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Resilient performance faced with a period of economic crisis: Integrated model of conceptions and research strategy

Desempenho resiliente ante período de crise econômica: Modelo integrado de concepções e estratégia de pesquisa

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Abstract

Purpose: This study seeks to design an integrated model of concepts for research on organizational resilience in a period of economic crisis and synthesize strategy for an empirical approach.

Originality/value: By recognizing economic recessions as crisis events, exogenous and recurrent, that challenge the evolutionary trajectory of the business environment and the adaptive capacity of firms, this study focuses on the convergence of scientific fields to unify the business cycle with characteristics and heterogeneous business dynamics from the perspective of resilience.

Design/methodology/approach: Initially, we conducted a systematic review of the literature on "business cycle management" and "organizational resilience." Next, we used various combinations and variations of the terms "economic crisis" and "resilience," plus "management" and "performance" to expand the base of references from publications in relevant indexes. Thus, through research by authors from different areas of knowledge, the propositions raised here are based on the comprehensive and transversal assimilation of knowledge related to the context of economic crisis and the adaptive dynamics of organizations.

Findings: This study organizes and reconciles convergences of scientific fields in an integrated model of concepts for studying organizational resilience throughout business cycles and synthesizes a research strategy with three analysis segments for an empirical approach. Thus, the findings cooperate with several streams of research that focus on the adversities faced by organizations in periods of recession and provide a broad prism of analysis, with significant space to explore the linkage of attributes and actions that favor or hinder the achievement of resilient performance in the face of a period of economic crisis.

Keywords: crisis, recession, management, resilience, performance

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Resumo

Objetivo: Este estudo busca conceber um modelo integrado de concepções para pesquisas de resiliência organizacional ante período de crise econômica e sintetizar estratégia para abordagem empírica.

Originalidade/valor: Ao reconhecer as recessões econômicas como eventos de crise, exógenos e recorrentes, que desafiam a trajetória evolutiva do ambiente de negócios e a capacidade adaptativa das firmas, este estudo se debruça sobre convergências de campos científicos para unificar ciclo de negócios com características e dinâmicas empresariais heterogêneas sob a perspectiva de resiliência.

Design/metodologia/abordagem: Inicialmente, conduzimos revisão sistemática da literatura sobre "gestão do ciclo de negócios" e "resiliência organizacional". Na sequência, usamos várias combinações e variações dos termos "crise econômica" e "resiliência", acrescidos de "gestão" e "desempenho", para ampliar a base de referências a partir de publicações em indexadores relevantes. Assim, mediante pesquisas de autores de diversas áreas do conhecimento, as proposições aqui levantadas se fundamentam na assimilação abrangente e transversal de saberes relativos ao contexto de crise econômica e de dinâmica adaptativa das organizações.

Resultados: Este trabalho organiza e concilia convergências de campos científicos em um modelo integrado de concepções para estudo de resiliência organizacional ao longo dos ciclos de negócios, e, ainda, sintetiza a estratégia de pesquisa com três segmentos de análise para abordagem empírica. Assim, os achados cooperam com diversos fluxos de pesquisa que se voltam às adversidades enfrentadas pelas organizações em períodos de recessão e oportunizam amplo prisma de análise, com significativo espaço para explorar a vinculação de atributos e ações que favorecem ou prejudicam o alcance de desempenho resiliente ante período de crise econômica.

Palavras-chave: crise, recessão, gestão, resiliência, desempenho

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INTRODUCTION

The past decades have shown that companies, regardless of their size or sector, are more susceptible to failure if they do not demonstrate resilience in facing macro-environmental changes (Hamel & Välikangas, 2003; Sheffi & Rice, 2005; Gulati et al., 2010; Irigaray et al., 2017; Duchek, 2020; Conz & Magnani, 2020). Among the various threats to the business environment, recessions and economic slowdowns are exogenous challenges that still represent a significant area of concern (Caldera-Sánchez et al., 2017; Hirt et al., 2019; Holland & Katzin, 2019), as economic declines can change the landscape of market-leading companies and significantly reduce investment performance metrics, to the point of making them unsustainable (Pearce & Michael, 2006; Dobbs et al., 2007; Gulati et al., 2010; Latham & Braun, 2011).

In the first two decades of the 21st century, the Committee for Economic Cycle Dating (Codace) has already identified five occurrences of the recessive stage in the Brazilian economy (2001, 2003, 2008, 2014-2016, and 2020), with an economic contraction above 4% in the last three events (Codace, 2020). Although the macroeconomic literature has long recognized the phenomenon of the business cycle (Schumpeter, 1939; Burns & Mitchell, 1946; Zarnowitz, 1985) and identified that recessive stages are recurring and measurable (Hamilton, 1989; Zarnowitz, 1992; Hodrick & Prescott, 1997; Chauvet, 2002; Mendes et al., 2019), recession periods still have reduced predictability regarding their onset, the amplitude of their effects, and the duration of the period.

The cyclical nature and recurrence of recessions, as well as their distinct impact on companies, have already drawn the attention of business cycle management scholars (Hofer, 1980; Mascarenhas & Aaker, 1989; Venkatraman & Prescott, 1990; Geroski & Gregg, 1993; Higson et al., 2004; Navarro, 2004; Pearce & Michael, 2006; Latham & Braun, 2008; Latham, 2009). However, with the advent of the 2007-2008 global crisis, this literature has become more enriched in light of economic concepts and strategic management of competitive advantages. Publications have advanced propositions and prescriptions (Bromiley et al., 2008; Kitching et al., 2009; Navarro, 2009; Latham & Braun, 2011; Lorange & Datson, 2014), as well as evaluations (Lien, 2010; Gulati et al., 2010; Navarro et al., 2010; Garcia-Sanchez et al., 2014; Knudsen & Foss, 2015; Conti et al., 2015; Bamiatzi et al., 2016; Vassolo et al., 2017; Saebi et al., 2017; Knudsen, 2019) geared towards highlighting under which conditions, strategies and characteristics companies can achieve sustainable economic performance during and after recessive periods.

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Due to successive and diversified sources of macro-environmental instabilities, alongside management studies that encompass business cycle fluctuations, there is a stream of researchers who conceive the perspective of organizational resilience, with a broader horizon of assumptions for incumbency in environments of suspicion and the confrontation of adversities and disruptive events. Review publications of this literature (Bhamra et al., 2011; Annarelli & Nonino, 2016; Linnenluecke, 2017; Conz & Magnani, 2020) point out that this field of research is not incipient and presents significant evolution from the 21st century onwards, with propositions based on the contemporary prism of the constant need for organizations and their systemic structures to have conditions to minimize impacts and quickly respond to moments of instability, with fruitful adjustments for performance resumption (Staw et al., 1981; Meyer, 1982; Sutcliffe & Vogus, 2003; Hamel & Välikangas, 2003; Sheffi & Rice, 2005; Vogus & Sutcliffe, 2007; Williams et al., 2017; Irigaray et al., 2017; Koronis & Ponis, 2018; Duchek, 2020; Conz & Magnani, 2020).

With the multifaceted application, the perspective of resilience has also gained the attention of economists (Rose, 2007; Pike et al., 2010; Pendall et al., 2010; Dormady et al., 2019). In fact, with a focus on the vulnerability conditions and adaptive dynamics of regions throughout business cycles (Simmie & Martin, 2010; Martin, 2012; Fingleton et al., 2012; Hill et al., 2012; Simmie, 2014; Martin & Sunley, 2015; Caldera-Sánchez et al., 2017; Martin et al., 2016; Angulo et al., 2018; Faggian et al., 2018; Ringwood et al., 2019).

From what has been presented and with a focus on some studies, it is possible to point out a central convergence among first – the profile of the business cycle curves (Hodrick & Prescott, 1997; Bromiley et al., 2008) and resilient performance curves (Sheffi & Rice, 2005; Martin, 2012; Martin et al., 2016); second – the elements of the regional economic resilience flow (Martin & Sunley, 2015; Martin et al., 2016) and the stages of processing organizational resilience capacity (Irigaray et al., 2017; Duchek, 2020; Conz & Magnani, 2020); and third – the complementarity between the conceptual framework of these studies and the perspective of business dynamics and performance in a recessive environment (Latham & Braun, 2011). Given these considerations, the question arises:

- How can the organizational resilience path be evaluated in an economic crisis?

To answer this question through a systematic literature review, this study seeks to conceive an integrated model of concepts for organizational

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resilience research in the face of an economic crisis period and synthesize a strategy for an empirical approach.

We first evaluated literature reviews on “business cycle management” and “organizational resilience” to identify predecessor studies. Next, we used various combinations and variations of the terms “economic crisis” and “resilience,” along with “management” and “performance,” to expand the reference base in the search for publications in relevant indexers such as the Academy of Management Journals, Ebsco, Emerald, Google Scholar, Oxford Journals, Sage, Science Direct, Springer Link, Web of Science, as well as unpublished manuscripts from the National Bureau of Economic Research (NBER) and the Social Science Research Network (SSRN).

In this sense, the propositions raised here are based on research by authors from various fields of knowledge. Moreover, for business cycle management researchers, this study adds the perspective of resilience, already used in the literature of economic geography. Furthermore, this research expands the attention horizon of organizational resilience scholars to events related to economic factors and their effects on the performance dynamics of companies, as this field of study has not yet advanced under the perspective of the results that organizations must sustain.

It should be noted that throughout this study, the economic situation and its effects are explored and understood with the limitation of configuring the scenario of turbulence where the business dynamics of adaptive evolution are analyzed from the resilience perspective. After this introduction, the study proceeds with the support of correspondence between adaptive evolution and the business cycle, advances in the organization, and reconciliation of convergences that lead to an integrated model of concepts for research on organizational resilience in times of economic crisis, progresses in proposing a strategy for empirical approach, and concludes with final considerations.

ADAPTIVE EVOLUTION AND BUSINESS CYCLES

Evolutionary theory in economics acknowledges that firms compete in an environment typical of selection of those that succumb or prosper through a positive relationship of adaptation of organizational routines to the ability to rival, as well as through heterogeneous arrangements and the continuous development of resources and their applications that provide a return to stakeholders and, above all, are adaptable to changes in incumbency (Nelson

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& Winter, 2002; Metcalfe, 2005). In this context, as advocated by Schumpeter (1942), the dynamics of economic fluctuations have a purifying effect on the business environment, i.e., they cause companies operating in outdated conditions to withdraw from the market and prevail those structured on more efficient and innovative arrangements in the way of competing.

The term "business cycle," also known as "economic cycle," represents the regularity of movements of aggregate economic activity in the upward and downward direction, with fluctuations of distinct amplitude, scope, and duration in each phase, as well as different sources of economic impetus and retraction (Schumpeter, 1939; Burns & Mitchell, 1946; Zarnowitz, 1985). In this sense, with the convergence of various indicators, the business cycle is identified from the fluctuations of the real gross domestic product (GDP) – total economic output adjusted for inflation – of a country around its trendline (Hamilton, 1989; Hodrick & Prescott, 1997; Baxter & King, 1999; Chauvet, 2002; Mendes et al., 2019).

During periods of economic expansion, although with some time lag, the increase in real GDP tends to be accompanied by higher levels of investment, employment, income, credit, sales, and possibly inflation and interest rates (Zarnowitz, 1985, 1992; Perry & Schultze, 1993; Cavalca et al., 2017). The opposite occurs in the face of and during a recession, with distinct adverse effects on the macroeconomic aggregates of individual sectors of the economy, such as durable goods, nondurable goods, and services; residential construction; productive equipment; nonresidential construction; government spending; imports, and exports (Zarnowitz, 1985, 1992; Perry & Schultze, 1993; Claessens et al., 2009; Cavalca et al., 2017). The decline in the economy shakes confidence levels. It accentuates the level of uncertainty of all economic agents, thus inducing the adoption of more cautious behaviors until the prospects for economic activity become more apparent, with developments that potentiate the reduction of consumption, employment, production, investment, and credit (Perry & Schultze, 1993; Bloom, 2009; Arellano et al., 2010; Gilchrist et al., 2014; Bloom et al., 2018).

Some scholars observe this sequence of predictors and effects in the context of the Brazilian economic crisis of 2014-2016, such as Barbosa (2017) and Sicsú (2019), who identified a period of economic expansion (2010-2014) influenced by monetary and fiscal policies related to the reduction of the basic interest rate and increased public investments and expenditures, as well as tax subsidies and intervention in administered prices. Following this, the recessionary crisis (2014-2016) began in the context of the imbalance of public accounts, the increase in country risk, and conse-

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quently, the basic interest rate, factors that led to a sharp reduction in the level of public spending, consumption, and investments (Barbosa, 2017). Additionally, Sicsú (2019) highlights the decrease in the number of formal workers, the level of installed capacity utilization, and gross fixed capital formation. In this context, Sicsú (2020) observes that trade and industry began to decrease their debt levels as an indication of spending containment and a reduction in activity levels, while the housing construction sector lost its space as an economic driver. Similarly, Colombo and Lazzari (2018) indicate a more significant contraction in manufacturing industries and the service sector, with no recovery to pre-recession levels until 2018/1, while there was a negative oscillation with rapid recovery for extractive and agricultural industries. Finally, Barboza and Zilberman (2018) find evidence of a reduction in investment and industrial production pace due to increased economic uncertainty.

Thus, parallel to the evolutionary path of the economy is the economic cycles, which influence and alter the pace of innovation, competition, and business progress. In this context, the periods of recession stand out because they are loaded with negative driving forces and, therefore, equivalent to disruptive events that intensify the ferocity of evolutionary selection forces and impose higher levels of aptitude reconfiguration (Schumpeter, 1942; Kitching et al., 2009; Latham & Braun, 2011; Knudsen, 2013). The structured framework in Figure 1 can illustrate this correspondence between the business cycle and evolutionary theory in economics.

From management literature (Pearce & Michael, 2006; Bromiley et al., 2008; Kitching et al., 2009; Lien, 2010; Gulati et al., 2010; Navarro et al., 2010; Latham & Braun, 2011; Knudsen, 2013; Conti et al., 2015), it is inferred that economic downturns affect companies in three fronts: first – organizations are impacted by the reduction in demand and changes in buying patterns, as customers of all levels become more reluctant to spend on services and nondurable goods and cancel or postpone plans to purchase durable goods and productive equipment, as well as investments in construction; second – businesses' profit margins deteriorate as revenue levels contract with a decrease in the consumer market and an increase in price competition, while production costs increase due to less efficient organizational structures against installed capacity; third – access to financial creditors becomes more restricted as the chances of companies facing difficulties in meeting their commitments are more outstanding. In this sense, there are prescriptions (Pearce & Michael, 2006; Bromiley et al., 2008; Navarro, 2009; Kitching et al., 2009; Lien, 2010; Knudsen, 2013) and evidence (Geroski &

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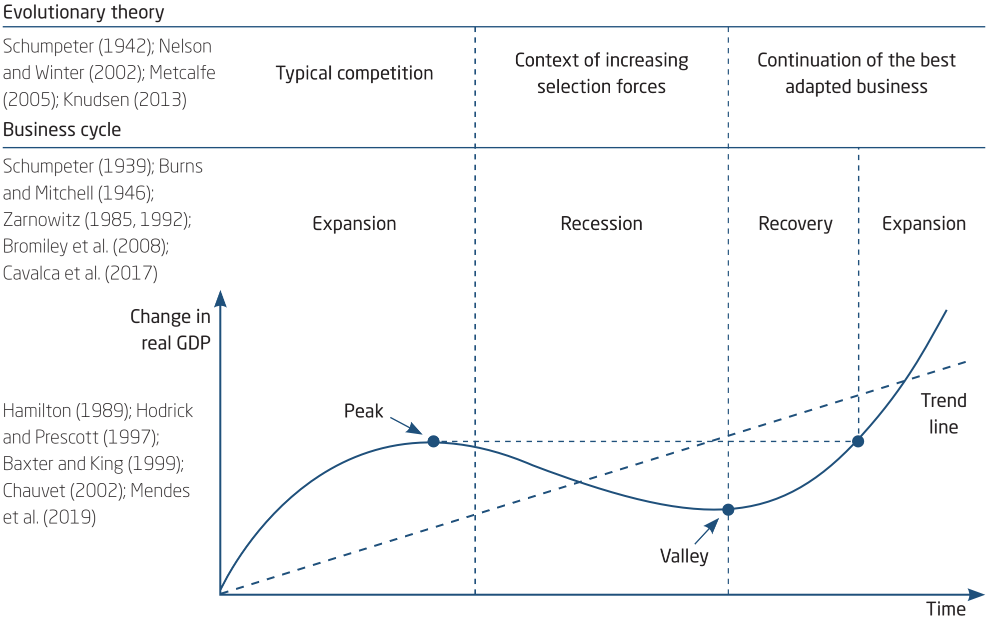
Gregg, 1993; Gulati et al., 2010; Navarro et al., 2010; Knudsen & Foss, 2015; Garcia-Sanchez et al., 2014; Conti et al., 2015; Bamiatzi et al., 2016; Vassolo et al., 2017) regarding companies that survive and overcome the recessionary period with a competitive advantage, with an indication of balanced management of adaptive strategic actions (pro-cyclical and counter-cyclical) such as market and product development; advertising and personnel expenses; production levels, inventories, and accounts receivable; price and credit policies; and investment and divestment execution.

Figure 1

Evolutionary theory and business cycle



Source: Adapted from Hodrick and Prescott (1997), Metcalfe (2005), and Bromiley et al. (2008).

When considering the perspective of business cycles and the dynamics of coping with recessive periods, studies in the areas of economics and finance (Fazzari & Petersen, 1993; Caballero & Hammour, 1994; Carpenter et al., 1994; Gertler & Gilchrist, 1994; Sharpe, 1994; Opler & Titman, 1994; Bernanke et al., 1996; Hubbard, 1998; Campello et al., 2010; Erel et al., 2012; İmrohoroğlu & Tuzel, 2014; Alfaro et al., 2016; Osotimehin & Pappadà, 2017; Kudlyak & Sánchez, 2017, Giroud & Mueller, 2017; Gilchrist et al., 2017; Begenau & Salomao, 2019; Crouzet & Mehrotra, 2020) associate

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selection forces with companies' exposure through two channels: first – total factor productivity conditions, as business units characterized by outdated or unprofitable techniques and products tend to grow less over the business cycle and have a higher propensity to cease operations when faced with demand reductions and increased competition; and second – liquidity and financing capability, as companies with greater dependence on financial sources and low creditworthiness are subject to more significant credit restrictions during recessions and are forced to reduce business activity levels or exit the market, even if they are productive.

Based on the analyses conducted in this section, there is evidence that the performance of companies during and after an economic decline is influenced by business attributes at the beginning of the recessionary period, as well as by behaviors adopted in response to the selective pressures related to productivity conditions and financing capacity. However, research streams in management, finance, and economics do not follow a specific theoretical framework; instead, they explore the unfolding and coping with effects under various aspects of the business cycle. Nonetheless, from the referenced studies, there is evidence that the approaches taken adopt, individually or collectively, three manageable fronts that have a strong influence on the performance of firms during economic fluctuations: operations (sales, revenues, costs, and expenses); funded assets (financial availability, working capital requirements, and long-term investments); and financing liabilities (short-term debts, long-term debts, and equity).

Therefore, the evolutionary context of companies over business cycles presents a unique exogenous challenge and driving force of transformations through structural changes, rationalizations, and innovations during economic contractions. However, the organizational aptitude for quick and fruitful adjustments to cope with recessionary periods is not a virtue of all companies (Pearce & Michael, 2006; Bromiley et al., 2008; Kitching et al., 2009; Gulati et al., 2010; Conti et al., 2015; Hirt et al., 2019; Holland & Katzin, 2019).

RESILIENCE AND BUSINESS CYCLES

The conception of resilience and resilient performance curves in the face of events that alter environmental stability gained notoriety from Holling (1973), and since then, this multidisciplinary perspective has been incorporated into various fields of science (Nelson et al., 2007; Rose, 2007; Pike et al.,

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2010; Pendall et al., 2010; Burnard & Bhamra, 2011; Bhamra et al., 2011; Martin & Sunley, 2015; Annarelli & Nonino, 2016; Linnenluecke, 2017; Irigaray et al., 2017; Duchek, 2020; Conz & Magnani, 2020). In this sense, the assumptions of resilience have been linked to the business cycle in the research flows of economic geography (Simmie & Martin, 2010; Martin, 2012; Fingleton et al., 2012; Hill et al., 2012; Simmie, 2014; Martin & Sunley, 2015; Caldera-Sánchez et al., 2017; Martin et al., 2016; Angulo et al., 2018; Faggian et al., 2018; Ringwood et al., 2019), where according to Martin et al. (2016, p. 564):

> The basic idea of resilience is that it captures how an entity or system reacts to and recovers from an adverse disruption. Interest focuses on how long the entity or system in question takes to return to its pre-shock state and whether, in fact, it returns to that state or is moved by the shock to some other (preferably more favorable) state.

Martin (2012), Martin and Sunley (2015), and Martin et al. (2016) explore and demonstrate that this definition of resilience applies to the analysis of regional economic reaction curves, even in the context of economic recessions and is closely related to the evolutionary economic process. This approach is already guiding publications that aim to distinguish resilient performance localities throughout business cycles and to highlight decisive characteristics and actions for the results achieved, both internationally (Angulo et al., 2018; Faggian et al., 2018; Ringwood et al., 2019) and nationally (Colombo & Lazzari, 2018; Tupy et al., 2018; Batista & Cruz, 2019). According to Caldera-Sánchez et al. (2017, p. 6), "economic resilience can be defined as the capacity of an economy to reduce vulnerabilities, to resist shocks and to recover quickly." In addition, the studies by Martin and Sunley (2015) and Colombo and Lazzari (2018) highlight companies and industrial sectors as factors that contribute both positively and negatively.

Therefore, there is an expectation that organizations should also be resilient when confronted with an economic crisis, with the understanding that during an economic expansion, companies aim for growth and leadership positions but also cultivate the necessary conditions and capacities to support strategies to face recession stages in order to achieve sustainable results (Bromiley et al., 2008; Navarro et al., 2010; Latham & Braun, 2011; Lorange & Datson, 2014; Conti et al., 2015; Saebi et al., 2017). This ability becomes a critical factor for businesses since in the reconfiguration of resources and efforts to contain the intensity of the impact of an economic

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downturn and improve the degree of recovery, companies that evolve more skillfully achieve resilient performance and position themselves for competitive advantage (Bromiley et al., 2008; Kitching et al., 2009; Hirt et al., 2019). In this sense, the studies by Kitching et al. (2009) and Hirt et al. (2019) emphasize that, during economic crises, positively distinct company performance is associated with adaptive capabilities, that is, resilience virtues.

The prism of resilience has already been extended to the organizational environment with multifaceted propositions and models (Staw et al., 1981; Meyer, 1982; Sutcliffe & Vogus, 2003; Hamel & Välikangas, 2003; Sheffi & Rice, 2005; Vogus & Sutcliffe, 2007; Burnard & Bhamra, 2011; Bhamra et al., 2011; Annarelli & Nonino, 2016; Linnenluecke, 2017; Williams et al., 2017; Irigaray et al., 2017; Koronis & Ponis, 2018; Duchek, 2020; Conz & Magnani, 2020), comprising literature that has not yet reached a consensus on the conceptualization of organizational resilience and is centered on approaches related to resilience as a process, capabilities, and outcome (Duchek, 2020). Perspectives that can be explored individually or collectively in line with the definition given by Annarelli and Nonino (2016, p. 3):

> Organizational resilience is the organization's capability to face disruptions and unexpected events in advance thanks to strategic awareness and linked operational management of internal and external shocks. Resilience is static when founded on preparedness and preventive measures to minimize threats probability and to reduce any impact that may occur, and dynamic when founded on the ability to manage disruptions and unexpected events to shorten unfavorable aftermaths and maximize the organization's speed of recovery to the original or to a new more desirable state.

However, in no approach the flow of research on organizational resilience has deliberately and explicitly explored the characteristics or the determinant actions for the resilient performance of companies throughout the business cycle. As Duchek (2020, p. 220) highlights, "based on the different definitions, scholars usually develop their own conceptualization which is oriented to the specific goals of the investigation." Therefore, we start from Martin et al.'s (2016) study – aimed at demonstrating how regions face and recover from the effects of recessive periods – in search of convergences between conceptions of economic resilience and organizational resilience that can support an epistemological proposition for the study of resilient performance in the context of a financial crisis since the lens of resilience gathers a perspective that

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> [...] proves useful as metaphors are intended: to offer novel ways of thinking about and understanding complex phenomena and, particularly, to reveal new connections and insights across seemingly disparate conceptual paradigms (Pendall et al., 2010, p. 72).

In this sense, we identify in Sheffi and Rice (2005), Irigaray et al. (2017), Duchek (2020), and Conz and Magnani (2020) the premises of organizational resilience comparable to the assumptions of Martin et al.'s (2016) study.

Martin et al. (2016) recognize a sequence of four stages that lead to the region's resilient performance capacity: 1. risk – understanding the level of vulnerability or exposure of companies, industries, workers, and institutions; 2. resistance – the degree of impact or reduction in performance metrics; 3. reorientation – the ability or inability to make necessary adjustments and adaptations to contain the impact and restore performance; and 4. recovery – the level of evolution of performance recovery. Similarly, in exploring the development of the concept of organizational resilience, Duchek (2020) proposes that it is established in a flow of three stages: 1. anticipation – preventive monitoring of possible disturbances and preparation for confrontation; 2. coping – recognition of changes in the scenario and implementation of response actions; and 3. adaptation – understanding the new environmental dynamics and evolution of the business model.

According to Martin et al. (2016), interactions between decision-making spheres of agents, industrial and business structures, labor market conditions, financial arrangements, and governance systems influence the regions' economic resilience capacity. Similarly, Irigaray et al. (2017) suggest that the organizational flow of coping and adaptation in the face of adverse scenarios found in the integration of aptitudes at the level of people and processes – observed as a whole, in parts, or specific aspects – the modulation of resilience and resilient performance capacities.

Martin et al. (2016) identify in the analysis of economic indicator curves the possibility of distinguishing levels of regional economic resilience in terms of resistance and recovery of performance. Similarly, Sheffi and Rice (2005) suggest that whatever the discontinuity, the impact on relevant organizational outcome metrics manifests in a distinctive and representative resilience capacity. Additionally, Conz and Magnani (2020, p. 409) argue that this manifestation of organizational resilience occurs in a temporal path where "the adaptation of routines and strategies to a shock at time t, through the reconfiguration of extant resources available at (t-1) – combined with new resources e leads – to a quick change of strategy (t+1), *i.e.*, flexibility".

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In addition to consolidating the central consonance of economic and organizational resilience perspectives, the above statements meet the views advocated by management scholars in business cycles. Latham and Braun (2011) present seven propositions regarding the identification that selection pressures challenge each firm's preestablished core attributes in recessive periods. In this context, the initial conditions of the company and the strategies adopted to face the recession define performance curves throughout the business cycle. Moreover, Bromiley et al. (2008, p. 210) emphasize: "organizations that either forecast and act in a preemptory manner or simply react appropriately to business cycle changes as they occur may gain an advantage over rivals who do not." Finally, Conti et al. (2015, p. 275) describe two situations of superior performance in facing the recessionary stage:

> In the first case, a firm may be less affected than competitors by the negative impacts of the recessionary environment, even though its absolute performance may decline compared to the moment prior to the recession. In the second case, which is less common, a firm may benefit from the recession more than competitors and even improve its performance.

Thus, we reach an epistemological proposition: organizational resilience, in the context of an economic crisis, materializes in the company's performance metrics (as a result) with stages of processing in temporal aspects of anticipation, coping, and adaptation (through the process) at individual and systemic levels of organizational resources (through capabilities). From this perspective, when entering a recessive economic period, organizational performance is unanchored from a normal level relative to pre-disturbance fitness and diligence conditions, with a temporal unfolding of negative impacts until the stabilization of a new level, depending on the actions taken, which may represent superior, equal, or inferior performance to the pre-existing one. Therefore, the framework in Figure 1 can be derived into an integrated model of conceptions that enables the study of determinants of resilient performance during an economic crisis, according to the framework in Figure 2.

Therefore, by filling gaps and highlighting convergences of studies and scientific fields, this section configures an integrated model of conceptions that enables researchers to identify conditions for organizational resilience, actions to cope with the crisis, and their relation to performance. This opens the way to proposing a strategy for an empirical approach.

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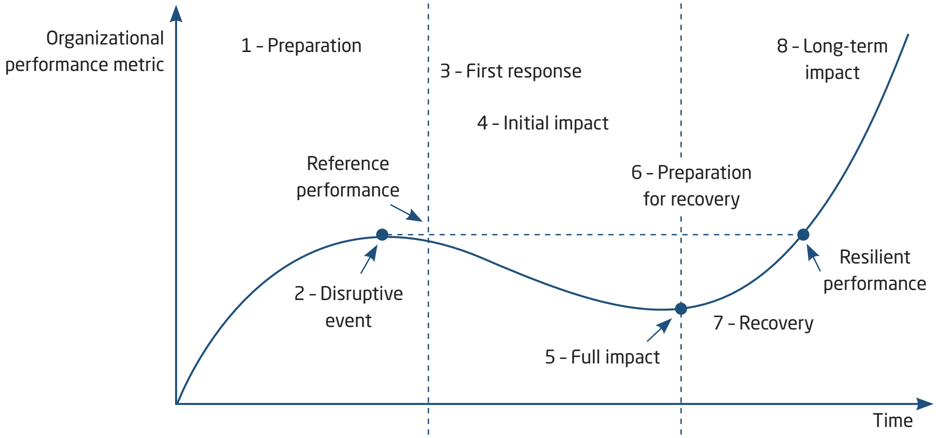
Figure 2

An integrated model of resilient performance concepts during an economic crisis period

Organizational resilience			
Sheffi and Rice (2005); Annarelli and Nonino (2016); Irigaray et al. (2017); Duchek (2020); Conz and Magnani (2020)	Anticipation Latent conditions for organizational resilience (t-1)	Coping Ostensible actions for organizational resilience (t)	Adaptation Resilient organizational performance (t+1)



Latham and Braun (2011)	Pre-recession	Recession	Post-recession
	Proposition 1 – To a significant extent, firms' within-recession performance will be dictated by their initial conditions at the onset of the recession. Proposition 2 – To a significant extent, firms' post-recession performance will be dictated by their initial conditions at the onset of the recession. Proposition 3 – A firm's initial condition in terms of its resources and capabilities at recession onset will determine the nature of its response.	Proposition 4 – Managerial perception of the threat or opportunity presented by recession, inevitably shaped by short term performance, will moderate the nature of the strategic response. Proposition 5 – A firm's choice of retrenchment *versus* repositioning strategies will be related to its short-term (intra-recessionary) performance.	Proposition 6 – A firm's response strategies, specifically its repositioning efforts, will determine its long-term (post-recessionary) performance. Proposition 7 – To a significant extent, firms' abilities to withstand recession will influence their ability to navigate subsequent recessions.

Source: Adapted from Duchek (2020), Conz and Magnani (2020), Sheffi and Rice (2005), and Latham and Braun (2011).

PROPOSITION FOR EMPIRICAL APPROACH STRATEGY

The set of studies addressed demonstrates that the reduction of the consumer market over the recessive period implies a decrease in sales volume

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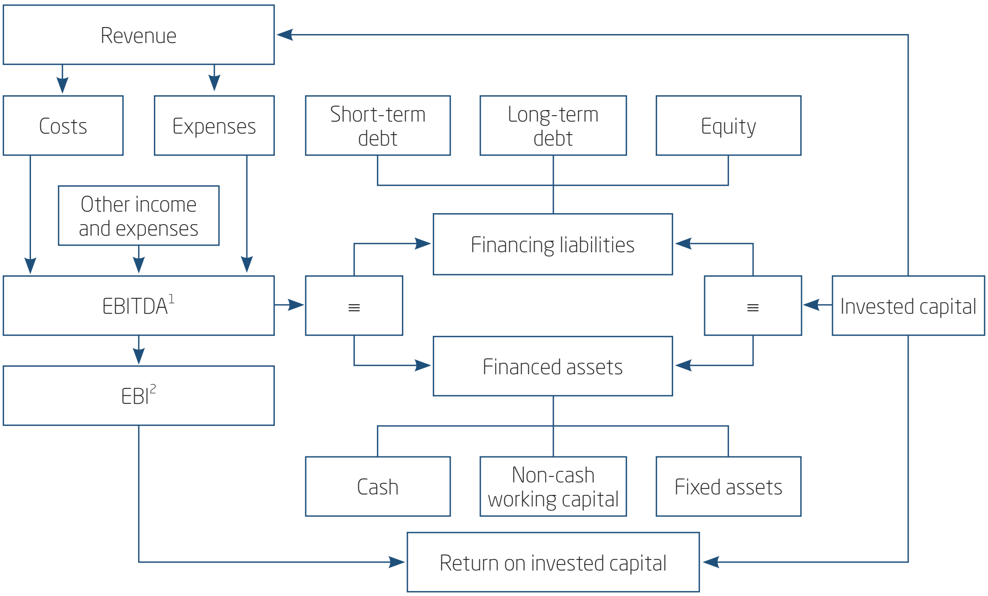
or revenue, depending on pricing strategy, demand elasticity, and competitive conditions, with effects that challenge the productive configuration of the business and, concomitantly, the liquidity and financing capacity (internal and external). Therefore, the economic setback pressures the adoption of comprehensive evolutionary measures, ranging from operational components (revenue, costs, and expenses) to the realignment of financed assets (financial availability, working capital needs, and non-current assets) and financing liabilities (short-term debt, long-term debt, and equity), due to the cointegration of these fields of action.

Given this, it can be inferred that some companies adopt a diligent posture to face the increased selection forces in recessive periods and, beyond the survival of the business, are engaged in adaptations that favor the achievement of resilient performance, as raised throughout the previous section. In this sense, the reconfiguration of internal economic-financial factors that promote return on invested capital occurs and interacts under intuition that can be illustrated as follows:

Figure 3

Cointegration of internal economic and financial factors



Source: Elaborated by the authors with additional support from Damodaran (2007).

[1] EBITDA = Earnings before interest, taxes, depreciation and amortization.

[2] EBI = Earnings before interest, in other words, EBIT x (1 – tax rate).

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Most research aiming at understanding business dynamics in periods of economic recession begins by dating the economic cycle (with Codace being the primary source of information in Brazil), a condition that proves sufficient for identifying the exogenous event and applying studies (Carpenter et al., 1994; Opler & Titman, 1994; Hubbard, 1998; Kudlyak & Sánchez, 2017; Brighetti & Albanez, 2019; Martucheli et al., 2021). Therefore, by identifying the business cycle, assimilating the causes and consequences of the recessionary period, and based on the temporal dynamics summarized in Figure 2, it becomes clear that studies related to the determinants of resilient performance during economic crises can be conducted using the following empirical approach.

Figure 4

The basis for the empirical approach strategy

Analysis context (example)

- Brazilian scenario of economic crisis (2014-2016):
  - Period 1T12-1T14 = prerecession = 9 quarters = 27 months = t-1
  - Period 2T14-4T16 = recession = 11 quarters = 33 months = t
  - Period 1T17-1T19 = postrecession = 9 quarters = 27 months = t+1

1st stage of analysis

- In a period of economic crisis, it is possible to distinguish resilient from non-resilient companies by analyzing ROIC performance curves.
  - $\text{Resilient}_i\,(1|x) = \text{Performance}_{i,t+1} \geq \text{Performance}_{i,t-1}$

2nd stage of analysis

- In the prerecession stage, resilient companies have attributes that are different from non-resilient ones and are determinant for ROIC performance.
  - $P(\text{Resilient} = 1|x) = \Phi\,(\beta_0 + \beta_1 X1_{i,t-1} + \beta_2 X2_{it-1} + \beta_k Xk_{it-1})$

3rd stage of analysis

- Throughout the intra and postrecession periods, resilient companies adopt different actions to adjust the economic-financial conditions that determine ROIC performance.
  - $\text{Resilient}_i\,(1|x) = \Delta Y1_{i,t} + \Delta Y2_{i,t} + \Delta Yk_{i,t}$
  - $\text{Resilient}_i\,(1|x) = \Delta Y1_{i,t+1} + \Delta Y2_{i,t+1} + \Delta Yk_{i,t+1}$

Source: Elaborated by the authors.

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Under the prism of the integrated model of concepts (Figure 2) and empirical approach strategy (Figure 4) proposed, the research is developed in a flow of three sequential stages that aim to 1. distinguish resilient companies from non-resilient ones in the sample; 2. verify distinct attributes between resilient and non-resilient companies, defining the determinants of positive or negative effects for resilient performance; and 3. identify different behaviors between resilient and non-resilient companies. The instruments for evidence-seeking are aligned with the three segments of analysis, where the first is based on statistical evaluation of differences in means (*t*-student) or medians (Wilcoxon sign rank and Wilcoxon sign test). Next, the second set of analyses is supported by probit regression (Freitas et al., 2013; Wooldridge, 2016), and the third reverts to statistical evaluation of differences in means (*t*-student) or medians (Wilcoxon sign rank and Wilcoxon sign test).

More specifically, motivated by Sheffi and Rice (2005) and Conz and Magnani (2020), the first stage consists of individually identifying the organizational performance curve throughout the business cycle under study to compare levels in the postrecession period (t+1) *versus* the prerecession period (t-1). Thus, it is possible to define (ex-post) resilient companies (postrecession performance is equal to or higher than prerecession levels) from non-resilient ones (postrecession performance is lower than prerecession levels).

Following Annarelli and Nonino (2016), Irigaray et al. (2017), Duchek (2020), and Conz and Magnani (2020), the second stage is focused on the latent conditions for organizational resilience, that is, the horizon of business attributes in the period before the adverse event (recession). According to the framework in Figure 2, this analysis is linked to the company's performance curve from propositions 1, 2, and 3 of Latham e Braun (2011).

The third stage, in harmony with Annarelli and Nonino (2016), Irigaray et al. (2017), Duchek (2020), and Conz and Magnani (2020) guides the analysis of coping and adaptation procedures for achieving organizational resilience, *i.e.*, the field of actions employed during the pre and postrecessionary period of an adverse event. According to the framework in Figure 2, this analysis is linked to the company's performance curve based on propositions 4, 5, and 6 of Latham and Braun (2011).

In conducting this proposal for an empirical approach, the proposed reference performance metric covers operational and structural aspects and profitability in alignment with the internal economic-financial factors cointegration structure (Figure 3). The list of organizational characteristics and behaviors that may be determinants of resilient performance can encompass both qualitative variables (country, sector, product etc.) and quantitative

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variables (size, liquidity, immobilization, leverage, indebtedness, margin etc.) in conformity with the internal economic-financial factors cointegration structure (Figure 3) and the indications of Fazzari and Petersen (1993), Bernanke et al. (1996), Hubbard (1998), Bromiley et al. (2008), Kitching et al. (2009), Campello et al. (2010), Latham and Braun (2011), Conti et al. (2015), Bamiatzi et al. (2016), Begenau and Salomao (2019), Crouzet and Mehrotra (2020), and Franzotti et al. (2021).

Therefore, in line with the integrated model of conceptions for studying organizational resilience throughout business cycles (Figure 2), this topic conceives principles of measuring and evaluating resilient performance during an economic crisis. Thus, it opens significant opportunities for studies in the management field to diagnose and understand the adaptive evolution of companies from the perspective of resilience. Therefore, there is ample room for research in which various methodologies and approaches, in addition to those presented here, can be used to build new knowledge and validate or refute paradigms related to business dynamics in periods of unfavorable economic context.

FINAL CONSIDERATIONS

There are no countries in the world that are immune to periods of economic recession or reduction in economic growth, especially when it comes to emerging economies (Kitching et al., 2009; Latham & Braun, 2011; Caldera-Sánchez et al., 2017; Hirt et al., 2019). However, "relatively little is known about systematic differences in sensitivity of firms to the business cycle" (Crouzet & Mehrotra, 2020, p. 1), meaning that there is a latent and ongoing need to expand the prism of analysis of the consequences of an economic disturbance on the incumbency of firms since organizations can be affected to a greater or lesser extent (Bromiley et al., 2008; Kitching et al., 2009; Latham & Braun, 2011; Conti et al., 2015; Caldera-Sánchez et al., 2017; Hirt et al., 2019; Holland & Katzin, 2019). In this sense, by unifying business cycles with heterogeneous business characteristics and dynamics under the prism of resilience, this study organized and reconciled convergences from scientific fields into an integrated model of concepts (Figure 2) and synthesized a strategy with three segments of empirical analysis (Figure 4), thereby contributing to various research streams that focus on the difficulties faced by organizations in periods of economic crisis.

As a proposed research agenda, approaches can deepen knowledge through case or multi-case studies, consider companies from different coun-

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tries or groups of nations, and compare evidence from various economic crises (2014-2016 in the national economic context and 2020 in the global pandemic context). In this regard, researchers can adopt sales, revenue, or average ticket metrics to evaluate the performance curve, explore the relationship between the characteristics of the business model (sector/product, market segment, pricing, distribution channels, among others) in the pre-crisis period and the reinforcement or repositioning actions used in the aftermath of the economic shock. In another line, metrics of productivity or cost levels also enable inferences about organizational resilience and drive the search for connections between the composition of productive factors (human capital, physical capital, other inputs, and their supply systems) employed in the prerecessionary stage and the pro or counter-cyclical strategies adopted in the unfolding of the economic crisis. Additionally, indicators of return on equity or enterprise value also have the potential to support the qualification of business resilience and lead to an analysis of the link between the internal economic and financial factors (financed assets, financing liabilities, profit margins, and cash generation) at the prerecessionary moment and the adjustment measures promoted throughout the business cycle. Finally, future studies can also advance connections between the literature on dynamic capabilities, economic crisis environments, resilience, and the achievement of resilient performance over business cycles to expand the knowledge base for the strategic awareness of organizations.

Therefore, given the history of recessions, the inevitable occurrence of new economic cycles (national or international), and the fact that studies conducted under the prism of resilience in the face of economic adversities are still incipient, future research remains relevant, with significant space to explore the linkage of attributes and actions that favor or hinder the achievement of organizational resilience in times of economic crisis.

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