The role of organizational resilience in SME service innovation and value cocreation

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Abstract

Purpose – The COVID-19 pandemic has significantly affected service small- and medium-sized enterprises (SMEs), increasing the importance of understanding how these businesses can become more resilient and how service innovation can be an effective strategy to increase their adaptive capacity and survival. This study aims to examine the role of dynamic capabilities in service innovation as a factor explaining the resilience of SMEs in Puerto Rico and the Dominican Republic during the COVID-19 crisis and its impact on service innovation. Additionally, the authors assess whether service innovation has a significant impact on value cocreation in these businesses.

Design/methodology/approach – This study used a quantitative method by surveying 118 SME owners in Puerto Rico and the Dominican Republic. The data were analyzed using partial least-squares structural equation modeling.

Findings – The results reflect important theoretical contributions by analyzing resilience from an innovation perspective instead of a retrospective approach, which is an area that has not been analyzed in the literature. Additionally, theoretical contributions to marketing services in SMEs are discussed, which is an underresearched topic. The results advance by discussing the role of service innovation through the reconfiguration of resources and how this can be an effective strategy to increase value cocreation with customers during crises.

Originality/value – This study is original in that it analyzes resilience from the perspective of innovation, and not from a retrospective approach. It offers a vision in response to the need for studies that provide a clearer conceptualization of resilience in small businesses. This highlights the importance of considering regional differences and service innovation as effective strategies to enhance resilience and value cocreation with customers.

Keywords COVID-19, Dynamic capabilities, Service innovation, Organizational resilience, Value co-creation

Paper type Research paper

1. Introduction

Resilience in small- and medium-sized enterprises (SMEs) is a key strength, enhancing performance and facilitating adaptation, innovation and resurgence amid disruptive challenges (Syamsari et al., 2022). The COVID-19 pandemic impacted both global companies and SMEs significantly. In times of uncertainty, such as the COVID-19 crisis, businesses adopt various strategies to enhance their resilience. Innovation serves as a pivotal means to achieve organizational resilience (Sanchez and Mahoney, 2020). Resilience is defined as the dynamic capacity of a system to adapt successfully to disturbances that threaten its viability, functioning and development. This process involves mobilizing resources to sustain well-being (Southwick et al., 2014; Dovbischuk, 2022). Barquet and Femenia (2020) assert that during the COVID-19 crisis, successful SMEs leveraged their dynamic capabilities to enhance their ability to integrate, build and reconfigure internal competencies, thereby becoming more resilient to external environmental changes.

During the COVID-19 crisis, the National Governors Association (NGA, 2020) reported a negative impact of COVID-19 on SMEs in the USA and its territories, with Puerto Rico being among the most affected. Neilson et al. (2020) observed a similar situation in the Dominican Republic, where 44% of SME owners faced the risk of closing their operations. Caiazza et al. (2021) note that service SMEs were particularly affected, creating a new context for developing innovation strategies (Heinonen and Strandvik, 2020). Service SMEs are noted for their adaptability to market changes (Saavedra-Garcia et al., 2019) and agile decision-making (Martinez-Muñoz et al., 2022). Moreover, as service providers, their success hinges on reputation and customer loyalty, underpinned by a commitment to service quality and satisfaction (Rojas-Martinez et al., 2020). Cruz (2008) suggests...
that this agility in responding to market changes positions them as catalysts for service innovation, which differs from product innovation by involving the entire organizational process and using capabilities for maximizing development opportunities and continuous service improvement.

During COVID-19, SMEs encountered numerous challenges, necessitating changes to their business models to adapt to the evolving environment (Gregurec et al., 2021) and mitigate adverse effects on their service models (Yang et al., 2020). Nonetheless, resilience during the pandemic has positively influenced innovation and value cocreation (Caballero-Morales, 2021; Dovbischuk, 2022; Akpan et al., 2022; Heinonen and Strandvik, 2020). Research has underscored the relationship between innovation and value cocreation (Prahalad and Ramaswamy, 2004; Payne et al., 2004; Domi et al., 2020), with service innovation facilitating the integration of new and improved service models (Domi et al., 2020), thereby enhancing consumer experiences and creating unique value propositions (Edvardsson and Tronvoll, 2013). This leads to value cocreation, fostering competitive advantages (Zhao et al., 2023).

Service innovation has been explored to generate competitive advantage (Pilawa et al., 2022; Capodistrias et al., 2022), with various models explaining this phenomenon (Song et al., 2009; O’Cass et al., 2013; Den Hertog et al., 2010). An intriguing theoretical model for examining how organizational resilience develops and impacts service innovation is Den Hertog et al. (2010) dynamic capabilities model of service innovation. Den Hertog et al. (2010) proposes a model that aims for service innovation through the management of six organizational dynamic capabilities, arguing that the service innovation process is more intangible compared to product innovation. Despite the focus on products in historical literature, Den Hertog et al. (2010) emphasizes the importance of dynamic capability models in services, offering a comprehensive tool for developing problem-focused and consumer-centric solutions.

This study explores how Den Hertog et al. (2010) management of six dynamic capabilities for service innovation underpins organizational resilience, influencing service innovation and consumer value cocreation during crises. Despite the model’s significance, its application from a quantitative perspective remains unexplored, revealing a gap in understanding the role of dynamic capabilities in service SMEs’ resilience and their impact on service innovation and value cocreation in crisis situations.

Thus, this research aims to examine whether dynamic capabilities for service innovation can explain organizational resilience in service SMEs in Puerto Rico and the Dominican Republic amidst COVID-19 challenges. Additionally, it investigates how organizational resilience, through the management of dynamic capabilities, affects service innovation and the capacity of these SMEs to cocreate value with consumers. Using a quantitative methodology and partial least squares structural equations (PLS-SEM) for data analysis, the study found that the six dynamic capabilities for service innovation are critical determinants of organizational resilience, significantly influencing service innovation and value cocreation, with consumer integration being crucial for survival and achieving service innovation. The paper continues with a literature review, methodology and discussion of results and conclusions.

2. Literature review

2.1 Organizational resilience

Resilience is defined as the ability to face and overcome disturbances, allowing adaptation and the generation of changes (Longstaff et al., 2010) to cope with challenging situations (Norris et al., 2008; Southwick et al., 2014). From a business perspective, resilience is analyzed through organizational resilience. In this study, organizational resilience is defined as the set of capabilities that an organization must face in the external environment, which can limit its growth and even lead to failure (Barrón Torres and Sánchez Limón, 2022). The study of organizational resilience began with the seminal works of Staw et al. (1981) and Meyer (1982), who established a series of components to analyze how an organization responds to an adverse event. In addition, they established that the way organizations respond to external threats results in the management of new organizational processes that can lead to a functional or dysfunctional response.

Bragatto et al. (2021) explain that within organizations, resilience is analyzed as the way in which a company modifies its operation before, during and after a disturbance to continue operating under both expected and unexpected conditions. Limnuelleke (2017) explains that resilience has been operationalized in different research streams and has its own definitions, theories and conceptions. This study analyzed organizational resilience from the perspective of dynamic capabilities for service innovation. We analyze how SME owners modified their functioning during the COVID-19 crisis and how this configuration of dynamic capabilities impacted service innovation and value cocreation.

Conz and Magnani (2020a, 2020b) detail that although organizational resilience has been studied in the organizational field, evidence in SMEs is limited. Some authors highlight that analyzing resilience in terms of SMEs is relevant at the organizational level (Saavedra-García et al., 2019; Hadjielias et al., 2022; Martinez-Muñoz et al., 2022), as these companies are distinguished by their ability to adapt to changes in the market (Saavedra-García et al., 2019), agile decision-making (Martinez-Muñoz et al., 2022) and developing personal, psychological and leadership resilience capabilities (Hadjielias et al., 2022). Other studies adopt the opposite view, arguing that SMEs are less resilient because of their slowness to reintegrate their operations back to normal after a critical event. However, both views agree that their flat structure provides flexibility for innovation, even in turbulent environments (Ibarra-Cisneros et al., 2021; Demuner-Flores et al., 2022), where organizational resilience has a direct impact on innovation (Cruz, 2008; Ibarra-Cisneros et al., 2021; Demuner-Flores et al., 2022). Innovation affects the value cocreation process (Abdalatif and Yamin, 2022; Mastropetrou et al., 2022). These antecedents indicate that resilience, innovation and value cocreation are interconnected concepts (Mastropetrou et al., 2022; Abdalatif and Yamin, 2022; Ibarra-Cisneros et al., 2021; Demuner-Flores et al., 2022; Saavedra-García et al., 2019; Hadjielias et al., 2022; Martinez-Muñoz et al., 2022; Dovbischuk, 2022; Akpan et al., 2022), which contributes to the development of competitive advantages and allows firms to continue operating in times of crisis.
Therefore, the degree of resilience managed through dynamic capabilities enables service firms to adapt to survive and compete successfully even after crises (Adekola and Clelland, 2020). On the other hand, Lv et al. (2018a) highlighted that the conceptualization of resilience in the context of innovation still needs further research, arguing that adaptability and stability contribute to the effectiveness of innovation in adapting to change. However, an extensive literature review confirms the scarcity of precise studies that analyze service SMEs. Considering that product-focused innovations are being replaced by experience-based approaches to value cocreation, in which innovations are based on customer interaction, there is a need to identify a model of interest to analyze organizational resilience in service SMEs and how it affects service innovation.

2.2 Dynamic capabilities for service innovation

The study of dynamic capabilities has emerged as an evolution of the resource-based theory (Kuuluvainen, 2012; Teece et al., 1997). The dynamic capabilities theory focuses on the analysis of a firm’s ability to integrate, build and reconfigure both internal and external competencies to effectively adapt to a constantly changing environment (Teece et al., 1997). The theory suggests that firms operating in uncertain environments do not simply seek a single solution to problems but are able to make constant revisions to the capabilities they have developed over time in the face of changing environments. This approach recognizes the need for continuous adaptation and reconfiguration of internal and external competencies to meet the changing challenges of the business environment (Zahra et al., 2006).

The study of dynamic capabilities encompasses different factors with an emphasis on innovation capability (Teece et al., 1997; Zahra et al., 2006). Innovative capability refers to a firm’s ability to combine acquired knowledge with innovation strategies to constantly develop new products, services and processes to maintain competitive advantage (Lawson and Samson, 2001). However, despite the extensive literature on dynamic capabilities, there is a gap in how they act in the service sector (Eloranta and Turunen, 2015; Storey et al., 2016), especially in the SME sector (Conz and Magnani, 2020a, 2020b). Service innovation differs from product innovation because it involves the entire organizational process (Cruz, 2008).

The literature reflects several models that cover the nature of dynamic capabilities in service innovation. These studies limit their views on strategic management (Eloranta and Turunen, 2015), present the differences between the management of different types of products and services (Kindström et al., 2013; Storey et al., 2016) and focus on changes in organizational processes and business activities (Kowalkowski et al., 2017; Storey et al., 2017). On the other hand, Den Hertog’s model (2010) categorizes innovations as internal or external innovations, where internal service innovations are analyzed as new ideas or practices within an organization and external innovations refer to innovations that arise through changes in the service offering that a firm provides to consumers. Den Hertog et al. (2010) added to this binary distinction and classified innovation into six dynamic capabilities for service innovation:

1. New service concepts: analyze the value that the service provider creates for its customers. Organizing solutions to consumer problems.
2. Consumer interaction: analyzes the incorporation of supplier-customer interaction methods that culminate in new services and value.
3. Technology integration: analyzes how new technology systems are used to present new ways of integrating services and continuously improving business processes.
4. New business partners: analyze various forms of collaboration and alliances with distributors and other companies.
5. New revenue-generating models: analyze how an organization implements new ways to innovate by integrating new products and technology to obtain superior economic benefits and satisfy consumer needs.
6. New service delivery system: analyze how the organizational structure is transformed by incorporating new elements into the service delivery system.

Unlike other service innovation models, Den Hertog et al. (2010) model offers a valuable tool for effectively responding to an event and developing a problem- and consumer-centered approach. These dynamic capabilities approach serves as a link for integrating all the parties involved and promoting greater collaboration and coordination in the process. Dynamic capabilities theory analyzes the need for the continuous adaptation and reconfiguration of an organization (Zahra et al., 2006). This study analyzes resilience through dynamic capabilities for service innovation in terms of how service SMEs incorporate and develop a set of dynamic capabilities to adapt, survive and compete successfully during the COVID-19 crisis (Adekola and Clelland, 2020). It is against this background that we posit:

H1. Organizational resilience is a multidimensional variable explained by the dynamic capabilities of service innovation and its dimensions.

H1a. New service offering.
H1b. New revenue generation models.
H1c. New delivery system.
H1d. New consumer interaction.
H1e. New technology integration.

2.3 Service innovation

The literature on dynamic capabilities mostly focuses on product and technological innovation, paying little attention to the impact of these capabilities on service innovation (Kindström et al., 2013). However, several studies have emphasized the relevance of dynamic capabilities in the service industry (Den Hertog et al., 2010; Lütjen et al., 2019). The management of dynamic capabilities becomes a resilience force that impacts innovation as dynamic capabilities enable innovation through the creation of new products, services and processes that emerge in response to changes in times of uncertainty (Al Omoush et al., 2023; Ali et al., 2017; Sun et al., 2022). In the context of the COVID-19 pandemic, the literature identifies several dynamic capabilities as
crucial elements of organizational survival. These capabilities include:

- strategic alliances (Heinonen and Strandvik, 2020; Ai and Peng, 2021);
- consumer integration;
- implementation of new organizational components (Savitri and Nahi, 2020; Smolje, 2020);
- technological integration (Masacón et al., 2020; Ruiz, 2021);
- incorporation of new services; and
- adoption of new business models (Smolje, 2020; Chavez and Moreno, 2020).

These capabilities have proven to have a significant impact on service innovation as they enable organizations to adapt and recover in times of turbulence (Lütjen et al., 2019; Rodríguez-Antón et al., 2018).

Service innovation in SMEs is defined as a new process or offering implemented by an organization to create value for one or more actors in a service network (Snyder et al., 2016; Witell et al., 2016). Service innovation enables a company to modify its strategic potential, making it a key factor in value cocreation. Companies that develop these abilities to assimilate information and use this information exchange become cocreating organizations, as they make services available to their customers that can surpass traditional activity in the development of innovations, in terms of speed of development, creativity and market success, as they generate successful ideas thus achieving a sustainable competitive advantage. (Hollebeek and Andreassen, 2018; Bock et al., 2011; Zheng et al., 2011; Lin et al., 2016; Heider et al., 2021). Studies in service industries highlight that once organizational resilience is achieved, it significantly affects service innovation (Dovbischuk, 2022; Marco-Lajara et al., 2022; Puliga and Ponta, 2022). However, these studies did not analyze the role of organizational resilience in service SMEs or its impact on innovation. The literature shows that, during the COVID-19 crisis, the service SME sector was the most affected when compared to other sectors of the economy (Ciaiazza et al., 2021; Heinonen and Strandvik, 2020). Furthermore, these authors detail that while COVID-19 has had an adverse impact on a larger group of the service industry, the crisis also resulted in a completely new context for service innovation. This background leads us to propose the following hypothesis:

**H2.** Dynamic service innovation capabilities allow service SMEs to reconfigure effectively during the COVID-19 crisis, leading to a significant positive impact on their service innovation.

### 2.4 Value cocreation

Innovation, which focuses on both the product and the firm, has evolved the experience of value cocreation (Prahalad and Ramaswamy, 2004). The literature highlights how in times of uncertainty, service innovation has become a strategy to transform firms, impacting value cocreation with consumers (Wang et al., 2020; Min et al., 2021; Sharma, 2021). Wang et al. (2019) state that by understanding the environment in which consumers are immersed, consumers can be integrated into collaborative practices. However, they cautioned that this understanding requires further research. Other authors point out that the link between service innovation and value cocreation is relevant to SMEs but has been an underresearched topic (Merrilees, 2016; Wilches-Velásquez, 2020; Omar et al., 2021).

The concept of value cocreation originates in service-dominant logic and is defined as the process of value creation through the integration of existing resources within a service system, which is then linked to other actors in the service network in each circumstance (Vargo and Lusch, 2004, 2008; Vargo et al., 2008). Other authors state that value creation is a joint process between a company and a consumer, allowing customers to co-construct the service experience and adapt it according to a particular situation (Barrios et al., 2023; Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2014; Leroi-Werelds, 2019). Thus, the participation of the consumer in the service provider is a determinant, as it explains how cocreation occurs (Payne et al., 2008; Ramirez and Garcia-Penalvo, 2018; Yi and Gong, 2013; Grönroos, 2011; Bilstein et al., 2022).

Under the logic of services, cocreation analysis is the best way to analyze value creation processes (Grönroos, 2006), understanding that customers are not always cocreators of value. By contrast, certain circumstances and external factors lead a service provider to generate opportunities to cocreate value with its consumers (Grönroos, 2011; Grönroos and Ravald, 2011; Grönroos, 2013; Grönroos and Voima, 2013). Several studies highlight how certain circumstances drive firms to strengthen their innovation capabilities and how innovation accelerates value cocreation with consumers (Kim et al., 2019). It has even been identified, albeit in a limited way, that the link between innovation and cocreation becomes a predictor of brand equity for SMEs (Omar et al., 2021).

Other studies from diverse perspectives point to a link between organizational resilience, innovation and value cocreation as determinants that explain the survival of firms in times of crises (Ju et al., 2021; Partouche-Sebba et al., 2022; Karpozoglou et al., 2016). Therefore, SMEs that manifest resilience allow them to strengthen their ability to innovate in turbulent times. This results in maintaining their participation in value cocreation activities with consumers (Yi et al., 2023; Saarijärvi, 2012). Value cocreation has a positive impact on the creation of new services and their relationships with customers in addition to its financial impact. Against this background, we propose the following hypothesis:

**H3.** Service innovation during the COVID-19 crisis had a positive impact on value cocreation in SMEs.

### 3. Method

We tested our conceptual model (Figure 1) through a quantitative method using a survey technique with men and women over 21 years of age who were owners of service SMEs in the Puerto Rico (PR) and Dominican Republic (DR). The choice of Puerto Rico and the Dominican Republic as the focus of this study is justified by their geographic proximity and notable economic, political and social similarities in the context of the Hispanic Caribbean. By analyzing both countries, we can compare their practices and extract valuable lessons that could be applicable to other nations. Furthermore, Hillmann and Guenther (2021) noted that an organization’s resilience is modulated by its specific circumstances as well as its unique.
resources and capabilities. To select service SMEs that would participate in the study, a database from the United Retail Center of Puerto Rico and another database from the Chamber of Commerce and Export of Santo Domingo, Dominican Republic, were used. Data were collected between June and October 2020. This period was decisive because the PR and DR government measures to curb the COVID-19 crisis were more restrictive at that time. In addition to the COVID-19 progress, this period allows for a more accurate analysis of resilience as it reduces recall bias. This allowed respondents to provide correct answers and did not lead to response errors because of the possibility of forgetting established business actions.

To ensure that the responses were aligned with resilient actions during the COVID-19 pandemic, prior to participation, the participants were presented with an information sheet covering the criteria for participation, emphasizing the nature of the study in that it covered actions related to COVID-19. It was also emphasized that they were SMEs operating in the service sectors in Puerto Rico and the Dominican Republic. In addition, data collection in this study used a nonreplacement sampling technique. Malhotra (2020) stated that nonreplacement sampling is much more effective than other sampling methods. The sample members cannot be selected more than once. In addition, its effectiveness significantly reduces the sample bias. To run the nonreplacement sampling successfully, the electronic survey was protected so that it could be accessed only on a single occasion. If the participant dropped out or took another action, the survey was automatically rejected and the participant could not access it again.

PLS-SEM was used for data analysis. PLS-SEM is an ideal tool for research analysis because it can handle complex models as it gradually reduces the small sample bias. This is supported by the fact that the estimation value in PLS-SEM is closer to the true value than that of a large sample (Sarstedt et al., 2014). Additionally, its ability to deal with latent variables with multiple measurements improves the accuracy and reliability of the results obtained (Hair et al., 2018). Finally, PLS-SEM allows for precise analysis of how multidimensional variables behave within a research model. In addition, it allows for testing whether the data are also confirmatory when testing hypotheses based on theory, existing concepts or exploratory studies (Hair et al., 2018).

During the data collection process, 3,100 e-mails were sent to the DR database, and the chamber of commerce and export sent e-mails directly to the database of its members. Ultimately, 214 surveys were collected for the PR (n = 96) and DR (n = 119) groups. After the initial analysis, only 118 surveys were usable for analysis purposes among the PR (n = 58) and DR (n = 60) SMEs for a 55% survey completion rate. Discarding 96 incomplete surveys, Table 1 reflects the demographic data for the research model.

3.1 Research instrument
The research instrument had 29 items and a five-point Likert scale, where 1 strongly disagreed and 5 strongly agreed. The operationalization of the instrument was based on the relevant literature, and each item can be observed in Table 1. We started with the organizational resilience variable, which we used as a guide for the definitions and operationalization of the six dynamic capabilities to innovate in the service of Hertog et al. These items were segmented into three categories: new service concepts, new revenue models and technological integration and four for the new delivery system, new customer interaction and new business partners. For the adaptation of each dimension of Hertog’s dynamic capabilities for service innovation in terms of organizational resilience, each statement for each variable was based on the established theory of dynamic capabilities. Each item contemplated how service SMEs reacted in an uncertain environment and what actions they took to not limit themselves to seeking a single solution to problems, but rather a review of their capabilities that they have developed over time allowed them to adapt to turbulent times (Teece et al., 1997).

The service innovation variable was operationalized using the definitions of Snyder et al. (2016) and Witell et al. (2016). Four items inquired about how the adaptation of services, effective decision-making and search for consumer benefits are adopted with a force that can create benefits for one or more actors in a service network (Snyder et al., 2016; Witell et al., 2016). Finally, the value cocreation variable was used as a scale guide, as proposed by Yi and Gong (2013), and adapted to the COVID-19 context.

3.2 Validity and reliability of the study
The summary in Table 1 analyzes the alpha coefficients, standardized loadings and convergent validity, which reflect that they are within the 0.70 criterion (Hair et al., 2018; Henseler et al., 2009). The analysis continued by looking at the average variance extracted (AVE) data, which reflect values above 0.50, leading to the conclusion that the AVE values explain more than half of the variance in their indicators for each variable analyzed (Hair et al., 2018). Discriminant validity was then analyzed using heterotrait-monotrait ratio analyzes (HTMT). The HTMT results (Table 2) reflect values below the criterion of 0.90 (see Table 2). They concluded that there were no problems between the variables that could have had the same meaning (Henseler et al., 2016; Hair et al., 2018). The
first part of the validity analysis concluded that the study had a high validity and reliability.

3.3 Confirmatory composite analysis

To provide more specific conclusions and analyze the robustness of the model, a confirmatory composite analysis (CCA) was performed. The purpose of using CCA maximizes the variance extracted from the exogenous variables. This facilitates the prediction of endogenous constructs and confirmation of research models through a series of steps in PLS-SEM. In addition, it allows for the validation of measures within a nomological network. After analyzing the factor loadings, Cronbach’s alpha (α), composite reliability, AVE values and HTMT values and concluding with the validity criteria, the next step was collinearity analysis. To analyze collinearity, variance inflation factor (VIF) values were observed. The results indicate that the inflation values are less than 2.5, and not greater than 5.0 and the tolerance level is 1.0, which is not greater than 2.0, indicating that there are no collinearity problems. Therefore, the data will not be a limitation in the estimation of the results (Hair et al., 2018). In addition, the VIF results are less than 2.5 and are not greater than 3.3 leading to the conclusion that there is no common method bias (Kock, 2015). By not reflecting that this type of bias does not exist, this implies that the data would not be inappropriately inflated and, therefore, did not reflect measurement errors (Schaller et al., 2015). This type of bias is analyzed in PLS-SEM through the VIF values, and any data exceeding 3.3, concluded that the model may be contaminated by common method bias (Kock, 2015). Continuing with the

Table 1 Demographic data for SMEs

<table>
<thead>
<tr>
<th>SMEs profile</th>
<th>DR</th>
<th>PR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Types of services offered</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture, forest, hunting and fishing services</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Electricity, water and gas services</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Manufacturing services</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Retail services</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Finance and insurance services</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>Health services and social assistance</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Construction services</td>
<td>7</td>
<td>4</td>
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<tr>
<td>Wholesale trade services</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>IT services</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Real estate, rental or leasing</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Management services</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Educational services</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Arts, entertainment and recreation services</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Other services (except public administration)</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>• Specialized services (health services, accounting, consulting, security, etc.)</td>
<td>47</td>
<td>10</td>
</tr>
<tr>
<td>• Export services and logistics</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>• Service providers (pharmaceuticals, energy, beauty, etc.)</td>
<td>43</td>
<td>9</td>
</tr>
<tr>
<td><strong>SMEs that started exporting as an opportunity to respond to the COVID-19 crisis</strong></td>
<td></td>
<td></td>
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<tr>
<td>Yes</td>
<td>11.67</td>
<td>7</td>
</tr>
<tr>
<td>No</td>
<td>88.33</td>
<td>53</td>
</tr>
<tr>
<td><strong>Average annual income (US$)</strong></td>
<td>Responses</td>
<td></td>
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<tr>
<td>$500,000 or less</td>
<td>65</td>
<td>39</td>
</tr>
<tr>
<td>$501,000 to $3,000,000</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>$3,000,001 to $10,000,000</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td><strong>Level of capacity that has operated my business during COVID-19</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30% or less capacity</td>
<td>43.33</td>
<td>26</td>
</tr>
<tr>
<td>31% or 50% capacity</td>
<td>33.33</td>
<td>20</td>
</tr>
<tr>
<td>51% or more capacity</td>
<td>23.33</td>
<td>14</td>
</tr>
<tr>
<td><strong>Years’ operating business</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 years or less</td>
<td>26.67</td>
<td>16</td>
</tr>
<tr>
<td>6 or 15 year</td>
<td>35.00</td>
<td>21</td>
</tr>
<tr>
<td>16 years or more</td>
<td>38.33</td>
<td>23</td>
</tr>
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</table>

Source: Own creation with survey data
The size of predictive significance was then calculated. $f^2$ where its values 0.35, 0.15 and 0.02 indicate large, medium and small effects on the sample. The predictive significance results of the predictive significance $f^2$ are greater than 0.54, indicating that each observed variable has a large effect on the exogenous construct on its corresponding endogenous construct (Hair et al., 2018). Finally, the correlation data and significance scores were analyzed for the proposed hypotheses, which led to nomological validity. The data reflect that they are consistent with the theoretical direction, sample size and significance of correlations (Hair et al., 2018; Adcock and Collier, 2001; Cronbach and Meehl, 1955). The nomological network is the last step of CCA, which leads to the conclusion that predictions based on the research model and proposed instrument are confirmed. The results discussed are also confirmatory because they are congruent with the CCA criteria proposed by Hair et al. (2018).

### 3.4 Results

The first hypothesis analyzes whether the handling of dynamic capabilities (see Figure 2) for service innovation is a multidimensional variable that explains organizational resilience. To analyze the hypothesis (see Figure 3), a hierarchical component model (HCM) test was used using SMART-PLS. Hair et al. (2018) stated that HCM analyzes a higher-order construct with more concrete subdimensions called lower-order components. Running HCM is effective as it reduces the number of relationships, providing a detailed

Table 2: Validity and reliability analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coding</th>
<th>During the COVID emergency:</th>
<th>Factor loading</th>
<th>α</th>
<th>Composite reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>New service concepts</td>
<td>FINC01</td>
<td>New ways of offering services within establishments have been integrated</td>
<td>0.747</td>
<td>0.700</td>
<td>0.893</td>
<td>0.733</td>
</tr>
<tr>
<td></td>
<td>FINC02</td>
<td>New ways of offering off-premises services have been integrated</td>
<td>0.827</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FINC03</td>
<td>New methods have been integrated using this technology</td>
<td>0.795</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New revenue models</td>
<td>FINM01</td>
<td>New methods of generating income have been integrated</td>
<td>0.883</td>
<td>0.822</td>
<td>0.833</td>
<td>0.625</td>
</tr>
<tr>
<td></td>
<td>FINM02</td>
<td>New ways of selling services have been integrated</td>
<td>0.818</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FINM03</td>
<td>Technology has also been integrated to generate revenue</td>
<td>0.871</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New delivery system</td>
<td>FISE01</td>
<td>Service has been improved through teamwork</td>
<td>0.792</td>
<td>0.840</td>
<td>0.893</td>
<td>0.676</td>
</tr>
<tr>
<td></td>
<td>FISE02</td>
<td>New methods have been integrated to optimize hours and human resources</td>
<td>0.844</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FISE03</td>
<td>Service has been improved through effective communication</td>
<td>0.744</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FISE04</td>
<td>An organizational culture focused on customer service has been created</td>
<td>0.772</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New consumer interaction</td>
<td>FINU01</td>
<td>New services have been integrated to interact with customers through online, self-service and delivery systems</td>
<td>0.792</td>
<td>0.797</td>
<td>0.868</td>
<td>0.622</td>
</tr>
<tr>
<td></td>
<td>FINU02</td>
<td>Telephone systems have been implemented to offer services to customers</td>
<td>0.844</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FINU03</td>
<td>Websites or mobile applications have been implemented to communicate with customers</td>
<td>0.744</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FINU04</td>
<td>Communication with customers has been improved to understand their needs</td>
<td>0.772</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology integration</td>
<td>FETC01</td>
<td>New software related to inventory, sales and other records management systems have been implemented</td>
<td>0.735</td>
<td>0.882</td>
<td>0.919</td>
<td>0.741</td>
</tr>
<tr>
<td></td>
<td>FETC02</td>
<td>New ways of integrating technology have been created to provide updated information to customers about products and services</td>
<td>0.892</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FETC03</td>
<td>Technology has been integrated to provide reliable and error-free information to customers</td>
<td>0.903</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FETC04</td>
<td>Services have been improved by integrating technology to facilitate customer service</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New business partners</td>
<td>FIAL01</td>
<td>Alliances with distributors of products and services have been developed</td>
<td>0.902</td>
<td>0.881</td>
<td>0.919</td>
<td>0.739</td>
</tr>
<tr>
<td></td>
<td>FIAL02</td>
<td>New ways of strengthening relationships with suppliers have been integrated</td>
<td>0.857</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FIAL03</td>
<td>Alliances with business distributors have been promoted</td>
<td>0.919</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FIAL04</td>
<td>Alliances with other small- and medium-sized companies have been promoted</td>
<td>0.754</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service innovation</td>
<td>FEIV02</td>
<td>The services have been modified to benefit the consumer</td>
<td>0.847</td>
<td>0.793</td>
<td>0.878</td>
<td>0.707</td>
</tr>
<tr>
<td></td>
<td>FEIV03</td>
<td>Decisions were made quickly to improve the services</td>
<td>0.842</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FEIV04</td>
<td>We have worked as a team to improve the services</td>
<td>0.833</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value cocreation</td>
<td>FISE01</td>
<td>Our consumers have been integrated into the service improvement process</td>
<td>0.809</td>
<td>0.840</td>
<td>0.893</td>
<td>0.676</td>
</tr>
<tr>
<td></td>
<td>FISE02</td>
<td>Consumers have sought ways to participate in the introduction of new services</td>
<td>0.791</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FISE03</td>
<td>The systems were implemented to listen to consumers' opinions</td>
<td>0.836</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FISE04</td>
<td>We have promoted consumer participation in processes that have allowed us to improve service quality</td>
<td>0.851</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Own creation with SMART-PLS data
understanding of how each dimension acts as a first-order variable (Hair et al., 2018). To analyze the data for each dimension, the repeated indicator approach proposed by Ringle et al. (2012) was executed. The level of significance was determined through significance levels according to bootstrapping of $t > 1.960$ data (Ringle et al., 2012; Hair et al., 2018). The results show that organizational resilience through the handling of dynamic capabilities for service innovation can be explained as follows: $H1e$ Technology Integration $t = 13.760$, $H1d$ Consumer interaction $t = 12.597$, $H1c$ New delivery system $t = 11.701$, $H1b$ New revenue generation models $t = 10.647$, $H1f$ New business partners $t = 9.268$, and $H1a$ New Service Offering Concepts $t = 8.368$ thus supporting our hypothesis. In addition, the second hypothesis is supported when analyzing whether organizational resilience through dynamic capability handling to innovate in the service of PR service SMEs and DR significantly ($H2 = \beta = 0.70; t = 13.760$) affects service innovation. We then observed how service innovation had a significant impact ($H3 = \beta = 0.64; t = 10.781$) on value cocreation, thus supporting our hypothesis.

### 3.5 Cross-validated predictive ability test

To validate the proposed model, an analysis of the direct effects of each dimension on service innovation was carried out, and then a cross-validated predictive ability test (CVPAT) was run to compare the predictive ability of the two models by CVPATCOMPARE. The results showed (see Table 4) only two significant effects for the following dimensions: technological integration ($\beta = 40, t = 3.707, t > 1.960$) and new delivery system ($\beta = 40, t = 3.476, t > 1.960$). The remaining dimensions of the new service concept ($\beta = -0.07, t = 0.725$,
new revenue models ($\beta = -0.10$, $t = 1.228$, $t < 1.960$), customer interaction ($\beta = 0.08$, $t = 0.850$, $t < 1.960$) and new business partners ($\beta = 0.13$, $t = 1.702$, $t < 1.960$) did not have a significant effect on service innovation.

After analyzing these results, CVPAT\textsuperscript{COMPARE} we ran the analysis. CVPAT evaluates how well PLS-SEM results predict future results. It also allows the assessment of the ability of a model to make accurate predictions on unseen data, which is achieved through k-fold cross-validation (Lienggaard et al., 2021). CVPAT\textsuperscript{COMPARE} allows for a comparison and predictive accuracy of proposed models or variables (Sharma et al., 2022). The first step for the analysis is that it was decided to run CVPAT\textsuperscript{OVERALL}. The indicator average prediction benchmark (IA) and the linear model prediction benchmark (LM) were then evaluated to interpret the data. According to the data presented in Table 3, both the original and alternate models outperformed the IA, maintaining a significantly lower mean loss ($p < 0.05$). Compared with the LM, both the original and alternate models demonstrated significant predictive performance ($p < 0.05$). When comparing both models, the data reflect that they meet all relevant structural and measurement evaluation criteria. However, the alternate model retained statistically nonsignificant effects on the structural model. Now when running the CVPAT\textsuperscript{OVERALL}. The average losses of the alternate model are lower than those of the original model. The proposed model exhibited the highest predictive accuracy (Sharma et al., 2022). This leads to establishing that in the case of multidimensional variables, applying HCM is fundamental because it allows for the precision of how each dimension acts on the variable and how it acts within the research model (Hair et al., 2018).

### 3.6 Mediation test with PROCESS

Some studies have suggested that service innovation can mediate value cocreation in diverse phenomena (Cheng et al., 2017; Sarmah et al., 2019). However, the articles were limited, and an extensive search did not detect articles that analyzed it from the perspective of small businesses. To deepen the research model, the PROCESS test (see Table 5) was run with the objective of analyzing beyond its direct effects within the research model. Hayes (2018) stated that the PROCESS method is an advanced technique for mediation and moderation analysis, allowing for a more detailed and adaptive analysis of the indirect effects and interactions present within the proposed research model. Sarstedt et al. (2020) noted that integrating PLS-SEM with the PROCESS method offers a robust methodology that enriches the validity and depth of data analysis. PROCESS was run, and the results in Table 5 reflect that organizational resilience $\rightarrow$ service innovation $\rightarrow$ value cocreation has both direct and indirect effects. These results led us to conclude that partial mediation exists. This implies that service innovation may act as a mediating variable between the effects of organizational resilience and value cocreation.

Organizational resilience can also directly affect service innovation (Hair et al., 2018; Sarstedt et al., 2020).

### 4. Secondary analysis

The second part of the study responds to the objective of analyzing whether there are significant differences between PR and DR SMEs through the proposed research model. This analysis is justified because organizational resilience may reflect differences according to the type of firm, the sector and location in which it operates and the interactions between operational strategies (Hillmann and Guenther, 2021). Other studies highlight that resilience varies across countries, as it is influenced by a variety of contextual factors that significantly influence organizational behavior (YahiaMarzouk and Jin, 2023; Madi Odeh et al., 2023; Kunz and Sonnenholzner, 2023). This fact is compounded by the influence of cultural values and norms on innovative behavior (Hillmann and Guenther, 2021; Jia et al., 2020). Additionally, understanding the environment in which consumers are located provides insight into how cocreation practices manifest themselves (Wang et al., 2019). Therefore, the complex interplay of cultural, national and managerial factors, together with the specific contexts in which these SMEs operate in different countries, could lead to remarkable variations across nations.
Table 5 Mediation analysis with process

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>Direct effect</th>
<th>Indirect effect</th>
<th>SD</th>
<th>t</th>
<th>95% Confidence interval</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational resilience → Service innovation → Value cocreation</td>
<td>0.749</td>
<td>0.460</td>
<td>0.076</td>
<td>6.089</td>
<td>0.797; 0.607</td>
<td>Partial mediation</td>
</tr>
</tbody>
</table>

Source: Own creation with SMART-PLS data

(Hu et al., 2022; Kahn et al., 2018; Witmer, 2019). These factors significantly influence how organizational resilience affects service innovation and value realization in diverse national contexts. PLS-multigroup analysis (MGA) is a one-tailed test in which all $p$-values indicate whether the path coefficient is significantly higher between the groups analyzed (Hair et al., 2018). For the second analysis, we posited the following hypothesis:

H4. The impact of the six dynamic capabilities of service innovation differs significantly between PR and DR SMEs.

H5. The impact of dynamic capabilities on service innovation significantly differs between PR and DR SMEs.

H6. The impact of service innovation on value cocreation significantly differs between PR and DR SMEs.

4.1 Invariance analysis
Prior to running PLS-MGA, (see Table 6) invariance analysis must be performed using the three-step measurement invariance assessment (MICOM) test to validate whether PLS-MGA is suitable for analytical purposes. The MICOM test begins by establishing a configural invariance. The PLS-SEM algorithm was configured by using the same indicators for each observed variable in the PR ($n = 58$) and DR ($n = 60$) groups. Once step one concluded that configural invariance was successfully established, it continued to step 2 (Henseler et al., 2016). Step two consisted of analyzing Compositional Invariance (Table 5) where the groups to be compared must show scores significantly close to 1 ($H_0 : c = 1$). Therefore, the null hypothesis was not rejected. $H_0 : c = 1$; $H_1 : c \neq 1$ (Hair et al., 2018; Henseler et al., 2016). To analyze the test, 5,000 permutations were run on a sample of 118 participants supporting the hypothesis that the groups to be compared show scores significantly close to 1 ($H_0 : c = 1$). There was no invariant effect for most variables except for the value cocreation variable ($p = 0.008$; $p < 0.5$). Step three was executed to analyze the permutation-based confidence intervals for the mean ($p = 0.141$; $p > 0.05$) and variance ($p = 0.531$; $p > 0.05$) to assess whether the mean value of a composite and its variance differed between the groups. The results presented for the value cocreation variable comply with step three. This leads to the conclusion that PLS-MGA is appropriate for analysis purposes and that data pooling is not necessary (Hair et al., 2018).

4.2 PLS-MGA results
The PLS-MGA test was run on the data in Table 7, leading to a rejection of $H_4$ by not observing a significantly different effect between PR and DR SMEs and the way the dimensions make up the organizational resilience variable. The data of interest are that DR SMEs provide, in third place, the importance of integrating new concepts ($t = 7.914$), in contrast to PR, which places it in fourth place ($t = 7.608$). Another similar result occurs in the organizational component variable, where DR places it in fourth place ($t = 7.885$), and PR gives it third place at the level of importance (8.286). The hypothesis is supported when analyzing whether there is a significantly different impact between PR and DR SMEs ($H_5 : p = 0.041$; $p < 0.05$) on how organizational resilience impacts service innovation. There were significant differences between PR ($t = 6.296$) and RD ($t = 16.813$). Finally, $H_6$ is rejected as it is observed that there is no significantly different impact between PR and DR SMEs on how service innovation significantly impacts value cocreation.

4.3 Discussion
The results indicate significant differences between PR and DR SMEs in terms of how organizational resilience impacts service innovation. Specifically, DR SMEs were found to be more impactful than PR SMEs in integrating new concepts and organizational components. Additionally, organizational resilience was found to have a significantly different impact on service innovation in the two regions. These findings highlight the importance of considering regional differences in managing dynamic capabilities for service innovation and how these differences may affect organizational resilience. Moreover, these results reflect how companies manage their dynamic capabilities to improve their resilience and ability to innovate in service.

5. Research implications
This study’s findings have several implications. First, this study extends the body of literature, as it is worth noting that although organizational resilience has been investigated in general organizational contexts, there is limited evidence specifically in SMEs (Barrón Torres and Sánchez Limón, 2022; Bragatto et al., 2021) and even more so in the service sector (Conz and Magnani, 2020a, 2020b). These findings
reinforce the call of Liao et al. (2019) for studies that provide a more precise conceptualization of resilience in SMEs.

Second, the results suggest that organizational resilience is achieved when strategic and operational perspectives are effectively aligned. Hillmann and Guenther (2021) highlight the debate in the literature on whether organizational resilience is predominantly strategic or operational. Furthermore, they emphasize the importance of discerning whether integrating both perspectives enhances organizational resilience. In this context, the model proposed by Den Hertog et al. (2010) offers an innovative perspective by addressing organizational resilience using the dynamic capabilities approach. It is worth noting that although the literature has focused on the study of dynamic capabilities in products, it has done so to a limited extent in the field of services. In this scenario, Den Hertog et al. (2010) model is essential as it allows for a detailed categorization of each dynamic capability, thus offering more concrete insights into the manifestation and management of organizational resilience in different contexts.

The findings show that in service SMEs, organizational resilience in the face of the COVID-19 crisis manifested itself initially at the operational level and subsequently at the strategic level. The data suggests that operational resilience, evidenced by aspects such as technological integration, renewed consumer interaction and implementation of new delivery systems, is of primary importance to entrepreneurs. This operational prioritization can be explained by the fact that during emergencies, owners were driven to quickly adopt technological solutions to optimize and ensure the effective delivery of their services. Subsequently, this operational change facilitated adaptation in the way consumers interacted, which, in turn, led to the consolidation of a new organizational structure aimed at improving the new service delivery system.

In turn, strategic dimensions encompassing elements such as new models for revenue generation, new business partners and new service concepts have emerged as the second most important. Once resilience was consolidated at the operational level, companies began to search for and implement innovative ways to generate revenue with the fundamental purpose of maintaining or even increasing their economic performance. Subsequently, the integration of alliances materialized, aimed at securing new business partners or suppliers. The development of these strategies culminates in the creation of new service concepts. These findings are in line with the postulations of Hillmann and Guenther (2021), who argue that organizational resilience can be conditioned by variables such as the type of firm, sector of operation and the interrelationship between operational and strategic dimensions. In sum, organizational resilience should not be conceived as a monolithic construct but rather as a multifaceted and contextual phenomenon.

This implication is particularly relevant and aligns with Linnenluecke’s (2017) findings. The author noted that the literature on organizational resilience relied heavily on retrospective analyzes to understand resilience in previous contexts. Against this background, Linnenluecke highlighted the urgency of formulating more detailed and contemporary approaches for assessing resilience in a variety of settings. In this scenario, the added value of our study lies in approaching resilience from an innovation-related perspective, rather than a purely retrospective perspective. Crucially, our resilience analysis methodology was developed in a context in which the COVID-19 crisis was still lingering. This contemporary perspective made it possible to assess the ability of organizations to adapt to emerging changes and thus strengthen their resilience to future critical scenarios beyond the COVID-19 situation. Therefore, the focus on agility to adapt to changes in difficult times makes these companies drivers of service innovation (Cruz, 2008).

In relation to service innovation, our findings add to the need for a deeper investigation into the conceptualization of resilience within the innovation framework, as highlighted by Lx et al. (2018b). This approach contributes to the field of organizational resilience, especially considering that the application of resilience to innovation is an emerging field that requires a more detailed approach (Lx et al., 2018a, 2018b; Marrone and Kolbe, 2011). The results of this study are a step forward, reinforcing the idea that in times of uncertainty, innovation should not be viewed as a linear or static process. Instead, as Kohlbacher (2018) argued, resilience highlights the imperative of adaptability and flexibility in highly uncertain landscapes.

These findings are congruent with those of Domi et al. (2020) and Edvardsson and Tronvoll (2013), who conclude that resilience enables the integration of renewed service models, enhances superior customer experiences and generates unprecedented value propositions. However, the data reflects a significant difference between PR and DR with respect to the impact of resilience on service innovation. Although organizational resilience impacts innovation in both countries, there are variations attributable to how each dimension
contributes to the resilience construct. Although the relevance is comparable, in the case of DR, the dimension “new organizational component” did not show a significant impact when constructing the variable. This implies that according to Hillmann and Guenther (2021), an entity’s resilience is modulated by its specific circumstances as well as its unique resources and capabilities. Consequently, strategies that work in one country or region may not be as effective in others. This is the case for SMEs in Puerto Rico and the Dominican Republic, where data suggests that these service enterprises maintain unique characteristics or challenges that require tailored approaches. This is consistent with the literature since organizational resilience strategy is affected by internal versus external factors. This influence is marked by the shared values within organizations, including their approach to resilience and innovation (Jia et al., 2020; Hillmann and Guenther, 2021).

These results indicate that service innovation significantly influences value cocreation among consumers. These findings are valuable, especially considering the scarcity of the literature in this area (Wang et al., 2019). According to Wang et al. (2019), it is crucial to understand the context in which consumers operate because this enables them to actively engage in collaborative practices. This extends the theoretical understanding of the value of cocreation by highlighting that it is not a static process but is deeply influenced by the consumer’s contextual environment. This contribution reinforces the idea that cocreation strategies should be adaptive and context sensitive (Grönroos, 2011; Grönroos and Ravald, 2011; Grönroos, 2013; Grönroos and Voima, 2013).

The data adds to the findings of Rodriguez-Antón et al. (2018) that collaboration with customers and other stakeholders is important for organizational resilience in SMEs. As the organization involves customers in the value cocreation process, SMEs can foster greater interaction with customers, improve service quality and create an emotional connection with customers that fosters long-term loyalty. This theoretical contribution challenges and extends the traditional conceptualization of the customer as a passive recipient, suggesting that under certain conditions, they can play an active and collaborative role in value creation. The data theoretically support the idea that customers are not always cocreators of value, but rather certain circumstances offer opportunities for a service provider to cocreate value with its consumers (Grönroos, 2011; Grönroos and Ravald, 2011; Grönroos, 2013; Grönroos and Voima, 2013). This theoretical contribution suggests that cocreation is not only a strategy for improving service quality or customer loyalty but can also be a vital tool for enhancing organizational resilience, especially in times of uncertainty or crisis. Finally, this study’s implications strengthen the scarce literature on the link between resilience, service innovation and value cocreation within SMEs (Merrilees, 2016; Wilches-Velasquez, 2020; Asiah et al., 2020).

5.1 Practical implications
The results of this study offer several practical implications for service practice. First, the results show that once service SMEs align their strategic and operational perspectives, organizational resilience is achieved when these two perspectives are effectively aligned. This is significant for service SMEs as they should consider models such as those proposed by Den Hertog et al. (2010) to achieve more effective resilience from strategic and operational perspectives. Therefore, during emergencies or crises, such as COVID-19, SMEs quickly adopt technological solutions and adapt their interactions with consumers to enable effective service delivery. Once resilience is consolidated at the operational level, service SMEs should explore innovative revenue generation models and seek strategic alliances to strengthen their organizational structure. This enables faster service innovation through adaptability during times of uncertainty. Additionally, SMEs must recognize and seize opportunities to cocreate value with their customers. This not only improves service quality and customer loyalty but can also be a vital tool for improving organizational resilience, especially in times of uncertainty or crisis.

Importantly, these findings may also be relevant to other regions and sectors, particularly to those that rely heavily on services. Service marketers in other regions could use these findings to improve resilience and innovation. The results of this study provide important theoretical and practical contributions to the management of the dynamic capabilities of service SMEs during crises. The results highlight the importance of considering regional differences and service innovation as effective strategies to enhance resilience and value cocreation with customers.

5.2 Limitations and future research
The main limitation of this study is the availability of SME owners to respond to the survey. In addition, the questionnaire did not ask what type of service innovation was most successful. This type of question would have provided valuable information to determine which innovations had the greatest positive impact on SMEs, limiting the ability to make specific recommendations. Future studies should consider this type of question, as it provides a more robust basis for the implications of the study. Another limitation is that this study did not consider other variables, such as government support to manage the crisis. In the case of PR and DR, government support and the type of aid received were notable. Incorporating this type of variable as a mediator would allow us to understand how support facilitates the implementation of resilience strategies more quickly. This study also fails to consider other factors that facilitate value cocreation. Identifying such factors in future research could provide additional information to maximize cocreation opportunities and overcome specific challenges.

Ultimately, it is important for organizations to understand and foster resilience to drive service innovation. The specific resources, structures and processes required to respond to adverse situations must be considered in strategic planning and service management. Additionally, a detailed assessment of resilience and its drivers can provide valuable information for continuous improvement and service innovation.

References


SME service innovation and value cocreation

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SME service innovation and value cocreation
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Further reading


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