

# Startup business model adaptation amid uncertainty: evidence from Brazil

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## Abstract

**Purpose** – This article aims to investigate the relationship between business model adaptation, company performance and digitalization capability among startups during the coronavirus disease-2019 pandemic to determine whether there is a correlation among these aspects in uncertainty scenarios.

**Design/methodology/approach** – The research used a mixed approach. First, it utilized a survey-based data collection method in which over 400 Brazilian startups participated, representing diverse demographic and cultural characteristics. Following the data analysis, the authors interviewed startup founders who participated in the first phase to enrich the discussion section.

**Findings** – The results revealed that startups with stronger digital capabilities and higher performance were associated with lower levels of business model adaptation. However, this association was observed primarily in the dimensions of value creation and value capture, and not in value delivery.

**Research limitations/implications** – The limitation of this study includes the cross-sectional data collection, which prevents the assessment of causality between variables.

**Practical implications** – The findings suggest that startups should carefully evaluate their business models and adaptation strategies during uncertain periods.

**Social implications** – The social implications of this study lie in supporting public policies and initiatives for entrepreneurship and startups. Government agencies and support institutions can use the findings to better understand the challenges faced by startups during uncertain times, effectively guiding their assistance and resources.

**Originality/value** – This research contributes to the literature on business models and digitalization capability. It offers insights into the interplay between performance, digital capabilities and business model adaptation. Furthermore, the study contradicts the common sense that businesses should favor adaptation in uncertain moments, at least for startups in similar contexts.

**Keywords** Uncertainty, Company performance, Startups, COVID-19, Business model adaptation, Digitalization capability

**Paper type** Research paper

## 1. Introduction

Startups and business models are hot topics in entrepreneurship and innovation research. Blank (2013) characterizes startups as organizations in the early stages that aim to find replicable and scalable business models, developing new products or services in



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environments of extreme uncertainty. In recent years, the success stories of startup companies have made the headlines, arousing the interest of various audiences, including investors, journalists, researchers and professionals from various sectors. Alongside the enthusiasm surrounding startups, there is ongoing interest in business models in management literature and corporate practice (Broccardo, Zicari, Jabeen, & Bhatti, 2023; Caputo, Pizzi, Pellegrini, & Dabić, 2020). The business model can be defined as the architecture of a company's mechanisms for creating, delivering and capturing value (Foss & Saebi, 2018; Teece, 2010). An important focus in business model studies is the adaptation of business models (Mihailova, 2023; Tian, Coreynen, Matthysens, & Shen, 2022), defined as the process by which management actively aligns the company's business model to address a changing environment (Saebi, Lien, & Foss, 2017).

Despite the recent surge in publications on the subject, many studies focus on the benefits of business model adaptation in scenarios of economic stability, often overlooking evaluation in response to uncertainty, such as that generated by the coronavirus disease (COVID-19) pandemic. The pandemic-induced changes have propelled digitalization across all company operations (Nagel, 2020; Agostino, Arnaboldi, & Lema, 2021; Yildirim & Erdil, 2024), including startups and small- to medium-sized companies (Fitriasari, 2020; Islam, & De Reuver, 2022; Molina-Castillo, Stanko; Priyono, Moin, & Putri, 2020). This increase in digitalization and uncertainty in firm performance has underscored the relevance of business models (Clauss, Abebe, Tangpong, & Hock, 2021; Seetharaman, 2020; Soto-Acosta, 2020). While there is a common assumption that business model adaptations are beneficial, guided by the prospect theory (Hutzschenreuter, Kleindienst, Groene, & Verbeke, 2014), it is not always necessary. In times of uncertainty like the COVID-19 pandemic, startups with well-structured business models, better positioned to face external environments, tend to make fewer adaptations. This prompts the question: is a full adaptation of the startup business model imperative in high-uncertainty contexts?

Despite widespread encouragement for startups to adapt their business models in response to uncertainty, guided by the prospect theory, our objective is to show that business model adaptation is not imperative for all startups. Startups with better performance and digitalization tend to adapt their business models less. We test this hypothesis based on the data collected through surveys with representatives of Brazilian startups. Our methodological approach was mixed. It began with a quantitative phase, during which data was collected through a closed electronic questionnaire between June and August 2020, and ended with a qualitative phase in 2023, during which founders of startups that participated in the first phase were interviewed for further exploration. Over 400 valid responses were collected from senior members of startups across all Brazilian states, representing diverse demographics, socioeconomic and cultural characteristics. The results support our thesis that better performance and higher digitalization align with less business model adaptation.

This article's main contribution is applying the prospect theory to the debate on business models and startups, demystifying the imperative of full adaptation. It extends the findings of Shimizu (2007) and Barberis (2013), indicating that business managers are more inclined to avoid risk in periods of gains and more likely to take risks in loss scenarios. Additionally, it enhances the understanding of business model adaptation in emerging markets (Landau, Karna, & Sailer, 2016; Sharma, Dixit, & Karna, 2016; Liu, Long, Fan, Wan, & Liu, 2023) and in response to uncertainty, such as the COVID-19 pandemic (Chanyasak, Koseoglu, King, & Aladag, 2022; Jabeen, Belas, Santoro, & Alam, 2023). From the digitalization perspective, this article aligns with studies on digitalization's impact on business models (Bouwman, Nikou, & de Reuver, 2019; Brunelli, Gjergji, Lazzarotti, Sciascia, & Visconti, 2023; Parida, Sjödin, & Reim, 2019; Rachinger, Rauter, Müller, Vorraber, & Schirgi, 2018).

Besides its academic originality and impact, the research results hold significant managerial potential, aiding professionals involved in business management, particularly in strategic planning for startups and addressing anxieties about changing business models.

## 2. Theoretical framework

The concept of business models and their developments is recent discussions in academia compared to the discussions around the prospect theory (Afflerbach, 2015; Harris, Aaron, McDowell, & Cline, 2014; Hutzschenreuter et al., 2014). Although widely accepted for accurately describing risk attitudes in experimental settings, this theory's applicability is questioned outside the laboratory. However, Barberis (2013) demonstrated various real-world applications confirming the theory's validity. The prospect theory's reach extends beyond economics, influencing the understanding of real-world phenomena, from business to law, medicine, political science and public policy (Chiu & Wu, 2010). It aids in developing a descriptive model of individual strategic decision-making and supports research to help managers mitigate the adverse effects of decision-making (Sebora & Cornwall, 1995).

Studies have examined the prospect theory's relationship with strategic decisions in diverse contexts, including supplier replacements, corporate strategy against foreign competitors, CEO incentive compensation and the commercial value of information technology. This article examines the role of the prospect theory in analyzing the adaptation of startup business models.

### 2.1 *Startup performance and business model adaptation in uncertainty scenarios*

Although business model innovation (BMI) and adaptation hold significant theoretical relevance in management sciences, Ammirato, Linzalone, & Felicetti (2021) highlight that research in this area is still in its infancy and suffers from a lack of consistency and theoretical connections to the concept of "performance." We define a business model as the architecture of a company's mechanisms for creating, delivering and capturing value (Foss & Saebi, 2018; Teece, 2010). Value Creation involves activities allowing suppliers and customers to perceive generated value (Chesbrough, Lettl, & Ritter, 2018; Dyer, Singh, & Hesterly, 2018; Visnjic, Neely, & Jovanovic, 2018), while Value Delivery ensures value appropriation by customers through company-supplier relationships (Achtenhagen, Melin, & Naldi, 2013; Chesbrough et al., 2018). Value Capture ensures profitability by distributing profits among stakeholders (Chesbrough et al., 2018; Sjödin, Parida, Jovanovic, & Visnjic, 2020).

Business model adaptation (BMA) differs from BMI in that it can be noninnovative (Saebi et al., 2017) and responds to external causes, while BMI can stem from internal and external factors (Bucherer, Eisert, & Gassmann, 2012). BMA is the process by which management actively aligns a company's business model to a changing environment (Saebi et al., 2017), analyzing adaptations in value offering, creation and delivery dimensions.

Adaptations occur due to various external factors, such as new entrants, competitor's strategies or legal changes in sectors (Saebi, 2014; Saebi et al., 2017; Thornton, 2024). In uncertain scenarios like the COVID-19 pandemic, companies, particularly startups, adapt business models due to anticipated performance losses. Startup performance relates to operational indicator variations, with positive performance indicating increases and negative performance indicating reductions (Gupta & Lehmann, 2003; Oke, Walumbwa, & Myers, 2012; Terziovski & Samson, 2000).

Following the logic of the prospect theory, managers in favorable performance situations are less sensitive to negative scenarios and risk-averse (Fiegenbaum, 1990; Marshall, Huan, Xu, & Nam, 2011; Sebora & Cornwall, 1995). Since any BMA implies an inherent risk,

startups with favorable performance adapt business models less due to pandemic-induced uncertainties. Hence, our first hypothesis is:

*H1.* In uncertainty scenarios, startups with better performance have lower levels of business model adaptation.

*2.2 Digital capabilities and business model adaptation in uncertainty scenarios*

Digitalization is crucial in analyzing BMA, especially during the COVID-19 pandemic. Digital Transformation has emerged as a significant phenomenon in strategic research (Piccinini, 2015; Vial, 2019) and market contexts (Fitzgerald, Kruschwitz, Bonnet, & Welch, 2014). Studies on digitalization’s impact on business models have surged since 2010 (Caputo et al., 2020). Digitalization poses challenges (Parida et al., 2019) but also offers competitive advantages (Annarelli, Battistella, Nonino, Parida, & Pessot, 2021) by enabling new ways of interacting with customers and improving performance (Lenka, Parida, & Wincent, 2017). Pang, Wang, Li, & Duan (2019) even suggest that managers should focus more on innovating their business models to enhance firm performance.

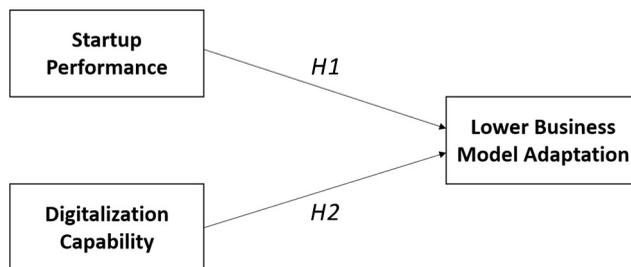
In the COVID-19 context, digitalization’s relevance has increased (Agostino et al., 2021; Seetharaman, 2020; Soto-Acosta, 2020), prompting significant adjustments in company operations (Fitriasari, 2020; Iivari et al., 2020; Nagel, 2020; Priyono et al., 2020). Startups with well-structured digitalization capabilities are better prepared for uncertainty scenarios, reflecting less sensitivity to adverse outcomes and risk aversion (Fiegenbaum, 1990; Marshall et al., 2011; Seborá & Cornwall, 1995). Companies with high digital capabilities adapt business models less due to better alignment with the prevailing context. Thus, our second hypothesis is:

*H2.* In uncertainty scenarios, startups with higher digitalization capabilities have lower levels of business model adaptation.

The conceptual model (Figure 1) depicts the research framework, including dependent and independent variables and their relationships.

**3. Methodology**

Our field research aimed to describe the reality of startups concerning BMA and its relationship with company performance and digitalization capability. At first, a quantitative approach was adopted through a survey conducted during the COVID-19 pandemic. Data were collected through a closed electronic questionnaire between June and August 2020,



**Figure 1.** Conceptual model  
Source: Authors’ own work

encompassing startups from all Brazilian states, representing diverse demographics, socioeconomic backgrounds and cultural characteristics. The survey targeted professionals from 3,023 startups nationwide, representing 23.75% of the total 12,727 startups in Brazil, according to a study by the Associação Brasileira de Startups (ABStartups, 2020). The survey utilized random sampling from databases obtained from startup accelerators, facilitated by the authors' ecosystem relationship. The geographic distribution of the final sample across different Brazilian regions closely resembles national distribution statistics, according to ABStartups (2020). Out of 512 responses received, 410 were considered valid after data processing. Survey data were initially managed on SurveyMonkey, the software for questionnaire creation and response collection. Respondents primarily comprised founders or C-level professionals (83.9%), with others occupying various company leadership positions.

After the survey stage, semi-structured interviews were carried out with the respondents from the first stage during September and October 2023 to better understand the relationships between the variables, including assessing causality. Startups were divided into groups or clusters that segment startups according to (i) the degree of adaptation of the business model, (ii) the level of digitalization capability and (iii) the company's performance. For this classification, the answers to the questions that indicated the level of impact on each of these performance indicators were used. Based on this division, interviews were carried out with 12 representatives of some of the startups previously researched so that at least four companies represented each of the above clusters. The startups that would be interviewed were randomly selected based on new contacts with the startups. The interviews were carried out virtually, using the Zoom videoconferencing software, with the support of artificial intelligence software that automatically transcribed the conversations to facilitate recording and subsequent consultations.

### 3.1 Constructs

The constructs and their measurement scopes are discussed in the subsequent sections.

**3.1.1 Business model adaptation.** In this study, BMA refers to actively aligning a company's business model with a changing external environment, such as the COVID-19 pandemic. Two scales, Spieth & Schneider (2016) and Claus (2017), were adapted to measure BMA, focusing on changes in Value Creation, Delivery and Capture dimensions. The adapted statements were consolidated into nine building blocks, aligning with Osterwalder, Pigneur, & Tucci's (2005) business model framework. Questions were presented randomly, and each statement utilized a five-level agreement scale. The complete questionnaire can be found in Appendix.

**3.1.2 Digitalization capability.** Digitalization capability represents a set of resources and processes managed to enable a company's digital activities. A scale by Greif (2016) was adapted to measure the digitalization capability of Brazilian startups. Digital sales, Customer involvement, and People and Culture were evaluated through a five-level measurement scale, including a nonexistent digitalization level option.

**3.1.3 Startup performance.** Startup performance was assessed using three commonly monitored indicators: monthly revenue (Oke et al., 2012), number of customers (Gupta & Lehmann, 2003) and number of employees (Terziovski & Samson, 2000). Each indicator was evaluated based on its impact during the COVID-19 pandemic, with respondents accounting for *perceived decrease*, *no change* or *increase*. Subsequently, respondents estimated impact sizes based on five performance levels, facilitating comparison with other constructs.

The methodology used in this study provides a robust framework for examining BMA, startup performance and digitalization capability, offering valuable insights into startups' responses to uncertain environments such as the COVID-19 pandemic.

**4. Results**

The SmartPLS 4 software was used for statistical calculations using the structural equation modeling techniques to evaluate the model's reliability and validity. The results are presented and discussed below.

The reliability and validity of the proposed model were assessed using techniques recommended by the academic literature on SmartPLS software analysis. As shown in Table 1, the average variance extracted (AVE) and composite reliability (rho\_c) values exceeded the recommended thresholds for all constructs. Although Cronbach's alpha for Value Capture was slightly below expectations due to its limited number of variables, it did not significantly impact construct consistency. Discriminant validity, depicted in Table 2, also met expectations according to the Fornell–Larcker criterion.

Table 3 illustrates the constructs' attributes in the software's path coefficient calculations. Analysis revealed that only the relationship between Value Delivery aspect adaptation and startup performance was not statistically significant ( $p > 0.05$ ). Similarly, the relationship between Value Capture aspect adaptation and digital capability was not statistically significant ( $p > 0.05$ ). However, all other associations were substantial ( $p < 0.05$ ), supporting the article's hypotheses.

The results suggest that startups with better digital capabilities and performance tend to exhibit lower levels of BMA. This confirms the article's hypotheses, indicating that startups with more robust performance and digital capabilities are less likely to adapt their business models in uncertain scenarios. Notably, while the hypothesis was supported for the relationship between digital capability and the dimensions related to Value Creation and

**Table 1.** Construct reliability and validity

Construct	Cronbach's alpha	Composite reliability (rho_c)	AVE
Capture	0.466	0.777	0.640
Creation	0.706	0.810	0.520
Delivery	0.596	0.783	0.549
Digital capacity	0.608	0.782	0.549
Performance	0.791	0.878	0.708

**Source(s):** Authors' own work

**Table 2.** Discriminant validity by the Fornell–Larcker criterion

Construct	Capture	Creation	Delivery	Digital capacity	Performance
Capture	0.800				
Creation	0.513	0.721			
Delivery	0.506	0.601	0.741		
Digital capacity	-0.106	-0.186	-0.150	0.741	
Performance	-0.317	-0.240	-0.132	0.217	0.841

**Source(s):** Authors' own work

**Table 3.** Path coefficients

Path (Relationship)	Original sample	Sample mean	SD	p-value
Performance → Capture	-0.308	-0.310	0.045	0.000
Performance → Creation	-0.209	-0.215	0.050	0.000
Performance → Delivery	-0.104	-0.109	0.056	0.062
Digital capacity → Capture	-0.039	-0.046	0.053	0.460
Digital capacity → Creation	-0.141	-0.152	0.051	0.005
Digital capacity → Delivery	-0.127	-0.142	0.050	0.012

**Source(s):** Authors' own work

Value Delivery of the business model, it was not consistently supported for the Value Capture dimension. On the other hand, the hypothesis was supported by the relationship between company performance and the dimensions related to Value Creation and Value Capture of the business model. Still, it was not consistently supported for the Value Delivery dimension.

## 5. Discussion

In this study, the hypothesis that startups which adapt their business models less during uncertainty are associated with better performance finds statistical significance for Value Creation and Value Capture, particularly for the former. However, for the Value Delivery dimension, the study failed to confirm or refute the hypothesis, potentially due to the pandemic's significant impact on organizations' external aspects. Nonetheless, a negative relationship between performance and adaptation in this dimension is suggested, aligning with decision-making tendencies under the prospect theory, where leaders anticipating positive outcomes exhibit less risk propensity, leading to lesser adaptation. [Andersen, Aagaard, & Magnusson \(2022\)](#) support this tendency, emphasizing managerial decision-making's centrality in BMI amidst uncertainty. Notably, the study's findings indicate that startups with higher digitalization capacity were less inclined to adapt their business models during uncertainty, particularly in the Creation and Delivery dimensions, reflecting leaders' perceptions of organizational readiness and reduced risk inclination. However, the study could not establish a direct correlation between digitalization capacity and adaptation in the Value Capture dimension, possibly due to measurement limitations and the complexity of factors influencing revenue and cost structures within business models. This warrants future investigation of these nuanced dynamics.

The research also underscores the impact of the pandemic on the management's propensity to innovate business models, contrasting the traditional reluctance among startup leaders with the necessity forced upon them by the crisis. As exemplified by the founder of one of the startups interviewed, which faced a sudden shift in its operational landscape, the pandemic demanded immediate adaptation despite prior hesitations. Moreover, findings by [Guckenbiehl & Zubielqui \(2022\)](#) reveal a nuanced relationship between startup size and adaptation tendencies: smaller startups capitalize on opportunities amidst adversity while larger ones, such as that whose founder was interviewed in this study, leverage their market position to proactively pursue digitalization strategies, accelerating their efforts in response to external pressures. This underscores the complex interplay between external shocks, managerial decision-making and organizational responses in shaping BMAs in the face of crisis.

Our results contribute to both theoretical and practical realms of business management. They align with the prospect theory, suggesting that managers of high-performing startups are more risk-averse and thus less inclined to adapt their business models in times of

uncertainty. The findings also advance discussions on BMA, highlighting the nuanced relationship between adaptation and performance and the role of digitalization capability. Additionally, the study addresses future research directions proposed by Foss & Saebi (2018), deepening the understanding of business model interdependencies and the capabilities' role as drivers of BMI. Finally, this work also contributes to recent research in business management and strategy that deals with these subjects from the perspective of the COVID-19 pandemic (Chanyasak et al., 2022).

From a practical perspective, the results caution against the assumption that innovation always leads to improved business models, especially in uncertain contexts. Managers and investors should carefully evaluate adaptation strategies, considering the impact of their perspectives on company performance and the incorporation of digital trends. The study's implications extend to government agencies, support institutions and startup hubs, offering insights for policy-making and support initiatives.

## 6. Conclusion

This research challenges the notion that high uncertainty demands full adaptation of startup business models. Through primary data collection from over 400 Brazilian startup founders and C-level executives during the COVID-19 pandemic, the study reveals that startups with more substantial digital capabilities and higher performance tend to adapt their business models less. This supports the article's hypotheses and underscores the nuanced relationship between performance, digital capability and BMA. The study addresses a gap in understanding the phenomenon of BMA in startups within contexts of uncertainty, mainly through the lens of the prospect theory and managerial decision-making processes. It investigates whether startups exhibiting superior performance during periods of uncertainty are associated with lesser BMA and if startups with higher digitalization capacities are likewise associated with reduced adaptation levels. The findings contribute to the existing literature on strategic management by supporting the principles of the prospect theory, emphasizing how managerial perceptions of risk influence strategic decisions, especially during uncertain times. Moreover, the study reinforces previous research by highlighting the importance of aligning business model constructs with prevailing market conditions, thus offering insights into the strategic behavior of startups, particularly in emerging markets such as Brazil, and in response to the COVID-19 pandemic.

Furthermore, the study validates measurement scales for BMA and digitalization capacity, providing empirical contributions to the field. By validating existing measurement schemes, the study offers a quantitative foundation for future research in business model studies, addressing a scarcity of validated measurement tools in this domain. These findings advance academic discourse and hold practical implications for policymakers, entrepreneurship support entities and startup managers, aiding in formulating targeted strategies and interventions. However, the study acknowledges methodological limitations, such as the temporal constraints of data collection and the simultaneous measurement of variables, which warrant future research endeavors. Additionally, avenues for future research are suggested, including longitudinal studies and investigations into the moderating role of digitalization capacity on the relationship between performance and BMAs. These offer opportunities for deeper insights into strategic decision-making dynamics in uncertain environments.

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## Appendix

Below, we present the questionnaire used during the quantitative phase, which was set up and sent through the SurveyMonkey survey platform. The information in italics between braces – *{example}* – is only presented below to indicate the logic of the questionnaire. However, the respondents did not view it. Also, the authors removed some of the identifying information to keep the file anonymous.

{START}

### Impactos da COVID-19 nas startups brasileiras

Os impactos da pandemia da COVID-19 estão sendo sentidos em todas as esferas da economia no país, inclusive no ecossistema de inovação e empreendedorismo. Para suportar as startups e o ecossistema de maneira geral é importante entender os impactos da pandemia nas startups brasileiras, em seus indicadores de performance (faturamento, número de colaboradores, etc.) e modelos de negócios.

Dado esse cenário, a Instituição X, em parceria com a instituição Y e outras entidades do ecossistema, está realizando uma pesquisa, conduzida pelos autores A, B e C, a fim de encontrar evidências de como a pandemia impactou as startups brasileiras, com o objetivo de oferecer um melhor direcionamento de esforços e soluções, tanto públicas quanto privadas, para o ecossistema de startups.

Duração da Pesquisa: 7 a 9 minutos.

#### Termo de Consentimento Livre e Esclarecido

Esclarecemos e garantimos que a sua identificação será mantida em sigilo e os resultados obtidos por meio da pesquisa serão utilizados apenas para alcançar os objetivos científicos expostos anteriormente, incluída sua publicação na literatura especializada.

(Lei n. 13.709/2018 LGPD)

Em caso de dúvida ou para entender melhor a pesquisa, você poderá entrar em contato, em qualquer momento que julgar necessário, com os pesquisadores por meio do e-mail.

Sua participação é muito importante! Ajude-nos a fazer com o que o ecossistema de inovação e empreendedorismo do país tenha maiores possibilidades de atingir todo o seu potencial.

#### Li e concordo:

- SIM (Aceito participar da pesquisa)
- NÃO (Não aceito participar da pesquisa) *{neste caso o formulário é finalizado}*

**Você trabalha em uma startup?**

Sim  Não {neste caso o formulário é finalizado}

**Cargo na startup:**

Founder / C-Level  Coordenador(a) / Supervisor(a)  
 Diretor(a) / Superintendente  Analista  
 Gerente / Head  Outros

**Ano de fundação da startup:**

Antes do ano 2000  2001  2002  2003  2004  2005  2006  2007  
 2008  2009  2010  2011  2012  2013  2014  2015  2016  2017  
 2018  2019  2020

**Sede da startup:**

AC  AL  AM  AP  BA  CE  DF  ES  GO  MA  MG  MS   
 MT  PA  PB  PE  PI  PR  RJ  RN  RO  RR  RS  SC  SE   
 SP  TO  Fora da Brasil

**Segmento(s) de atuação da startup:**

[Escolha um ou mais segmentos de atuação]

<input type="checkbox"/> Agronegócio	<input type="checkbox"/> Esporte, Fitness e Bem-estar	<input type="checkbox"/> Saúde
<input type="checkbox"/> Alimentos e Bebidas	<input type="checkbox"/> Eventos	<input type="checkbox"/> Segurança e Monitoramento
<input type="checkbox"/> Animais e Pets	<input type="checkbox"/> Governo	<input type="checkbox"/> Seguros
<input type="checkbox"/> AR / VR	<input type="checkbox"/> Hotéis e Restaurantes	<input type="checkbox"/> Serviços
<input type="checkbox"/> Automotivo	<input type="checkbox"/> Indústria e Manufatura	<input type="checkbox"/> Serviços de Tecnologia
<input type="checkbox"/> Bens de Consumo	<input type="checkbox"/> Indústria e Manufatura	<input type="checkbox"/> Serviços Financeiros
<input type="checkbox"/> Big Data e Analytics	<input type="checkbox"/> Inteligência Artificial e Machine Learning	<input type="checkbox"/> Serviços Profissionais e Autônomos
<input type="checkbox"/> Biotecnologia	<input type="checkbox"/> IoT (Internet das Coisas)	<input type="checkbox"/> Sustentabilidade
<input type="checkbox"/> Blockchain	<input type="checkbox"/> Jogos (Games)	<input type="checkbox"/> Telecomunicações
<input type="checkbox"/> Comércio e Distribuição	<input type="checkbox"/> Jurídico	<input type="checkbox"/> Terceiro Setor - ONGs
<input type="checkbox"/> Comunicação	<input type="checkbox"/> Máquinas e Equipamentos	<input type="checkbox"/> Transporte
<input type="checkbox"/> Construção	<input type="checkbox"/> Mídia e Conteúdo	<input type="checkbox"/> Turismo e Viagens
<input type="checkbox"/> Consultoria	<input type="checkbox"/> Moda e Vestuário	<input type="checkbox"/> Utilidades Domésticas
<input type="checkbox"/> Desenvolvimento de Software	<input type="checkbox"/> Petróleo e Gás	<input type="checkbox"/> Outros
<input type="checkbox"/> Educação	<input type="checkbox"/> Política	
<input type="checkbox"/> Energia	<input type="checkbox"/> RH e Gestão de Pessoas	
<input type="checkbox"/> Energia Limpa		
<input type="checkbox"/> Engenharia		
<input type="checkbox"/> Entretenimento		

**Número de colaboradores:**

[Indicar o número de colaboradores e sócios trabalhando full-time na sua startup]

0 - 10  76 - 100  
 11 - 25  101 - 200  
 26 - 50  201 - 500  
 51 - 75  Mais de 500

Levando em consideração a situação criada pela pandemia da COVID-19, como você avalia as afirmações a seguir sobre a sua startup?

**A oferta existente de produtos e serviços da empresa mudou devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Novas ofertas de produto ou serviço foram desenvolvidas devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**O posicionamento dos produtos e serviços da empresa mudou devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Os clientes-alvo da empresa mudaram devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Novos segmentos de mercado passaram a ser atendidos devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Novos segmentos de clientes passaram a ser atendidos devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Os canais de distribuição da empresa mudaram devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Nós passamos a utilizar novos canais de distribuição para nossos produtos e serviços devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**As principais funções dos nossos canais (por exemplo, promoção, processamento ou entrega de pedidos, pagamentos) mudaram devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**As maneiras como a empresa se relaciona com seus diferentes segmentos de clientes mudou devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Nós tentamos aumentar a retenção de clientes por meio de novas ofertas de serviços devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Tomamos medidas específicas para fortalecer o relacionamento com os clientes devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**As atividades internas de criação de valor, ou seja, aquelas que fazem parte das entregas dos produtos ou serviços da empresa, mudaram devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Os recursos técnicos (por exemplo, equipamentos, tecnologias) de nossa empresa precisaram ser atualizados devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Processos existentes foram alterados significativamente devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**As principais competências da empresa mudaram devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Nossos colaboradores receberam capacitação para desenvolver novas competências devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Nossa empresa desenvolveu novas competências devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**O papel e o envolvimento dos parceiros no processo de criação de valor mudou devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Nós passamos a nos relacionar com novos parceiros devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Nós desenvolvemos novas formas de relacionamento com os parceiros devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**As estruturas de custo da empresa mudaram devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Modificamos a nossa estratégia de precificação devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Ações específicas para reduzir custos foram tomadas devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Os mecanismos de geração de receita mudaram devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Desenvolvemos novas oportunidades de receita (por exemplo, vendas adicionais, vendas cruzadas) devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

**Complementamos ou substituímos as receitas de transação única por modelos de receita recorrente, ou vice-versa, devido à pandemia da COVID-19.**

Discordo totalmente  Discordo parcialmente  Nem concordo  Concordo parcialmente  Concordo totalmente

---

**Em relação à sua presença e vendas digitais, selecione a alternativa que melhor descreve o momento atual da sua startup:**

- Nossa empresa não possui um website.
- Temos um website padrão para apresentar/vender nossas soluções.
- Temos medidas de acompanhamento e serviços digitais para aumentar as vendas on-line.
- Usamos big data para criar ofertas para clientes individuais.
- Usamos a digitalização para mudar fundamentalmente nosso modelo de negócios.

**Em relação ao envolvimento dos seus clientes, selecione a alternativa que melhor descreve o momento atual da sua startup:**

- Os clientes não interagem conosco por meio de canais digitais.
- Os clientes podem dar feedback por meio de canais digitais.
- O feedback do cliente é processado e analisado automaticamente.
- Os clientes estão envolvidos digitalmente em processos de negócios isolados (por exemplo, vendas e desenvolvimento).
- Os clientes estão envolvidos digitalmente em todos os processos de negócios (vendas, desenvolvimento, etc.).

**Em relação ao time e cultura, selecione a alternativa que melhor descreve o momento atual da sua startup:**

- A empresa possui uma cultura avessa à digitalização.
- A nossa equipe não se preocupa com a digitalização.
- Nós asseguramos que a equipe use ferramentas digitais.
- Fornecemos treinamento e especialistas para promover o desenvolvimento digital de nossa equipe.
- Promovemos a inovação por meio da avaliação de habilidades digitais em nossos critérios de contratação.

**Como a pandemia da COVID-19 impactou o faturamento mensal da sua startup?**

- O faturamento reduziu *{resposta condicional pergunta a. abaixo}*
- O faturamento permaneceu o mesmo
- O faturamento aumentou *{resposta condicional pergunta b. abaixo}*

**a. Indique o impacto estimado da pandemia no faturamento mensal da sua startup:**

- Redução de até 10%
- Redução de 11% a 20%
- Redução de 21% a 30%
- Redução de 31% a 40%
- Redução de 41% a 50%
- Redução de 51% ou mais

**b. Indique o impacto estimado da pandemia no faturamento mensal da sua startup:**

- Aumento de até 10%
- Aumento de 11% a 20%
- Aumento de 21% a 30%
- Aumento de 31% a 40%
- Aumento de 41% a 50%
- Aumento de 51% ou mais

**Como a pandemia da COVID-19 impactou o número de clientes da sua startup?**

- O número de clientes reduziu *{resposta condicional pergunta a. abaixo}*
- O número de clientes permaneceu o mesmo
- O número de clientes aumentou *{resposta condicional pergunta b. abaixo}*

**a. Indique o impacto estimado da pandemia no número de clientes da sua startup:**

- Redução de até 10%
- Redução de 11% a 20%
- Redução de 21% a 30%
- Redução de 31% a 40%
- Redução de 41% a 50%
- Redução de 51% ou mais

**b. Indique o impacto estimado da pandemia no número de clientes da sua startup:**

- Aumento de até 10%
- Aumento de 11% a 20%
- Aumento de 21% a 30%
- Aumento de 31% a 40%
- Aumento de 41% a 50%
- Aumento de 51% ou mais

**Como a pandemia da COVID-19 impactou o número de colaboradores da sua startup?**

- O número de colaboradores reduziu *{resposta condicional pergunta a. abaixo}*
- O número de colaboradores permaneceu o mesmo
- O número de colaboradores aumentou *{resposta condicional pergunta b. abaixo}*

**a. Indique o impacto estimado da pandemia no número de colaboradores da sua startup:**

- Redução de até 10%
- Redução de 11% a 20%
- Redução de 21% a 30%
- Redução de 31% a 40%
- Redução de 41% a 50%
- Redução de 51% ou mais

**b. Indique o impacto estimado da pandemia no número de colaboradores da sua startup:**

- Aumento de até 10%
- Aumento de 11% a 20%
- Aumento de 21% a 30%
- Aumento de 31% a 40%
- Aumento de 41% a 50%
- Aumento de 51% ou mais

{END}

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