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POST-PANDEMIC COMPANIES AND CUSTOMERS' DIGITAL READINESS: A DIAGNOSTIC ANALYSIS BASED ON THE MARKETING 5.0 APPROACH

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ABSTRACT

Objective: The aim of this study was to investigate the impacts of the pandemic on the digital readiness of companies and customers, based on the proposal suggested in Marketing 5.0. **Method:** A structured survey was conducted with 62 companies from the financial services (15), high-tech (6), automotive (8), retailing (15), healthcare (8), and hospitality industries (10). **Main Results:** Data analysis led to the development of perceptual maps showing digital readiness in two axes: company digital readiness and customer digital readiness. High-tech and financial services were in the omni quadrant (digitalized companies and customers), and retailing was in the onward quadrant (companies more digitalized than customers). Despite being in the omni quadrant, the automotive industry was close to the proposed organic model (customers more digitalized than companies). On the other hand, the healthcare and hospitality industries were further away from the proposal, which was the origin quadrant (customers and companies with little digitalization). **Relevance / Originality:** The article presents a simple digital readiness diagnostic model that can be easily applied and replicated by different types of companies. By applying it, companies can direct better efforts where they most need to develop digitally. **Theoretical / Managerial Contributions:** The article presents the digital advances that 62 companies from 6 different sectors achieved after the effects of the pandemic and directs management improvement actions for companies in these sectors, both for their structure and for their relationship with customers.

Keywords: Digital Readiness, Digitalization, Digital Transformation, Marketing 5.0, Pandemic.

PRONTIDÃO DIGITAL DE EMPRESAS E CLIENTES PÓS-PANDEMIA: UMA ANÁLISE DIAGNÓSTICA COM BASE NO MODELO *MARKETING 5.0*

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RESUMO

Objetivo: O objetivo deste estudo foi investigar os impactos da pandemia na prontidão digital das empresas e dos clientes, com base na proposta sugerida no livro Marketing *5.0*. **Método:** Foi realizada uma pesquisa estruturada com 62 empresas, dos setores de serviços financeiros (15), alta tecnologia (6), automotivo (8), varejo (15), saúde (8) e hospitalidade (10). **Principais Resultados:** A análise dos dados permitiu a elaboração de mapas perceptuais que mostram a prontidão digital em dois eixos: prontidão digital da empresa e prontidão digital do cliente. Os setores de alta tecnologia e serviços financeiros estavam no quadrante *omni* (empresas e clientes digitalizados), enquanto o varejo estava no quadrante *onward* (empresas mais digitalizadas que os clientes). Apesar de estar no quadrante *omni*, a indústria automotiva estava próxima do modelo *organic* (clientes mais digitalizados que as empresas). Em contrapartida, os setores de saúde e hospitalidade estavam mais distantes da proposta, no quadrante *origin* (clientes e empresas com baixa digitalização). **Relevância / Originalidade:** O artigo apresenta um modelo simples de diagnóstico de prontidão digital que pode ser facilmente aplicado e replicado por diferentes tipos de empresas. Ao utilizá-lo, as empresas podem direcionar melhor seus esforços nos pontos em que mais precisam se desenvolver digitalmente. **Contribuições Teóricas / Metodológicas:** O artigo apresenta os avanços digitais que 62 empresas de seis setores diferentes alcançaram após os efeitos da pandemia e direciona ações de melhoria gerencial para essas empresas, tanto em sua estrutura quanto no relacionamento com os clientes.

Palavras-chave: Prontidão Digital, Digitalização, Transformação Digital, *Marketing* 5.0, Pandemia.

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INTRODUCTION

The pandemic caused by COVID-19 has impacted various sectors of the economy and their respective companies and customers in different ways. From the companies' point of view, some have benefited from the critical health conditions, such as pharmacies and laboratories. Others, such as hotels and schools, have been completely or partially paralyzed. Many organizations had to adapt to remote working, and others had to include the delivery system as a core activity (Campos et al., 2021). Those with a better digital structure or a greater propensity to embrace digital tools had the impact on their operations minimized or even managed to exploit market opportunities.

As a result, the pandemic has accelerated the process of digital transformation in many industries and companies (Tolfo & Santos, 2022). Companies have had to invest quickly in adopting remote service strategies to meet new consumer demands (Araújo, 2022). Online shopping, which was already a reality, was intensified. Delivery apps, already installed on many people's smartphones, were downloaded even more by those who didn't already have them. Fintechs, which were still a source of mistrust for some customers, became valued options for financial transactions. Online meeting platforms have become inseparable companions for executives. Classes had to be adapted at all different levels. Even remote medical care has become an option for some specialties. The use of digital marketing strategies for customer service and value delivery has become more essential than ever before (Vieira et al., 2023).

Each industry has been impacted in its own way, depending on its particular characteristics (Nassif et al., 2020). Companies providing services tended to suffer greater impacts than those selling goods, due to the very principle of inseparability, which requires face-to-face contact between the provider and the consumer. Companies in the B2C (business-to-consumer) market tended to suffer greater impacts than those in the B2B (business-to-business) market, as they were forced to comply with local, state, and federal regulations prohibiting crowding, especially in environments such as physical retail. Companies whose target audiences were more resistant to the use of technology suffered greater impacts than those whose target audiences were more open to the use of technology.

On the other hand, from the perspective of customers, there was a process of learning about the emotional and social benefits promoted by digital interactions (Imschloss & Schwemmle, 2023). During the pandemic, individuals had to change much of their physical routines to digital equivalents, as it was the only option available. The Euromonitor report published at the end of 2020 presents several data points identifying this change in behavior. For example, there was an increase of at least 10 percent in all online purchasing categories from January to April 2020. This increase occurred not only for Millennials and Generation Z, but also for baby boomers (Evans, 2020).

There was no doubt that the digital behavior of different types of customers would expand, but the main question is how these habits would be perpetuated after the pandemic. Sheth (2020) argued that during the pandemic, consumers found more convenient and accessible alternatives, which contributed to the maintenance of digital behavior. Examples include streaming, ordering platforms, and home–office work.

In this context, according to Kotler et al. (2021), it is possible to classify this diversification of the pandemic's impact on industries and companies from two perspectives: companies' digital readiness (high vs. low) and customers' digital readiness (high vs. low). Companies' digital readiness relates to their ability to consistently offer digital interactions and solutions to their customers, such as communication, sales, and relationship channels. Customers' digital readiness is related to people's interest and propensity to embrace the digitalization available, involving appreciation of digital services and preference for digital channels and products.

In their book *Marketing 5.0*, Kotler et al. (2021) suggested a categorization of six sectors of the economy in relation to the concept of digital readiness. After a few years, it is important to evaluate the changes caused by the pandemic in the acceleration of digitalization in these sectors. Thus, considering the different impacts that companies and customers suffered from the pandemic and considering the proposed framework that assesses the digital readiness of companies (high vs. low) and customers (high vs. low), this article aims to investigate the impacts of the pandemic on the digital readiness of companies and customers, based on the proposal suggested by Kotler et al. (2021) in *Marketing 5.0*.

Despite the managerial nature of the framework proposed by Kotler et al. (2021), this study aims to advance theoretically by applying and analyzing their digital readiness model in the post-pandemic context of SMEs in an emerging economy. This approach not only tests the model's adaptability across different sectors and regions but also critically examines its quadrant structure through comparative results. By doing so, we contribute to bridging the gap between managerial insights and academic literature in digital transformation and marketing strategy.

Although some studies regarding Marketing 5.0 have already been published (Alanazi, 2022; Araújo, 2022; Draganov et al., 2018; Gooljar et al., 2024; Khan & Kataria, 2021; Tolfo & Santos, 2022; Yagnik et al., 2020), none of them explored a managerial perspective like our present proposal. Furthermore, the method of this study is easy to apply among micro and small businesses, which has the advantage of being replicable, especially for entrepreneurs with lower literacy. This proposal is an applied paper. Although this study is based on data from Brazil, it contributes to the internationalization of marketing knowledge by examining how globally proposed models can be applied and adapted in emerging economies.

Based on literature and the post-pandemic context, we propose the following research question: *How has the COVID-19 pandemic affected the digital readiness of companies and customers?* To deepen this analysis, we also explore differences across industries and suggest possible next steps for digital evolution in each sector. Our research approached 62 companies within the 6 proposed sectors: financial services (15), high-tech (6), automotive (8), retailing (15), healthcare (8), and hospitality (10). As such, the article's results focus mainly on managerial contributions, with suggestions for continuing the digitization process for companies and their respective clients, in each industry surveyed. This study adopts a structured survey approach to explore the digital readiness of companies and customers based on the Kotler et al. (2021) framework.

1. THEORETICAL BACKGROUND

1.1. Digital readiness

The digital readiness of companies can be defined as their ability to digitize (Lassnig et al., 2022). Kotler et al. (2021) assessed companies' digital readiness (high vs. low) and customers' digital readiness (high vs. low), characterizing the sector. Companies' digital readiness is related to their ability to consistently offer digital interactions and solutions to their customers, such as communication, sales, and relationship channels. Customers' digital readiness is related to people's interest and propensity to embrace the digitalization available, involving appreciation of digital services and preference for digital channels and products.

1.1.1. Digital readiness for companies

Companies' digital readiness can be assessed based on three main elements: (a) the digital experience presented to their customers, (b) their internal digital infrastructure, and (c) their digital organizational culture. The digital customer experience involves whether the company can interact for a large part of the journey in digital format, whether the digital touchpoints are already established, and whether the company can generate revenue from digital products and services (Nasution et al., 2018).

Digital infrastructure consists of the company's ability to collect, store, and manage large volumes of customer data, whether the company has digitalized internal processes, whether there have been adaptations in the business model due to its digitalization, and whether physical assets, such as equipment and automobiles, are already digitally connected to each other (Hansen & Bøgh, 2021).

Regarding digital organizational culture, the readiest companies support employees with digital tools, structure remote work, and create virtual collaboration mechanisms (Grover et al., 2022). Valuing IT staff, creating positions with digital responsibilities, and prioritizing the digitization of processes all directly contribute to a digital culture. The company's directors and managers, in charge of business strategy, must be in tune with digital leadership.

1.1.2. Digital Customer readiness

The digital readiness of customers is also supported by three pillars: (a) the profile of the majority of customers, (b) the digital journey of customers, and (c) the customer's propensity to go digital. Digital readiness is increasing as the largest part of the

customer base is Gen Y and Gen Z. Additionally, most customers already transact with the company via digital platforms, further enhancing readiness. Moreover, customer interactions through digital interfaces to consume the company's products and services indicate greater digital readiness (Nasution et al., 2021).

In terms of the customer journey, digital readiness increases when most of the journey is completed online. Another factor is when physical touchpoints that cause frustration are replaced by digital technologies. Furthermore, customers are able to make purchasing decisions on their own, based on the information provided digitally by the company (Thomas-Francois et al., 2023). Recent research emphasizes the need to manage digital customer experiences across multiple touchpoints, highlighting how digital readiness involves not only access to technology but also customer expectations and behavioral shifts (Lemon & Verhoef, 2016).

Finally, the customer's propensity to go digital involves their opinion, favorable or not, of interacting with the company digitally. When the company's products and services are easy to understand and low in complexity, the issue of risk and trust is minimized and the propensity to go digital increases. Another element is the fact that customers are presented with better prices, more variety, and greater convenience in the digital environment. All these good showrooming and webrooming practices are further explored by Kang (2018).

1.2. Digital readiness of sectors: marketing 5.0

Based on the concepts of digital readiness of companies and customers, Kotler et al. (2021) described four quadrants for assessing the digital readiness of sectors. Figure 1 illustrates the proposed quadrants, and the respective industries distributed according to their characteristics. For industries where both companies and customers have high digital readiness, the authors called the quadrant "omni." Sectors where companies have high digital readiness, but customers are less digitally prepared, were placed in the "onward" quadrant. Sectors where customers were more digitally ready, but companies were not, were classified as the "organic" quadrant. Finally, those sectors where neither companies nor customers were digitally ready were placed in the "origin" quadrant.

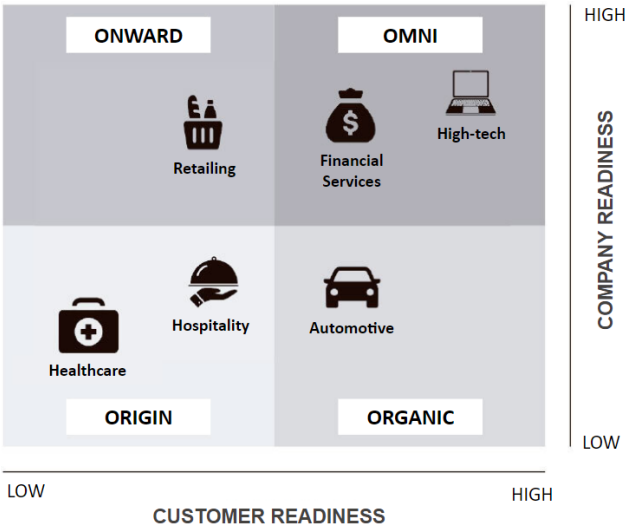

Figure 1. Digital readiness by industry.
Source: Kotler et al. (2021).

1.2.1. Omni

The industries in this quadrant suffered the least impact from the pandemic since their structure was already digitalized or more prepared for rapid digitalization. Moreover, their customers were already integrated into digital media and had a preference for these services, sales, and relationship channels. Digital marketing tools bring companies closer to those customers who are more digitally ready (Kannan & Li, 2007).

Companies in the technology sector are present in this quadrant. Because their product itself is digitalized, both supply and demand were already inserted in this context of high aptitude. Amazon, Netflix, Microsoft, and Zoom are companies that represent this sector, serving both corporate clients and customers. In addition to having a robust technological structure, technology companies invested more to be able to meet demand during the pandemic. Demand increased in both the B2B and B2C contexts. Companies in this quadrant already make decisions based on data mining tools and techniques carried out from the interaction between consumers and the market intelligence sector (Lies, 2019).

Another industry that is in the omni quadrant is the financial services sector. The digitization of financial services already existed, but few customers embraced it before the pandemic because they still felt insecure (Friedline et al., 2020). Having a consolidated structure and the requirement of social distancing meant that cus-

tomers had to choose to carry out financial transactions via digital channels. As a result, this sector has been less affected by the pandemic. Digitalization in this industry also involves the emergence of fintechs, which are companies that are born digital with financial solutions that traditional banks don't offer, as well as blockchain and bitcoin solutions and investment platforms.

1.2.2. Onward

This quadrant shows industries where companies already have a digital structure and a high readiness for digitalization. But, for different reasons, the majority of customers are not so keen on this movement. This resistance can happen for numerous reasons. The need to touch, try on, and choose products can put some customers off digital transactions (Kühn et al., 2020). The difficulty of handling apps, platforms, and websites via devices means that some customers prefer physical means. Lack of trust in institutions and the risk of scams and fraud are also factors preventing digitalization (Rad et al., 2022).

Retailing, in its most varied forms, has companies that can be present in this quadrant. Supermarkets, shopping malls, department stores, clothing stores, and shoe stores are good examples of this scenario. Although the companies have digital channels, apps, well-structured websites, and different forms of delivery (their own network and outsourced), the niche of customers who are digitally adept enough to buy these types of products in a digital context is limited. Their products reach a very broad target audience in demographic terms, with a large part of this audience being more resistant to digitalization, placing the sector in the opportune quadrant (Kaur et al., 2020).

1.2.3. Organic

The so-called organic quadrant is the one that has industries with companies that are less digitally ready; on the other hand, customers in these sectors are more inclined toward digitalization. Companies with lower digital readiness are those that need to keep their employees present at headquarters to function and that need to maintain many physical points of contact. They may also be those that market more complex comparison-shopping products, where customer engagement is greater. Another factor is that some industries are more regulated by public bodies and need to follow guidelines that prevent their digitization.

The automotive industry, according to Kotler et al. (2021), is in this quadrant. Customers usually do a lot of research on cars on the internet and then go to dealerships to test and buy the products (Arora & Sahney, 2017). As cars are comparison-shopping products, it can take longer for them to become fully digital. Their main customers are baby boomers and Generation X, some of whom are already Generation Y. Over time, as Generation Z becomes the main customer base and demands more digital interaction from dealerships, it is likely that the customer journey in this sector will become mostly or entirely digital.

1.2.4. Origin

The fourth and final quadrant is the so-called origin quadrant, which includes industries where both companies and customers have a low readiness for digitalization. This quadrant includes the sectors that have been most significantly impacted by the pandemic. In addition to the greater difficulty of creating a digital structure, there is the dilemma that even if they go digital, their customers may still opt for traditional channels.

The tourism and hospitality industry fits well into this quadrant since the core service of companies in this sector requires travel, interactions between people, and face-to-face and physical contact. The customer can even digitize some processes, such as buying tickets and booking hotels, but the main journey involved in a trip requires people to leave their homes and interact with the environment. Some museums, zoos, and soccer stadiums even have platforms to promote the digital experience with the use of virtual reality, augmented reality, and the Internet of things; however, these would be secondary products that revolve around the main activity that requires face-to-face contact.

Another sector with characteristics inherent to the obsolete quadrant is healthcare services. Although technology is increasingly present in hospitals and clinics, personal care continues to be the main activity of healthcare services. An additional aggravating factor in the sector is the high level of regulation, which partially restricts the digitalization of companies. In addition, customers themselves, by tradition, feel safer when they receive face-to-face care when it comes to healthcare.

Naturally, there are particularities within each industry. Within the technology sector, there may be companies that serve both the end consumer and the organizational consumer, and this can have an impact on digital readiness. Retailing is a sector with many subcategories, ranging from small neighborhood stores to supermarket chains. The healthcare industry itself can be represented by hospitals, clinics, or even pharmacies that have had their demands increased due to the need for COVID-19 tests. We believe that the model proposes the distribution of industries into quadrants, taking into account their more general characteristics. These characteristics are sufficient to differentiate them from each other.

While Kotler et al. (2021) offered a practical and accessible framework for digital readiness, it is important to situate this model in the broader academic debate on digital transformation. Recent studies from marketing and management literature have proposed more robust and theoretically grounded frameworks. Kane et al. (2015), for example, argued that digital transformation is driven more by strategic alignment and cultural readiness than by technology adoption per se. Similarly, Westerman et al. (2011) highlighted the role of digital leadership in enabling companies to outperform their peers in digital maturity. From a marketing standpoint, the work by Verhoef et al. (2021) emphasized customer experience orchestration and data-driven decision-making as critical capabilities for digital readiness. These perspectives reinforce and complement Kotler's quadrants, while also suggesting that sector-based classification may need to be contextualized based on strategic and organizational capabilities.

While quadrant-based visualization is useful, it lacks empirical validation and theoretical refinement, especially when applied to different firm sizes and country contexts. Recent studies reinforce the importance of contextualizing digital maturity through strategic alignment, leadership, and adaptability to post-pandemic dynamics in SMEs (Kargas et al., 2023; Mick et al., 2024; Nguyen et al., 2025).

2. METHOD

This study does not aim to replicate the original data or sample from Kotler et al. (2021), as their book presents a conceptual model rather than an empirical study. Instead, our research seeks to apply and test the relevance of their quadrant-based framework in a post-pandemic scenario, using data collected from 62 companies in Brazil, most of which are micro and small enterprises. While the industrial sectors analyzed are similar to those presented in Kotler et al. (2021), the context differs significantly—offering insights into how digital readiness manifests in an emerging economy and among SMEs. This contrast enriches the discussion and allows for an exploration of the model's adaptability across contexts.

Rather than using in-depth interviews or a standardized scale, this study employed a structured survey composed of close-ended questions, translated and adapted from the original digital readiness checklist proposed by Kotler et al. (2021). The instrument included 18 items—9 for companies and 9 for customers—responded to by business owners or managers. A simplified 3-point Likert-type scale (yes= 2, partially= 1, no= 0) was used, given the participants' diverse education levels. To ensure clarity and consistency, the translated items were reviewed by two bilingual researchers with experience in digital transformation studies. Pre-testing was not conducted formally, but several participants offered feedback on question comprehension during initial interviews.

Although Kotler et al. (2021) do not provide a validated scale, our choice to follow their original structure allowed us to maintain consistency with the proposed conceptual model. It is worth noting that the sample was composed entirely of companies based in Southern Brazil, most of them micro and small enterprises. While this introduces a limitation in terms of generalizability, it also presents an opportunity to test the framework in an emerging market and SME context, contributing to its practical validation and future refinement.

Although the authors propose a script of questions to classify companies and customers regarding their digital readiness in the four quadrants, they do not clarify how the answers can be plotted on a graph to fill in the quadrants. In addition, until the time of data collection, there was no validated scale for this proposed model.

To facilitate interaction and data collection with the interviewees, three alternative answers were given for each of the questions: "yes", "partially", and "no". Since some of the interviewees had a lower level of education, the concern was not to change the con-

tent of the questions and the fact that some questions were not so simple to answer. These three alternatives would make understanding each variable more comprehensible than a 5- or 7-point scale indicating agreement and disagreement. Thus, "yes" answers were given a score of 2 points, "partly" answers were given a score of 1 point, and "no" answers were given a score of 0. As at the time of the research, there was no validated scale considering the proposal by Kotler et al. (2021), we chose to replicate the original questions from the book *Marketing 5.0*. We emphasize that the objective of this article is not to propose a scale.

The 18 items used in the survey were translated from the checklist proposed by Kotler et al. (2021) (Table 1). Minor adjustments were made to ensure clarity and contextual adequacy for Brazilian respondents, particularly those from micro and small enterprises. The translation was performed by the research team, all of whom are fluent in English and familiar with the digital transformation literature. Although a formal pre-test was not conducted, informal feedback was gathered from the first few respondents during data collection. This led to small refinements in wording to enhance comprehension, without altering the original conceptual meaning of the items. Every effort was made to preserve the semantic integrity of the original constructs.

In this way, each company could achieve up to 18 points on the company digital readiness axis and up to

Table 1. Questions for assessing digital readiness.

Company digital readiness	
Customer digital experience	1. Is the company able to interact digitally for a large part of the customer journey? 2. Can all digital touchpoints be integrated into a seamless customer experience? 3. Is the company able to create value and generate revenue through digital business models?
Digital infrastructure	4. Are the technologies available to collect, store, manage, and analyze a large volume of customer data in real time? 5. Are processes digitized and re-engineered to adapt to the new digital business model? 6. Is the digitization of physical assets such as buildings, fleets, and equipment implemented through the Internet of Things (IoT)?
Digital organization	7. Have the majority of employees been empowered with digital tools for remote working and virtual collaboration? 8. Is the generation of digital talent, such as data scientists, user experience designers, and IT architects, a key priority? 9. Is there a strong digital culture that allows managers and digital talent to work together?
Customer digital readiness	
Customer digital base	10. Are most of your customers from the digitally savvy Y and Z generations? 11. Do most customers already interact and transact with the company via digital platforms? 12. When consuming or using products and services, are customers asked to interact with digital interfaces?
Customer digital journey	13. Is the customer journey already partly or entirely online (webrooming or showrooming)? 14. Physical touchpoints that cause customer frustration can be replaced or improved by digital technologies 15. The Internet provides customers with a treasure trove of information so that they can make well-informed decisions on their own?
Customer propensity to go digital	16. Does the customer consider physical interaction with the company unnecessary, irrelevant, and worthless? 17. Are products and services considered less complicated, which reduces risk and trust issues? 18. What is customers' biggest incentive to go digital: better prices, more choice, quality, and convenience?

Source: translated and adapted from Kotler et al. (2021).

18 points on the customer digital readiness axis, since there are 9 questions for each axis. It is worth noting that the questions about customers were originally formulated to be answered by the companies themselves, not by the customers, which allowed data to be collected exclusively from these companies.

Table 2 shows the main characteristics of the 62 companies surveyed. The companies' respondents were the owners, directors, or managers themselves, who were able to give reliable answers to the questions posed. In terms of size, the majority were micro and small companies. Regarding location, the data was collected in a medium-sized city in the southern region of Brazil. Some information is worth highlighting, for example, financial company 5 mentioned the number of employees for the entire network, not just the unit. As for the technology companies, many of them have staff working from home and in other offices throughout Brazil and abroad. One car dealership mentioned the length of time the automaker has been operating and the number of employees in the group. Even with these particularities, the objective of having a heterogeneous group of companies was achieved.

In terms of time in business, the profile of the main clients, and the products and services offered, it was

Table 2. Characteristics of the companies interviewed.

Company	N. Staff	Years in business	Client profile	Main products, services, and activities
Financial 1	15	69	B2C | Ger. X.	Bank.
Financial 2	5	22	B2C | Ger. BB and X.	Bank.
Financial 3	45	40	B2C | Ger. X and Y.	Consortium.
Financial 4	12	23	B2C | Ger. X and Y.	Credit.
Financial 5	1000	10	B2C | Ger. X.	Credit.
Financial 6	3	10	B2B | Ger. X and Y.	Credit and consortium.
Financial 7	15	30	B2C | Ger. BB and X.	Investments.
Financial 8	23	4	B2C | Ger. Y.	Consortium.
Financial 9	20	12	B2C | Ger. X and Y.	Consortium and investments.
Financial 10	1	10	B2B | Ger. BB and X.	Insurance.
Financial 11	80	5	B2C and B2B | Ger. X.	Investments.
Financial 12	9	4	B2C | Ger. Y.	Bank.
Financial 13	749	23	B2B | Ger. BB and X.	Credit.
Financial 14	460	16	B2C and B2B | Ger. X and Y.	Investments.
Financial 15	3	9	B2C | Ger. X.	Insurance.
Technology 1	13	9	B2B | Ger. BB and X.	Occupational health and safety management software.
Technology 2	23	5	B2B | Ger. BB and X.	Electronic tax document search software.
Technology 3	1000	30	B2B | Ger. BB, X, and Y.	Banking software and financial operations.
Technology 4	800	20	B2B | Ger. X and Y.	Customized marketplace integration hub.
Technology 5	16	13	B2B | Ger. X and Y.	BI consulting and customized software.
Technology 6	18	10	B2B | Ger. X and Y.	Farm management software.
Nutritionist 1	4	9	B2C | Ger. BB, X, and Y.	Weight loss.
Nutritionist 2	4	15	B2C | Ger. X and Y.	Sports nutrition.
Nutritionist 3	2	8	B2C | Ger. X and Y.	Oncology nutrition.
Nutritionist 4	1	4	B2C | Ger. X, Y, and Z.	Eating disorders.

Continue...

Table 2. Continuation.

Company	N. Staff	Years in business	Client profile	Main products, services, and activities
Nutritionist 5	1	4	B2C | Ger. X and Y.	Nutrition for pregnant women.
Nutritionist 6	1	3	B2C | Ger. X and Y.	Weight loss.
Nutritionist 7	2	4	B2C | Ger. X and Y.	Weight loss.
Nutritionist 8	2	4	B2C | Ger. X and Y.	Intestinal health.
Clothing Store 1	3	2	B2C | Ger. X and Y.	Men's and women's wear.
Clothing Store 2	2	5	B2C | Ger. X and Y.	Men's and women's wear.
Clothing Store 3	1	4	B2C | Ger. X.	Women's wear.
Clothing Store 4	1	3	B2C | Ger. X and Y.	Women's wear, accessories, and shoes.
Clothing Store 5	3	22	B2C | Ger. Z.	Children's wear and household items.
Clothing Store 6	1	29	B2C | Ger. Z.	Children's wear.
Clothing Store 7	4	20	B2C | Ger. BB and G.	Women's wear.
Clothing Store 8	2	18	B2C | Ger. X and Y.	Women's wear, accessories.
Clothing Store 9	4	28	B2C | Ger. BB and G.	Women's wear and household items.
Clothing Store 10	2	3	B2C | Ger. X and Y.	Women's wear.
Clothing Store 11	2	12	B2C | Pregnant women and children.	Babies' and pregnant women's wear.
Clothing Store 12	2	10	B2C | Ger. X and Y.	Women's wear.
Clothing Store 13	2	2	B2C | Ger. BB, X, and Y.	Men's and women's wear, accessories n shoes.
Clothing Store 14	4	20	B2C | Ger. X and Y.	Men's and women's wear.
Clothing Store 15	2	6	B2C | Ger. X and Y.	Women's wear.
Dealership 1	40	8	B2C and B2B | Ger. X and Y.	BMW dealership.
Dealership 2	7	49	B2C and B2B | Ger. X and Y.	Multi-brand car dealership.
Dealership 3	8	12	B2C and B2B | Ger. X and Y.	Multi-brand car dealership.
Dealership 4	2	6	B2C | Ger. X and Y.	Resale of used cars.
Dealership 5	7	25	B2C and B2B | Ger. BB, X, and Y.	Multi-brand car dealership.
Dealership 6	65	68	B2C. and B2B | Ger. BB, X, and Y.	Volkswagen dealership.
Dealership 7	2	1	B2C | Ger. X and Y.	Resale of used cars.
Dealership 8	500	70	B2C and B2B | Ger. BB, X, and Y.	Chevrolet dealership.
Hotel 1	91	41	B2C and B2C | Ger. X and Y.	Hotel chain.
Hotel 2	42	2	B2B | Ger. X and Y.	Hotel chain.
Hotel 3	67	30	B2C and NP| Ger. X and Y.	Local hotel.
Hotel 4	78	19	B2C and B2C | Ger. X, Y, and Z.	Local hotel.
Hotel 5	36	18	B2C and B2C | Ger. X, Y, and Z.	Local hotel.
Hotel 6	18	5	B2B | Ger. X and Y.	Local hotel.
Hotel 7	15	5	B2B | Ger. X and Y.	Local hotel.
Hotel 8	23	26	B2C | Ger. X, Y, and Z.	Farm hotel.
Hotel 9	25	2	B2C | Ger. X, Y, and Z.	Farm hotel.
Hotel 10	17	10	B2C | Gen. Y and Z.	Farm hotel.

possible to access companies with different profiles. Approximately half of the interviews were conducted face-to-face; the other half by video call. Data collection took place in late 2022 and early 2023.

After collecting the data, the analysis consisted of plotting each company on a graph, and the average of the companies in each sector summarized the profile of the sector itself. By plotting the graphs and constructing perceptual maps, it was possible to classify the companies and customers in their respective industries into the four quadrants proposed by the model.

3. RESULTS

Figure 2 shows the analysis of the data distributed in four graphs. From the results in Graph 1, it can be seen that companies are present in all four quadrants, with a higher concentration in omni, where both the company's digital readiness and the customer's digital readiness were high.

The use of perceptual maps in this study follows a tradition in marketing and strategic diagnostics, where visual positioning tools help identify sectoral gaps and comparative performance across dimensions (Baumgartner & Eppinger, 2010; Kalafatis & Tsogas, 1994). These tools allow researchers to contrast empirical results with conceptual frameworks in a visually intuitive manner, supporting decision-making in contexts such as digital transformation.

Table 3 shows the average values calculated for each industry, which are represented in Graph 2 of Figure 2. As expected, the high-tech sector proved to be the most prepared for digitalization, followed by

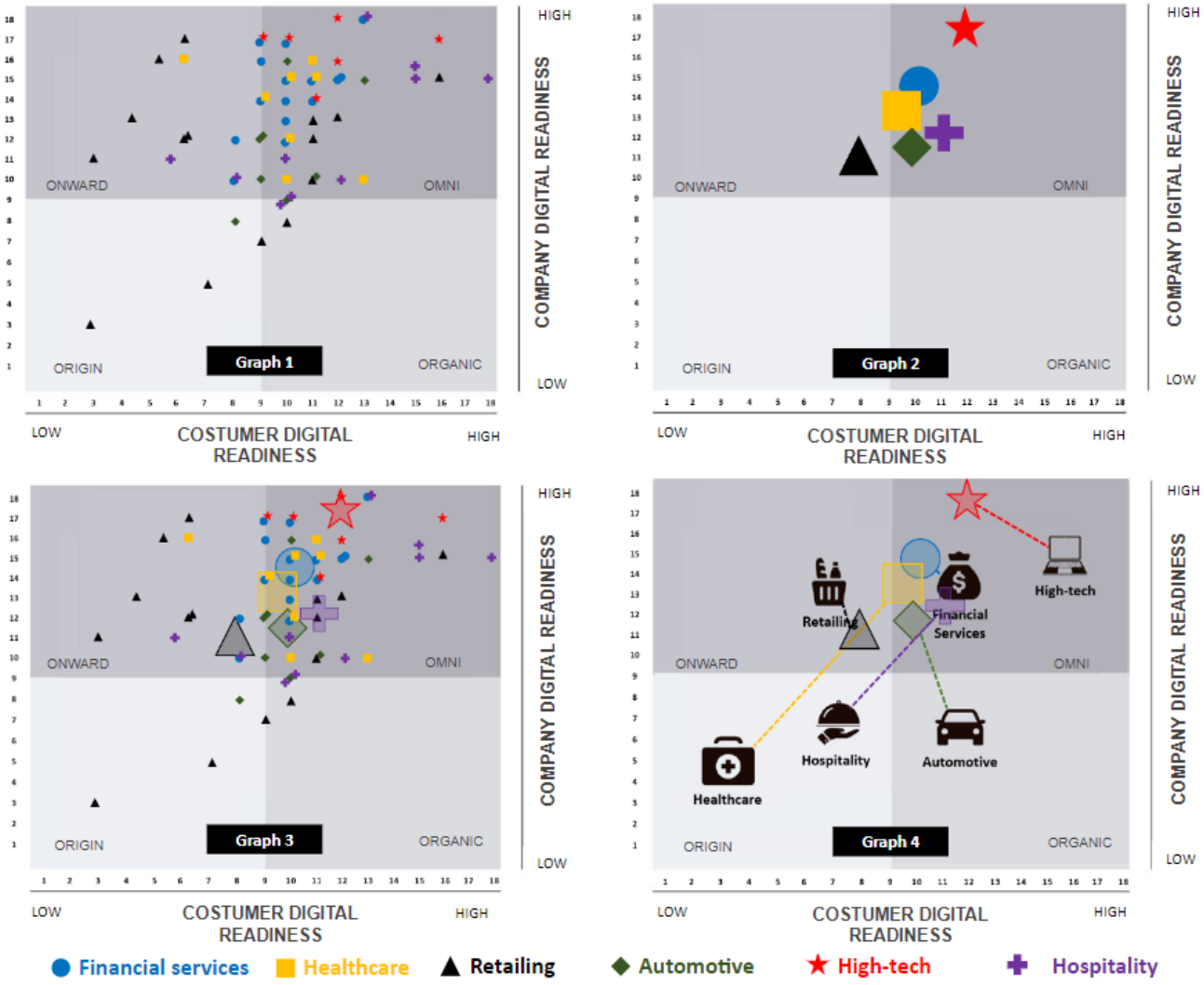

Figure 2. Digital readiness of industries, companies, and customers.

Table 3. Digital readiness results by industry.

	Company		Client	
	$\bar{x}$	σ	$\bar{x}$	σ
High-tech	17.0	0.6	11.8	2.4
Financial services	14.4	2.1	10.2	1.5
Healthcare	13.5	2.3	10.1	1.9
Automotive	11.5	2.6	9.9	1.5
Retailing	11.3	3.7	7.9	3.7
Hospitality	12.6	3.0	11.5	3.5

the financial services sector. Both were in the same quadrant of the model proposed by Kotler et al. (2021), the omni quadrant.

Another sector that, based on the mean values of the companies, was located in the proposed quadrant was retailing. This sector showed a higher standard deviation (3.7 and 3.7), with companies distributed across all quadrants due to their heterogeneous ways of working. When calculating the mean, the sector was located in the onward quadrant, indicating that companies are more ready to digitize. However, not all customers are ready or interested in digitizing.

The healthcare sector, on the other hand, was the furthest away from the proposal. This is due to the profile of the companies interviewed, which were primarily nutritionists. Initially, hospitals, medical clinics, and laboratories were contacted to participate in the survey. However, these companies were not open to being contacted. Therefore, the nutritionist sector was approached, and it was very receptive, so it was chosen for the survey. Since nutritionists use digital media much more to communicate with their clients and because their client profiles are more digitized, the sector was also located in the onward quadrant.

The automotive sector was also in the omni quadrant since the companies surveyed already have many of their processes digitized. Although the automotive industry is very traditional, it hardly ever goes through periods without significant technological development. This development includes both the characteristics of the car and the management of automakers and dealerships. Finally, the hospitality sector also found itself in the omni quadrant. The report of these companies was emphasized by the greater digital concern, impacted by the evasion of customers during the period of social distancing.

Also in Figure 2, Graph 3 illustrates the dispersion of both companies and sectors in an overlapping manner. Graph 4 illustrates the results found for the industries compared to the original position presented in the model proposed by Kotler et al. (2021). Even without presenting market data, the model does more than simply place each sector in a quadrant. The authors take care to position each sector in a detailed and careful manner to more accurately represent the level of readiness they suggest for that sector.

It was therefore possible to draw a line between the results found for each sector and the position proposed in the digital readiness model. It can be seen that in three of the six industries analyzed, the proposition was confirmed within the quadrant (technology services, financial services, and retailing). For the automotive sector, although the result indicated a different quadrant, the customer readiness line was equivalent to the proposed model (high readiness); it was the readiness of the car dealerships surveyed that was higher than the proposed model.

In the case of the healthcare sector, the biggest discrepancy was found. This was because the authors based their proposal on more traditional business models such as hospitals, clinics, and laboratories. As the survey was carried out with nutritionists, both the company readiness and the customer readiness were higher. For hotels, there was also a difference between the proposed quadrant and the quadrant where the sector was located. This was due to the rapid digitization process that hotels have undergone, not only those of large chains, which were already digitized but also local hotels.

3.1. Analysis and management contributions

3.1.1. High-tech industry

A unique feature of the high-tech industry is that its product is already essentially digital. Both in the development phase and in the use phase, both supply companies and their customers are required to have a propensity to use technology. Naturally, the digital readiness of both tends to be higher (Soomro et al., 2020).

Another unique characteristic of this sector, specifically present in the research, is that it is the only industry with exclusively organizational clients. Al-

though Kotler et al. (2021) cited companies where the consumer is the end user, most technology companies generally develop solutions for other companies, such as management software. As the client is another company that needs a technological solution, their digital readiness tends to be greater.

In B2B relationships, it is common for companies to maintain contact with their suppliers, it is common for negotiations to take place face-to-face, and physical contact points can be used to strengthen the relationship. For this reason, even though the sector is highly digitized, both by companies and customers, as in any B2B market, the relationship between people is still valued.

The sector was not located further up in the upper right corner of the graph because some customers are represented by people from Generation X. One of the questions in the survey indicated that only customers from generations Y and Z would have greater digital readiness. However, even if they are from Generation X or even baby boomers, people who work in technology companies are highly digitalized.

As a management suggestion for companies in the technology industry, we advocate maintaining personal relationships and physical contact points. Although the market as a whole has moved toward digitalization, for the sector that is already essentially digitalized, valuing personal relationships becomes an advantage (Kotler et al., 2021). Even if all processes are digitized, customers who receive their software supplier in-house and create bonds of trust tend to be more profitable and longer lasting.

3.1.2. Financial services industry

Although the industry was located in the omni quadrant, not all of the companies surveyed fit there. Most financial services companies were already well-prepared for digitalization before the pandemic hit. The compulsion of social isolation between people and companies accelerated their digitalization, which was already at a fast pace. However, there are still many people who are insecure and distrustful when it comes to banking transactions.

Consortium, insurance, banking, and finance companies highly value professionals who specialize in investment knowledge—it is a natural characteristic of the sector. However, digital talent and a digital culture are not always encouraged within their structure. Being a traditional sector, often highly regulated and managed by professionals from Generation X and baby boomers, companies in the financial industry still have a way to go before they are fully digitized.

Recently, fintechs have been leading this process and pushing traditional institutions toward this path. Digital natives, these companies have sparked people's interest due to their reduced fees and fast service. However, more traditional customers or those with low levels of education still value face-to-face contact, especially when the issue is as sensitive as money.

As a suggestion, encouraging the digitization of the most insecure customers is still a challenge for the industry. Applications that are easy to use and at the same time secure will be key allies on this path (Ketterer et al., 2016). Forcing customers to go digital, restricting physical service, and reducing the number of branches is a practice already underway by some banks. On the other hand, financial cooperatives have been increasing the number of branches, valuing face-to-face service in small towns, and targeting small rural producers. The sector is very complete and varied, and different digital solutions are still possible.

3.1.3. Healthcare industry

If there was one sector that suffered multiple impacts from the pandemic, it was the healthcare industry. Hospitals had to quickly adjust their protocols, while demand increased exponentially and unanswered questions were latent. The race to develop vaccines drove the industry, which was already very profitable. Laboratories, on the other hand, took advantage of the wave, with endless tests being carried out all over the world. In this context, telemedicine has re-emerged as an alternative for some specialties (Gnagnarella et al., 2022).

The nutritionist sector was more open to participating in data collection. The sector's primary characteristic is its autonomous work, which allows for greater agility in redirecting management processes. Even though face-to-face appointments are required for common procedures in the area, such as bio-impedance, appointments via virtual platforms were common, contributing to the digital readiness result found in the survey.

Furthermore, the dissemination of nutritional guidelines often carried out through social media and the use of applications to help in the treatment of patients were also tools that made the sector more digitalized. Therefore, the result found in the research was the opposite of the proposal by Kotler et al. (2021). By replicating the questionnaire with other types of businesses in the health area, the data can take the sector to another quadrant.

The suggestion for the nutritionist sector, specifically, is the opportunity to explore the male audience and the Generation X and baby boomers' segment, since these audiences tend to use nutritionist services less. If the aim is to increase the client portfolio, considering non-digital channels becomes an option since the current portfolio of these professionals tends to be more digitalized. The emphasis here is not on digitalization, but on increasing the number of clients.

3.1.4. Automotive industry

A unique feature of the automotive industry is its ticket average. Buying a vehicle, new or used, is not a frequent practice; in other words, it is not a daily purchase. Being in a comparison-shopping sector naturally requires more commitment from the customers in the buying process, making them more demanding and critical. As a result, the search for information on product attributes is intense and takes place in both physical and digital environments (Rodrigues et al., 2023).

The automotive sector is one of the most competitive in the world, with several automakers in different countries vying for consumer preferences. It is also an industry that has evolved a lot since its massification. This whole scenario of high competitiveness and investment in new technologies has made the market more digitalized. This was exactly the result found in this survey, with the sector in the omni quadrant. However, among the sectors in this quadrant, automotive was the least digitally ready.

On the other hand, the very characteristics of the product mean that customers feel the need to be present. The face-to-face test drive, for example, is unlikely to be completely replaced by a digital simulator. Even though the simulator provides a remarkable experience, drivers feel safer taking a test drive in a real car. The fact that traffic laws highly regulate industry and that vehicles are expensive products that require specific documentation makes face-to-face testing commonplace in the sector. As much as the sector is highly technological and its past shows its evolution, some of these factors mentioned will maintain the importance of face-to-face. In addition, the use of creativity for brand management has been and will continue to be an essential element for the sector (Yagnik et al., 2020).

As a suggestion, vehicle dealerships can improve their service by taking on the functions performed by a broker. Every purchase of a vehicle, whether new or used, requires a subsequent step, which is the regularization of documents. This work is done by a broker and is not the responsibility of the dealerships. In order to improve and integrate the entire customer experience, reduce their effort, and increase convenience, taking on this responsibility by introducing digitalized processes would be a step forward, since most of the brokers' procedures are not yet digitalized.

3.1.5. Retailing industry

The retail industry is perhaps the most varied of all and can include large companies such as supermarket chains and shopping malls, small businesses such as bakeries and restaurants, and even independent or large service providers. Within this spectrum, some companies are more oriented toward e-commerce, and others are not. In addition, retailing is configured differently in developed and emerging economies (Goldman et al., 2021). The sector was originally placed in the onward quadrant by the authors of the Marketing 5.0 approach (Kotler et al. 2021).

In this study, 15 clothing stores were chosen to represent the retailing industry, which had the highest standard deviation in the digital readiness analysis. Even with companies located in all four quadrants, on average, the sector was very close to the location proposed by Kotler et al. (2021). Even though empirically the investigation took place in a restricted area, i.e., only small clothing stores with up to 4 employees, the result was the most heterogeneous.

Some businesses showed little or no digitalization, both on the part of management and the public interest. These businesses were located in neighborhoods with low-priced products. On the other hand, companies were also investigated where the communication and sales channels were already quite efficient with

the use of social media. Sending photos and an entire catalog via WhatsApp or making pieces available on Instagram profiles improves some companies' digital interaction with their customers. The sector still depends on face-to-face contact, especially when it comes to fitting and trying on garments.

The suggestion for the retail sector is to invest in virtual reality and augmented reality. With the growth of e-commerce and the reduction in the cost of maintaining physical stores, online clothing purchases will become even more effective when the issue of trying on items is overcome with digitalization. Creating personalized avatars of customers, capable of being customized by themselves, will be the next big step for the sector.

3.1.6. Hospitality industry

As well as providing services to professionals traveling for work or study, the hospitality industry is also in high demand from leisure travelers. In both cases, demand fell significantly during the pandemic. In the gradual reopening of the economy, events and travel were placed at the end of the priority queue, directly harming companies in this sector (Telles et al., 2022).

The migration from face-to-face to remote professional meetings was rapid, which reduced the demand for business travel. Permission for leisure travel was slow. Moreover, the principle of the inseparability of a service company has made the hospitality sector one of those that has suffered the most from the pandemic. Not by chance, Kotler et al. (2021) placed it in the quadrant of origin.

However, the data showed a different scenario, precisely because of the digital transformation that the sector has undergone. Among the hotels contacted, there are three different categories: large companies, local hotels, and farm hotels. Large companies' hotels achieved high digitalization, both for firms and customers. These were already more digitalized, and during the pandemic this process intensified. Farm hotels achieved low digitalization (companies and customers), positioning themselves in the obsolete quadrant. Local hotels, on the other hand, showed average digitalization (companies and customers). When averaging these establishments, the sector was positioned in the omni quadrant, right in the center of the graph.

Suggestions for the sector are aimed at local hotels and farm hotels to get closer to the digitalization presented in large chain hotels, which are already more digitalized. Digital marketing tools can be better applied when micro and small business owners themselves take responsibility (Ritz et al., 2019). Check-out is a process that has already become more agile, but check-in has not yet. The alignment of digital communication is also another element that could be improved. When it exists, it is confusing and can cause noise and dissatisfaction. More than digitalized systems, trained people are needed to keep these systems running smoothly.

FINAL CONSIDERATIONS

The first conclusion of this study is that Kotler et al. (2021) were very assertive in their proposal. Even without conducting empirical research, the precise distribution within the proposed quadrants was well-justified and coherent. A few years after the pandemic, the model remains close to what was suggested, with some improvements in digital readiness in companies and customers in some industries. As discussed, some differences can be justified by the particularities of collection, regional and situational issues, and the particularity of each sector. In addition, each of the proposed industries is quite heterogeneous, so the results of a survey like this will be highly dependent on the choice of companies investigated. In any case, it is possible to say that the digitization behavior driven by the pandemic has been maintained in most sectors, even in those where there was little or no digitization.

A second conclusion of the research points to a warning made after reading the book *Marketing 5.0*. We noticed that there is a direction in the discourse toward a path in which digitalization is a necessary condition for success. It is important to highlight that for some sectors, considering our results, there is no need for high digitalization in the two proposed axes to achieve business success. Digitalization is not a necessary condition for success, but it can certainly be a differentiator for some companies that do not concern sales and communication channels. In addition, some consumer profiles of digital experience tend to be more decisive than others.

The study has some limitations, the first of which is the fact that it uses variables from an unvalidated

questionnaire. However, as the research does not carry out multivariate analyses such as multiple regression, factor analysis (exploratory or confirmatory), or structural equation modeling, this limitation does not have a substantial impact on this study. This decision was based on our concern to be faithful to the proposal by Kotler et al. (2021). Alanazi (2022) carried out empirical research from the perspective of Marketing 5.0 using scales but does not adopt the path of digital readiness analysis.

While the lack of application of conventional multivariate analysis can be considered a limitation, the ease of application and replication of analysis using perceptual maps is an advantage. It is often difficult for the great contributions of scientific articles to make their way into companies and effectively contribute to management decisions. This research offers a simple organizational diagnostic model, in the digital context, to analyze the readiness of customer companies.

The heterogeneity of the companies surveyed is also a factor to be highlighted. In the high-tech industry, few companies were surveyed. In the healthcare industry, only nutritionists represented the area. In the financial services industry, we had companies from different areas, such as banks, consortium companies, insurance, and credit cooperatives. As for the retailing industry, the participating companies were small clothing stores. The automotive industry was represented by dealerships of major car manufacturers and used car dealerships. Finally, the hospitality industry featured large chain hotels, as well as local and rural hotels.

Another limitation concerns the geographic and organizational scope of the sample. All participating companies are located in Southern Brazil, and most are micro or small enterprises. While this may limit the generalizability of the findings to other national or global contexts, particularly when compared to more mature economies or large corporations, it also presents an opportunity. This regional and SME-based focus allows the application of Kotler et al.'s (2021) model in an emerging market context, contributing to its practical relevance and inviting future comparative studies across regions and company sizes.

Regardless of the researchers' choice according to the characteristics of the companies researched, there will always be a bias, either due to their homogeneity, which would not represent the entire sector, or due to their heterogeneity, which increases the possibility of heterogeneous results, distancing them from a unified conclusion. This problem would only be solved if a significant number of companies were contacted, being able to generalize their results to the entire sector. We prefer to value the effort of being able to collect data from 62 companies of different sizes and sectors for an unprecedented verification of the model proposed by such a renowned author in the area of marketing.

Another important limitation of the article is the lack of publications in the field of Marketing 5.0. This is due to two reasons: the first is the fact that the book by Kotler et al. (2021) is very recent. There have been no articles published with this keyword or this approach since then. In addition, the more managerial nature of this publication also reduces the interest of academic researchers in the subject, reducing the number of publications in the area. In contrast, we saw this situation as a research opportunity with the potential to contribute to both academia and the market.

Furthermore, as Kotler et al. (2021) proposed a conceptual model rather than an empirically validated scale, this study applied their framework as originally structured. Although we did not contact the authors, future research may benefit from doing so, especially to refine the model's empirical applicability, develop and validate a measurement scale, and allow for cross-country comparisons or longitudinal studies. Such efforts could enhance the theoretical robustness and generalizability of the digital readiness framework proposed in *Marketing 5.0*.

Although Kotler et al.'s (2021) quadrant-based model provides a useful conceptual framework, its application in emerging economies reveals limitations related to structural disparities in digital infrastructure and market readiness. Future research should adapt and refine these quadrants to account for contextual heterogeneity.

Our proposal for future research consists of validating the scale of company digital readiness and customer digital readiness. Although there are other scales to measure digital readiness, none of them meet the need for this assessment in the context of Marketing 5.0, especially considering the post-pandemic period. Once the scale has been validated, analyzing in more detail the factors that lead to greater and less digital readiness among companies and customers is also a suggestion for continuity and scientific progress in the field.

Finally, a last proposal involving a more managerial profile to develop a digital diagnosis, specifically for micro and small businesses. This tool can involve the issues presented in this article, as well as other adaptations for the context of SMEs. A self-filling platform that presents the digital maturity of companies and guides them on which initiatives they need to adopt to improve their digital presence can be an easy-to-use and widely disseminated tool.

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