the supply side can try to leverage the opportunities that arise from these shifts, they have to take into account demand-side expectations and legislative restrictions. To disentangle the various ways in which the MM is affected, we synthesize the different decisions into four central questions:

> ***Who*** is performing the MM actions and controlling the instruments? ***What*** constitutes the MM, its actions and instruments? ***How*** are MM actions and instruments implemented and adjusted over time? ***Where*** is the MM deployed, globally or locally?

For each of these questions, we show how the answers have been evolving in the past, and develop dichotomies that show how these answers may keep evolving in the future depending on specific contingencies.[3]

Over the years, several conceptual and editorial articles have discussed important evolutions in marketing. Kumar (2018) and Rust (2020), for example, paint a holistic picture of how the marketing discipline as a whole is affected by some of these drivers. Other articles have zoomed in on individual drivers and/or specific settings. Davenport et al. (2020) and Huang and Rust (2021a), for example, review potential uses of artificial intelligence (AI) in marketing, while Huang and Rust (2018; 2021b) elaborate on its use in service delivery. Kannan (2017) and Reinartz et al. (2019) discuss the role of digitalization, Swaminathan et al. (2020) focus on technology and branding, Gupta and Ramachandran (2021) discuss the growing importance of emerging economies to retail trade, and Martin and Palmatier (2020) review privacy concerns and related legislations.

This paper contributes to, and differs from, this literature by concentrating on the changing role of the MM, a facet that has been touched upon only tangentially in the aforementioned discussions. Specifically, we will analyze its evolution from various angles, starting from three major global drivers—technology, socioeconomy and geopolitics, and the environment—and considering its three major stakeholders—consumers, suppliers, and legislators. While most articles to date have projected monotonic developments, which are also assumed to apply universally, we will adopt a *reverse-thinking* approach (Dekimpe & Geyskens 2019; Urban & Hauser 1993) to derive dichotomous developments for the future of the MM. In addition, we will propose various contingency factors that may affect which development will materialize in different settings. In doing so, we will also derive an extensive set of future research questions for the MM field.

In the remainder of this paper, we first discuss briefly how the global drivers have affected the aforementioned three stakeholders (Section 2). Next, we show in some detail how this helps explain four key MM developments: (i) from a clear delineation to a blurring of roles and responsibilities (Section 3.1), (ii) from a 4P-myopia and silo thinking to an extended and integrated MM approach (Section 3.2), (iii) from a mass-market orientation to a customization and fragmentation of MM actions (Section 3.3), and (iv) from a developed-market myopia to an explicit consideration of emerging markets (Section 3.4). Even though the onset of some of these developments may have taken place some time ago, their rate of change has increased dramatically over recent years. As such, we discuss them as ongoing developments. Next, we identify different scenarios along which the MM may evolve in the years to come and outline how, for each of the four underlying dimensions (who, what, how, where), two opposing patterns are shaping up: (i) more inter-firm collaboration related to the MM for

[1] A conceptually similar argumentation was recently made in Rust (2020).

[2] Also employees and investors are relevant stakeholders that may have unique expectations and influences. For parsimony of exposition, we use the demand-side, supply-side, legislator classification in our discussion.

[3] We would like to point out that the various references given throughout the text are meant to support our conceptualization and argumentation, rather than to offer an exhaustive enumeration of all studies that have appeared on a given issue in the leading marketing journals (as typically done in formal meta-analyses).

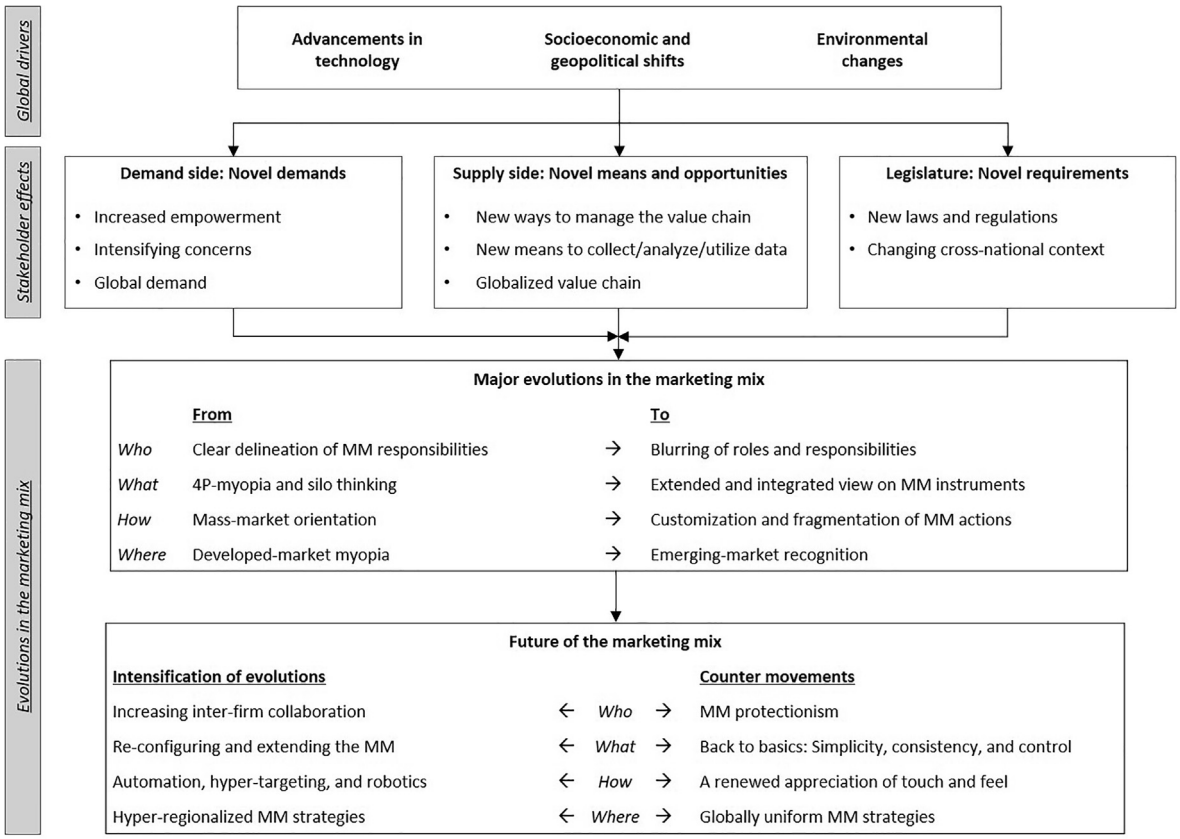

Fig. 1. Conceptual Framework.

some firms, versus more protectionism for others (Section 4.1), (ii) a more intricate set of MM instruments, paralleled by a back-to-the-basics movement (Section 4.2), (iii) a tendency for more automation, along with a renewed appreciation for the human touch (Section 4.3), and (iv) a balancing of (hyper-) regionalized versus global considerations (Section 4.4). Applying a contingency approach, we discuss relevant moderators for each of these contrasting developments taking place in the marketplace and present a range of concrete future research questions. We finish with conluding remarks on the evolution of the MM (Section 5).

2. Global drivers of the marketing-mix evolution

Inspired by Rust (2020), we identify three fundamental shifts that have occurred in the marketplace: (i) advances in technology, (ii) socioeconomic and geopolitical shifts, and (iii) environmental changes.

Technological advancements have resulted in an increased interconnectedness (through, among others, the Internet, the Internet of Things (IoT), and a variety of portable, smart devices), and an increased capability to both collect data (e.g., clickstream data, location data, user-generated content, sensors) and analyze/utilize that data (e.g., through machine learning and AI; see also Haenlein & Kaplan 2019 or Wedel & Kannan 2016). Relevant geopolitical shifts include the economic growth of emerging markets, and dichotomous trends such as globalization, a facilitation of free-trade, and the rise of protectionism in other parts of the world. Environmental concerns, in turn, have become increasingly important to many consumers and policy-makers, with clear implications for manufacturers and retailers. In addition, the worldwide Covid-19 pandemic continues to affect the demand and supply side, as well as the surrounding legislature.

In Table 1, we list some major effects of each of the three global drivers on the three principal stakeholders in the market. They inform our following discussions on how the effectiveness and deployment of the MM have evolved over time and will continue to change in the future. On the one hand, these evolutions have given companies new means and opportunities to leverage the MM. On the other hand, they have also set new boundary conditions. Indeed, novel demands from consumers and novel requirements by the legislature have arisen that moderate how companies (can) utilize the MM. Next, we discuss the various major evolutions in the MM that have emerged, organized around our four central questions of *who*, *what*, *how*, and *where*.

Table 1
Global drivers and their effect on the principal stakeholders.

	Demand Side	Supply Side	Legislature
Advancements in Technology	• Empowerment of consumers via means to access and share information across the globe, with clear implications of user-generated content on sales (Tang et al. 2014) and stock returns (Tirunillai & Tellis 2012) • Drastic increase in choice freedom via access to global products and services, coupled with effective filtering mechanisms and automated recommender systems (Jiang et al. 2011) • Rise of consumers as powerful value creators, e.g., crowd- and co-creators (Heimans & Timms 2014) or as part of the sharing economy (Eckhardt et al. 2019)	• Transformation of the traditional value creation chain into an ecosystem in which all parties interact leading to new forms of collaboration while reshaping the competition (Porter & Heppelmann 2014) • Emergence of new business and revenue models, e.g, digital marketplace platforms (Reinartz et al. 2019), subscription models (McCarthy et al. 2017), and the sharing economy (Eckhard et al. 2019) • Globalization of the value creation chain and target markets (Verhoef & Bijmolt 2019; Verhoef et al. 2021)	• Advent of new laws such as the General Data Protection Regulation (GDPR) in the European Union, which puts stronger restrictions on companies' data collection (Goldberg et al. 2021), and affects how (effectively) companies can communicate with consumers (Goldfarb & Tucker 2011) • Increase in anti-monopoly regulations targeting powerful platform markets that (due to their network effects) inherently favor winner-takes-all outcomes and natural monopolies, in regions such as the EU, the U.S., and Japan (Ducci 2020)
Socioeconomic and Geopolitical Shifts	• Surge in demand for ethical behavior of brands (Schamp et al. 2019) • Increasingly broad affluent upper-middle class in emerging markets (Cavusgil et al. 2018) • In addition to consumers' global orientation, emergence of a cultural shift towards a more intense local focus as consumers develop pride for national and local brands (Steenkamp 2019a, b)	• Evolution of emerging markets from being mere manufacturing sites to becoming innovators, developing strong products and brands with a global customer base (Steenkamp 2017)	• Emergence of legislations to limit algorithmic biases in the analysis of consumer data (Cowgill & Tucker 2020; Lambrecht & Tucker 2019). • Dichotomy with facilitation of free trade and more foreign direct investments (increasingly also flowing from emerging markets into western nations) on the one hand, and raising of tariffs and increasing protectionism on the other (Rust 2020)
Environmental Changes	• Rise in sustainable consumption practices and a demand for sustainable product attributes (White et al. 2019) • Potential shift in consumer habits and routines due to the perpetuated Covid-19 lock-downs (Campbell et al. 2020; Knowles et al. 2020)	• Need for considering fines and compensations for carbon emissions, food and packaging waste, etc. • Need for adjustment to new restrictions on the sourcing of raw materials, offline distribution, and customer interactions post the pandemic (McKinsey 2021; Scott et al. 2020)	• Emergence of legislations addressing environmental shifts, e.g., the European Union pledging to be carbon neutral by 2050

3. Major evolutions in the marketing mix

3.1. Evolution in the "Who": From a clear delineation to a blurring of responsibilities

In the twentieth century, value-creation chains featured parties that served clearly-defined roles related to specific MM instruments: manufacturers developed, produced, and advertised products, whereas retailers distributed products and set consumer-facing prices. As such, manufacturers were more in control of the upper-funnel marketing activities related to branding, advertising, and product innovativeness, while retailers were primarily in charge of the lower-funnel activities related to distribution, pricing, and (in-store) promotions (Lamey et al. 2018). The consumer, in turn, was mostly a passive recipient of these decisions, who then had to decide whether or not to buy the product.

In the twenty-first century, and largely driven by a multitude of technological advances, the role of the different channel parties has become less confined. Product and service offerings, for example, were traditionally developed and produced by manufacturers, who uni-directionally pushed these down the value-creation chain towards consumers. The concept of co-creation has toppled this concept, introducing the consumer as an important locus of value creation (Vargo & Lusch 2004). Spurred by technological advances such as the social web (Steinhoff et al. 2019) and self-service technologies (Meuter et al. 2005), consumers have come to adopt roles formerly performed by manufacturers (O'Hern & Rindfleisch 2010). Thereby, they do not only shape the value they themselves receive from the exchange (Xie et al. 2008) but in many cases also affect the value created for other consumers, for example, by engaging in the development of new products and services (Chang & Taylor 2016) or through user-generated content. The gradual transformation of the consumer into a creator of value has culminated in the proliferation of the sharing economy, with platforms such as Uber and Airbnb. Consumers have therefore evolved even further from *co*-creators to actual producers and service providers, with companies reverting to being matchmakers between demand and supply.

The sharing economy does not only address consumers' increasing desire to be involved in value creation but also appeals to their rising environmental concerns. It promises to tap into underutilized resources (e.g., unused flats or cars in the case of Airbnb and Uber), thereby reducing waste and resource-intensive production—however, the verdict is still out whether the sharing economy actually increases sustainability (Eckhardt et al. 2019; Philip et al. 2015). Prior research (see Kozlenkova et al. 2021 for a recent meta-analysis) has identified a score of economic/competitive, cultural, societal, technological, regulatory, and demographic factors that affect not only the level of sharing-economy participation, but also the benefits sought from such participation (utilitarian, social, hedonic, and/or sustainability-related). Other research has raised the issue of racial discrimination in the sharing economy that may be harder to regulate for the legislature (Edelman et al. 2017; Ge et al. 2016).

In addition to consumers becoming more involved in manufacturing tasks, suppliers on the opposite side of the value-creation chain increasingly influence the development of new products. They have become more involved in each step of the product-development process, ranging from a mere consulting role to full control of the product design (Petersen et al. 2005) to proactively approaching consumers to develop new-product ideas (Homburg et al. 2014).

While manufacturers may benefit from consumers and suppliers taking over roles they traditionally covered themselves, they are also under pressure from retailers who increasingly morph into manufacturers by continuously expanding their private-label (PL) portfolio (Kumar & Steenkamp 2007). Initially, PLs functioned as a retailer's lowest-price option for its most price-sensitive consumers, and often were copycats of branded products (ter Braak & Deleersnyder 2018). Increasingly, however, they cover all price tiers up to the premium price segment in a variety of product categories (Geyskens et al. 2010). Besides, retailers have moved beyond a mere copycat strategy, as is evident from the innovative assortments of IKEA, ZARA, or France's Decathlon. Via this newfound innovation focus, retailers tend to further blur the boundaries with manufacturers.

In addition, they are progressively integrating vertically to actually produce their store brands rather than procuring them through dedicated PL producers or national-brand manufacturers. For example, Costco recently invested $400 m in a poultry production facility in Nebraska (NPR 2018), while Walmart opened a 250,000 square-foot milk processing facility in Fort Wayne (IGD 2016). Through this vertical integration, retailers aim to increase their control over product quality. As a corollary, the retailer can facilitate transparency throughout their supply chain, and alleviate consumer concerns about the origins of the products they purchase. The Covid-19 pandemic is expected to further increase this evolution towards more vertical integration, as it brought to the fore that a considerable part of the PL supply chain for non-food products is China-centric (Schuttelaars & Partners 2020). This made it difficult for many PL producers to meet supply requirements. To avoid such shortages in the future, more retailers are expected to take control of the entire supply chain.

The blurring of roles and responsibilities is also reflected in prices which were usually determined by retailers (even though manufacturers tried to influence that decision), with end-consumers having little to no say in determining the final price for a product. Traditional exceptions to this were auctions and bargaining, which used to be limited to product categories or settings where they would be feasible, acceptable, or allowed. Several developments have fundamentally changed this, giving consumers an active role in price setting. First, the increase in ease of communication between sellers and buyers via the Internet and the associated rise of secondary markets for reselling (e.g., eBay or StockX) have made online auctions commonplace for the average consumer across a large variety of product categories (Chen et al. 2013). Second, there has been an increase in the adoption of novel participative pricing mechanisms in which consumers play a central role in setting prices, such as Name Your Own Price and Pay What You Want pricing schemes (see Spann et al. 2018 for an overview). Third, as consumers transform into producers in the sharing economy (Eckhardt et al. 2019), they often become price setters as well, either explicitly by defining a price (e.g., Etsy) or implicitly by providing supply to demand- and supply-dependent systems (e.g., Uber).

Besides consumers, manufacturers are also increasingly involved in setting consumer-facing prices, taking over a responsibility that was traditionally attributed to retailers in their role as distributors. This is a consequence of manufacturers becoming increasingly engaged in direct selling through offline flagship and/or own retail stores (Wang et al. 2009), digital platforms (Reinartz et al. 2019), or own online shops (Chiang et al. 2003). Those manufacturers then need to develop their own strategies for consumer-facing prices.

Similarly, advertising and promotional communication used to be split between manufacturers and retailers, with the former advertising their product portfolio and the latter promoting their assortments and special deals. However, with the rise in manufacturers' direct-selling channels, their advertising increasingly addresses the bottom parts of the purchase funnel, too (Keller 2010). At the same time, manufacturers have in several instances gained control of retailers' communication instruments: cooperative advertising, for example, in the form of advertising allowances, has grown considerably with the turn of the millennium (Nagler 2006), in-store display placement as part of category management is often outsourced to manufacturers (Kurtulus & Toktay 2011), in-store media are regularly booked by manufacturers (Dukes & Liu 2010), mobile technologies such as geo-targeting or beacons allow manufacturers to engage consumers in the store (Chen et al. 2017; Grewal et al. 2016), and store-within-a-store concepts bring manufacturers' sales personnel physically inside retailers' stores (Jerath & Zhang 2010). This ever-closer cooperation between manufacturers and retailers has culminated in the shopper-marketing concept, which "is inherently a joint effort of retailers and manufacturers" (Shankar et al. 2011, p. 36) to tailor marketing efforts along shoppers' entire path to purchase.

While manufacturers are increasingly utilizing retailers' communication channels, the reverse can be observed, too. With manufacturers establishing powerful platforms through which they can engage and directly interact with consumers (Reinartz et al. 2019; Wichmann et al. 2021), they become attractive communication channels for retailers as well. Also,

intermediaries are increasingly becoming involved in advertising to consumers. Instacart, a US-based grocery delivery platform, for example, integrates advertising functionalities that enable brands to promote their products on the platform (Williams 2020).

While this muddling of responsibilities in the MM has led to novel opportunities for companies, and deeper integration and involvement of consumers, it has also raised a variety of regulatory concerns, especially in the context of platforms (OECD 2020). As platform providers are often also platform suppliers (e.g., Amazon runs the marketplace but also offers its own products), they have repeatedly been accused of abusing their power across multiple MM instruments, such as to favor own products (Edelman 2019), copy successful third-party products (Zhu 2019), illegally bundle products, apply predatory pricing, or refuse distribution (OECD 2020). Similarly, in the digital advertising market, in many instances, platforms such as YouTube and Facebook control the advertising inventory as well as the means to measure ad effectiveness, giving brands only limited access to data and testing, raising credibility concerns and creating the potential for ad fraud (Porter 2021). Accordingly, anti-trust authorities in multiple regions such as the EU, Australia, and the UK are investigating the issues and crafting new legislation (Gordon et al. 2021).

In sum, the twentieth century clear delineations of roles in the value-creation chain are increasingly becoming muddled: suppliers progressively shape the product-development process, manufacturers become their own retailer, retailers integrate vertically and produce their PLs, while consumers increasingly play an active part in the value-creation (product) and -capture (price) process.

3.2. Evolution in the "What": From a 4P myopia and silo thinking to an extended, integrated view

Even though there has been a long-time recognition that, ideally, the different MM instruments should not be managed in isolation, it is fair to say that, traditionally, the different MM instruments were not only set independently by different channel parties (Section 3.1) or by different departments in a company (Homburg et al. 1999), but also rarely studied holistically in academic research.

However, on top of a blurring of the roles of different parties involved in the value-creation chain, also the different MM instruments (which traditionally were studied along the 4P classification) have become increasingly intertwined. In terms of the place, the role of physical stores is increasingly to communicate a brand's value and its products rather than ensuring distribution. This has been enabled through more sophisticated technologies for in-store media and mobile advertising (Grewal et al. 2016). In addition, new store concepts have emerged which primarily focus on communication with distribution taking a back seat, such as retail-as-a-service (Baiter 2020), flagship stores (Keller 2010), and showrooms (Bell et al. 2018). Take b8ta as an example: brands can display products in b8ta's stores, control how they are presented, and measure in real-time how consumers interact with their products while the actual distribution takes place online. Hence, "whereas online and offline channels may be substitutes in distribution, they are complements in marketing communications" (Wang & Goldfarb 2017, p. 706).

Increasingly, the place also becomes part of the product experience itself. Online, consumers can use branded apps and platforms to co-create and customize products and create and share user-generated content (Boyd et al. 2019; Reinartz et al. 2019). This seamless transition between place and product also increasingly emerges offline due to highly-engaging brick-and-mortar store concepts (Keller 2010). Indeed, the growing tendency of retailers and manufacturers to provide appealing offline experiences means that the place becomes a product itself or extends its value creation. Apple, for example, envisions running "town squares" in which its customers can socialize and take part in special events and workshops that complement its products.

Place and price have traditionally been entangled to some degree, with retailers and manufacturers leveraging their different channels for price discrimination. With technological advances and an increase in channel fragmentation (see Section 3.3.2), these two MM instruments have become even more intertwined (Grewal et al. 2010). At the same time, price differences have become more transparent since consumers can easily compare prices even while in the store (Grewal et al. 2018). The challenge of how to optimally price in different channels has been studied extensively in the multichannel pricing literature (see, e.g., Ailawadi & Farris 2020 for a recent review), and has led to novel strategies such as price obfuscation (Ellison & Ellison 2009) or drip pricing (Santana et al. 2020).

Finally, prices are getting more intertwined with products as products are increasingly being priced by the various modular upgrades that technological evolutions have allowed for. That is, consumers can often buy complementary services, content, functionalities, and upgrades after having purchased the base product (Ülkü et al. 2012). Tesla, for example, ships the same automobiles with identical capacities for which consumers can purchase different digital updates at any time, modifying the actual capabilities of the product. Hence, prices are increasingly getting intertwined with the individual product specifications which may evolve over time. Consequently, prices for the base product need to be developed with subsequent modular upgrades of the product in mind (Krishnan & Ramachandran 2011). In addition, the very nature of these MM instruments is evolving, as products become increasingly experiential rather than material and as prices are set for access rather than ownership (Morewedge et al. 2021).

Additionally, new pricing schemes have emerged, especially in the B2B context, in which not the product itself, but rather its usage, performance, and the benefits derived from it, are priced (Porter & Heppelmann 2014). For example, Rolls Royce uses a "power-by-the-hour" model, tying its pricing directly to product usage by charging airlines for the time the jet engines are running. Similarly, in the B2C context subscription models become increasingly widespread for digital (e.g. Netflix) as

well as physical (e.g. Gillette on Demand) products. They create convenience for consumers by removing transaction costs and establish long-term commitments (McCarthy et al. 2017). Other pricing models like freemium and sharing-based models create value for customers by leveraging network effects that, in turn, power the core product (Eckhardt et al. 2019). Thus, prices and pricing strategies evolve from the traditional aggregate product or product-bundle level to (i) individual (and potentially future) product modules that a consumer may upgrade its base product with, and/or (ii) reflections of a consumer's actual usage of the product. Finally, recent research also shows how product and price have become intertwined in the context of consumers' rising demands for sustainability, and governments' environmental regulations such as cap-and-trade schemes or carbon taxes (Bertini et al. 2021).

From an academic point of view, these evolutions underline the importance of accounting for external influences on and interdependencies among the various instruments to fully understand and conceptualize the MM (Constantinides 2006). Companies, in turn, have also come to realize that much can be gained from treating the MM more holistically by accounting for and leveraging the many interdependencies among the instruments.

3.3. Evolution in the "How": From mass-market orientation to marketing-mix customization and fragmentation

A common critique of the traditional MM conceptualization has been its mass-market orientation and lack of personalization (Constantinides 2006). Powered by novel technologies for data collection and analysis, this has drastically changed. Over the years, researchers and marketers have paid increasing attention to customization strategies and continue to tailor each MM element to fit (individual) consumer preferences as closely as possible. This may include practices where firms use previously collected data to infer consumer preferences, as well as practices where firms interact with customers to seek out their preferences directly (Arora et al. 2008).[4] This trend has been driven by both supply- and demand-side factors, such as a decrease in production costs for individual products, better data collection and storage, a decrease in the costs of interacting with customers online, a decrease in customers' purchase complexity, and an increase in the demand for heterogeneous products (Franke et al. 2009).

3.3.1. Marketing-mix customization

Product customizations have been greatly facilitated due to more flexible production routines (Dellaert & Stremersch 2005), and have been shown to improve consumers' willingness to pay, purchase intention, and attitude toward the product (Franke et al. 2009) as well as product performance (Kaiser et al. 2017). However, the increasing customization of product offerings can also lead to greater complexity in customers' choice process which can adversely affect profitability (Dellaert & Stremersch 2005). As such, firms need to balance customization with complexity. Having consumers indicate their preferences for individual attributes instead of having them evaluate specified alternatives (which involves trading off attributes) can reduce complexity and increase customer satisfaction and learning (Valenzuela et al. 2009). Interestingly, this effect is moderated by culture-specific processing styles, with Western consumers preferring information presented by attributes, whereas Eastern consumers prefer a presentation by alternatives (De Bellis et al. 2019).

The customization of the MM has probably become most pronounced in firms' communication. As greater parts of consumers' lives take place digitally, firms and advertising networks can collect ever-increasing amounts of consumer data and use this to target ads based on past website visits (retargeting) or construct and predict user profiles (Trusov et al. 2016). As such, the targeting of advertisements has become increasingly detailed, and ad creatives can be adjusted on the fly (Urban et al. 2014), leading to more effective (e.g., Munz et al. 2020) and efficient (e.g., Goldfarb & Tucker 2011; Johnson et al. 2020) communication. This customization of advertising is also increasingly transported to the "offline" world as digital and physical channels merge. For example, promotions can be geo-targeted based on location data collected from wearable devices, providing consumers with coupons for nearby brick-and-mortar stores (Danaher et al. 2015), or when consumers are in the vicinity of competitors' stores (Fong et al. 2015).

Customization is also being applied in firms' distribution. Online, website morphing automatically matches the content and look and feel of a website to the cognitive styles of the user (Hauser et al. 2009; 2014). Offline, distribution via Click-and-Collect formats can be tailored to a diverse set of clientele characteristics (Gielens et al. 2021).

In the context of pricing, Rossi et al. (1996) showed early on that even with short purchase histories, target couponing can achieve revenues that are 2.5 times higher than from blanket couponing. Today, this practice is taken to new extremes in the form of Behavior-Based Pricing (BBP). Enabled by technological advances, firms set prices based on customers' purchase histories, and several studies have identified factors and conditions under which BBP can be profitable, including screening out price-sensitive customers (Chen & Zhang 2009), having ex-ante uncertain customers (Jing 2016), and having customers concerned with price fairness (Li & Jain 2016).

Extant research has primarily tried to illustrate the potential gains from customizing every piece of the MM. However, customization can also backfire. On the demand side, customization may (as indicated before) increase the complexity associated with customers' purchasing process, while a debate is emerging about the privacy and ethical concerns associated with anonymous personalization, i.e., without consumers' awareness (see, e.g., Martin and Palmatier 2020). There are strong

[4] Arora et al. (2008) distinguish customization from personalization. However, we use customization as an umbrella term for both, as these terms are often used interchangeably.

global differences, however, in that privacy concerns are higher in cultures with pronounced individualism rather than collectivism (Cho et al. 2009). Finally, personalization in the context of communication has been shown to potentially lead to discriminatory outcomes (Lambrecht & Tucker 2019).

3.3.2. Marketing-mix fragmentation

On the supply side, increased customization tends to go hand in hand with an increasing fragmentation as activities, tools, and channels multiply. Product assortments, for example, traditionally followed the Pareto principle, generating 80% of revenues by 20% of the products. The Internet, however, has given rise to a new underlying pattern, the "long tail", based on which the majority of revenues is generated from a large variety of products with a comparatively low market share (Anderson 2004). Brynjolfsson et al. (2011) find evidence for the long tail, showing that a retailer's online sales are considerably less concentrated than offline, because the Internet allows consumers to effectively search and discover those products that best match their needs. Hence, offering specialized and niche products becomes feasible, which is likely to result in increasingly fragmented product assortments, especially with further technological advancements in search and discovery algorithms such as automated recommender systems (e.g., Kim et al. 2011).

In addition, today's multichannel marketplace has led to a fragmentation in prices, as manufacturers and retailers leverage multichannel price differentiation (Wolk & Ebling 2010). However, prices are not only fragmented across channels but even within channels across time as companies can adjust prices online at virtually no cost (Bergen et al. 2005). Amazon, for example, is estimated to make more than 2.5 million price changes daily (Profitero 2013). This is a reflection of the emergence of dynamic pricing strategies (Gönsch et al. 2009), which enable an almost instant and automated reaction to shifting demand and supply conditions (Gorodnichenko & Talavera 2017), changing competitor prices, current market trends, and other factors such as website traffic (Kannan & Kopalle 2001). For matchmaking platforms like Uber, dynamic pricing plays a crucial role in their entire business model, as it not only ensures that consumers' willingness to pay is skimmed (value capture) but also that a sufficient supply of drivers is available (value creation; Guda & Subramanian 2019).

Also advertising has been subject to drastic fragmentation, not only because the number of advertising channels has grown exponentially, but also because each channel often features various different formats. For example, display ads can have different dimensions and placements, as well as different content formats such as static images, animations, or interactive rich-media formats, each with varying effectiveness and purposes (Bruce et al. 2017). Besides, ads on Instagram need to be formatted differently than on Twitter or Facebook. On YouTube, advertisers can choose between 6-second bumper ads, traditional 20-second ads, and skippable long-format ads that may feature an entire short movie. In-game ads, search engine advertising, and affiliate marketing systems further expand the advertising cosmos (see, e.g., Campbell et al. 2014).[5]

The fragmentation of channels and formats is also accompanied by fragmentation in advertising content and messaging. For example, Todri et al. (2019) show that brands reduce ad annoyance by using different ad creatives in a campaign. In addition, using programmatic buying and programmatic creativity, advertisers can automatically optimize their advertisement creative for the best performance on the fly (Chen et al. 2019). Because of the increase in fragmentation of the media landscape, the media-measurement industry is struggling to develop a commonly accepted "currency" or metric (GfK 2018), while both industry practice and academic research strive for the holy grail of 360^0 measurement and perfect attribution (see also Danaher & van Heerde 2018).

The examples discussed above illustrate an increase in fragmentation of all MM instruments. An increasing number of players are involved in making MM decisions at a higher frequency and finer granularity. This results in an ever-growing variety of data points and data sources. While this offers greater opportunities for companies to understand consumer behavior and needs, it also requires companies to collect, process, and analyze this data appropriately. Yet, leveraging vast amounts of (often unstructured) data, coming from an increasingly fragmented set of sources, and doing so in quasi real-time, continues to be a challenge to many companies (Dekimpe 2020).

3.4. Evolution in the "Where": From developed-market myopia to emerging-market recognition

For decades, the marketing field has been emphasizing developed-market research. For example, while a rich set of empirical generalizations on market-mix elasticities has developed over time, these were derived almost exclusively from developed economies. Bijmolt et al. (2005) compared in this respect the price elasticity across three highly developed regions (Europe, the US, and Japan/Australia/New Zealand), but did not include any elasticity estimates from emerging countries. Similarly, in their meta-analysis on personal-selling elasticities, Albers et al. (2010) only included estimates from the US and Europe, while Sethuraman et al. (2011) meta-analytically tested for differences in advertising elasticity between Europe and the US. Similar to this empirical work, also much of the early construct-development and conceptual work has evolved from a developed-world mindset (Burgess & Steenkamp 2006).

Around the turn of the century, various calls were made to step out of this developed-market myopia (see, e.g., Burgess & Steenkamp 2006; Steenkamp 2005), which all emphasized not only the increasing economic importance of emerging markets but also that established theories and empirical generalizations derived from data gathered in the developed world may

[5] The Interactive Advertising Bureau (IAB) brings some order to this chaos by providing standard definitions and specifications for the various formats (IAB 2020).

not necessarily hold in emerging markets. (Partly) in response to these calls, the last 15 years have seen an increasing number of studies that either (i) discuss at a conceptual level why existing perspectives and insights should be re-considered (see, for example, Sheth 2011 or Roberts et al. 2015), (ii) replicate earlier developed-market studies to assess their generalizability in an emerging-market setting (e.g., Venkatesan et al. 2015), or (iii) focus on some unique challenges that brands/firms face in emerging markets (such as the introduction of new products to emerging markets' lower-income segments in Arunachalam et al. 2020, or the impact of corruption on small-firm IT adoption in Sudhir and Talukdar 2015).

Lately, we have started to see on a more regular basis studies that incorporate a global perspective as a central part of their theorizing, along with a formal empirical contrasting of developed and emerging markets. Kozlenkova et al. (2021), for example, investigate what motivates consumers to participate in the sharing economy. Using Maslow's hierarchy of human needs as a theoretical lens, they consider a broad set of global contingencies, such as societal and cultural factors, that help explain variations in participation levels in the sharing economy across 15 developed and emerging countries. Building on the conceptual discussion in Sheth (2011), Bahadir et al. (2015) explore how differences in resources and infrastructure, sociopolitical governances, market heterogeneity, and unbranded competition help explain differences in MM effectiveness between 14 developed and emerging markets, while Rajavi et al. (2019) theorize on and empirically test the influence of cultural dimensions on the effectiveness of the MM in creating trust towards a brand.

4. Future evolutions in the marketing mix

In this section, we endeavor to arrive at various possible future scenarios related to the "who", "what", "how", and "where" of the MM. To do so, we consider the situation in which the ongoing trends are further amplified, identify countervailing developments emerging in response to these trends by applying reverse thinking, and consider potential contingency factors for each stakeholder group (demand side, supply side, and legislature) that may either accentuate a particular evolution or tip the scale towards one or the other scenario.

The reverse-thinking procedure is well accepted in the new-product development field (see, e.g., Urban & Hauser 1993, p. 148) and was recently advocated by Dekimpe and Geyskens (2019) to detect new trends in rapidly changing times. We contextualize the resulting patterns with relevant developments in the global drivers of these forces to arrive at the discussed future scenarios. In addition, insights into contingency factors are essential to further MM theory development (MacInnis 2011; Yadav 2010) and crucially important for managers to develop "adaptive foresight" (Zeithaml et al. 2006). The market environment in which they operate is a complex dynamic system, and managers should increasingly "unlearn the idea that a single predictive future exists" (Fink et al. 2005, p. 361). Instead, they should become open to "the possibility of multiple futures simultaneously" (Zeithaml et al. 2006, p. 176), with varying probabilities of occurring in different settings, but each requiring a different MM offering to best fit their customers' (or other stakeholders') expectations.

In the following, we first describe for each dimension the two opposing evolutions, discuss contingency factors that have already been studied, and present various research questions worth exploring. In the latter, we will distinguish between questions that focus on implications for consumers (RQ1a-RQ4a), implications for the firm (RQ1b-RQ4b), and research questions pertaining to cross-country heterogeneity (RQ1c-RQc4).

4.1. Increased inter-firm collaboration versus marketing-mix protectionism

We discussed the blurring of the roles and responsibilities of different channel parties from their clearly delineated traditional roles as a major evolution in the MM space. This has been caused and enabled, in great parts, by the increased efficiency brought along by various technology-induced means that have become available to the demand and/or supply side. This blurring of roles has not only been exhibited by firms vertically (across the value-creation chain) but also horizontally via cooperation between competing firms, termed as coopetition (Bengtsson & Kock 2014). Coopetition has typically been studied in the context of new-product development, co-branding, and distribution (Bouncken et al. 2018; Guo & Wu 2018). While in terms of prices, direct coopetition would constitute illegal collusion, some pricing strategies such as price-matching guarantees have been shown to lead to similar effects on price-setting behavior (Wals & Schinkel 2018). As the incentive to benefit from competitors' and channel partners' know-how increases, we could see a further increase in inter-firm cooperation on MM decisions. In contrast, certain firms might be wary of losing their differential advantage due to increased cooperation with other firms, which could lead them to become more protective of their MM decisions instead.

4.1.1. Inter-firm collaboration

Technological advancements have enabled firms to benefit increasingly from each other's know-how. As means to communicate this know-how become more efficient and scalable, one would expect to see even more cooperation between firms. Here, blockchain technology may play a crucial role as it is able to authenticate certain product attributes easily and reliably, such as country of origin, organic, or fair-trade (Iyengar and Woods 2020). This can help firms streamline their supply chains across one another, attribute costs and revenues appropriately, reduce consumer uncertainty, and build trust. As such, blockchain technology has the potential to make inter-firm partnerships more viable by removing middlemen, changing the nature of transactions, and further shifting traditional roles.

As these efficiencies increase further, digital platforms in the future might make it viable for not only two or three but several different firms to collaborate on their product offerings. These "coopetition marketplaces" could, for example, allow competing firms to collaborate by creating modular products in partnership together. Competing firms are known to enter into capacity-sharing agreements to manage their supply chains when facing stochastic demand (Guo & Wu 2018). Digital marketplaces of the future could allow for real-time capacity-sharing agreements between multiple firms. Such platforms could also make cooperative advertising strategies (Nagler 2006) more scalable and feasible.

Another important driver of increased cooperation between firms could be the growing focus on sustainability. Fueled by rising climate-related concerns, there has been a global shift in consumer consciousness as well as government policies towards promoting sustainability, which has forced firms to trade off profits against the social good (Rust 2020). One avenue to maintain profitability for firms is to cooperate with other firms at different points in the value-creation chain (Nelson 2017). Tian et al. (2019) develop a theoretical model to explore cooperation between multiple differentiated firms against the backdrop of legislation holding them responsible for the recycling of their products. The authors find that cooperative (market-based) recycling can be a stable outcome under less intense competition. In another example, dominant retailers such as Walmart have started using their market power to coerce suppliers into adopting cleaner supply chains. Gielens et al. (2018) show that suppliers with strong marketing characteristics such as brand equity and environmental reputation can benefit from such an arrangement with the retailers. As such, a further intensifying focus on sustainability can also lead to more cooperation between firms in the future.

4.1.2. Marketing-mix protectionism

While new technologies and concerns for sustainability might increase inter-firm collaboration, firms might also end up losing differentiation because of these collaborations. As such, it might create incentives for firms to retain their differentiation by protecting their MM decisions. In addition, firms engaging in MM protectionism might be able to better control their brand image, pricing, and communication with consumers. Furthermore, advancements in technology might make it easier for firms to protect their proprietary information. Again, blockchain technology may be relevant to this development, as it can enable secure sharing of confidential business data while making a digital trail of transactions, which could be audited in case of a data breach (Harvey et al. 2018).

Another important driver towards more protectionism among firms may be the increase in consumer privacy concerns. For example, companies like Google and Apple have announced plans of phasing out third-party cookies in their browsers in response to increasing customer-privacy concerns. These cookie bans could make ad attribution more difficult for third parties by impeding their ability to track consumers across different websites resulting in walled gardens in which only the platform owners or exclusive partners can access, use, and verify advertising-related data (Porter 2021).

Regulators might also play a role in promoting inter-firm protectionism. Governments are enforcing more stringent privacy and data-sharing laws that might make certain collaborations infeasible or illegal. For example, recently, the messaging service WhatsApp changed its privacy policy to share data with its parent Facebook but was unable to do so in the European Region due to the GDPR (Kumar 2021). As cooperation between competing firms increases, it might also increase the risk of collusion between firms. As such, regulators might enforce stricter anti-trust laws, which could again lead to more inter-firm protectionism.

4.1.3. Contingencies

Platforms can be a strong driver of inter-firm collaboration when different brands and stakeholders jointly create complementary value for consumers by interacting through platforms. Nike and Apple, for example, collaborate as part of the Apple Watch NikePlus, while Coca-Cola collaborates with the Bitburger and Krombacher groups, two major German breweries, to form a B2B platform targeted at gastronomists (Ramaswamy & Ozcan 2018; Wichmann et al. 2021). Not surprisingly, an important contingency factor for the future development of the MM towards greater inter-firm collaboration versus protectionism will be consumers' convenience focus. A greater desire for a convenient solution that bundles an otherwise fragmented offering favors platform business models and, thus, inter-firm collaboration (Gielens & Steenkamp 2019; Parker et al. 2016). In addition, consumers' tendency to multi-home (i.e., to use multiple different platforms) will determine how concentrated the platform market will be. A lower tendency to multi-home favors larger platforms requiring greater MM collaboration among firms (Barua & Mukherjee 2021). In terms of the supply side, contingency factors that foster the emergence of platforms are fragmented markets with little concentration and strong network effects (Parker et al. 2016). On the legislative side, data-sharing regulations such as the European GDPR and rulings on platform monopolies can undermine companies' collaboration efforts and force them into MM protectionism (OECD 2020). As such, MM inter-firm collaboration may be more likely to emerge in countries and cultures with lower privacy concerns.

We present future research opportunities along the collaboration versus protectionism dichotomy in Table 2 (RQ1a-c).

4.2. Added complexity versus increased simplicity

We identified an extended and more integrated view on the MM instruments as another major evolution in the MM space. This has been caused, in part, by the novel means and business models available to firms and the empowerment of consumers. The blurring of instruments has also been brought about by the blurring of the roles of different channel parties in the MM that would traditionally have focused on only a subset of these instruments.

Table 2
Contingencies and research questions for the future of the marketing mix.

Dichotomy	Contingencies	Future research questions
Increasing inter-firm collaboration versus MM protectionism	*Demand side*: Convenience focus, loyalty / tendency to multi-home *Supply side*: (Two-sided) Market concentration, strength of network effects, installed base of consumers, public vs. private companies *Legislature*: Platform monopoly rulings, data-sharing legislation	**RQ1a: Implications for consumers.** How do consumers perceive collaborative MM actions? Do customers prefer to be informed about MM collaborations? Does this apply to all MM instruments? How will increasing protectionism/collaboration in the MM affect consumer welfare? With a growing maturity of the platform economy, will consumers become less loyal and increase multi-homing? Does this apply to all consumers? To all categories? How are brands collaborating through platforms perceived by consumers? How do consumer-brand relationships evolve in more collaborative (protectionist) settings? **RQ1b: Implications for firms.** When do (should) firms/brands enter into a collaborative relationship a) vertically or b) horizontally with other channel parties? Is there an optimal level of vertical/horizontal collaboration that maximizes stakeholder welfare? Given public companies' greater transparency, are they more likely to engage in MM collaboration than private companies? Should companies with a smaller installed base move first into platforms to preemptively defend against companies with a larger installed base? How should companies that run a platform balance openness towards third parties and control over the value creation and monetization? **RQ1c: Cross-country heterogeneity.** How do these developments vary across countries with varying levels of regulatory quality? What role do cultural differences play in terms of consumers' perceptions of inter-firm collaboration?
Re-configuring and extending the MM versus Back to basics: Simplicity, consistency, and control	*Demand side*: Product category involvement (commoditization), preference for instrumentality, generalized trust, service and solution orientation *Supply side*: Organizational hierarchies and departmentalization, corporate culture, cost-leadership vs. differentiation, market concentration, profit margins *Legislature*: Data-storage legislation, right-to-repair legislation	**RQ2a: Implications for consumers.** Which incentives will encourage customers to share their data? Which incentives work best for what consumers? Which MM instruments are best suited to induce consumers' trust in the brand? How can brands leverage the MM to build strong relationships even in instrumental consumption scenarios? For which MM instrument is consistency and control most valued by consumers? How will consumers' right-to-repair change the customer journey? **RQ2b: Implications for firms.** How should the MM be departmentalized? Which industries and firms would profit the most from a reconfiguration of departments involved in setting the MM? Should firms integrate all MM instruments or should they retain greater consistency and control over some? How can firms address and leverage the "repair stage" through MM actions? **RQ2c: Cross-country heterogeneity.** What types of legislation promotes effective but safe use of customer data? How should multi-national companies deal with differing legislation in the various markets that they serve?
Automation, hyper-targeting, and robotics versus A renewed appreciation of touch and feel	*Demand side*: Consumption context, familiarity with AI, appreciation for human-provided services, demographics, personal and societal attitudes towards privacy, innovations *Supply side*: Market concentration, profit margins, complexity and legal sensitivity of interactions, strategic positioning (quality vs. cost, mass vs. niche), product category (hedonic vs. utilitarian), organizational hierarchies and departmentalization *Legislature*: Legislation on privacy and data-storage, -usage, and quality, AI regulations	**RQ3a: Implications for consumers.** Which consumer types are most open (reluctant) to adopt new technologies in the MM? How does this vary by the consumption and purchases context? Which type of data is perceived as private/sensitive? And which MM instruments are particularly susceptible to consumers' privacy concerns? Which target groups are especially vulnerable to unintended or exploitative AI-supported MM outcomes? **RQ3b: Implications for firms.** How can firms best balance the costs and benefits of new MM technologies to both the own organization and its customers? How should potential consumer benefits be communicated for maximum impact? How to balance human and artificial intelligence in the MM, in particular for luxury/premium brands or when interactions are complex? How to balance reliance on AI with overreliance? How to establish AI quality control to mitigate risks of discriminatory or otherwise harmful MM outcomes for the company or its stakeholders? How to deploy AI in data-deprived market segments? How to design effective MM strategies that conform to stricter privacy, data-storage, and AI legislation? What are the opportunity costs of stricter

Table 2 (*continued*)

Dichotomy	Contingencies	Future research questions
		regulations? How can companies collaborate with public institutions to make AI more reliable and safer for all target groups? Which industries and consumption contexts are especially vulnerable to unintended or exploitative AI-supported MM outcomes? **RQ3c: Cross-country heterogeneity.** How does the willingness to adopt AI and the need for human touch vary across cultures, with the level of economic development, or with other societal factors? And how do cross-country differences regarding privacy concerns and trust in institutions and regulations play into that?
Hyper-regionalized MM strategies versus Globally uniform MM strategies	*Demand side*: Degree of Nationalism/regionalism vs. globalism, trust in global vs. local brands, sustainability concerns, income inequality, urbanism, cultural relevance of status and consumerism *Supply side*: Global organizational structures, ethnic diversity in (senior) staff, country of origin, competitiveness and dynamism in the market *Legislation*: Requirements to have local offices/production, trade openness	**RQ4a: Implications for consumers.** How does consumers' appreciation for local versus global brands vary over time and in relation to changing economic and societal conditions? For which MM instruments and actions do consumers appreciate a hyper-regionalized strategy and when do they reject it? How does their perception of brands influence this? When do hyper-regionalized strategies become stale and inauthentic? **RQ4b: Implications for firms.** Which MM instruments should be part of a a) global integration, b) local adaptation, or c) worldwide learning strategy? How does this vary with a) the type of product, b) the brands' country of origin (especially developed vs. emerging economies)? In what categories are global (local) brands most likely to prosper? When are hybridized brands called for? How to cope with or leverage idiosyncrasies in emerging markets (e.g. unorganized retailers/intermediaries, limited infrastructure) in the MM? Which practices and lessons-learned can be adapted to developed markets (e.g. last-mile distribution to remote areas, changes due to growing income inequality or the rise of metropolises)? **RQ4c: Cross-country heterogeneity.** Should we (can we) move past political boarders towards a differentiation by cultural and socioeconomic regions? For what MM instruments? What is the role of, respectively, economic, cultural and geographic distance between home and target markets?

As this development intensifies, one could anticipate the emergence of radically new but more relevant MM instruments and strategies in the future motivated by promises of greater MM effectiveness. In contrast, consumers could also crave simplicity and uniformity in their consumption experience, while firms might want to have greater control and reduce costs (Rust 2020). This could lead firms to revert to a more traditional interpretation of MM instruments and simplified strategies.

4.2.1. Re-configuring and extending the marketing mix

The traditional MM instruments have proven to be a useful framework for more traditional products. However, as consumer experience is increasingly becoming digital and socially connected, the traditional instruments might not include all the important levers a firm must (can) utilize to execute a marketing plan. The 4Ps have been criticized as being internally oriented, lacking in consumer interactivity, and lacking in strategic elements, and several papers have suggested reorganizing or extending the set of MM instruments to address these limitations (see Constantinides 2006 for a review).

As consumers are becoming more empowered, rethinking the marketing levers in terms of other constructs, such as customer journeys (Lemon & Verhoef 2016), might be more beneficial to firms when formulating a marketing plan. Attending to customer journeys would naturally involve thinking about multiple business functions and relationships with external firms to deliver a positive experience to consumers at the various touchpoints. As such, future marketing departments may be structured around the various customer journey stages rather than the different MM instruments, thus, facilitating a dissolution of MM silos and allowing a completely integrated view on MM instruments.

The future will also bring about new MM instruments and a changed perception of existing instruments. The ongoing digitization of offerings will make products increasingly experiential rather than material, with prices set for access rather than ownership and consumption becoming collective (Morewedge et al. 2021), thus changing the very nature of many traditional MM instruments. Similarly, AI advances have led to "mobile predictions" being proposed as an additional MM instrument, leveraging data from mobile devices to predict consumers' stage of the purchase path or current needs (Tong et al. 2020).

Fueled by sustainability concerns as well as pandemic-related changes in consumer behavior, 3D printing technology may further rise in popularity. The widespread affordability and accessibility of 3D printers provide an opportunity for firms to

start selling and distributing digital designs that can be manufactured at home to reduce customers' exposure and their carbon footprint (Rindfleisch & Kim 2020). As such, the traditional product instrument and its understanding could change drastically, requiring practitioners and academics to rethink the MM instrument. Similarly, several blockchain services have emerged that may change companies' approach to price and communication. Brave Browser, Blockstack, MadNetwork, BIGtoken, and Killi, for example, are allowing consumers to own, and in certain cases, monetize, personal data by sharing their data or viewing targeted advertisements (Newman 2019; Walker 2018). As a result, firms might have to consider another marketing instrument in the form of payments to potential consumers for consuming their advertisement media.

4.2.2. Going back to the basics: Simplicity, consistency, and control

In today's world of ever-changing prices, wider assortments, ubiquitous advertising, and purchase points, an increasing group of consumers has been shown to put value on simplicity and consistency. A stream of research has shown adverse effects of larger assortment sizes on consumer experience and even post-purchase satisfaction (see Diehl & Poynor 2010). Similarly, consumers' anti-advertisement sentiments are growing due to substantial advertising clutter (Hammer et al. 2009), and are resulting in advertising avoidance, e.g., through ad-blocking software (Shiller et al. 2018). On the pricing front, Chen and Cui (2012) show that consumers' concern for fairness can drive firms to adopt uniform pricing across different branded variants in various product categories. Also, growing privacy concerns and regulations could create incentives for firms to commit to simpler MM strategies in order to improve transparency with their consumers, and strengthen consumer trust. In addition, simplicity and uniformity in MM instruments might afford greater control to firms on their marketing strategies and reduce costs.

4.2.3. Contingencies

Product categories that have high consumer involvement and that are characterized by a strong consumer desire to build lasting relationships with brands lend themselves better to a re-configured and extended MM. By accompanying consumers over their lifetime and delivering suitable value at each stage, firms may be able to reduce churn and increase brand attachment (Lemon & Verhoef 2016; Siebert et al. 2020). However, consumers prefer instrumentality in some product categories. That is, they do not seek close relationships nor a strong inclusion into the value creation process, but rather want to be served value (Bardhi & Eckhardt 2017). This is likely to foster a greater simplicity in the MM for such product categories. On the supply side, highly dynamic markets and companies that follow a differentiation strategy require marketing agility, which in turn necessitates a highly integrated, mutable, and extended marketing mix. This is further enabled through corporate contingency factors such as flat hierarchies, strong diversity, and a trial-and-error culture (Kalaignanam et al. 2021; Lewnes 2021). In contrast, when companies are competing in a rather stable marketplace and follow a cost-leadership strategy, their MM focus is more likely to revert to simplicity, consistency, and control (Homburg et al. 2020). Regarding legislature, rulings on limits to data storage may inhibit an indefinite extension of MM measures over time, while right-to-repair legislature as currently discussed in the EU and the US may spur interesting opportunities for companies to expand MM actions long after the purchase.

Future research opportunities along the complexity versus simplicity dichotomy are presented in Table 2 (RQ2a-c).

4.3. Increased automation versus the human touch

We discussed the proliferation of customization and an increase in fragmentation of the MM instruments as another major evolution in MM space. The abundance of data on consumers, new means available on the supply side, and the interconnectedness of consumers and suppliers have been major drivers of this evolution. With further advancements in technology, we could anticipate an even stronger shift towards customization and fragmentation with automated real-time changes in the MM. In contrast, as automation and AI-based technologies gain prevalence, consumers may long for the human touch in their purchase and consumption experience, creating incentives for companies to go back to more basic MM uses.

4.3.1. Automation, hyper-targeting, and robotics

Advancements in technology have induced firms to implement several technology-driven MM strategies such as hyper-targeting, real-time personalization, programmatic buying, and robot-driven fulfilment. As AI-related capabilities continue to evolve and improve and the penetration of robots and IoT-enabled devices increases globally, firms would have fewer blind spots and more touchpoints in customer journeys. As a result, one would expect further automation in a firm's implementation of its MM instruments and related decisions.

AI-related technologies can help firms be more proactive in their MM decisions in the future. For example, highly accurate predictions regarding consumer preferences can allow retailers to follow a shipping-then-shopping model (Agrawal et al. 2017), where firms would deliver products to consumers before they place an order allowing for subsequent returns. Current MM functions could also benefit from AI-based assistive technologies. For example, a firm's sales personnel could use AI in the future to read their customers' facial expressions or analyse the tone of their voice in order to better promote or negotiate the price of their offerings (Davenport et al. 2020).

Not only are firms using automation to target consumers with personalized MM instruments, they also use AI to make recommendations and decisions for them. For example, Amazon uses machine learning to make real-time personalized product recommendations, and Spotify uses AI to create playlists for their users. Increasingly, consumers are relying on voice-

based AI assistants to make shopping decisions as well (Dellaert et al. 2020). As such, MM strategies of the future might also have to consider how to market products to other AI-based agents that are making decisions for the end consumers (Puntoni et al. 2021).

4.3.2. A renewed appreciation of touch and feel

Research suggests that automation may have a dark side as well (De Cremer et al. 2017; Puntoni et al. 2021). Failure of automation and robotics can potentially lead to anger, confusion, distrust, and vendor and customer dissatisfaction. In a bid to gain and maintain consumer trust, more and more firms look to adopt a balanced approach between hyper-automation and no-automation to satisfy each stakeholder in the process.

Consistent with consumers' need for touch and feel, *customer experience* has become the new mantra to many manufacturers and retailers. According to a recent customer intelligence study, customer experience is expected soon to overtake price and product as a key brand differentiator. Recognizing this trend, Sainsbury recently entered a partnership with Unilever's Ben & Jerry to introduce ice cream parlors in some of its UK stores (PlanetRetail RNG 2018). Nike, in turn, opened a new five-story store in New York City that is as much a place to play (with mini basketball courts, treadmills and a small soccer enclosure) as it is to shop (with coaches helping potential customers to develop personalized sport shoes; KPMG 2018).

Consumers' need and appreciation for the physical experience are therefore expected to persist despite some retailer's adoption of automation, robotics, and related technologies. Reinartz et al. (2019) identify several new sources of value creation germinating from these newer technologies and argue that depending on the importance of these sources in different purchase situations, physical retailing will continue to hold a prominent place.

4.3.3. Contingencies

Grewal et al. (2017) discuss how new technologies along with big data/predictive analytics will cause a quantum leap in marketers' understanding of consumers' shopping process. At the same time, concerns are increasingly raised that firms that invest heavily in these capabilities might face negative returns on their investments (Verhoef et al. 2016). Because of that, there is a growing recognition that neither all technologies will be equally relevant to all firms (Hoyer et al. 2020), nor that all consumers will be equally receptive to new technologies (Luo et al. 2019), or for all shopping occasions (Miao et al. 2021).

Recent studies identify several contingency factors on the demand side that determine whether consumers prefer automation over human (inter-) actions, and the type of AI they prefer. If, for example, a particular consumption experience has a high relevance for consumers' identity, they tend to reject automation (Leung et al. 2018). Also, Miao et al. (2021) argue that while simple, low-risk consumption contexts lend themselves to AI with low sophistication (e.g., basic customer service), they can be detrimental in more complex scenarios (e.g., financial decision making). Interestingly, non-human-like but sophisticated AI can be particularly effective in consumption contexts in which consumers share sensitive personal information (e.g., health). Also, since consumers' direct encounters with these new technologies are still rare, their perceptions may change over time (Huang & Rust 2021b; Luo et al. 2019). Similar to consumers' continued and growing appreciation for handmade products (Fuchs et al. 2015), human interactions (probably supported through AI) may evolve into premium experiences reserved to hedonic offerings or to premium and luxury brands.

In line with the demand-side, supply-side contingencies relate to the product category a company is operating in (hedonic versus utilitarian) and its positioning and target group (cost-leadership and mass-market orientation versus premium and luxury segments). In addition, the high costs of a full-fledged automation and technology adoption favor larger companies with higher profit margins: their higher available budgets allow them to hire talent, develop their own talent (possibly supplemented with external consultants), or acquire companies specialized in the field (e.g., Walmart acquiring jet.com). However, the usually hierarchical structures and strong departmentalization of larger companies may stand in the way of necessary interdisciplinary and cross-functional information exchange (Kumar et al. 2019).

On the legislative side, data privacy, usage, and storage regulations will influence to what degree and in which contexts AI applications can be implemented (see, e.g., European Commission 2021). In addition, future legislation may impose quality standards on the data being used for AI applications to reduce the potential for biases that tend to discriminate against minorities and, thus, may undermine fundamental rights (FRA 2019).

Future research opportunities along the automation versus human touch dichotomy are presented in Table 2 (RQ3a-c).

4.4. Local adaptation versus global uniformity

We identified the shift from developed-market myopia to an emerging-market recognition as the fourth important evolution in the MM space. The economic growth opportunities in emerging markets, increased availability of global data, and a global consumer interconnectedness have all contributed to this evolution. Regulations on foreign investments play an important moderating role in this. As firms become more global and countries open up to foreign investments, access to granular local data and know-how might allow global firms to better understand local preferences, making hyper-regionalized strategies more attractive and feasible. In contrast, as consumers become more global and interconnected, fairness and parity concerns might start playing an important role in determining firms' global strategies, creating incentives for firms to strive towards building a more globally uniform strategy for certain products.

4.4.1. Hyper-regionalized marketing-mix strategies

While firms and academics first recognized the (potentially) differential effect of MM elements on firm performance between developed and emerging markets, they are increasingly exploring the heterogeneity *among* different emerging markets. As firms become more globalized, their know-how of these differences, along with their ability to account for them in the design and implementation of their MM, is increasing. Moreover, there is a growing recognition of the significant variation *within* these countries across different socioeconomic and/or geopolitical sub-units (such as states or provinces, or between rural and more urban regions; Roberts et al. 2015; Sudhir et al. 2015). As this kind of within-country variation tends to be higher in emerging than in developed markets, the potential for (hyper)-regionalized strategies becomes more pronounced in those markets. In this respect, we see and expect more research on differences in MM deployment and/or responsiveness between the growing middle class in emerging markets and the still very substantial bottom of the pyramid (see, e.g., Narayan et al. 2015; Arunachalam et al. 2019) or between organized and unstructured retailing (e.g., Jerath et al. 2016).

In addition to *supply*-side factors contributing to more regionalized MM strategies, the *demand* for locally-grown and -produced products, as well as domestic brands, has been rising consistently over the past few years (Gupta & Wright 2019; VuMA 2019). The dominance of global brands is increasingly being challenged as consumers are becoming more concerned with the negative effects of globalization, cultural homogenization, and the deterioration of local businesses (Steenkamp 2019a, b). The recent emergence of stronger national tendencies in many countries around the world (Rust 2020), as well as a more widespread concern for climate-related issues, have been exerting growing pressure on global brands. This development has also reached emerging markets, in which the dominance of global over local brands has traditionally been especially strong (Gupta & Wright 2019). Hence, as consumers increasingly focus their consumption on domestic and regional manufacturers and retailers, local brands are capitalizing on this trend,[6] while global brands have had to adjust their MM strategies to local conditions to defend their market share. As a consequence, global brands may have to increasingly consider the acquisition of local brands or the use of localized brand names and MM measures (Gupta & Wright 2019; Steenkamp 2019a, b).

4.4.2. Globally uniform marketing-mix strategies

While there is (as discussed before) a growing recognition of cross-sectional differences in consumer preferences and responsiveness to the MM—both between and within countries—there is also a perception that many of the underlying drivers that traditionally helped explain these differences are becoming more similar (i.e., converging) over time, which may lead to a re-emergence of more uniform MM strategies. For example, research in economics has shown a gradual convergence in countries' per-capita income (Barro 2015), foreign direct investment (Kottardi & Thomakos 2007), research and development (Jungmittag 2006), and prices (Goldberg & Verboven 2005). Reduced differences in measures of trade, per capita income, and price, in turn, are among the mechanisms through which consumer preferences for differentiated goods become more similar across different countries (see e.g., Silver 2010).

Also, there are several developments on the supply side that may lead to a growing potential for a renewed MM uniformity across markets. For example, the growing internationalization of many retailers (especially of the discount channel) is expected to lead to a convergence in PL acceptance, where lagging countries are catching up to the level observed in some European countries (Gielens et al. 2021). Global digital platforms, in turn, introduce more uniformity in the assortments consumers around the world can choose from (Verhoef & Bijmolt 2019), and may also lead to more price uniformity (Gielens & Steenkamp 2019), while the increased use of multi-ethnic advertising could make standardized global (or cross-regional) advertising strategies more viable (Strebinger et al. 2018).

4.4.3. Contingencies

Rather than assuming that "everything is the same" (which would make marketing theories, marketing models, and marketing-effectiveness estimates context-free), or that "everything is unique" (which would preclude cross-context learning), contingency studies assess how differences in marketing-mix deployment and effectiveness can be systematically and predictably linked to observable demand- and supply-related drivers (creating a potential for worldwide learning; Steenkamp and Geyskens 2014). For example, especially in highly dynamic markets, the cost advantages of a more standardized marketing-mix deployment tend to outweigh the revenue advantages from a more locally tailored offering (Grewal et al. 2008). Steenkamp and Geyskens (2014), in turn, identified a host of economic, institutional, and cultural factors that moderate the attractiveness of global-integration, local-adaptation and world-wide learning strategies in the PL/national brand battle.

Especially in cross-national studies, researchers are increasingly confronted with a "paradox of richness", where multiple indicators could be used for a wide variety of country-level contingency categories, that all could have a moderating impact (Dekimpe and Geyskens, 2021). Absent an over-arching conceptual framework applicable to all settings, some authors have advised to try out and include all (potentially) relevant variables, irrespective of their collinearity or VIFs (Lindner et al. 2020, p. 294). Others opt to start with a theoretical lens to limit that set from the outset (e.g., Kozlenkova et al. 2021). Both approaches (more TE vs. more ET; Bass 1995) have been found useful to arrive at novel (and actionable) insights.

[6] A similar observation can be made in the place dimension, where smaller-scale and close-by convenience stores have become one of the fastest-growing retail formats (Deloitte 2017).

Further research opportunities along the local adaptation versus global uniformity dichotomy are presented in Table 2 (RQ4a-c).

5. Conclusion

The MM, its instruments, and its role in the value-creation process have evolved substantially over the past decades. Technological advances have enabled companies to increasingly customize each of the MM instruments to individual consumers (or ever smaller segments) and have led to an increased fragmentation in terms of a larger number of players making marketing decisions for a larger number of products and services at a higher frequency and finer granularity. These developments have presented firms with increasing opportunities for value creation and appropriation. At the same time, they have resulted in ever-growing complexities in formulating and executing one's MM strategies, especially since various socioeconomic and geopolitical changes have increased the expectations of (or requirements imposed by) various other stakeholders.

While initially several of the ensuing changes were fairly "monotonic" (more customization, more fragmentation, . . .), we lately observe two opposing developments for each of the four dimensions along which we structured our exposition: more versus less cooperation, more versus less complexity, more versus less automation, and more versus less local adaptation. While previous research has already hinted at a number of potential contingency factors, more research along those lines is clearly called for. Building on the ideas developed throughout the manuscript, we presented in Table 2 an extensive (though by no means exhaustive) set of more concrete research questions that, we hope, will advance our understanding on the future workings of the marketing mix.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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