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Resilience building in service firms during and post COVID-19

COVID-19 疫情之下的服务业的弹性

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ABSTRACT

The COVID-19 pandemic has affected millions of service firms worldwide; therefore, they must be resilient during these uncertain economic times. This paper develops a new conceptual framework of resilience-building strategies for the service industry. This framework encompasses five major practical strategies and several sub-strategies that can help service firms to survive and thrive amid and post COVID-19 pandemic. The proposed strategies include market orientation, supply chain optimization, strategic corporate reorganization, innovation, and business model transformation. The successful implementation of each strategy depends on various factors, which are discussed in the study. In addition, four major resources, including financial, human, social, and technological capital, are reviewed as prerequisites for adopting the resilience-building strategies. This new framework contributes to the organizational resilience literature and provides practical implications for service firms to become resilient during and post COVID-19.

摘要

COVID-19大流行已经影响了全球数以百万计的服务公司；因此，这些公司必须在当前不确定的经济时期保持弹性。本文为服务业提出一个新的概念来建立弹性建设策略。该框架包含五种主要的实践策略和若干子策略，可以帮助服务公司在COVID-19大流行期间和之后生存和发展。拟议的战略包括市场定位，供应链优化，战略性公司重组，创新，和业务模式转型。文中对每种策略的成功实施取决于各种因素在研究中进行了讨论。此外，审查了包括财务，人力，社会和技术资本在内的四种主要资源，这是采用防灾建设战略的先决条件。这个新框架有助于组织复原力文献，并为服务公司在COVID-19期间和之后变得更有弹性提供实际意义。

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1. Introduction

Service firms have been devastated by the COVID-19 pandemic more than any other type of firms (Suneson, 2020). They have experienced a sudden sharp decrease in their revenues; thus, they have enacted massive layoffs, furloughs, and pay cuts (Kochnar & Barroso, 2020). According to the U.S. Bureau of Labor Statistics, the service industry employed

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131,063,000 workers in January 2020; however, this number decreased by more than 10% to 117,916,000 in June 2020 (U.S. Bureau of Labor Statistics, 2020). As these numbers show, the service industry has been hit hard by COVID-19, which calls for a well-planned response.

To respond to this crisis, some service firms have changed their routines, adopted teleworking, or cut their expenses significantly. Some other firms have increased their presence in online platforms to keep their relationships with their stakeholders. Others have changed their business strategies by embracing new distribution channels, offering new products/services, or creating new partnerships. For example, vineyards in Napa Valley started providing online wine-tasting classes in combination with wine sales, which led to an increase in their sales. At the same time, some restaurants, such as Panera Bread, started selling staple groceries along with their everyday menu items (Wade & Bjerkan, 2020). All of these changes and responses intended to increase businesses' resilience during and after the pandemic. However, there is a lack of empirical studies on what changes service firms should implement to survive, recover, and grow after COVID-19. By elaborating on prior research on businesses' performance during and after crises, the current study aims to answer the following question: What resilience-building strategies should service firms adopt during and after the COVID-19 pandemic?

2. Business resilience

Business resilience is defined as a capacity through which a business *survives*, *recovers*, and *grows* when a crisis disrupts its operation (Dahles & Susilowati, 2015; Torres et al., 2019; Vogus & Sutcliffe, 2007). Survival means the company remains in business after the crisis, but its performance is below the pre-crisis level. Recovery (adaptation) refers to the company's return to its pre-crisis status. Lastly, growth means the company's performance exceeds the pre-crisis level (Torres et al., 2019). Previous studies on business resilience can be divided into two major types: conceptual and case studies (Annarelli & Nonino, 2016). Conceptual studies mainly discuss the factors that enhance the resilience of an organization. For example, Kantur and Iseri-Say (2012) provided an overview of organizational resilience by discussing four factors of perceptual stance, contextual integrity, strategic capacity, and strategic acting. In their study, perceptual stance refers to the organization's sense of reality, wisdom, and positive perceptions. Contextual integrity indicates employees' involvement and empowerment. Strategic capacity relates to employees' capability and availability of resources, while strategic acting means being proactive, flexible, and innovative. These factors shed light on the characteristics and resources of resilient organizations. However, the authors did not provide any theoretical foundation or explanation on how exactly they identified these factors. Nor did they clarify whether these factors are dimensions of resilience that can be used for its operationalization or potential precursors of resilience that can be statistically tested in future studies. In another study, Lengnick-Hall et al. (2011) provided a theoretical framework of organizational resilience focusing on human resources (HR). The authors argued that organizational resilience involves three cognitive, behavioral, and contextual dimensions (Lengnick-Hall et al., 2011).

The cognitive dimension refers to the organizations' positive orientation towards problem-solving and ability to interpret events meaningfully. The behavioral dimension represents the organizations' resourcefulness, agility, and practical habits to better understand and respond to events. The contextual dimension highlights the importance of facilitating conditions such as social capital and resource networks in resilience building. In addition to the explanation of resilience dimensions, Lengnick-Hall et al. (2011) identified and discussed the employees' characteristics and HR principles and policies that may contribute to each dimension. This study provides an actionable agenda for developing resilience capacity; however, its emphasis is mainly on human resources practices.

Regarding the resilience in the service industry, Brown et al. (2018) identified various economic, social, human, physical, natural, and cultural resources that contribute to the lodging sector's resilience by reviewing the previous literature on disaster resilience in the tourism sector. However, the authors did not discuss how businesses can acquire these resources and use them towards resilience enhancement in practice (Brown et al., 2018). For the health sector, Wu et al. (2020) identified three resilience-building principles during COVID-19 based on their institutional observation and experience during the SARS outbreak; these principles included the focus of leadership on resilience, structured crisis communication, and support of employees. Although authors had a practical approach towards resilience enhancement, they did not theoretically discuss the role of three principles in resilience building.

As the above examples illustrate, most of the conceptual studies on business resilience focused on specific organizational *factors* or *resources* that could increase resilience, yet failed to provide practical resilience-building *strategies*. Thus, this study aims to bridge the gap in the organizational resilience literature by discussing various applied resilience-building strategies, success factors, and resources.

Previous case studies on business resilience typically investigated the factors that helped a specific firm or sector to increase its resilience during a crisis, such as an outbreak or economic recession. For example, Teo et al. (2017) studied how leadership in a hospital developed relational networks and procured social, emotional, and cognitive resources for organizational resilience during the severe acute respiratory syndrome crisis in Singapore in 2003. Pal et al. (2014) studied the enablers of resilience in Swedish textile and clothing SMEs during 1990–1993 and 2007–2009 economic recessions and concluded that material, financial, and social network, and intangible assets and resources were the major enablers of resilience. They also found that dynamic competitiveness acquired through strategic flexibility and robustness induced resilience in the SMEs. Additionally, they highlighted the effect of leadership, collectiveness, and employees' well-being on resilience building.

A few case studies were also conducted in the tourism and hospitality industry. For example, Cellini and Cuccia (2015) analyzed the response of the tourism sector in Italy to the Great Recession. According to their results, tourism destinations that could substitute domestic with international tourists and sea-side mass tourism with other tourism products could build resilience during the recession. More specifically, the author found that focusing on new markets was the primary enabler of the tourism sector's resilience. In another study, Tibay et al. (2018) showed that leadership, employees' competence, market sensitivity, situational awareness, and preparedness plans were the major

factors that had an impact on the resilience of the hospitality sector in Auckland, New Zealand.

Many of the previous case studies on business resilience identified practical strategies or influential factors that could increase resilience; however, they were limited to a specific business/sector and a geographic region, which limited the generalizability of their findings. The present study addresses this issue by focusing on individual firms in the service-providing industry, which involves various sectors including trade, transportation, and utilities, information, finance, professional and business services, education, health services, and leisure and hospitality (U.S. Bureau of Labor Statistics, n.d.). As mentioned earlier, this industry has been severely impacted by COVID-19, and the leisure, hospitality and trade sectors have been suffered from the pandemic more than others (Williams & Kayaoglu, 2020).

3. Resilience-building strategies for service firms

According to the Dynamic Capability Theory, organizations need to respond promptly to changes in their environment in order to obtain a competitive advantage (Teece et al., 1997). More specifically, organizations should develop dynamic capability, the 'ability to integrate, build, and reconfigure internal and external competences' to address rapidly changing environments (Teece et al., 1997, p. 516). Per the definition of dynamic capability, reconfiguration and/or transformation of competences is a critical capability to organizational adaptations during environmental changes (Helfat et al., 2009; Teece, 2007). In this context, reconfiguration refers to small changes within organizations, such as the revamping of routines, while transformation refers to radical changes in structures, processes, assets, business models, and decision rules, such as adding, deleting, or changing organizational layers (Girod & Whittington, 2017; Teece, 2007). In response to a crisis, some businesses may adopt cost-cutting reconfigurations, such as labor shedding. Others may implement other financial reconfigurations by reducing tangible and intangible investments. Other groups may increase their R&D budget to fuel productivity and growth and transform their processes gradually (Szalavetz, 2016). Businesses that adopt only cost leadership strategies may survive the crisis; however, they cannot promptly recover and grow since market demands change during and after the crisis. Thus, businesses need to adopt both reconfiguration and transformational strategies to build resilience successfully.

Fromhold-Eisebith (2015) identified major reconfiguration and transformational strategies that can enhance sectoral resilience during a crisis: changes in market orientation, supply chain optimization, strategic corporate reorganization, focus on innovation and upgrading, and changes in production (relocation/transformation). The author studied the manufacturing industry's sectoral resilience and discussed how production systems and supply chains react to a crisis across geographical regions using reconfiguration and transformation strategies. In Fromhold-Eisebith's study, a sector refers to all the firms that together contribute to the creation of a specific end product; for example, all the manufacturers, intermediaries, and final product and service providers of consumer electronics constitute a sector. Since a sector is a system composed of individual actors

and each actor's behavior affects the whole system, it is critical to know about each actor's response to a crisis. Thus, this study responds to this need by addressing an individual firm's resilience. Also, due to the lack of research on service firms' responses to a crisis (Borchert & Mattoo, 2010; Martin-Rios & Pasamar, 2018), the current study merely focuses on service firms. More specifically, by adjusting Fromhold-Eisebith's framework for service firms, this study develops a conceptual framework that illustrates resilience-building strategies, success factors, and resources that may help service firms to survive, recover, and grow during and after the COVID-19 pandemic. In previous economic disruptions, service firms that had a continuous commitment to expansion by adopting resilience-building strategies showed long-term survivability and growth in operating profits and market capitalization (Martin-Rios & Pasamar, 2018). The following sub-sections discuss these strategies.

3.1. Market orientation

Market orientation is defined as 'the organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it' (Kohli & Jaworski, 1990, p. 6). Per its definition, the three major stages of market orientation are *market intelligence collection*, *market intelligence dissemination*, and *market responsiveness*. Previous research supports the positive effect of market orientation capability on service firms' performance during crises. Lettice et al. (2014) showed that law firms with high scores of market orientation capability had a better subjective performance during the 2008–2009 economic crisis than the firms with low market orientation capability. Market intelligence collection assisted the firms in developing an understanding of existing markets' status, competitors, threats, opportunities, and growth potential for new markets and services. To increase the capability of market intelligence collection, service firms should develop a formalized intelligence collection process in which data from various sources including the Internet, media, business networks, external stakeholders, government, and financial transactions are integrated, and different data analysis techniques and technologies are utilized (Ross et al., 2012).

Regarding market intelligence dissemination, Lettice et al. (2014) found that the law firms had a low capability to effectively disseminate market intelligence during the recession, which prevented them from having a return on their investment in market intelligence collection. The low capability of market dissemination is due to the lack of either interdepartmental communication or a shared understanding of the market among employees (Gebhardt et al., 2019; Lettice et al., 2014). To enhance interdepartmental communication, the development of a robust communication system through a considerate and participative leadership style and the adoption of proper information systems is essential (Strese et al., 2016). In order to develop a shared understanding of the market and increase market intelligence dissemination capability, service firms can use five practices: (1) distribution of market intelligence by providing reports and presentations to internal stakeholders and sharing a performance dashboard with them; (2) centralization of market intelligence within the organization and assigning its management to the intelligence team; (3) tailoring market intelligence for each user group in the organization

based on their preexisting market conceptions; (4) familiarizing organization members with the world of customers and other stakeholders through empathic learning methods such as secondhand ethnographic stories; and (5) encouraging organization members to learn about customers' worlds through experiential learning methods such as direct interaction with customers (Gebhardt et al., 2019).

Lettice et al. (2014) found that market responsiveness had the highest score among all three stages of market orientation and exerted the most significant influence on law firms' subjective performance during the recession. Other studies also supported the positive effect of responsive market orientation on firms' performance during a crisis (e.g. Bodlaj et al., 2012; Petzold et al., 2019). Thus, service firms should develop processes that allow them to be responsive to market needs during a crisis; for example, they can enhance their networking with customers and diversify their services and service delivery methods and technologies based on customers' existing and emerging needs (Alves et al., 2020). In addition to responsiveness, proactiveness to anticipate customer needs during a crisis increases firms' performance (Petzold et al., 2019). More specifically, proactiveness enables firms to take risks to target customers' latent needs, while responsiveness allows firms to take advantage of available market intelligence to satisfy customers' current needs (Petzold et al., 2019).

To increase a firm's market orientation, it is critical to focus on its success factors, which can be categorized into departmental, managerial, structural, and employee-related factors (Kirca et al., 2005). In a study on airline market orientation in post-crisis times, Martín-Consuegra et al. (2008) found that strong connectedness among departments reduced internal conflicts and increased market orientation capability. Furthermore, they found that top managers' emphasis on market orientation helped firms to increase their market orientation capability and, on the contrary, top managers' risk aversion decreased firms' market orientation capability (Martín-Consuegra et al., 2008). Lastly, the authors showed the positive impact of adequate organizational systems on market orientation. Organizational systems include two structural factors of centralization and formalization, and two employee-related factors of market-oriented training and market-based reward systems (Petzold et al., 2019). The two structural factors can harm market orientation capability since high levels of centralization and formalization prevent the dissemination and utilization of information within a firm and consequently decrease responsiveness to customers' needs (Petzold et al., 2019). Conversely, the two employee-related factors can increase market orientation capability. Market-orientation training helps employees to identify and value customer needs. Similarly, a market-based reward system, in which employees are rewarded for their market-oriented behaviors, motivates employees to put more emphasis on market orientation (Petzold et al., 2019).

Another factor that can increase market orientation capability is the strategic utilization of Information Technology (IT) (Borges et al., 2009). For example, Artificial Intelligence (AI) may be used to identify new trends in customers' consumption patterns, personalize advertising to target individual customers, enhance aggregate marketing mix, optimize pricing for products/services based on customer-specific data, and offer new or personalized online products/services to customers (Borges et al., 2009; Sterne, 2017). The vital role of IT in market orientation during a crisis has been seen among businesses that have increased their online presence during COVID-19 due to the shift

in customer purchase behavior (Columbus, 2020); for example, during the pandemic, Chipotle hosted a series of virtual lunch parties via Zoom, a video-conference platform. The parties took place with celebrity guests and offered free burrito giveaways (Nesterenko, 2020). Such online experiences provide an opportunity for customers to control/deal with the fear caused by the pandemic by increasing their social presence online (Addo et al., 2020). Thus, it is expected that online purchasing remains a priority among customers, even during post-pandemic periods, since behavioral changes have already taken place in customers (Columbus, 2020). Therefore, improving customers' online experiences can help firms to increase their market orientation capability.

3.2. Supply chain optimization

Optimization of supply chains helps service firms decrease their vulnerability to crises and cope with and recover from crises successfully (Jüttner & Maklan, 2011). To optimize supply chain performance, service firms should adopt strategies that can enhance their supply chain agility and resilience (Altay et al., 2018). Supply chain agility is defined as the supply chain's quick and cost-effective response to changes, while resilience is defined as the supply chain's coping with and recovery from disruptions (Altay et al., 2018). A key factor that can increase agility and resilience is flexibility in two areas: procurement and distribution (Gligor et al., 2019). Procurement flexibility refers to the availability of a range of options to purchase and receive high-quality products/services and the ability to effectively take advantage of these options to meet changing market demands (Swafford et al., 2006). Distribution flexibility refers to the availability of a range of options for the storage and delivery of products/services to customers and the ability to effectively take advantage of these options to respond to changing marketplace conditions (Swafford et al., 2006).

Three strategies can secure procurement and distribution flexibility: agility capacity, risk mitigation inventory, and capacity subcontracting (Lücker & Seifert, 2017). Agility capacity is a reserve capacity at the parent firm that can provide goods when the primary capacity is disrupted; however, if the parent firm is significantly affected by the disruption, agility capacity cannot be utilized. Risk mitigation inventory, an additional inventory at a location different from the parent firm, can be used when the parent firm and its capacities are entirely disrupted (Lücker & Seifert, 2017). Although manufacturing firms typically adopt these strategies, service firms may indirectly utilize them by selecting suppliers with agility capacity or risk mitigation inventory. Another strategy that can increase procurement and distribution flexibility is capacity subcontracting. Using this strategy, service firms procure a product from a third party, which can be domestic or international (Atamtürk & Hochbaum, 2001).

In addition to having procurement and distribution flexibility, firms can make their supply chains agile and resilient by increasing their supply chains' visibility. This concept refers to the transparency in tracking products from the source to the final destination by having access to essential information related to supply chains. In 2017, Geodis conducted a worldwide supply chain survey and collected feedback from 623 professionals. According to the survey, only 6% of surveyed firms had complete supply chain visibility, 17% of the firms had extended visibility, and 77% had either restricted or no visibility. These statistics implied that most firms did not have an agile and resilient supply

chain. To increase the visibility of supply chains, firms may acquire a reliable Enterprise Resource Planning (ERP) system that allows them to generate real-time reports on various components of supply chains such as inventory, manufacturing, and shipping. Modern ERP systems use AI and machine learning (ML) to improve daily business operations, predict problems with advanced forecasting, and enhance personalized user experiences (Biezepol, 2020). Furthermore, the adoption of big data analytics may help firms make better decisions by integrating and analyzing unstructured data generated throughout supply chains (ModusLink, 2020).

Another factor that may positively influence supply chain agility and resilience is information sharing. When firms share operational information among departments and suppliers through integrated databases, they decrease the bullwhip effect, which refers to supply chain inefficiencies and inventory fluctuations due to changes in customer demands (Jeong & Hong, 2019; Soni et al., 2014). Firms may adopt smart systems to share information across their supply chain in real time and to meet current and predict future customers' demands seamlessly (Ralston & Blackhurst, 2020). Service firms should also have close relationships with suppliers to develop highly integrated logistics networks, resulting in more agile and resilient supply chains (Power et al., 2001). In addition, firms need to adopt supply chain coordination mechanisms to increase the entire supply chain performance and prevent suboptimization (Fugate et al., 2006; Li & Wang, 2007). There are three major categories of coordination mechanisms including (1) the single-person approach (centralized approach) in which one party has access to the supply chain information and makes all the decisions, (2) team-based approach (decentralized approach) in which various supply chain members cooperate for optimized decision making, and (3) nexus-of-contract approach in which the incentives of supply chain members are kept aligned across the entire supply chain through contracts (Fugate et al., 2006; Li & Wang, 2007). Although any of the three mentioned approaches may be adopted to prevent suboptimization, the second approach is more common among practitioners (Fugate et al., 2006).

COVID-19 has resulted in the closure of production and distribution sites and has significantly disrupted supply chains. As opposed to natural disasters, this pandemic has happened at the global level and influenced various supply chains' components sequentially or concurrently, making a recovery complicated and difficult. The aforementioned strategies may help firms during and after the crisis; however, they may not be applicable instantly. Thus, service firms should also consider situational prompt responses to real-time changes in their supply chains, for example, some firms may adopt robotics for their distribution systems to prevent the collapse of supply chains (Ivanov & Das, 2020).

3.3. Strategic corporate reorganization

During a crisis, vulnerable firms such as startups may decide to seek partnerships to reduce their costs and strengthen their market position. By contrast, well-established firms with substantial capital resources may be interested in acquiring other businesses to create growth opportunities and increase their revenues. These strategies fall under the corporate reorganization category, which involves different strategies including mergers and acquisitions, joint ventures, and strategic alliances (Fromhold-Eisebith, 2015; Nafday, 2011). A merger is a deal through which two existing firms unite and

develop a new single firm, while an acquisition occurs when one firm takes over another and becomes the new owner (Hayes, 2020). A joint venture is a new third firm created through the legal partnership of two or more firms and a strategic alliance is a legal partnership in which two firms share resources such as intellectual capital, technologies, and trademarks (Kenton, 2019). Service firms can adopt any of these strategies considering their needs and resources; however, mergers and acquisitions are more common than other strategies. Previous statistics demonstrated that mergers and acquisitions remained a major type of business reorganization strategy during economic recessions; for example, during the 2007–2010 economic recession, 49% of global corporate reorganization deals (measured by the volume of deals) were mergers and acquisitions (Allen & Overy, 2011).

Mergers and acquisitions allow service firms to enter new markets, grow and diversify their service portfolios, and obtain access to various financial and technological resources (Martin-Rios & Pasamar, 2018). Also, returns from merger and acquisition deals in economic downturns are higher on average than the ones in economic upturns. Gell et al. (2010) compared returns from merger and acquisition deals of 2001–2003 economic downturn with the ones in 2004–2007 upturns. They found that the deals in both periods initially suffered from the adverse market reaction, but two years after the announcement of the deals, downturn merger and acquisition deals outperformed upturn deals by 12% (Gell et al., 2010). PricewaterhouseCoopers (PwC) also reported that median shareholder returns of merger and acquisition deals of the 2001 recession were 7.01% greater than the relevant S&P 1500 sector index one year after the announcement (Warren, 2020). A successful example of a merger and acquisition deal in the economic downturn was the acquisition of Barclays Global Investors, a mutual-funder provider, by BlackRock, an investment management corporation, in 2009. This deal was influential in making BlackRock one of the world's leading asset management firms after the recession (Warren, 2020). Another example was Booking Holdings' (formerly known as Priceline) partnerships with established businesses such as United Airlines, Ticketmaster, and Chevrolet during the 2007–2010 economic recession, which not only contributed to the company's survival but also helped the company to outperform its competitors by becoming the largest online hotel reservation service in 2010 (Faeste et al., 2020).

COVID-19 has resulted in a disruption in the merger and acquisition market. Allen and Overy (2020) reported that the number of global merger and acquisition deals decreased by 41% in the first half of 2020 compared to the first half of 2019. However, they also stated that the market would recover due to the increase in restructurings in vulnerable businesses and the rise of interest in cost efficiencies through joint ventures and consolidations. PwC stated that companies have access to more solid capital resources to develop partnerships in the current economic downturn in comparison to previous downturns. According to PwC, more corporate cash is available for mergers and acquisitions. Additionally, a more significant source of capital is currently held by private equity firms. Bank financing, leveraged loans, and corporate bonds are also more popular in the current time than in previous downturns (PwC, 2020). Considering the diversity and amount of capital resources, service firms have better opportunities to seek partnerships during the pandemic. For example, Uber, a ridesharing company, recently seized the opportunity and announced that it would acquire Postmates, a food delivery company, for $2.65 billion in stock (Brown, 2020). This acquisition would allow both companies to combine their delivery networks and develop a smooth delivery process. The acquisition

would also help Uber Eats, which is the Uber online food delivery platform, to strengthen its position in the market and be more competitive (Brown, 2020).

To develop a successful partnership, service firms should consider several pre-partnership and post-partnership factors. Pre-partnership factors include strategic and organizational fit with the potential partner, a relatively similar organizational size with the potential partner, prior experience in partnerships (e.g. mergers and acquisitions), effective communication with the potential partner, analyzing future capital needs of the potential partner, and paying the right price for the partnership (Calipha et al., 2010; Gomes et al., 2013). Regarding the post-partnership phase, success factors include an appropriate partnership strategy that addresses both functional and organizational aspects, effective leadership that establishes a clear post-partnership business direction, proper speed of partnership, creation of a coordination team for the post-partnership phase, effective communication during the partnership, and managing cultural differences and human resource problems (Gomes et al., 2013).

3.4. Innovation

During a crisis, most firms immediately enter a crisis mode and start cutting expenditures on every item from daily operation to labor to R&D (Nafday, 2011). Although this strategy helps some firms to survive the crisis, a mere focus on cost-cutting may result in different problems, including a decrease in product quality, customer dissatisfaction, lack of post-crisis growth, and feelings of pessimism and disempowerment among employees. Thus, a balance between cross-cutting and investment is necessary to help firms survive the crisis and grow after the crisis (Gulati et al., 2010). According to the Schumpeterian model, economic downturns eliminate less innovative firms while provides survival and growth opportunities for more innovative ones (Jung et al., 2018). This notion was supported by other studies as well. For example, Soininen et al. (2012) conducted a study on 194 Finish SMEs' performance during the 2007–2009 economic recession. They found that the operating revenue and total assets of innovative and proactive firms were impacted less by the recession. Madrid-Guijarro et al. (2013) also showed the positive effect of innovation on Spanish firms' subjective performance during the Great Recession.

If service firms decide to focus on innovation, they can adopt one or more of the four major forms of product/service, process, marketing, and organizational/management innovation (Landry, 2020; OECD, 2005, 2010). Product/service innovation refers to the design of a new product/service or a major improvement in the components or specifications of a product/service (OECD, 2010). This form of innovation is not very common during an economic downturn due to businesses' focus on cost reduction (George, 2020). However, an example in the service industry during COVID-19 is the launch of Airbnb Online Experiences. This new service allows customers to experience various online tours and events with local hosts (Board of Innovation, 2020). Other iconic examples of service innovation are Venmo and Dropbox, which were launched during the Great Recession (Dullea, 2020).

Innovation may also occur in the production or delivery method of a product/service, which is called process innovation. During the pandemic, several service firms have changed their service delivery method. For example, the entertainment, education,

and health service sectors have adopted digital platforms to provide their services to their clients remotely. Virtual concerts and conferences, online learning, and telehealth sessions have become prevalent to reduce customers'/clients' exposure to COVID-19 (CDC, 2020; Millman, 2020). The foodservice sector has also adopted third-party delivery services such as Grubhub, Doordash, and Uber Eats during the pandemic (Maze & Lalley, 2020).

Marketing innovation refers to considerable changes in the marketing mix, including product design, placement, promotion, or pricing (OECD, 2005). Several service firms have recently adopted online platforms to maintain their interaction with customers. Some of them have even hired social media influencers to promote their services. In addition to the adoption of online marketing, creative ads have been made to emphasize the social consciousness of businesses. For example, the Ministry of Culture and Information Policy of Ukraine held the Art of Quarantine campaign in which classic art pieces got a new look by displaying the ways that could stop the spread of COVID-19 (Nesterenko, 2020). Other examples involve Uber's heartfelt ad thanking customers for not riding and Burger King's comical ad reminding customers that they can stay home and order food through Burger King's mobile application (Bilir, 2020).

Organizational innovation is another opportunity that may assist firms in generating growth during a crisis. This concept refers to the adoption of 'new business practices, knowledge management systems, methods of workplace organization (i.e. system of decision making), and management of external relations' (Polder et al., 2010, p. 10). Organizational innovation typically starts with dissatisfaction with the current practices and/or processes within an organization, which may motivate leaders and managers to get inspiration from outside the organization and learn about potential changes. Evaluation of the internal situation and status quo alongside the identified solutions may help the leaders and managers develop a new practice/process, which should be validated by organizational members (Birkinshaw & Mol, 2006). With the validation and implementation of the new practice/process, the organization's performance, productivity, and dynamic capability may increase (Volberda et al., 2013). During the COVID-19 pandemic, some firms adopted new practices to facilitate remote working for employees, some adopted new policies for customers' protection, and others changed the distribution of responsibilities and decision making due to massive furloughs/layoffs.

As the above discussion shows, innovation may take various forms, and service firms may adopt one or more forms during the pandemic; however, they must also focus on the factors that facilitate innovative processes. Low centralization and low formalization at firms are organizational factors that positively impact innovation. Also, organizational readiness for change, effective communication among teams, effective use of slack resources such as knowledge, time, and budget, and integration of IT in the innovation process are among the enablers of the innovation process (Boer & During, 2001; Senbeto & Hon, 2020). Other influential factors are employees' knowledge, skills, and creativity that can be improved through organizational training and autonomy (Cerinsek & Dolinsek, 2009; Lopez-Cabrales et al., 2009). Lastly, external factors such as collaboration with other businesses, cooperation with knowledge centers, and regulatory support may facilitate the innovation process (Alcalde & Guerrero, 2016; Radas & Božić, 2009).

3.5. Business model transformation

A business model is defined as how a firm creates and captures value for its stakeholders including customers, employees, suppliers, shareholders, and society (Aspara et al., 2013; Kavadias et al., 2016; Ritter & Pedersen, 2020). During crises, some business models may fail, putting firms at risk. For example, during the 2007–2009 economic recession, financial institutions that were greater in size, had less capital, relied mainly on short-term market funding, and did not have diversified income resources were at greater risk of failure than other institutions (Altunbas et al., 2011). In the U.S., financial institutions such as Ameriquest and Countrywide Financial failed due to their reliance on selling loans as the only income source and not taking any deposits from individuals and businesses (Gilbert, 2014). While, Washington Mutual and Wachovia failed because of the lack of balance in their diversified income sources and their heavy reliance on one source although they took deposits from millions of people and businesses (Gilbert, 2014). Such failures are also seen during the COVID-19 pandemic. Recently, Sweet Tomatoes (Souplantation), a California-based buffet chain, had to close its restaurants permanently across the U.S. This buffet chain and other buffets that are currently at the risk of failure, such as Ponderosa and Hometown Buffet, majorly relied on a self-service business model and one income source and could not apply proper changes in their business model (e.g. switching to takeout) (Kao, 2020). On the contrary, some service firms have implemented configurations in their business models to survive the COVID-19 crisis. Some restaurants such as Panera Bread and California Pizza Kitchen started to sell fresh groceries alongside their regular food items (Morgan, 2020). With the cancelation of 90% of passenger flights in the airline industry, American Airlines, United Airlines, Virgin Atlantic, and Lufthansa changed their commercial passenger flights to cargo-only flights and began transporting essential items such as healthcare products (Morgan, 2020). These small changes have helped businesses to enter new markets and create new revenue streams. However, in addition to minor changes, service firms may consider more radical changes in their business models to secure their growth after the crisis.

Business model transformation can take place through adopting new technology and focusing on innovation. However, it should be noted that business model transformation does not equal mere technology adoption or innovation (Kavadias et al., 2016). Transformation is a process that links a new technology with a market need. It ideally involves personalized products/services, asset sharing, usage-based pricing as the complementary pricing method, and a collaborative ecosystem (Kavadias et al., 2016). Personalized products/services, the first sub-strategy of the ideal business model transformation, provide a closer fit between customers' needs and service characteristics, satisfy customers' hedonic or experiential needs, and deliver superior value to customers (Schreier, 2006). During the COVID-19 pandemic, personalized products/services took different forms from payment reliefs to contactless experiences for customers. For example, some financial institutions such as Bank of America, Capital One, Chase, Citi, and Wells Fargo helped affected customers by waiving late fees of missed credit card and loan payments (Smith & Foreman, 2020). In the entertainment industry, some providers started to offer contactless entertainment experiences during the COVID-19 pandemic. For example, the Haunted Road entertainment group developed a new drive-thru Halloween theatrical event that would provide customers a safe immersive experience (Tuttle, 2020).

The second sub-strategy of ideal business model transformation is asset sharing, which refers to sharing valuable material and non-material assets with stakeholders. It may take the following forms: (1) business-to-customer (B2C) access-based services in which customers obtain access to services by registering with providers (Fritze et al., 2020), (2) peer-to-peer sharing in which private individuals rent their assets to peers who need them (Wilhelms et al., 2017), and (3) business network asset sharing through which businesses share their assets with their partners (Faridian & Neubaum, 2021). All forms of asset sharing create value for the parties involved. B2C access-based services generate economic and technical values (Schaefers et al., 2018), peer-to-peer sharing brings monetary, social, and emotional values (Zhang et al., 2019), and asset sharing in business networks creates monetary and social values as well as growth and innovation opportunities for involved parties (Faridian & Neubaum, 2021). In addition to value creation, asset sharing can modify consumption behavior and contribute to sustainability in societies (Mi & Coffman, 2019). Airbnb and Uber, B2C sharing economy services, were founded during the 2007–2009 economic recession when their founders realized that people could earn or save money during the financial hardship by sharing their idle assets (Mudassir, 2020). During the COVID-19 pandemic, they initially lost their popularity due to the risk of disease transmission, but they started experiencing increased bookings with the loosening of domestic travel restrictions. It is expected that these services become people's preferred options after the pandemic (Bosa, 2020).

The other sub-strategy to achieve an ideal business model transformation is the adoption of usage-based pricing in which customers are charged based on how much they use a product or service. This pricing method offers agility, affordability, and low commitment for customers and greater profitability for companies (Solomonik, 2019). More specifically, usage-based pricing allows customers to pay for more services if needed, while it enables service providers to charge for additional usage (i.e. agility). This method also allows customers to pay only for what they use rather than pay full prices for what they may or may not use (i.e. affordability). Lastly, with usage-based pricing, customers do not need to commit to a service for a long period, which may motivate more customers to try the service (i.e. low commitment) (Solomonik, 2019). These advantages result in higher revenues for service providers; however, Rouse (2019) suggests that service providers should balance this pricing method with a more sustainable one, such as subscription, since usage-based pricing may compromise long-term growth. During an economic crisis, customers become price sensitive, and, after the crisis, they may experience a tight budget. Thus, a flexible pricing model can help service providers to adapt to their customers' needs and situations (Deloitte, 2020).

The development of a collaborative ecosystem is another sub-strategy that helps service firms with their business model transformation. A collaborative ecosystem is a network of interactions with employees, customers, suppliers, and partners, which allows firms to better harness intangible and tangible resources, manage complex issues, stimulate innovation and growth, and obtain competitive advantage (Smith, 2015). Also, a collaborative ecosystem provides an environment for the co-creation of various values for firms and their stakeholders. A successful example of a collaborative environment created during the COVID-19 pandemic is Alibaba's data-sharing ecosystem. The Chinese technology company developed a data-sharing model through horizontal

partnerships and helped hundreds of Chinese SMEs increase the production of medical supplies and groceries rapidly through this model (Prashantham & Woetzel, 2020).

Service firms can adopt some or all of the above sub-strategies and take advantage of various technologies including AI, blockchain, and 3-D printing to address customers' emerging needs during economic downturns and initiate a transformation process. For example, during the SARS epidemic of 2002–2004, Alibaba was a 2-year old business-to-business service company. Although experiencing a difficult time, Alibaba came up with the idea of launching a customer-to-customer e-commerce platform (known as Taobao) when it recognized the importance of online shopping during the pandemic (Phillip Morris International, 2020). After the crisis, Taobao turned the company into a global success. Other examples of e-commerce platforms that thrive during the current pandemic are Magento and Shopify (Akhtar et al., 2020). These examples demonstrate that identifying the market need and addressing it through technological innovation are the critical factors in business model transformation. However, prior literature showed that firms should also consider the success factors of business model transformation. These factors include transformational leadership, agile decision making, collaborative idea generation, active learning, knowledge management, effectuation (i.e. a logic of thinking used to build new ventures), experimentation, and sustainable performance during the transformation (Chanal & Caron-Fasan, 2010; Chesbrough, 2010; Eppler et al., 2011; Malhotra, 2001; Osmundsen et al., 2018; Savič et al., 2016; Smith et al., 2010).

4. Conceptual framework of resilience building in service firms

As discussed in the previous section, five essential strategies for resilience building during and after the COVID-19 pandemic include market orientation, supply chain optimization, strategic corporate reorganization, innovation, and business model transformation. Although business owners, CEOs, and other decision-makers may place these strategies at the core of their businesses and adopt them at any time, they may avoid them during crises because of three potential reasons: (1) impairment of their cognitive function, (2) loss aversion, and (3) automatic application of heuristics. Previous psychological studies showed that financial concerns and perceived scarcity of financial resources deplete individuals' mental capacity and negatively affect their cognitive function, which results in poor decision making (Cook & Sadeghein, 2018; Mani et al., 2013). During the COVID-19 pandemic, business leaders encountered a sudden disruption that had tremendous negative economic consequences, resulting in many mental challenges for them. In this situation, leaders might not be able to make proper decisions regarding their organizations' current and future status, which might negatively influence their organizations' performance. In addition, business leaders might show a high level of loss-aversion during the COVID-19 economic downturn and avoid strategies requiring large investments even if they induce long-term growth (Guiso et al., 2018; Guo, 2006; Lewis, 2020; Pisani, 2019). Loss aversion is a cognitive bias that describes individuals' inclination to avoid a loss twice as much as to obtain an equivalent gain (Kahneman & Tversky, 1979). According to Prospect Theory, the reason for this bias is the greater level of pain of losing in comparison to the joy of gaining (Kahneman & Tversky, 1979). Examples of loss aversion during economic downturns were seen among investors who kept their losing stocks to avoid the pain of losing or business leaders who avoided uncertain investments even though there was a

possibility of large gains (Pisani, 2019). Another factor that may negatively affect business leaders' decision making is the automatic application of heuristics in ambiguous situations (Foss, 2020). The COVID-19 influence on the economy is associated with high levels of uncertainty and ambiguity, which may result in the automatic adoption of strategies that are identified as right (e.g. cost-cutting) and avoidance of distinctive and diverse options that may be helpful (Foss, 2020). Considering the possibility of such biases during the COVID-19 pandemic, this study proposed five strategies that could increase business resilience. The practicality of these strategies was shown in the above-mentioned real-world examples and their contribution to business resilience was supported through the above-discussed scientific studies that evaluated them empirically.

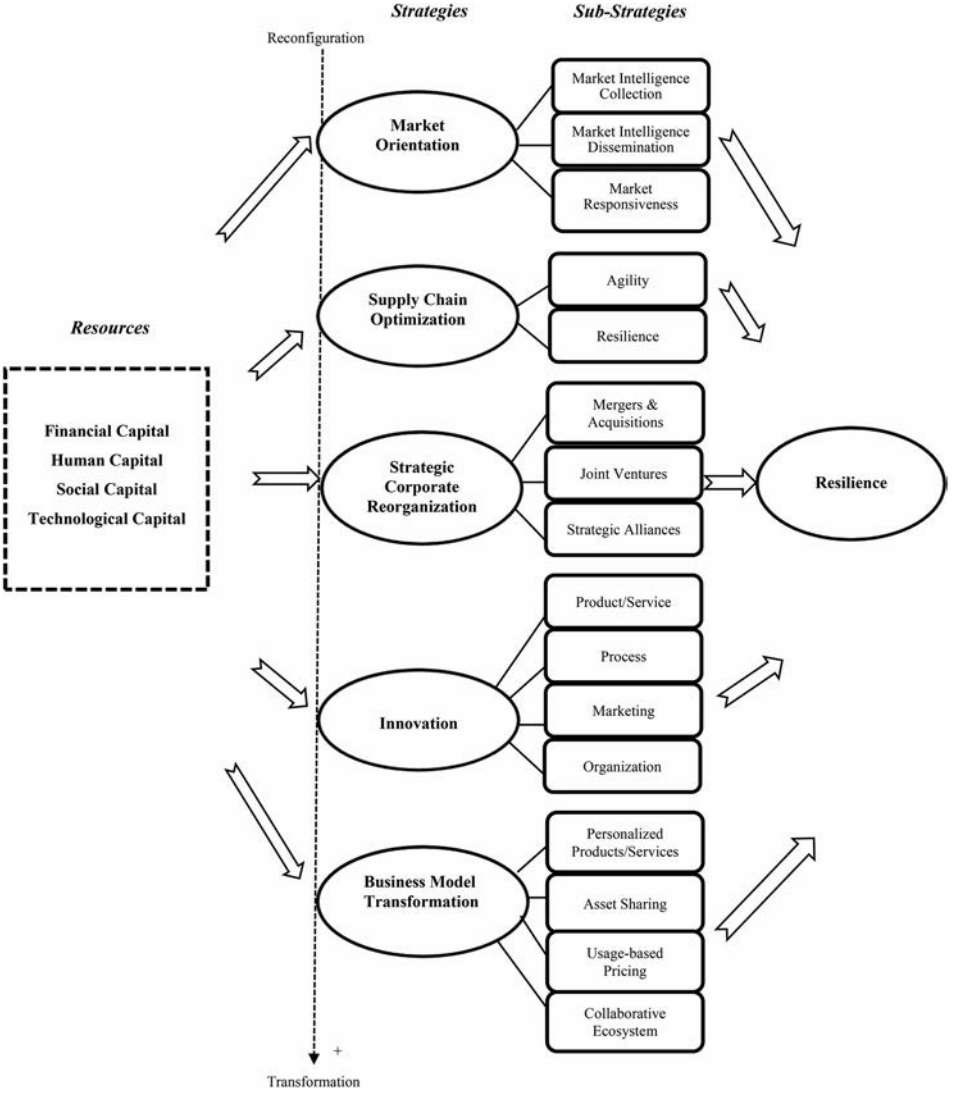

Figure 1. A conceptual framework for resilience building in service firms.

The five resilience-building strategies are based on the reconfiguration-transformation perspective of dynamic capabilities, which emphasizes the necessity of change in organizations and highlights their practicality during disruptions (Teece et al., 1997). Each strategy involves a specific degree of change. If a spectrum is considered for degrees of change in resilience-building strategies, reconfiguration strategies can be placed at the low end of the spectrum, while transformational strategies can be placed at the high end. Among the five major strategies, market orientation and supply chain optimization involve smaller degrees of change than others. Thus, they can be considered as reconfiguration. However, strategic corporate reorganization, innovation, and business model transformation require more radical changes, which make them transformational. Among the transformational strategies, business model transformation has the highest degree of change. This spectrum helps service firms to know the approximate level of preparedness required for implementing each strategy. For example, approaches that involve high degrees of change need higher levels of preparedness and a greater number of resources. Figure 1 illustrates a conceptual framework that depicts the resilience-building strategies with their spectrum of change. This framework also displays the sub-strategies that facilitate the implementation of each major strategy. Furthermore, it illustrates four major resources that are required for resilience building. These resources are discussed in the following section.

5. Resilience-building resources

According to Systems Theory, an organization is a social system composed of interrelated elements that should be brought together to enable the system to work properly (Teece, 2018). To build a capability such as resilience in the organizational system, strategies and resources are major elements that should be brought together. More specifically, resources should be effectively employed to facilitate the development and implementation of strategies. In the previous section, major resilience-building strategies and sub-strategies were discussed. Also, the success factors of each strategy were reviewed. These success factors showed how the utilization of different resources increased the success rate of each resilience-building strategy. To have a better understanding of these resources, this section provides a review of four major types of them including financial, technological, human, and social capital.

5.1. Financial capital

Access to financial capital is critical for resilience building in service firms (McDonald et al., 2014). Adopting a cost leadership strategy, re-negotiating contracts and credit terms, and developing partnerships with firms with access to reliable financial resources may help service firms to navigate through a crisis. However, having access to external financial resources are also crucial during difficult times. For example, based on the Paycheck Protection Program, small businesses (fewer than 500 employees) in the U.S. can apply for loans to pay for their payroll costs for up to eight weeks. They also have access to the Economic Injury Disaster Loan and Small Business Relief Initiative (Homebase, 2020). In addition, some private programs offer financial assistance to small businesses during a crisis. Small family businesses may also use family savings or get financial support from

friends and relatives (McDonald et al., 2014). All of these resources can help small and medium-sized businesses facilitate their resilience-building process. Regarding external financial support for well-established service firms, large business loans such as bank loans or medium-term loans from online lenders are available during and after a crisis (Wood, 2020). Financial capital during a crisis is necessary for service firms of all sizes to enable them to adopt one or more resilience-building strategies; for example, in order to start an innovation process, service firms need financial capital to invest in their R&D. However, to generate the best results, firms should integrate financial capital with other types of capital, such as human and social capital (Mzid et al., 2019).

5.2. Human capital

Managers and employees have a significant influence on resilience-building strategies. Managers' perception of threats or opportunities presented by a crisis determines the type of approach they would adopt in response to the crisis (Saebi et al., 2017). Managers who consider a crisis as both a threat and an opportunity tend to adopt a combination of cost leadership and resilience-building strategies. In addition, the managers' leadership style may act as an enabler of the resilience-building process. Participative, transformational, and sustainable leadership are the three recommended styles that may help service firms to respond to crises successfully.

Participative leadership is a leadership style in which a leader engages all members of the organization in making decisions (Chan, 2019). Based on motivation and social-exchange theories, this style improves the employees' performance significantly (Huang et al., 2010). Participative leadership style may facilitate market orientation and supply chain optimization since all stakeholders' participation is critical to the success of these two strategies. Transformational leadership is a style in which a leader identifies the changes needed in the organization and the unmet market needs with the help of his/her followers. The leader inspires the followers to implement the identified changes and satisfy the identified needs through a shared vision and mission (Gumusluoglu & Ilsev, 2009). Transformational leadership includes four components of idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation. As the definition and components of transformational leadership show, this style can be an enabler of strategic corporate reorganization, innovation, and business model transformation in service firms (Bass & Avolio, 1994). Sustainable leadership is a leadership style in which a leader works with his/her followers to create enduring values for all stakeholders of the organization. This style values development of human and material resources, connectedness among stakeholders, innovation, sustainability practices in the business model, and sustained success (Hargreaves & Fink, 2004; Tideman et al., 2013). Sustainable leadership is an enabler of all resilience-building strategies since it includes the elements of both participative and transformational leadership styles while it highlights sustainable value creation for all stakeholders (Tideman et al., 2013).

In addition to managers and their leadership styles, employees play a critical role in resilience building in service firms. Various cognitive and behavioral elements enable employees to facilitate the resilience-building process. Among cognitive elements, knowledge, expertise, skills, experience, creativity, a strong sense of purpose, shared core values, a shared mindset, and constructive sensemaking from unprecedented events

are influential. Regarding behavioral elements, employees' creativity, agility, and the ability to perform a course of action different from the norm contribute to resilience building (Lengnick-Hall et al., 2011). These cognitive and behavioral elements help employees perform better in times of crisis, decrease their resistance to the adoption of resilience-building strategies, and motivate them to contribute to the implementation of resilience-building strategies.

Employees' psychological resources are also critical to resilience building. Four major resources that create employees' psychological capital are confidence, hope, optimism, and individual resilience (Luthans et al., 2004). Confidence refers to an individual's belief in his/her abilities. Hope is a positive state that involves motivation and expectation to achieve a goal, while optimism is a tendency to consider the positive aspect of an event or action. Lastly, individual resilience is the ability to adapt to and bounce back from adversities (Luthans et al., 2004). These resources help with the development of a resilient organizational culture, which in turn facilitates the adoption and implementation of resilience-building strategies (Luthans & Youssef-Morgan, 2017). Service firms can develop these psychological resources among their employees through positive psychology training programs (Luthans et al., 2004).

5.3. Social capital

Financial and human capital partially contribute to resilience building. Service firms should also cultivate social capital, which is a network of relationships that creates value for the business and improves its performance by increasing the availability of other resources such as financial and technological capital. Social capital includes three major components: ties between individuals or groups within or outside a business, level of trust within each tie, and benefits that are transferred through each tie (Nahapiet & Ghoshal, 1998; Poteyeva, 2009). The stronger the tie and the higher the level of trust, the more likely the business obtains the benefits associated with the tie (Putnam, 2000). One of these benefits is the likelihood of obtaining financial and nonfinancial support during crises through close relationships with business stakeholders. The literature supported the positive influence of social capital on business resilience. For example, Torres et al. (2019) conducted a study on small businesses after Hurricane Katrina and found that social capital received from family and friends, community, and institutional networks positively influenced businesses' resilience. Chowdhury et al. (2019) also showed the significant effect of post-disaster social capital on tourism organizations' resilience. According to their study results, the strength of social ties and feelings of trust between organizations and their stakeholders/partners were the major contributors to organizations' resilience.

5.4. Technological capital

Technological capital is a firm's active production assets (tangible component), as well as its unique production know-how obtained from investing in R&D (intangible component) (Grigoriev et al., 2014; McGrattan & Prescott, 2009). Previous studies demonstrated the positive effects of tangible and intangible elements of technological

capital on business resilience. Ranjan (2014) showed that water-saving technology systems (tangible) could improve drought resilience in agriculture. In the service industry, Alesi (2008) highlighted the importance of technology systems (tangible) and data structures (intangible) in the development of a business continuity planning program and resilience building at Lehman Brothers, the global financial services firm, after the 9/11 disaster. Additionally, other studies highlighted the facilitating role of different types of technology such as big data analytics-capable information systems, artificial intelligence, blockchain, and, in general, industry 4.0 smart systems in the enhancement of business resilience (e.g. Ciampi et al., 2018; Min, 2019; Ralston & Blackhurst, 2020; Saravi et al., 2019). However, service firms should link technological capital to technological capability, which is the ability to create, implement, and manage technological change, in order to enhance resilience successfully (Bustinza et al., 2019). In fact, technological capability, which is built upon the organizational knowledge and experience, allows service firms to search, adopt, and commercialize innovative products/services (Bustinza et al., 2019) and, as a result, apply the changes required for the resilience-building strategies.

6. Managerial agenda

The COVID-19 pandemic in 2020 is different from previous business disruptions in multiple aspects. First, this pandemic has happened on a global scale and drastically affected several geographical regions at the same time. Second, the duration of the pandemic has been long and it is not known exactly how long it will last. Last, the impact of the pandemic has been so high that it might result in a 5.2% shrinkage of the economy and the most severe recession since World War II (The World Bank, 2020). Thus, to respond promptly to the pandemic, service firms should create two types of teams: crisis management and plan-ahead. The crisis management team is responsible for day-to-day activities that protect the firms against the pandemic, such as cash preservation, management of supply chain disruptions, and implementation of safety protocols for employees and customers (McKinsey & Company, 2020). While, the plan-ahead team should create different scenarios for the potential impacts of the pandemic on the economy and the firm and develop a portfolio of strategic actions for each scenario considering the above-mentioned resilience-building strategies (McKinsey & Company, 2020). These scenarios may assess the potential degree of harshness, volatility, and malleability of the business environment. Harshness refers to the degree of the scarcity of resources in the business environment, volatility is the degree of unpredictability and uncertainty of the business environment, and malleability is the extent to which the business environment can be influenced and shaped (Reeves et al., 2012). In a harsh environment, which would probably be the case for all COVID-19 pandemic scenarios, service firms should initially adopt strategies that help them to survive and free up resources (e.g. cost-cutting), and, then, complement it with one or more of the five resilience-building strategies based on the degree of volatility and malleability of the environment. In a highly volatile and nonmalleable scenario, service firms should focus on strategies that help them to adapt to the environment, such as market orientation and supply chain optimization (i.e. reconfiguration strategies). However, in a highly volatile but malleable scenario, the firms should adopt strategies that can change the business environment, such as innovation and

business model transformation (i.e. transformation strategies) (Reeves, 2017). In addition to the type of scenario, service firms should consider different internal and external factors when they adopt a resilience-building strategy: firm size, year of establishment, vision and mission, organizational structure and culture, capabilities, financial status, access to resilience-building resources, and barriers to strategy implementation (Altıok, 2011; Brown et al., 2018; Child, 1972; Obeidat et al., 2017).

7. Conclusion and future research directions

This study is the first conceptual attempt that provides a framework of resilience-building strategies for service firms. Using Dynamic Capability Theory and the Fromhold-Eisebith Framework (2015), the study provides insight into strategies, success factors, and resources that may help service firms to successfully respond to and create opportunities out of crises, such as the COVID-19 pandemic. The first contribution of this paper is the detailed discussion of five resilience-building strategies and their sub-strategies with practical examples for service firms. The first strategy, market orientation, highlights the critical role of market intelligence collection and dissemination in response to changing market demands during and after a crisis. The second strategy, supply chain optimization, focuses on the agility and resilience of procurement and distribution systems and the visibility in supply chains, which may help service firms to respond promptly and adaptively to supply chain disruptions caused by a crisis. The third strategy, strategic corporate reorganization, emphasizes the importance of seeking partnerships to strengthen one's market position during and after a crisis. The fourth strategy, innovation, underlines the role of product/service, process, marketing, and organizational innovation in firms' growth after a crisis. Finally, the fifth strategy, the business model transformation, discusses how firms may gain a competitive advantage by addressing an identified market demand with new technology during and after a crisis.

The second contribution of this paper is the introduction of the success factors of each resilience-building strategy as well as the resources needed for resilience building. Although success factors of each approach are different, they are generally related to the following themes: organizational structure, leadership style, communication among employees, interaction with stakeholders, knowledge management, technology utilization, and adoption of flexible processes. These themes show that the utilization of various resources including financial, social, human, and technological capital is required for the success of the resilience-building process. Financial resources lay the foundation for resilience building, while human and social resources facilitate access to financial resources and accelerate the resilience-building process. Technological resources, particularly Industry 4.0 smart systems, are among the main building blocks of resilience and should be cultivated by technological capabilities. All in all, this study provided a comprehensive review of practical resilience-building strategies and sub-strategies for service firms as well as the success factors and resources needed to develop resilience.

This conceptual study is not free of limitations. Most of the correlations between the above-mentioned resilience-building strategies and their success factors were tested in previous studies separately; however, the proposed framework is conceptual and not tested with any quantitative or qualitative method. Thus, it might be beneficial to

examine the framework using surveys, interviews, longitudinal studies, or case studies to show how the framework can be applied. Another limitation of the study is that the above-discussed resilience-building strategies were mostly tested in the manufacturing industry, and few studies were conducted on service firms. Therefore, it is suggested that future studies examine the conceptual framework of the current study in different sectors of the service industry (e.g. finance, hospitality, health service) and determine which strategies work better for each sector. Also, since this study addressed the resilience of individual service firms, future studies may investigate the sectoral or regional business resilience of the service industry. Most of the previous studies on sectoral or regional business focused on the manufacturing industry (e.g. Fromhold-Eisebith, 2015; Soroka et al., 2020), thus, there is a need for research on the service industry. Moreover, future studies may examine the service firms that adopted one or more of the resilience-building strategies during and after the pandemic and assess the effect of these strategies on their survival and growth rates.

Another avenue for future research is to examine the effect of resilience-building resources on the development of resilience-building strategies and identify which resource contributes the most to each strategy. In addition, since this study did not address the role of capabilities in resilience building, future studies may explore what and how capabilities help service firms to increase their resilience. For example, some resources such as technological capital may not enhance resilience by themselves if proper capabilities are not developed and deployed to utilize them (Bustinza et al., 2019). Thus, it is critical to identify the capabilities required to effectively cultivate resilience-building resources and enable resilience building. Last but not least, in this study, the focus was on business resilience, however, the concept of business agility is sometimes studied with resilience (McCann et al., 2009). Agility refers to the business' ability to respond to and take advantage of changes promptly and flexibly and is worth to be investigated during the COVID-19 economic downturn. Future studies may differentiate the roles of resilience and agility during a crisis and identify the strategies that can increase business agility.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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