

The effect of resource slack on organizational decline of large Brazilian companies: the moderating effect of the industry's dynamic

The effect of
resource slack

El Efecto del Sclack de Recursos sobre el Declive Organizacional de Grandes Empresas Brasileñas: El efecto moderador de la dinámica de la industria

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O Efeito do Excedente de Recursos sobre o Declínio Organizacional de Grandes Empresas Brasileiras: O efeito moderador da dinâmica da indústria

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Abstract

Purpose – This study aims to investigate the influence of resource slack on the decline of Brazilian companies, with a particular focus on the moderating role of environmental dynamism. The authors specifically examine three types of resource slack: available, potential and recoverable. These represent surplus resources that exceed what is necessary for the organization's basic operations. The role of environmental dynamism, characterized by rapid changes in customer preferences, technologies and competitive dynamics, is considered as a moderating factor in this relationship.



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Design/methodology/approach – The authors used data from Brazilian companies spanning from 1997 to 2008. The research sample was composed using the matching-pairs method, which included a group of publicly traded companies that experienced decline (43 companies) and a group that did not (40 companies) within the specified timeframe.

Findings – Findings of this study indicate that the presence of available slack, being more liquid resources, decreases the likelihood of organizational decline. Furthermore, the moderation effect of potential resource slack can mitigate decline in companies operating in dynamic industries.

Originality/value – This research provides valuable insights into the impact of slack resources on potential organizational turnarounds. Given the relative scarcity of resources in these companies compared to those in developed countries, whether they be financial, human or technological, the study highlights the unique influence of slack in a less explored institutional environment. This research underscores the importance of examining the decline of Brazilian companies from a broader perspective, emphasizing that decisions regarding resource use can have significant implications on a company's trajectory, either amplifying or mitigating its decline.

Keywords Organizational decline, Resource slack, Strategy

Paper type Research paper

Resumen

Propósito – ¿Cuál es el impacto del slack de recursos en el declive de grandes empresas brasileñas? Para responder a esta pregunta, hemos probado hipótesis por separado para tres tipos de slack de recursos: disponible, potencial y recuperable. Estos excedentes consisten en recursos en exceso más allá de lo necesario para mantener la organización funcionando.

Diseño/metodología/enfoque – Desarrollamos un estudio empírico cuantitativo y longitudinal con datos de empresas brasileñas de 1997 a 2008. Adoptamos el método de pares emparejados, componiendo la muestra de investigación con un grupo de empresas cotizadas en bolsa que declinaron (43 empresas) y otro que no declinó (40 empresas) en el período de tiempo.

Hallazgos – Encontramos que la disponibilidad de recursos más líquidos reduce la posibilidad de declive. El efecto de moderación en el slack de recursos potenciales para empresas en industrias dinámicas puede mitigar el declive.

Originalidad – Esta investigación contribuye a una mejor comprensión del efecto del excedente en posibles recuperaciones. Extender los estudios de recursos excedentes al contexto de empresas brasileñas mostró la influencia que el excedente ejerce en un ambiente institucional relativamente menos explorado. Ya sea financiero, humano o tecnológico, la escasez de recursos es más pronunciada que en empresas de países desarrollados. Esta investigación llama la atención sobre el hecho de que la declinación de empresas brasileñas se analiza desde una perspectiva más amplia. Las decisiones sobre cómo la empresa usa sus recursos pueden afectar positiva o negativamente la declinación de las empresas, reforzando la importancia de discutir esta relación.

Palabras clave Declive Organizacional, Slack de Recursos, Estrategia

Tipo de artículo Trabajo de investigación

Resumo

Objetivo – A Qual é o impacto da folga de recursos no declínio de grandes empresas brasileiras? Para responder a essa pergunta, testamos hipóteses separadamente para três tipos de folga de recursos: disponível, potencial e recuperável. Essas folgas consistem em recursos além do necessário para manter a organização funcionando.

Projeto/metodologia/abordagem – Desenvolvemos um estudo empírico quantitativo e longitudinal com dados de empresas brasileiras de 1997 a 2008. Adotamos o método de pares combinados, compoendo a amostra de pesquisa com um grupo de empresas de capital aberto que declinaram (43 empresas) e outro que não declinou (40 empresas) no período.

Resultados – Descobrimos que a disponibilidade de recursos mais líquidos reduz a possibilidade de declínio. O efeito moderador na folga de recursos potenciais para empresas em indústrias dinâmicas pode mitigar o declínio.

Originalidade – Esta pesquisa contribui para uma melhor compreensão do efeito da folga sobre possíveis recuperações. A extensão dos estudos de folgas de recursos para o contexto de empresas brasileiras mostrou a influência que a folga exerce em um ambiente institucional relativamente menos explorado. Seja financeiro, humano ou tecnológico, a escassez de recursos é mais pronunciada do que em empresas de países desenvolvidos.

Esta pesquisa chama a atenção para o fato de que o declínio de empresas brasileiras é analisado sob uma perspectiva mais ampla. Decisões sobre como a empresa usa seus recursos podem afetar positiva ou negativamente o declínio das empresas, reforçando a importância de discutir essa relação.

Palavras-chave Declínio Organizacional, Excedente de Recursos, Estratégia

Tipo de papel Trabalho de pesquisa

Introduction

Organizational studies have historically favored research oriented toward the understanding of growth. On the other hand, studies of organizational decline have not received the same attention given to studies on the success of companies (Trahms *et al.*, 2013; McMillan and Overall, 2017). The organizational decline occurs over a significant period (Trahms *et al.*, 2013). Authors recognize the minimum of resources and long-term performance over time and that an organizational failure depends on a resource's resource (Hambrick and D'Aveni, 1988; Teixeira *et al.*, 2019). However, the perception of organizational decline tends to be very late (Barra, too, either because of the cognitive myopia of managers (McMillan and Overall, 2017) or because of the effects of threat rigidity (Staw *et al.*, 1981; Muurlink *et al.*, 2012). These aspects make slack resources contingent and essential to avoid organizational decline (Barbero *et al.*, 2020). Further studies in this field are necessary since the structural properties and internal processes observed in fast-growing organizations are very different from those in declining organizations (McKinley *et al.*, 2014).

In the ever-evolving business environments, resource slack can offer a competitive edge, allowing companies to proactively respond to market turbulences, and proper management of resource slack might delineate the difference between sustainable growth and decline (Suzuki, 2018; Paeleman and Vanacker, 2015). Innovation, as well, often touted as a remedy against corporate decline, is intrinsically tied to resource slack. Companies with resource slack might be better positioned to invest in research and development, embrace new technologies and venture into novel markets (Liu *et al.*, 2014; Geiger and Makri, 2006).

While the strategic use of resource slack has been recognized as a potentially competitive advantage in changing business environments (Suzuki, 2018; Paeleman and Vanacker, 2015) and its capacity to accelerate response to market changes, foster product innovation and adopt new technologies (Lin, 2014; Liu *et al.*, 2014; Geiger and Makri, 2006), the understanding of how this resource slack might influence the trajectory of organizational decline remains underexplored.

In particular, while the relationship between resource slack and business performance has been discussed (Bourgeois, 1981; Sharfman *et al.*, 1988; Daniel *et al.*, 2004; Mousa *et al.*, 2013), there is limited insight into how this relationship plays out in the face of imminent organizational decline, especially within dynamic industries. The organizational decline, while being a phenomenon that can be observed across different sectors and company sizes, has nuanced implications when viewed through the lens of available and potential resource slack, as well as stakeholder dependence (Balcaen *et al.*, 2011).

Although research has touched upon the effects of external and environmental factors on exit timings post distress, such as adverse macroeconomic conditions and industry-related dynamics reflecting uncertainty and turbulence (Balcaen *et al.*, 2011), there is a need to explore how these factors intersect with resource slack in influencing the trajectory of decline. Additionally, while the broader implications of resource slack on innovation have been studied (Huang and Chen, 2010; Lee, 2015; Suzuki, 2019), its specific role in potentially mitigating, delaying or exacerbating organizational decline in dynamic environments remains a gap in the literature.

Traditional research usually occurs in developed countries, where the institutional context differs significantly from emerging countries (Teixeira *et al.*, 2019; Mingo *et al.*, 2018). Latin America as the background, or empirical context, of institutionally inefficient

environments and firms' responses (be these responses the ownership in foreign deals or the actions to improve performance in the local market). The context of Latin America is relevant for several reasons. First, since this is the context and by studying Latin America and Brazil specifically, we increase the knowledge that other scholars, managers and policymakers may use. Studies on Latin America have become increasingly important due to the emerging status of many Latin American countries (Cuervo-Cazurra, 2008; Cuervo-Cazurra and Dau, 2009), such as Mexico and Brazil.

To better understand the relationship between resources and organizational decline, we propose the following research question:

RQ1. What is the impact of resource slack on the decline in large Brazilian companies considering the industry dynamism?

To answer this question, we developed a quantitative empirical study on publicly traded companies listed on the BM&FBOVESPA. We adopted the matching-pairs method, selecting pairs of comparable companies (declined/not declined). Data were collected from secondary sources, mainly from the Economática database, and tested using regression analysis.

Understanding the organizational decline in the national and regional specificities in which companies are inserted is necessary. The effect of financial slack on company performance also depends on the institutional environment (Guo *et al.*, 2020). The idiosyncrasies of Latin American emerging markets play a key role in company performance (Rugman *et al.*, 2012). They may change the mechanics, which leads to a decline. While resource slack may indicate a lack of efficiency in developed country companies, it may represent preparation for the emerging country company to face the uncertainties of the institutional environment. Thus, in this study, we contribute to the literature on the organizational decline by analyzing the role of resource slack in a relatively unexplored context, where institutional characteristics make companies have to deal with nonmarket threats. By approaching an emerging country perspective, the study goes beyond traditional explanations related to management and competitive pressures, adding environmental issues to the literature on organizational decline.

Literature review

Resource slack can be helpful for organizations as it provides an essential "cushion" for their activities, looking at it from a positive perspective. Without resource slack, any reduction in cash flow would result in an immediate shortage of funds. Such a shortage would result in dysfunctional organizational changes, such as layoffs and cancellation of capital investments (Cyert and March, 1963). Slack allows the organization to successfully adapt to internal pressures to adjust or external pressures to change policy and initiate changes in strategy concerning the external environment (Bourgeois and Singh, 1983).

Resource slack is composed of three interrelated but conceptually distinct dimensions, which are: (1) available slack, (2) potential slack and (3) recoverable slack (Bourgeois, 1981). Available slack is the internal, unabsorbed slack that consists of resources that have not yet been assimilated into the organization's technical design, for example, excess liquidity (Bourgeois, 1981; Bourgeois and Singh, 1983). It is the amount of unused and readily available resources to the company. Potential clearance is the external and also unabsorbed clearance. It consists of the organization's ability to generate extra/additional resources from the organizational environment, increasing other debt or equity (Bourgeois, 1981; Bourgeois and Singh, 1983). The recoverable slack is the external and absorbed gap. It consists of resources already absorbed into the system as cost overruns but that can be recovered during adverse periods (Bourgeois, 1981; Bourgeois and Singh, 1983). For example, some companies retain more employees than necessary to support the ups and downs of demand

and business activity. It increases spending and provides a “cushion” to ensure effectiveness if demand increases (Marlin and Geiger, 2015).

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Organizational decline and resource slack

Organizational decline is not just a temporary setback but a prolonged and intricate process, signaling a decrease in both resources and performance (Serra *et al.*, 2017). Central to this phenomenon is the concept of resource slack, representing the surplus resources that an organization possesses over and above its immediate operational requirements (Teixeira *et al.*, 2019).

In the business environment, especially in hypercompetitive environments, resource slack holds significant importance. Organizations with a surplus of slack often find themselves at a decision point. They can use this slack to stimulate innovation, adapt to evolving market dynamics and undertake major strategic actions. However, these very decisions can occasionally have adverse effects, leading to rapid decline rather than advancement (Hambrick and D’Aveni, 1988).

The orchestration of resource slack, especially during challenging phases, emerges as a critical competency. Organizations are constantly challenged to judiciously deploy their slack, ensuring it serves as a catalyst for positive change rather than a harbinger of complacency. Teixeira *et al.* (2019) shed light on this, emphasizing that the effective management of slack can make or break turnaround strategies.

Organizations equipped with ample slack often exhibit an enhanced capacity to absorb shocks, adapt to disruptions and explore new avenues for growth (Cyert and March, 1963). Yet the relationship between slack and organizational performance is not linear. Chiu and Liaw (2009) introduced a nuanced perspective, suggesting an inverted U-relationship between the two. While moderate slack can act as a catalyst for innovation and adaptability, excessive slack might usher in complacency, inertia and inefficiencies.

The strategic implications of resource slack gain even more prominence during phases of decline. As organizations grapple with dwindling resources and eroding market positions, the management and deployment of their slack can either offer a lifeline or exacerbate their challenges (Bromiley, 1991; Wiseman and Bromiley, 1996).

In the modern, volatile business landscape, understanding the interplay between slack and decline is more crucial than ever. Research has consistently shown the benefits of maintaining an optimal level of slack. Organizations that strike this balance often demonstrate superior innovative capabilities, especially in uncertain environments (Sharfman *et al.*, 1988). However, there is a dark side to this equation. Organizations that let their slack balloon, particularly amidst declining performance, risk entrenching themselves in a quagmire of inefficiency and reduced competitive advantage (Chen and Hambrick, 2012).

Organizational decline in the context of emerging countries

Understanding the role of context dynamism in the relationship between resource slack and organizational decline is paramount. The impact of resource slack can manifest differently in stable settings compared to dynamic ones. In rapidly changing environments, resource slack can grant organizations the agility required to adapt and seize new opportunities, whereas in more stable contexts, it might inadvertently lead to inefficiencies (Bourgeois, 1981). This slack becomes even more critical when considering strategic flexibility, allowing firms to quickly pivot their strategies and invest in emergent opportunities or provide a cushion against unforeseen challenges (Nohria and Gulati, 1996). Dynamic contexts often necessitate continuous innovation, where resource slack can be the key to funding exploratory projects and other innovative endeavors without jeopardizing core operations (Cyert and March, 1963). Furthermore,

understanding how resource slack interacts with environmental dynamism can offer firms a competitive advantage, helping them optimize performance during both decline and growth phases (Hambrick and D'Aveni, 1988). This awareness aids leaders in making informed decisions about resource allocation and in developing sustainable strategies that ensure longevity, even in potential decline periods (Chen and Hambrick, 2012). In essence, the interplay between resource slack, organizational decline and the dynamism of the surrounding context shapes the strategic landscape, underscoring the necessity for organizations to recognize and navigate these intricacies effectively.

The exploration of context dynamism in the relationship between resource slack and organizational decline is particularly salient within the framework of emerging countries, such as some in Latin America. Given the distinct socioeconomic challenges and opportunities in these environments, understanding this relationship is crucial for both academic and practical applications (Aguinis *et al.*, 2020). In the volatile economic landscapes that are characteristic of emerging countries, resource slack can bestow organizations with the necessary agility to adapt and capitalize on new possibilities. Conversely, in environments where market conditions are more stable, an overabundance of slack may inadvertently foster inefficiencies and complacency (Chiu and Liaw, 2009).

In emerging markets, where rapid shifts and unexpected challenges are par for the course, strategic flexibility becomes particularly vital. Here, resource slack can serve as a pivotal element, enabling organizations to nimbly modify their strategies, allocate resources to emergent opportunities or buffer against unforeseen adversities (Teixeira *et al.*, 2019). These dynamic contexts, frequently observed in Latin American markets, inherently demand a continuous pursuit of innovation. Resource slack thus becomes a critical facilitator, enabling organizations to finance exploratory projects and innovative ventures without jeopardizing their core operations (Cyert and March, 1963).

Teixeira *et al.* (2019) emphasize the importance of understanding how resource slack interacts with environmental dynamism in emerging markets, such as those in Latin America. This understanding can afford firms a competitive advantage, aiding in optimizing performance during both decline and growth phases. Equipped with this knowledge, leaders can make more informed decisions regarding resource allocation, crafting strategies that ensure sustainability and resilience even amidst potential downturns.

Conceptual development and hypotheses

Available slack and decline

The capacity of management to recognize and act upon signs of organizational decline is critical for a firm's future prospects. Often, there is a gap in managerial awareness and timely response. By the time some managers discern the signs of decline, their firms might already be grappling with significant losses. This delay can intensify the negative impacts on the firm's resources and make the process of recovery more challenging and uncertain (Teixeira *et al.*, 2019).

Resource slack, particularly financial slack, may serve as buffer during uncertain periods. By providing this financial flexibility, managers can proactively address emerging threats and capitalize on opportunities. Such available slack not only supports investments in research and development and employee morale (Marlin and Geiger, 2015) but also bolsters the firm's ability to cater to customer needs by investing in enhanced customer service. By relieving capital constraints, slack enhances strategic decision-making, encouraging innovation, experimentation and risk-taking, all of which can propel performance (Mousa *et al.*, 2013; Tabesh *et al.*, 2019; Leyva-de la Hiz *et al.*, 2018). Mishina *et al.* (2004) assert that net financial resources signify a firm's capability to fulfill current obligations and sustain sales levels. Such resources can even shield organizations from potential dissolution (Kraatz and Zajac, 2001). For firms on the brink

of decline, the presence of slack becomes even more critical, as evidenced by its benefits in the years leading up to potential bankruptcy scenarios (Guha, 2016).

Available resource slack, characterized by its liquidity and accessibility, is essential in staving off decline. Its immediate availability can be the deciding factor when confronting threats, ensuring organizations can mobilize necessary resources promptly. Such slack ensures that during turbulent times, companies can operate without resorting to loans for operational expenses. This is particularly beneficial in emerging countries like Brazil, where high-interest rates and institutional challenges can jeopardize firms' financial stability (Khanna and Palepu, 2010). Thus, companies endowed with ample available resource slack are better positioned to resist decline, emphasizing the inverse relationship between available resource slack and susceptibility to organizational decline:

H1a. Available resource slack is negatively associated with organizational decline.

Potential slack and decline

Potential slack indicates the future resources created from the external environment through additional loans and invested capital (Kim *et al.*, 2017). The concept of potential slack reflects the ability of a company to guarantee resources through capital raising or financing from the external environment (Jifri *et al.*, 2016). Potential slack is external because it represents a company's ability to secure resources with debt financing. Unlike available and recoverable slack, the existence of potential slack should not, by its very nature, lead to misuse problems because this slack component consists of resources that are only potentially available to the company and currently unused (Marlin and Geiger, 2015). This type of slack also encourages innovation because the risks of experimentation are protected when the potential for access to external resources exists, suggesting a positive relationship between potential slack and innovation (Geiger and Cashen, 2002). Potential slack may not always be positive for the firm. For example, suppose a company with a high potential slack (the potential of raising too much money). It may become inefficient and use too many resources to fund projects or current operations. This inefficiency may result in a high level of debt and poor use of resources. In this case, potential slack causes inefficiency and ineffectiveness.

However, in crises, the company typically accesses loans or equity as a strategic response to the possibility of decline. The loans have a fixed interest rate that is not based on whether the company has performed well or poorly. Generally, companies access loan capital rather than equity. A company with a low level of potential slack is financially limited and cannot invest due to the high cost of acquiring funds or the lack of availability of external funds (Guha, 2016). This slack provides the ability and flexibility for the company to pursue new investments and opportunities that can lead to improved performance (Ju and Zhao, 2009). Thus, when the company needs external resources to deal with threats, having more significant potential slack will give access to more resources under comparatively better conditions. These better conditions to access potential resources can help the company not decline compared to companies that do not have the same conditions:

H1b. Potential resource slack is positively associated with organizational decline.

Recoverable slack and decline

The recoverable slack is the external and absorbed slack. It consists of resources already absorbed into the system as cost overruns but can be recovered during adverse periods

(Bourgeois, 1981; Bourgeois and Singh, 1983). For example, some companies retain more employees than necessary to support the ups and downs of demand and business activity. It increases spending and provides a “cushion” to ensure effectiveness if demand increases (Marlin and Geiger, 2015). These resources can be used to protect against unexpected occurrences and disruptions. The innovation literature is replete with stories of chance discoveries that resulted from slack, such as the much-celebrated discovery of the Post-it note at 3M (Nohria and Gulati, 1996). This recoverable slack can be considered recoverable time slack. Richtner *et al.* (2014) analyzed the impact of project-level slack and highlighted two types of recoverable slack: time slack – in a product development project, project members need time to be analytical and creative, time to discuss and reflect, and, thus, be more innovative; and the human competence gap – directly related to the number of people available and their skills and experience levels; both the number of employees and their competencies within projects have a direct impact on innovation, including knowledge creation.

Given the long-term nature of this slack, companies are motivated to experiment and take risks. Companies with less recoverable slack have less flexibility and fewer strategic options to follow (Alessandri *et al.*, 2018). Therefore, recoverable slack is resources that can be recovered to influence performance throughout a typical cycle in which the manager’s activities are carried out (Wang *et al.*, 2014). The importance of using recoverable slack is the level of resources available to the firm to invest and explore new opportunities, thereby providing a competitive advantage. As recoverable slack can help leverage competitive advantages, companies will be less likely to experience a decline as these resources will grant them a better position in the market. Based on these arguments, we propose the following hypothesis:

H1c. Recoverable resource slack is negatively associated with organizational decline.

The role of industry dynamism

In emerging countries, such as those in Latin America, the capacity of management to recognize and act upon signs of organizational decline becomes even more critical. These countries often grapple with unique socioeconomic challenges and opportunities that can shape the trajectory of a firm. Often, there is a noticeable lag in managerial awareness and timely response. By the time some managers discern signs of decline, their firms might be wrestling with substantial losses, intensifying the negative impacts on resources and complicating the recovery process (Teixeira *et al.*, 2019).

Davis *et al.* (2009) elucidate that empirical research on environmental dynamism encompasses diverse dimensions. Some studies focus on environmental characteristics like unpredictability, while others delve into aspects of ambiguity, complexity and speed. These dimensions, despite their distinctiveness, often intersect in real-world scenarios. For instance, high-speed environments might inherently be unpredictable, and complex settings can introduce multiple ambiguities. In the context of this research, dynamic industries are identified as less stable, with a stable industry being one where key elements such as customer preferences, technologies and competitive dynamics exhibit minimal change (Henderson *et al.*, 2006).

Within dynamic industries, particularly those prevalent in emerging markets, companies can harness slack resources more efficiently to navigate industry shifts. The agility and adaptability offered by these slack resources enable firms to identify and capitalize on new business opportunities and counter potential threats. In contrast, in less dynamic industries, the slow pace of change means that these slack resources might be perceived more as

excesses or inefficiencies than strategic buffers. The potential risk is that in non-dynamic industries, slack might lean more toward wastage than preparedness for disruption. This perspective aligns with [Abebe \(2012\)](#), who observed that companies in dynamic environments, often characterized by fluctuating customer demands and rapid innovations, necessitate a higher degree of information processing. Such industries demand consistent organizational commitment to new processes. Firms operating in these dynamic landscapes risk competitive disadvantage, or even threats to their survival, if they do not continually adapt and innovate:

H2. Industry dynamism moderates the relationship between resource slack and organizational decline.

Method

In this research, we adopted the matching-pairs method, which consists of selecting pairs of comparable companies (declined/not declined) so that each company in the couple differs in a specific dimension ([Collins and Hansen, 2012](#)). This method is used in organizational decline research. Researchers can match a sample of companies that exhibit a phenomenon of interest with a control group of companies that have similar characteristics but do not exhibit the phenomenon of interest and compare the results ([Certo and Semadeni, 2006](#)). The matched-pairs method is widely used in organizational decline research. The work by [Hambrick and D'Aveni \(1988\)](#), one of the most cited in organizational decline research, used this method to study the dynamics of major bankruptcies by comparing 57 major bankruptcies with 57 surviving companies. Other studies also used matched-pairs: [Martin and Eisenhardt \(2010\)](#), from a set of projects carried out in six companies, selected two projects from each company, one with high performance and the other with low performance, following selection criteria such as size, resources, duration, complexity, importance and type; [Kronborg and Thomsen \(2009\)](#) examined the survival of foreign subsidiaries in Denmark, comparing them to a matching sample of nationally owned companies; [Ferrier et al. \(1999\)](#) researched the competitive activity of market-leading companies, comparing them to non-leading companies; [Daily and Dalton \(1994\)](#) researched the relationship between bankruptcy and corporate governance, comparing bankrupt companies with surviving companies; [D'Aveni \(1989\)](#) analyzed the strategic and managerial consequences of declining companies compared to companies that did not decline; [Moulton and Pruett \(1996\)](#) studied bankruptcy by comparing 73 companies that declared bankruptcy in a given period to an equal number of companies that did not declare bankruptcy in the same period.

Like every method, matched-pairs also has advantages and some limitations. In terms of advantages, this method allows comparing successful companies with those that fail. If researchers only study successful organizations, it becomes difficult to know if their conclusions are related to an attempt to explain this success ([Collins and Hansen, 2012](#)). [Eisenhardt and Graebner \(2007\)](#) also highlight the advantages of this method, emphasizing that the theoretical sampling approach called “polar types” is particularly important, in which the researcher deals with extreme samples, such as very high and very low performance, to more easily observe contrasting patterns in the data. According to these authors, the resulting theory is consistently supported by empirical evidence, leading to the recognition of patterns and the relationship between central ideas and the logic of the phenomenon studied. Among the limitations of this method, sample selection bias is one of them. There is no practical way to assess the potential error degree in sample selection ([Hambrick and D'Aveni, 1988](#)). The criterion for selecting the sample, as well as the sample

size, are limitations; large samples are needed to implement this method correctly (Certo and Semadeni, 2006).

Sample

The universe of this research is of publicly traded Brazilian companies traded on the BM&FBOVESPA from 1997 to 2008. The criterion for selecting this period was to allow us to analyze the decline of companies in a general environment of stability, avoiding the crisis effect. Thus, the decline of the companies in the sample would not be directly associated with an unfavorable environment. For this reason, we chose the period from 1997 onwards. Before 1997, Brazil was still adjusting to the process of economic opening. Companies were experiencing the reflection of this process, which began in the late 1980s and intensified in 1992. After 1997, Brazil faced a favorable scenario. Brazilian companies experienced a stable national and international economic environment favorable to growth, signaled by the greater purchasing power of the population, control of inflation and stability of the dollar. The survey data went up to 2008 because, from that year onwards, the economy could feel the effects of the international crisis.

We considered the total of the 627 companies traded on the BM&FBOVESPA that declined from 1997 to 2008. We selected those companies that experienced situations of decline. Within the analyzed period, they had a reduction in financial resources, as pointed out in the literature. The criteria established for companies to be classified as companies in decline were that they should show a negative return on assets (ROA) and/or show a drop in ROA and present negative net income and/or decrease in net income for three consecutive years. According to these criteria, 43 companies were selected (Table 1).

According to the criteria established for the selection of the sample group of companies that declined, we selected 60 companies. We considered for the purposes of this research only those companies that were active on the BM&FBOVESPA throughout the period

Industry	Declined	Did not decline
Non-cyclic consumption	Caf Brasilia, Excelsior, Leco, Marambaia, Minupar, Oderich, Vigor	Josapar, Sousa Cruz
Construction and transport	Chiarelli, Haga S/A, Portobello	Eternit
Oil, gas and biofuels	Pet Manguinho	
Basic materials	Eluma, Eucatex, Gazola, Klabin, Micheletto, Rimet, Sansuy, Semp	Aliperti, Celul Irani, Elekeiroz, Ferbasa, Fibam, Fibria, Mangels Indl, Met Duque, Metal Iguacu, Panatlantica, Suzano Papel, Tekno, Usiminas
Industrial goods	Aco Altona, Arteb, Celm, D F Vasconc, Recrusul, Riosulense, Trafo	Bardella, Baumer, DHB, Forja Taurus, Fras-Le, Inds Romi, Inepar, Kepler Weber, Marcopolo, Metisa, Nordon Met, Randon Part, Schulz, Tupy, Wetzel S/A
Cyclic consumption	Arthur Lange, Botucatu Tex, Buettner, Cambuci, Estrela, F Guimarães, Fab C Renaux, Hercules, IGB S/A, Santanense, Schlosser, Tec Blumenau, Tecel S Jose, Tectoy, Teka, Tex Renaux, Vicunha Text	Alpargatas, Bic Monark, Cedro, Cia Hering, Dohler, Ind Cataguas, Karsten, Nadir Figuei, Vulcabras

Table 1.
Research sample
(declined/not
declined)

Source: Table by authors

from 1997 to 2008. We excluded companies that canceled their registration on the BM&FBOVESPA during this period, whether due to bankruptcy or other reasons. Following this criterion, 17 companies were excluded, leaving 43 companies to make up the sample group of companies that declined. This exclusion was necessary because these companies had their registration canceled and would lack a lot of data since they were not required to present their results to Comissão de Valores Mobiliários – Securities and Exchange Commission (CVM), making access to information difficult. Some of the companies in the sample had their registration canceled on the BM&FBOVESPA after the period analyzed in this research (1997–2008), or even their operations compromised (eight went bankrupt, one was sold and one filed for judicial recovery). However, since during the years considered for this research (1997–2008), these companies were still active and with an active registration on the BM&FBOVESPA, they were considered active companies for research purposes and composed the group of declining companies, especially since the events mentioned here that resulted in the closure of some companies occurred after the research period.

We collected the data for this analysis from the Economática database. As the focus of this research is to analyze declining companies and not failed companies, these measures are compatible, as they reflect the reduction of resources, which means decline and not necessarily bankruptcy.

Economática is a financial analysis software platform widely used by professionals in the financial sector, especially in Latin America. It provides a comprehensive database that includes financial statements, market data, economic indicators and other relevant information for equities, fixed income and other financial assets. One of its main strengths is its ability to make historical comparisons and analyze trends over time, which is crucial for financial analysts. The software is popular among analysts from major financial institutions around the world due to its comprehensive data and powerful analytical tools (available at www.economatica.com/).

After selecting the companies that declined, we started setting up the group of companies that did not decline to make matching pairs feasible. Likewise, the companies that did not decline should be traded on the BM&FBOVESPA from 1997 to 2008. However, unlike the companies that declined, they should not present the ROA as negative and/or decrease in ROA and negative net income and/or decrease in net income for three consecutive years. Another criterion established was that these companies should be part of industries corresponding to the industries of the group of companies that declined. Observing these criteria, we selected 40 companies that did not decline (Table 1).

Variables and measures

The dependent variable of this study is organizational decline. We measured using a dichotomous variable equal to 1 for the companies in the sample that declined and 0 for those who did not. We tested the relationship between the hypotheses using logistic regression analysis.

The independent variable of this survey is resource slack. Different financial indicators can be used to measure organizational slack. Empirical research points to several measures, with the study by Bourgeois (1981) being considered one of the first to construct measures for organizational slack. In the literature, available slack measures commonly used are liquidity measures. We use the ratio between current assets and current liabilities to measure available slack representing untapped resources but available (Chiu and Liaw, 2009). Potential slack is unused borrowing capacity, and we measured it by the ratio between total liabilities and shareholders' equity. A firm with a high debt-to-equity ratio has a relatively low ability to raise additional funds, so it has little potential slack (Bromiley,

1991). Therefore, potential slack represents the company's ability to secure resources using debt financing (Geiger and Cashen, 2002). Recoverable slack means resources allocated to certain operational activities but recoverable to their initial status if necessary (Chiu and Liaw, 2009). It is usually measured by selling, general and administrative expenses divided by sales. In this research, due to the lack of data related to the sales of the companies surveyed, we substituted the sales indicator for the company's revenue, which also meets the expected result. Hence, we measured recoverable slack by the ratio of selling and administrative expenses to revenue.

We followed Serra (2016) for the moderating variable industry dynamism, which is used to classify industries into less dynamic and more dynamic. We used the classification of industries developed by BM&FBOVESPA. This categorization stratifies companies into 10 different industries based on the products or services that most contribute to the formation of companies' revenues. Considering that the industry's dynamism consists of the unpredictability rate of change in the external environment (Garg *et al.*, 2003), we classified the companies' industries as dynamic and less dynamic industries. Dynamic industries are less stable, that is, more unpredictable. Less dynamic industries are more stable, that is, more predictable. We classified companies belonging to the cyclical consumption, information technology, telecommunications and financial industries as dynamic. We classified those belonging to the noncyclical consumption, construction and transport, oil, gas and biofuel, public utilities, basic materials and industrial goods industries as less dynamic. After this classification, we measured the variable dynamism of the industry through a dummy variable, assuming the value 1 for companies inserted in the dynamic industry and the value 0 for companies inserted in the less dynamic industry.

We measured the company age control variable as a proxy of the companies' years of operations. Company size is a variable operationalized in most jobs by the number of employees, sales or total company assets. In this research, we adopted total assets as an indicator of this variable (Real [R\$]). The ownership variable consists of classifying whether a family group controls the company or not. We consulted the item on the companies' reference forms available on the CVM and BM&FBOVESPA websites to measure this variable, which indicates the existing family relationships between managers. This variable was also measured using a dummy variable, assuming a value of 1 for family businesses and 0 for nonfamily firms.

As we collected the data for 12 different years, it was also necessary to control the year effect. We analyzed whether the general situation of the year as an external variable, such as economic fluctuations, had any general effect on the sample.

Data analysis

Following the best practices of logistic regression (Hoetker, 2007), we included a measure of correct global predictions, decline and no decline in each model. Considering a reasonable percentage probability for decline or no decline, all models developed show a significant improvement of about 50% in the predictions.

We further used the Process v4.0 procedure and the Johnson–Neyman technique (Hayes *et al.*, 2017) to assess the moderating effect of the level of potential slack.

Results

Table 2 offers insights into the relationships between organizational decline and several other key variables, using Spearman's rank correlation method. Spearman's correlation, a nonparametric measure, is particularly useful for understanding monotonic relationships without making assumptions about the distributions of the variables.

Variable	1	2	3	4	5	6	7	8
1 Decline	1							
2 Available slack	-0.245**	1						
3 Potential slack	0.036	-0.001	1					
4 Recoverable slack	0.000	-0.060	-0.001**	1				
5 Sector dynamism	-0.184**	-0.042	-0.075*	0.065*	1			
6 Age	-0.040	0.046	-0.057	-0.066*	-0.233**	1		
7 Size	-0.331**	0.117**	-0.052	0.003	-0.039	-0.004	1	
8 Ownership	-0.92**	0.031	-0.059	-0.026	0.138**	0.024	-0.112**	1

Notes: **Correlation is significant at the 0.01 level; *correlation is significant at the 0.05 level
Source: Table by authors

Table 2.
Correlations matrix

The observed relationship between decline and available slack stands at $-0.245 - 0.245$, suggesting that as available slack increases, the likelihood of organizational decline decreases. This finding implies that organizations possessing more liquid resources can navigate challenges more effectively, potentially reducing their chances of decline.

Interestingly, the relationships between decline and both potential slack and recoverable slack are weak, with correlation coefficients of 0.0360 and 0.000, respectively. This indicates that these types of slack might not linearly influence the likelihood of decline in the same manner as available slack.

The negative correlation of -0.184 between Decline and Sector Dynamism is intriguing. It suggests that organizations in more dynamic sectors may use strategies or mechanisms that diminish their propensity for decline, a counterintuitive finding that warrants further exploration.

A particularly pronounced correlation in the matrix is the strong negative relationship ($-0.92 - 0.92$) between Decline and Ownership. This suggests that certain ownership structures substantially mitigate the likelihood of decline, emphasizing the critical role of ownership dynamics and governance in organizational resilience.

However, it is essential to note that despite the presence of some significant correlations, none are so high as to raise concerns about multicollinearity. Multicollinearity can obscure individual predictor effects, but the provided variance inflation factor scores being below typical threshold levels further reassure us about the absence of multicollinearity problems in the analysis.

Table 2 provides a nuanced understanding of how various resources, sector characteristics and organizational attributes interrelate without multicollinearity hazards, laying the groundwork for more in-depth analysis and hypothesis testing.

Given the use of a dichotomous dependent variable (declined = 1/not declined = 0) and a series of control variables (age, size, ownership and year) and the nature of the independent variable resource slack, we performed logistic regression analysis to test the hypotheses (Table 3). Here, we present the results of the statistical tests performed.

Model 1 serves as a baseline, containing only control variables. The significant negative associations of “Size,” “Ownership” and “Age” with decline have important practical implications. Larger, older and certain ownership-structured firms may possess inherent advantages, such as economies of scale, established market presence or specific governance mechanisms, which make them more resilient against decline. For practitioners, this emphasizes the importance of organizational growth, longevity and strategic governance structures as buffers against decline. Notably, Model 1 achieved a “Correct prediction %” of 78.09% for decline scenarios, 73.57% for non-decline and an overall accuracy of 75.90%, providing a robust base predictive model.

Table 3.
Logistic regression
results to decline

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Available slack		-0.959***	-0.951***	-0.993***	-0.972***	-0.953***	-1.028***
Potential slack		0.003	0.001	0.001	0.015**	0.001	0.016**
Recoverable slack		-0.010	-0.018	-0.017	-0.019	-0.039	-0.046
Sector dynamism			1.185***	1.039***	1.268***	1.173***	1.073***
Sector dynamism × available slack				0.102			0.127
Sector dynamism × potential slack							-0.018**
Sector dynamism × recoverable slack						0.025	0.032
Age	-0.004	-0.001	-0.007**	-0.007**	-0.007**	-0.007**	-0.007**
Size	-0.553***	-0.557***	-0.588***	-0.591***	-0.585***	-0.589***	-0.590***
Ownership	-0.714***	-0.923***	-1.205***	-1.219***	-1.156***	-1.209***	-1.176***
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	984	921	921	921	921	921	921
Chi ²	140.412***	327.059***	364.958***	365.255***	371.241***	365.269***	372.135***
R ²	0.177	0.399	0.437	0.437	0.443	0.437	0.444
Correct prediction % – decline	78.09	76.49	77.89	76.49	76.29	75.30	76.10
Correct prediction % – no decline	73.57	72.09	73.78	74.00	76.53	74.84	75.40
Correct prediction % – overall	75.90	74.36	75.90	75.28	76.41	75.08	75.75

Note: ** and *** denote significance at 5 and 1%, respectively

Source: Table by authors

Model 2 highlights the protective role of “Available Slack.” While it was negatively associated with decline, “Potential” and “Recoverable Slack” did not show significant effects. In practical terms, this implies the significance of maintaining a certain level of liquid assets to navigate unforeseen adversities and challenges. The model’s diagnostics, including “Correct prediction %” values of 76.49% for decline, 72.09% for no decline and 74.36% overall, attest to its reliability and predictive power, supporting hypothesis *H1a*.

Model 3 introduces “Industry Dynamism,” which was positively and significantly associated with decline, revealing that companies in more dynamic sectors face higher risks of decline. Managers in such sectors should be vigilant about industry trends and shifts, ensuring adaptability, continuous learning and agility to remain competitive. This model presented predictive accuracies of 77.89% for decline, 73.78% for no decline and an overall accuracy of 75.90%.

Models 4 through 6 delve into the interaction between industry dynamism and different types of slack resources, providing insights into how the impact of slack resources can vary depending on industry dynamics. For managerial practice, understanding these interactions can guide strategic resource allocation decisions, especially in dynamic industries. Specifically:

- Model 4 attained predictive accuracies of 76.49% for decline, 74.00% for no decline and 75.28% overall;
- Model 5 demonstrated accuracies of 76.29% for decline, 76.53% for no decline and 76.41% overall; and
- Model 6 reached 75.30% accuracy for decline, 74.84% for no decline and 75.08% overall.

Model 7, consolidating all insights, emphasizes the protective nature of “Available Slack” and the risk enhancement of “Potential Slack” and “Industry Dynamism” on organizational decline. These insights are paramount for business strategy, advocating for judicious resource management and cautious handling of potential slack, especially in volatile industries. Model 7 yields predictive accuracies of 76.10% for decline, 75.40% for no decline and 75.75% overall, affirming its robustness and reliability.

In [Figure 1](#), we present the single effect tests to interpret as comfortable signifiers of potential resource slack with sector dynamism. The results confirmed the moderation tests shown in [Table 3](#) but provided detail of this interaction. When dynamism is high, slack has a negative effect, causing the organizational decline, confirming *H2*. However, for low momentum, potential slack tends to increase organizational decline.

The results of our analysis provide empirical evidence that lends substantial support to our proposed hypotheses. Hypothesis *H1a*, suggesting a negative relationship between available slack and organizational decline, found support in multiple models. This outcome suggests that firms with an abundance of readily available resources are less prone to decline, emphasizing the protective role of such resources.

Hypothesis *H1b* postulated a positive relationship between potential slack and organizational decline. While this hypothesis received partial support, the nuances of the relationship became evident when considering the moderating role of sector dynamism, as depicted in [Figure 1](#). Specifically, the figure illustrates that when sector dynamism is high, potential slack negatively impacts an organization, leading to decline. This finding aligns with Hypothesis *H2*, which highlighted the moderating role of sector dynamism. However, in scenarios of low dynamism, an increase in potential slack tends to exacerbate organizational decline. This nuanced insight underscores the importance of understanding the interplay between resources and the dynamism of the sector in which a firm operates.

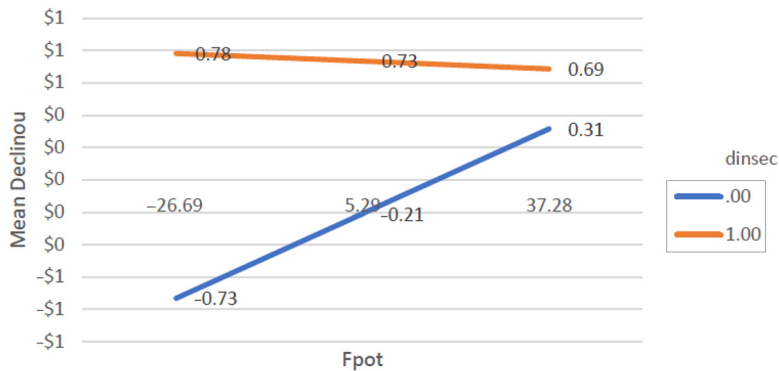


Figure 1.
Moderating effect of sector dynamism on the relationship between potential slack and decline

Source: Figure by authors

Hypothesis *H1c*, which anticipated a negative association between recoverable slack and decline, did not find consistent support across the models, suggesting a more complex relationship than initially theorized.

Discussion

In the domain of organizational decline and resource slack, the Brazilian landscape presents distinctive insights. While numerous studies have highlighted the role of resource slack, particularly in intensely competitive environments (Hambrick and D'Aveni, 1988; Teixeira *et al.*, 2019), our research adds depth by examining this relationship within an emerging economy like Brazil.

Our analysis reveals the dynamics between potential resource slack and sectoral variability. Distinctively, we found that the nature of a sector can significantly shape how slack resources influence organizational trajectories. In sectors marked by high volatility, an abundance of potential slack can fast-track organizational decline. Conversely, in more stable sectors, an increase in potential slack can elevate decline risks. These findings magnify the critical influence of the environmental backdrop in the slack–decline relationship, resonating with earlier research (Bourgeois, 1981; Nohria and Gulati, 1996).

The data underscores the protective attributes of available slack. Companies equipped with substantial immediate resources exhibit greater resilience against downturns (Mishina *et al.*, 2004; Kraatz and Zajac, 2001). This immediate availability acts as a safeguard, facilitating firms to tackle uncertainties in challenging markets, like Brazil, without leaning on external funds.

The relationship between potential slack and organizational decline offers a nuanced narrative. The dynamics of potential slack are crucial in understanding innovation and organizational outcomes, as suggested by various studies (Marlin and Geiger, 2015b; Lee, 2015). The role of potential slack, especially in the context of a firm's internationalization speed and its broader performance, further reinforces its importance (Zhang *et al.*, 2020). This understanding, especially in relation to sector dynamism, resonates with the insights provided by other scholars (Kim *et al.*, 2017; Jifri *et al.*, 2016).

We postulated recoverable slack as a protective buffer, but it did not find robust support, aligning with other findings (Vaughan and Koh, 2019). While available slack is recognized for its role in internationalization speed, recoverable slack's impact remains less evident and possibly context-dependent. This ambiguity mirrors concerns where resource slack might be perceived as wastage, especially in efficiency-driven settings (Nohria and Gulati, 1996).

However, the strategic importance of recoverable slack cannot be understated, as it potentially plays a role in fostering competitive advantages such as innovation and customer service (Daniel *et al.*, 2004; Marlin and Geiger, 2015). The nuanced effects of recoverable slack, especially its idiosyncratic utilization influenced by contextual factors, suggest a compelling avenue for deeper exploration in future studies.

One of the standout contributions of our investigation is its holistic scrutiny of different slack categories within Brazil's market. By synthesizing empirical observations with established theories, we spotlight the interconnections between resources, sectoral changes and organizational results. This approach not only fills a literature gap but also equips both scholars and industry professionals with a deeper grasp of resource orchestration in budding economies.

In essence, this study, anchored in the Brazilian milieu, demystifies the multifaceted interplay between slack resources and organizational downturn. By amalgamating empirical outcomes with time-tested theories, we hope to augment academic dialogue and pave the way for subsequent studies in comparable settings.

The primary objective of this research was to discern the impact of slack resources on the downturn of Brazilian enterprises. Grasping the dynamics that steer declines in emerging nation enterprises is paramount for academia and industry alike, given its potential ramifications on corporate longevity and broader economic health. Notably, while the majority of research on slack and performance is centered around developed nations (Altaf and Shah, 2017), our work underscores the imperative of individually assessing available, potential and recoverable slack as their effects diverge. This enabled us to elucidate the debated nexus between slack resources and organizational descent, reinforcing foundational theories like Chen and Hambrick (2012) and Tan and Peng (2003).

The observed nexus between available slack and decline echoes the sentiments of George (2005) and Nohria and Gulati (1996), shedding light on the strategic significance of immediate resources. On the flip side, the positive correlation between potential slack and decline necessitates astute management to avert inherent pitfalls.

The moderating influence of sector dynamism in our findings offers a renewed perspective, emphasizing the requisite for context-driven strategies aligning with insights from Bourgeois (1981) and Miller and Leiblein (1996).

The strategic insights from our research can serve as a guide for business leaders and managers. The nuanced understanding of available and potential slack, combined with the moderating influence of industry dynamism, paves the way for more informed and context-aware decision-making. Our findings, when juxtaposed with other studies assertions (Tan and Peng, 2003; Chen and Hambrick, 2012), may provide suggestions for effective resource management.

Future research could delve deeper into the nuanced roles of different slack types across various organizational life stages. Especially in emerging economies, how do firms transition between available, potential and recoverable slack as they grow and face challenges? Furthermore, given the observed ambiguity around recoverable slack, qualitative studies could explore managerial perceptions and decision-making processes related to its strategic utilization. Cross-referencing the Brazilian context with other emerging markets might also provide a richer understanding of cultural and economic variations in slack management and their implications for organizational sustainability.

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