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ENTREPRENEURIAL ORIENTATION AND GROWTH OF MICRO, SMALL AND MEDIUM-SIZED ENTERPRISES IN THE CONTEXT OF COVID-19

ORIENTAÇÃO EMPREENDEDORA E CRESCIMENTO DAS MICRO, PEQUENAS E MÉDIAS EMPRESAS NO CONTEXTO DA COVID-19

ORIENTACIÓN EMPRENDEDORA Y CRECIMIENTO DE LAS MICRO, PEQUEÑAS Y MEDIANAS EMPRESAS EN EL CONTEXTO DEL COVID-19

ABSTRACT

Objective: This study analyzes the main dimensions of Entrepreneurial Orientation (EO) – propensity inseridofor innovation, risk propensity, and proactivity – that contributed to the growth of Micro, Small and Medium-sized Enterprises (MSMEs) during the crisis caused by Covid-19.

Method: A quantitative analysis was carried out using the t test paired with 102 MSMEs managers to understand which main aspects of EO contributed to the performance of their companies.

Results: The results show that the presence of a proactive element in MSMEs influences the increase in their revenues in a crisis period. Nevertheless, the significance of characteristics prone to innovation and risks in MSMEs for their growth in a period of crisis is not confirmed.

Limitations: the sample used in this research could be larger and the concept of EO is based only on its three main dimensions. As there is no consensus in the literature on the dimensionality of the EO construct, other applications using different concepts are suggested.

Theoretical and practical implications: The research shows how the EO drives MSMEs in a crisis context, notably through its proactivity dimension. In a practical way, the paper reveals that EO in MSMEs is strongly present in the leader's figure, as well as it is related to its personality, playing an important role to boost the business in a period of crisis.

Originality: This study allows to know which aspects of EO are more decisive in the growth of MSMEs in periods of widespread recession. Thus, entrepreneurs will be able to assess how much they consider EO dominant perspectives for the growth of their businesses. It also contributes both to the discussion on the recovery of the economy and the literature on EO, which does not yet show how this construct operates in the context of crisis.

Manoela Kasper Kopittke
Graduation
Universidade do Vale do Rio dos Sinos - Brazil
manoelakasper@gmail.com

Jefferson Marlon Monticelli
PhD.
Universidade do Vale do Rio dos Sinos - Brazil
jeffmarlon@hotmail.com

Fábio Dal-Soto
PhD.
Universidade de Cruz Alta – Brazil
dalsoto.gel@terra.com.br

Ivan Lapuente Garrido
PhD.
Universidade do Vale do Rio dos Sinos - Brasil
igarrido@unisinos.br

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Keywords: Entrepreneurship. Entrepreneurial orientation. Covid-19. Context of crisis.

RESUMO

Objetivo: Este estudo analisa as principais dimensões da Orientação Empreendedora (OE) – propensão *à* inovação, propensão ao risco e proatividade – que contribuíram para o crescimento das micro, pequenas e médias empresas (MPMEs) durante a crise causada pela Covid-19.

Metodologia: Foi realizada uma análise quantitativa por meio de teste t pareado com 102 gestores de MPMEs para perceber quais os principais aspectos da OE que contribuíram para o desempenho das suas empresas.

Resultados: Os resultados mostram que a presença de um elemento proativo nas MPMEs influencia o aumento das suas receitas em período de crise da pandemia. No entanto, não se confirma a importância das características de propens*ão à* inovação e ao risco nas MPMEs para o seu crescimento em período de crise.

Limitações: A amostra utilizada nesta pesquisa poderia ser maior e o conceito de OE *é* baseado apenas em suas três dimensões principais. Como não há consenso na literatura sobre a dimensionalidade do construto de OE, outras aplicações com o uso dos diferentes conceitos são sugeridas.

Implicações teóricas e práticas: A pesquisa mostra como a OE impulsiona as MPMEs em um contexto de crise, notadamente por meio de sua dimensão proatividade. De forma prática, o artigo revela que a OE nas MPMEs está fortemente presente na figura do líder, assim como está relacionada à sua personalidade, o qual desempenha um papel importante para impulsionar o negócio em um período de crise.

Originalidade: Este estudo permite identificar quais aspectos da OE são mais decisivos no crescimento das MPMEs em períodos de recessão generalizada. Assim, os empreendedores poderão avaliar o quanto consideram as perspectivas dominantes da OE para o crescimento de seus negócios. Também contribui tanto para a discussão sobre a recuperação da economia quanto para a literatura sobre OE, que ainda não mostra como esse constructo opera em contexto de crise.

Palavras-chave: Empreendedorismo. Orientação empreendedora. Covid-19. Contexto de crise.

RESUMEN

Objetivo: Este estudio analiza las principales dimensiones de la Orientación Emprendedora (OE) – propensión a la innovación, propensión al riesgo y proactividad – que contribuyeron al crecimiento de las Micro, Pequeñas y Medianas Empresas (MIPYMES) durante la crisis provocada por el Covid-19.

Metodología: Se realizó un análisis cuantitativo utilizando la prueba t pareada con 102 gerentes de MIPYMES para comprender qué aspectos principales de OE contribuyeron al desempeño de sus empresas.

Resultados: Los resultados muestran que la presencia de un elemento proactivo en las MIPYMES influye en el incremento de sus ingresos en tiempos de crisis pandémica. Sin embargo, no se confirma la importancia de las características propensas a la innovación y al riesgo en las MIPYMES para su crecimiento en tiempos de crisis.

Limitaciones: la muestra utilizada en esta investigación podría haber sido mayor y el concepto de OE se basa *ú*nicamente en sus tres dimensiones principales. Como no hay consenso en la literatura sobre la dimensionalidad del constructo OE, se sugieren otras aplicaciones que utilizan conceptos diferentes.

Implicaciones teóricas y prácticas: La investigación muestra cómo la OE impulsa a las MIPYMES en un contexto de crisis, en particular a través de su dimensión proactiva. De manera práctica, el artículo revela que la OE en las MIPYMES está fuertemente presente en la figura del líder, además de estar relacionada con su personalidad, la cual tiene un papel importante para dinamizar el negocio en un período de crisis.

Originalidad: Este estudio permite conocer qué aspectos de la OE son más determinantes en el crecimiento de las MIPYMES en periodos de recesión generalizada. Así, los empresarios podrán evaluar cuánto consideran las perspectivas dominantes de OE para el crecimiento de sus negocios. También contribuye tanto a la discusión sobre la recuperación de la economía como a la literatura sobre OE, que aún no muestra cómo opera este constructo en el contexto de crisis.

Palabras clave: Emprendimiento. Orientación emprendedora. Covid-19. Contexto de crisis.

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INTRODUCTION

Entrepreneurship plays a crucial role in all economies. This scenario includes small and medium-sized enterprises – businesses with a turnover and number of employees higher than that established for micro-enterprises, but lower than that which defines an enterprise as large (Serviço Brasileiro de Apoio às Micro e Pequenas Empresas - SEBRAE, 2022). The importance of these businesses in the Brazilian scenario is expressed in numbers: according to data from the Special Secretariat for Productivity, Employment and Competitiveness (Secretaria Especial de Produtividade e Competitividade -SEPEC), micro and small enterprises represent 99% of the country's businesses, account for 30% of its total Gross Domestic Product (GDP) and generate 55% of the jobs in Brazil (SEPEC, 2020).

The years 2020 to 2022 were marked by the Coronavirus (Covid-19) pandemic, which negatively impacted the economy and these businesses. Despite this scenario, micro, small and medium-sized enterprises (MSMEs) were responsible for 70% of the new jobs created in Brazil in 2021 (SEBRAE, 2021). This shows its potential for economic contribution, as more revenue and social welfare are generated from the proliferation and, mainly, the growth of MSMEs.

However, the factors preceding the growth of MSMEs, especially in periods of crisis, are not well known. They approach the means used for these firms to grow (Davidsson *et al.*, 2006; Estrella & Bataglia, 2013; Wright & Stigliani, 2013) and the impact of the environment on these businesses (Batjargal *et al.*, 2013; Coad & Tamvada, 2012; Dobbs & Hamilton, 2007), but there are still uncertainties regarding the decisive factors for their success.

In this way, a construct normally analyzed as a factor causing the growth of MSMEs is the Entrepreneurial Orientation (EO). EO aims to identify postures or behaviors of an organization that may be conducive to a greater ability to entrepreneur. This orientation includes the following dimensions: innovative behavior, risk propensity, and proactivity (Miller, 1983). Together or not, these dimensions can influence the growth of MSMEs in different contexts.

In the academic literature, EO has found broad support mainly in the strategy and entrepreneurship fields, as addressed by Anderson, Kreiser, Kuratko, Hornsby and Eshima (2015), Hitt, Ireland, Camp and Sexton (2001), and Lumpkin and Dess (1996). EO dimensions refer to the extent managers at the strategic level are willing to take risks related to the business; to favor change and innovation pursuing competitive advantage; and to compete aggressively with other firms (Anderson *et al.*, 2015; George & Marino, 2011; Miller, 1983; Neto, 2019; Rattner, 2013).

Through a bibliometric study, Martens, Lacerda, Belfort, and Freitas (2016) address that business performance is the main theme identified in a sample of 405 articles on EO, present in almost a third of these articles. However, this study also points out that when the subject focuses on growth and emerging/developing economy/country, there is a moderate or low frequency, respectively, which demonstrates the relevance and need for research in these topics. Based on this, the authors warn about the lack of studies that establish the relationship between EO and growth, as well as the differences of entrepreneurial process between firms from emerging and developed countries.

In this context, it is not known which EO dimensions most influenced the growth of small and medium-sized firms in times of crisis (Moreno-Menéndez *et al.*, 2022; Zighan *et al.*Alkalha, 2022; Wright & Stigliani, 2013). Therefore, the following question guides the investigation: what are the EO dimensions that contributed to the growth of MSMEs in the crisis caused by Covid-19? From this, the study aims to analyze the main dimensions of EO – propensity for innovation, risk propensity, and proactivity – that contributed to the growth of MSMEs during the crisis caused by Covid-19.

Considering the three dimensions analyzed, a quantitative analysis was accomplished with 102 MSMEs in Brazil. The results show how the EO drives these firms in a crisis context, notably through its proactivity dimension. In a practical way, the paper reveals that EO in MSMEs is strongly present in the leader's figure, as well as it is related to its personality, playing an important role to boost the business in a period of crisis.

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The other dimensions – propensity for innovation and risk propensity – did not show significance with growth in the MSMEs researched.

Therefore, this study allows to know which aspects of EO are more decisive in the growth of MSMEs in periods of widespread recession. Thus, entrepreneurs will be able to assess how much they consider EO dominant perspectives for the growth of their businesses. It also contributes both to the discussion on the recovery of the economy and the literature on EO, which does not yet show how this construct operates in the context of crisis.

ENTREPRENEURIAL ORIENTATION

EO is related to the creation of novelties with commercial application, overcoming obstacles with a degree of risk, and desire for personal elevation in achieving goals (Schein, 1983). Miller (1983) states that most MSMEs have centralized power and, to a large extent, they have their results strongly influenced by the personality characteristics of their leaders. In addition, the author points to three variables necessary for a firm to be considered as entrepreneur: innovation, risk propensity and proactivity. For him, EO can be seen as a correlation between these aspects, which make up its main dimensions.

The EO was first studied by Miller (1983), who defined it as having the dimensions of risk propensity, propensity for innovation, and proactivity. For this author, an entrepreneurial firm engages in product market innovation, it carries out risky ventures and it is the first to proactively present innovations.

The constant growth of organizations and the pressing need to search for opportunities, innovation, and risk-taking have made it essential for the organization as a whole to act in the entrepreneurial process. From this perspective, entrepreneurial activity at the organizational level is defined as EO, with emphasis on the role played by the organization's structure, the importance of building the strategy and recognizing the importance of the leader or the subject who undertakes it (Miller, 1983).

Subsequently, other authors included new dimensions in the OE construct, such as Lumpkin and Dess (1996), which complemented the concept with "competitive aggressiveness" and "autonomy". When an organization engages in entrepreneurial activities, all dimensions may be present or only some of them. The influence of each of these dimensions on entrepreneurial activity may depend on external factors, such as the industry or business environment, or on internal factors, such as the organization's structure or the founders' or executives' characteristics. It is possible that these dimensions vary independently, according to the environmental and organizational context (Lumpkin & Dess, 1996; Walter, Auer & Ritter, 2006).

However, the present study consents with Lomberg *et al.* (2017), Basco *et al.* (2020) and Hernández-Perlines, Covin e Ribeiro-Soriano (2021), considering that innovation, risk propensity, and proactivity are the dimensions that best define the EO. These three dimensions commonly used in the literature are synthesized in Table 1 and they are explored in the following sections.

Table 1.

Dimensions of entrepreneurial orientation

Propensity for innovation	Leader's ability to possess new marketable ideas (Lumpkin & Dess, 1996); A characteristic that drives firms to be more innovative and different from their competitors, enabling greater loyalty of their customers and making it more difficult for new competitors to enter the enterprise segment (Brinckmann, Bausch & Rosenbusch, 2011); Tendency to support new ideas, which can result in new products, technological processes, or services (Covin & Slevin, 1989).
Risk propensity	Tendency to place new bets with entrepreneurship and the ability to venture into unknown territories, without being sure if there will be the return expected (Lumpkin & Dess, 1996); Tendency to find new possibilities to increase revenue and make the firm more innovative (Hughes & Morgan, 2007).

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Proactivity	The one who seeks market share in emerging industries (Miles *et al.*, 1978); It is associated with dynamicity and constant search for new products or services in the market (Pérez-Luño *et al.*, 2011); It aims to take advantage of opportunities to predict future demands (Lumpkin & Dess, 1996).

Source: Elaborated by the authors.

Propensity for innovation

Propensity for innovation is an important antecedent factor for a firm's growth (Brüdel & Preisendörfer, 2000). Lumpkin and Dess (1996) expose the propensity for innovation as a very characteristic trait of entrepreneurship, which is intrinsically related to the EO. It refers to the leader's ability to have new marketable ideas and is related to their creativity.

A person who is prone to innovate has an economic bias aimed at creating new products, services, processes, or business models, which makes the entrepreneur engaged with novelties that can add to your organization (Lumpkin & Dess, 1996). Research has shown that entrepreneurs who develop innovative strategies for their firms result in better business performance (Wiklund & Shepherd, 2005).

This dimension of EO, when is present in the figure of the firm leader, encourages to boost business through innovation and to seek new forms of action (Dai *et al.*, 2014) within the firm. These points increase the chances of achieving greater scalability with the business since entrepreneurs with innovation-focused characteristics increase their chance of succeeding as they are more confident in their ideas (Martins & Perez, 2020).

Other studies related to this aspect of EO show that the propensity for innovation also adds value to the business, since it drives the company to be more innovative and different from the competition. It gives greater customer loyalty and make it more difficult for new competitors to enter the segment in which the enterprise is (Brinckmann *et al.*, 2011; Neto & Forte, 2023). Thus, an innovative behavior would positively impact MSMEs in a crisis context, considering the impacts they suffer.

An entrepreneur who has an innovative attitude tends to support new ideas, which can result in new products, technological processes, or services (Covin & Slevin, 1989) that would later help MSMEs increase their revenue channels and reduce part of their costs – mainly by gaining operational efficiency, thus contributing to a positive financial scenario for the firm. Therefore, it is understood that the propensity for innovation represents a dimension of EO that would impact the growth of MSMEs in times of crisis.

Risk propensity

Risk propensity is a factor present in EO. According to Lumpkin and Dess (1996), three categories are linked to innovation in a firm and can occur at the same time: (a) risk related to the unknown, which means lack of knowledge of the probability of being successful; (b) risk related to the investment of large amounts of money in ventures that have uncertainty about their return; and (c) personal risk associated with potentially negative consequences, such as the failure in new professional challenges (Lumpkin & Dess, 1996).

The relationship between a greater risk propensity and an increase in firms' results is less evident compared to the concept of innovation propensity. Research shows that there is a negative impact of risk propensity in the early stages of the firm (Hughes & Morgan, 2007) and that family businesses have a low-risk propensity index, as initially, this characteristic may pose a threat to their survival (Naldi *et al.*, 2007; Zahra, 2005). However, companies that only react conservatively to market changes decrease their propensity for innovation and, consequently, delay potential innovations that could provide a competitive advantage and growth regarding competition (Hughes & Morgan, 2007).

Risk propensity has already been shown to have a positive and auxiliary impact on the survival of MSMEs. A survey conducted with Chinese firms concluded that the risk-oriented entrepreneurial attitude had a positive impact on their performance (Xi & Liren, 2017). The same result was found in a study conducted in Nigeria, in which it was concluded that there is

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a high relationship between the presence of this characteristic and the growth of firms (Lawal *et al.*, 2018).

In a pandemic context, two behaviors can be adopted: to protect the firm, or to take risks and seek new suppliers, and new sales models, which need risk-taking (Li, Anaba, Ma & Li, 2021). Considering that, when managers are prone to risk, they tend to find new possibilities for increasing revenue and making a firm more innovative (Hughes & Morgan, 2007). Thus, it is understood that risk propensity would be a positive factor for the growth of MSMEs in the context of crisis.

Proactivity

A firm is considered proactive when it has a market share in emerging industries while aiming at rapid reactions to changes or new market trends (Miles *et al.*, 1978). A firm that has proactive behavior is dynamic and seeks to constantly introduce new products or services to the market (Pérez-Luño *et al.*, 2011). Authors also reinforce the importance of the prospective characteristic related to proactivity – as it highlights the one who can take advantage of opportunities to predict future demands (Lumpkin & Dess, 1996).

Proactivity has a positive impact on business results and its presence has repercussions on organizational growth. It is more evident in environments of high competition, in which managers must predict market opportunities and mobilize firm resources to take advantage of them (Lumpkin & Dess, 1996).

This characteristic is considered vital for enhancing the performance of organizations (Yang & Meyer, 2019). Studies have already pointed out important levels of correlation between the growth of firms and proactivity (Lisboa *et al.*, 2016), a statement that was also confirmed by Pennings *et al.* (1998) with leadership of banks, who concluded that the proactive attitude can scale the result of these institutions.

The relationship between proactivity and business growth tends to become positive in crisis contexts, as it makes managers able to predict new market opportunities and resources. (Lumpkin & Dess, 1996). It also makes them able to anticipate market needs, changes, and challenges, and can lead the organization to a better financial position (Bolton & Lane, 2012).

Therefore, it is understood that proactivity is a key element for achieving an organization's competitive advantage and for its adequacy to possible changes that may occur in the market and the consumption pattern. Thus, there is the understanding that this dimension is of great relevance for the growth of MSMEs in the context of crisis.

IMPACT OF THE PANDEMIC ON MSMEs

The virus that hit the world at the end of 2019 (Covid-19) has impacted the society and the economy of all countries in the world. Once affected by the pandemic, they had to apply mechanisms to contain the contagion among the population, one of them being the *lockdown* measure, which severely impacted economic and social activities (Donthu & Gustafsson, 2020; Lukito-Budi *et al.*, 2022).

Most small and medium-sized enterprises were forced to close their establishments and suspend direct service to the public. This situation was negative for businesses, especially those with industrial and trade activities, and imposed an uncertain future for many segments (LI *et al.*, 2021). A survey accomplished by SEBRAE showed that 65% of Brazilian MSMEs had lower annual revenues in 2020 than in 2019 and that 57% of entrepreneurs were very insecure about the future of their firms (SEBRAE, 2021), which increased pessimism about the economic recovery.

For firms that had to close their doors to the public, the biggest problems faced were the reduction in demand for their products/services, the consequent drop in financial liquidity, and the interruption in the supply chain, which presented as a less important factor. On average, companies reduced their hiring by up to 47% (Bartik, Bertrand, Cullen, Glaeser, Luca & Stanton, 2020).

The *lockdown* measure resulted in negative economic effects for most firms (L *et al.*, 2021). Despite delaying the spread of the virus, it caused MSMEs to face commercial, logistical, financial, and management difficulties that prevented them

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from achieving a good performance and resulted in a slow economy and decreased production (Nseobot *et al.,* 2020; Penco *et al*., 2022).

Given the importance of MSMEs for the economy and how much most were negatively impacted by Covid-19, it is important to study decisive factors for the growth of these businesses in an emerging economy like Brazil in times of crisis. One of the main elements that help the growth of MSMEs is the EO, a concept that studies show to be a sustainable means of growth before, during and after the pandemic (Kraus *et al.*, 2012).

Recent research suggests that entrepreneurial orientation (EO) has a more complex effect on performance (i.e., non-linear instead of linear) than previously considered (Luu & Ngo, 2019). The *environment* where a company is located can positively influence its growth (Wiklund *et al.*, 2009). The variety of ideas and resources increases the growth of small businesses because it makes them more likely to develop aspects of EO, such as finding or creating new market niches (Miller & Friesen, 1982). In this sense, the *resources* of the *company* also influence their growth. These resources represent variables such as number of sales made by the employees, size of the management team, number of employees with a graduate degree, size of the employee team and external investments. Access to resources with greater ease facilitates the growth of the company, making it more innovative and more likely to take risks with new products/services (Cooper *et al*.., 1994).

Vaz (2021) analyzed 165 articles with important information about the growth of enterprises to identify the factors that determine their positive outcome. The research presented these factors divided into three main blocks: *characteristics of the entrepreneur, internal factors and factors external to the organization*. According to the results, the main *characteristics of the entrepreneur* that influence the growth of companies are: education, motivation, experience, propensity to risk, optimism, self-confidence, personal and professional connections, and number of founders. Through an empirical analysis, it was observed that the growth elements related to factors external to the company do not often determine its growth, evidencing the importance of the internal elements of the organization (Vaz, 2021).

In addition to external factors, there are internal characteristics that strongly influence the growth of MSMEs, one of them being the *attitude of the leader*. The way of managing - especially if it is a small business - is paramount to the success, being positive when it is intended to take moderate risks, take personal responsibility for performance and find a new way to make new products or services (Miner, 1990; Miner *et al.*, 1994). Previous experience acquired by the entrepreneur, either in the sector in which it is located or in several sectors, has proved to be an important feature of the leader for the growth of their business (Davidsson *et al*.., 2010). In addition, characteristics such as fear of failure can influence the growth of the enterprise, as it limits the individual to take risks in opportunities that could make their company grow (Hermans *et al.*, 2015; Wright & Stigliani, 2013).

RESEARCH DESIGN

Given the references presented, the hypotheses presented in Table 2 were formulated.

Table 2.

Hypotheses

Hypotheses	*Description*
H1a	Propensity for innovation tends to increase the revenue of MSMEs in times of crisis;
H2a	Risk propensity tends to increase the revenue of MSMEs in times of crisis;
H3a	Proactivity tends to increase the revenue of MSMEs in times of crisis;
H1b	Propensity for innovation tends to increase the number of customers of MSMEs in times of crisis;
H2b	Risk propensity tends to increase the number of customers of MSMEs in times of crisis;
H3b	Proactivity tends to increase the number of customers of MSMEs in times of crisis;

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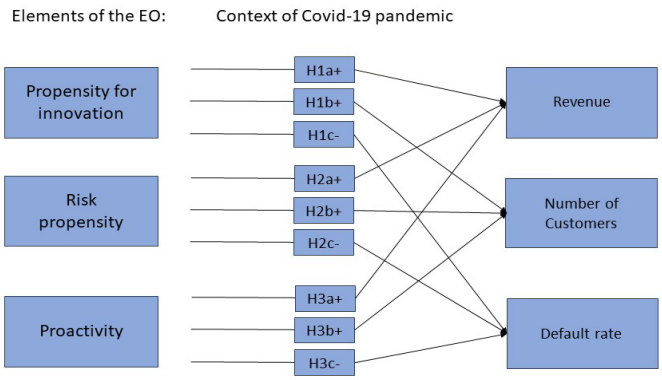
H1c	Propensity for innovation tends to decrease the default rate of MSMEs in times of crisis;
H2c	Risk propensity tends to decrease the default rate of MSMEs in times of crisis;
H3c	Proactivity tends to decrease the default rate of MSMEs in times of crisis.

Source: Elaborated by the authors.

The hypotheses are illustrated in the conceptual framework shown in Figure 1.In this figure, the elements of the EO are the independent variables, and the revenue, number of customers, and default rate are the dependent variables.

Figure 1.

Research design



Source: Elaborated by the authors (2023).

METHOD

From a quantitative research, it is believed that is adequate to quantify the variables that impact the growth of MSMEs in numbers, which will determine whether what was predicted in the theoretical framework is sustainable or not. This research method is linked to the quantification of facts, measurement, and control of its results (Knechtel, 2014). In the present study, this method will also be used to analyze the cause-effect relationship between the presence of the different elements of the EO and the growth of MSMEs in times of crisis.

Since growth is defined as a change in size during a determined time period (Dobbs & Hamilton, 2007), in this research, the dependent variables revenue, number of customers, and default rate were used to analyze whether MSMEs participating in the questionnaire grew after the crisis period. The most widely used variable to measure the growth of a business is the increase in demand and consequent increase in the number of sales, with a lower default rate (Davidsson *et al.*, 2006), followed by the analysis of the achievement of new customers (Brush *et al.*, 2009).

About the variables used, the questionnaire was created based on the Covin and Slevin (1989) scale (Table 3). According to a meta-analysis on the relationship between EO and business performance, the scale was identified as the most frequently used scale to measure EO (Rauch *et al.*, 2009): 80% of the main studies related to EO used this method (Wales *et al.*Mousa, 2011). In this sense, propensity for innovation, proactivity, and risk propensity are the independent variables of the study. The scale used has been previously applied in the Brazilian context for analyses considering the EO, such as in the studies of França, Saraiva e Hashimoto (2012), Hinckel *et al.* (2014), and Penz *et al.* (2016).

Table 3.

Miller/Covin and Slevin Scale

In general, the top managers of my firm favor...		
A strong emphasis on the marketing of tried-and-true products or services	1 2 3 4 5 6 7	A strong emphasis on R&D, technological leadership, and innovations
How many new lines of products or services has your firm marketed in the past 5 years?		
No new lines of products or services	1 2 3 4 5 6 7	Very many new lines of products or services

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Changes in product or service lines have been mostly of a minor nature	1 2 3 4 5 6 7	Changes in product or service lines have usually been quite dramatic
In dealing with its competitors, my firm ...		
Typically responds to actions which competitors initiate	1 2 3 4 5 6 7	Typically initiates actions which competitors then respond to
Is very seldom the first business to introduce new products/ services, administrative techniques, operating technologies, etc.	1 2 3 4 5 6 7	Is very often the first business to introduce new products/ services, administrative techniques, operating technologies, etc.
Typically seeks to avoid competitive clashes, preferring a 'live-and-let-live' posture	1 2 3 4 5 6 7	Typically adopts a very competitive, 'undo- the-competitors' posture
In general, the top managers of my firm have ...		
A strong proclivity for low-risk projects (with normal and certain rates of return)	1 2 3 4 5 6 7	A strong proclivity for high-risk projects (with chances of very high returns)
In general, the top managers of my firm believe that . . .		
Owing to the nature of the environment, it is best to explore it gradually via timid, incremental behavior	1 2 3 4 5 6 7	Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives
When confronted with decision-making situations involving uncertainty, my firm...		
Typically adopts a cautious, 'wait-and-see' posture in order to minimize the probability of making costly decisions	1 2 3 4 5 6 7	Typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities

Source: Covin e Slevin (1989).

In addition to the scale elaborated by Covin and Slevin (1989), the dependent variables related to the growth of the firm were defined, considering in the present work the perception of the respondents concerning the revenue, number of customers, and default rate of the MSMEs.

Data was collected through an online questionnaire using *Google Forms*, with a total of 102 representatives of MSMEs in the second semester of 2022. Firms were chosen because of the accessibility criterion and due to differences in numbers of employees. Respondents should occupy a management position with access to the data that comprised the dependent variables, i.e., revenue, number of customers, and default rate of MSMEs. A Likert scale was used to assess the degree of agreement of the firms' representatives with the statements that indicated main dimensions of EO that contributed to the growth of MSMEs during the crisis caused by the pandemic.

The profile of the firms participating is the following: firms characterized according to their number of employees as micro, small, and medium-sized firms, considering the differences between industries (micro – up to 19 employees; small – from 20 to 99 employees; medium-sized – from 100 to 499 employees) and trade and services (micro – up to 9 employees; small – from 10 to 49 employees; medium-sized – from 50 to 99 employees) (SEBRAE, 2013). The number of employees is analyzed because it is data obtained more easily from firms concerning their revenue. The percentage of MSMEs that participated is distributed as follows: 39.5% medium-sized enterprises, 31% micro-enterprises, and 29.5% small businesses.

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Firms representing different sectors were considered to remove the sectoral effect caused by the pandemic. Thus, the MSMEs that participated in the research are distributed as follows: 42% industry, 21% trade, and 37% services. These firms are located in different regions of Brazil, but mostly in the south of the country, in the State of Rio Grande do Sul.

Initially, those questionnaires answered incompletely were removed from the analysis. Next, a t-test was performed, so that the correlations between the different elements of the research could be identified. The data were interpreted using the Statistical Package for Social Sciences (SPSS), version 22.0, in which the paired t-test was used to associate two variables – the moment before and after the pandemic.

DESCRIPTION OF THE RESULTS

Before applying the data analysis technique, the sample fit was evaluated to observe its validity and reliability. In this sense, missing values were replaced by the mean responses, provided that they do not exceed between 5% and 10% of the answers (Kline, 2005). Outliers that cannot exceed two mean deviations were also considered (Maroco, 2010).

Normality was evaluated by observing the asymmetry indices (skewness) and kurtosis that must meet, respectively, modules 3 and 10 (Kline, 2005). The data must correspond to a normal distribution of residuals and, additionally, the Kolmogorov-Smirnov test was applied, as it must be used for samples greater than 50 respondents (Hair, Black, Babin, Anderson & Tatham, 2009).

In order to estimate the internal reliability of the Zaroni's scale (2015) that was adopted, Cronbach's alpha was used thus assessing the correlation of the items. For confirmatory studies such as this, a level higher than 0.7 is suggested (Cortina, 1993). Table 4 shows the Cronbach's alpha result of the research conducted in the SPSS tool.

Table 4.

Reliability test

Cronbach's alpha	N of Items
.898	9

Source: Prepared by the author following the results of the SPSS tool.

An inferential statistical analysis was performed using the t-test of *Student* for paired samples to compare the scores on the variables of EO and the variation in revenue, number of customers, and default rate of the MSMEs studied here. The significance level was established in a=0.05. Table 5 shows the values corresponding to the data analysis from the SPSS tool, following the parameters of the T-test.

Table 5.

Descriptive Statistics

	Statement 1	*Statement 2*	*Statement 3*	*Statement 4*	*Statement 5*	*Statement 6*	*Statement 7*	*Statement 8*	*Statement 9*
Valid	102	102	102	102	102	102	102	102	102
Missing	0	0	0	0	0	0	0	0	0
Mean	4.647059	5.019608	4.990196	4.415842	4.294118	4.441176	3.490196	4.313725	3.941176
Median	5	5	5	4	4	5	3	5	4
Std. Deviation	1.7803231	1.7375913	1.8176428	1.7758965	1.7353772	1.7125461	1.8773422	1.8889793	1.7867899
Variance	3.17	3.019	3.304	3.154	3.012	2.933	3.524	3.568	3.193
Skewness	-0.385	-0.648	-0.744	-0.243	-0.237	-0.334	0.328	-0.323	0.006
Std. Error of Skewness	0.238	0.238	0.238	0.239	0.238	0.238	0.238	0.238	0.238
Kurtosis	-0.703	-0.3	-0.34	-0.798	-0.791	-0.627	-0.933	-0.994	-0.928
Std. Error of Kurtosis	0.472	0.472	0.472	0.474	0.472	0.472	0.472	0.472	0.472

Source: Prepared by the author following the results of the SPSS tool.

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Table 6 shows the result of independent variables (propensity for innovation, risk propensity, proactivity) in relation to dependent variables (revenue growth, number of customers, and reduction of default rate) in the SPSS tool, the latter being represented by the number 1 = decrease or similarity during the pandemic period and 2 = increase during the pandemic period.

Table 6.

Result of combining independent and dependent variables

INOVA	What is the revenue of the firm where you work today when compared to the revenue before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	55	4.624	1.50316	0.20269
	2	47	5.192	1.45088	0.21163
RISK	What is the revenue of the firm where you work today when compared to the revenue before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	55	4.033	1.58029	0.21309
	2	47	4.794	1.39453	0.20341
PROACTIV	What is the revenue of the firm where you work today when compared to the revenue before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	55	3.485	1.64532	0.22185
	2	47	4.418	1.59629	0.23284
INOVA	What is the number of customers of the firm where you work today when compared to the number of customers before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	51	4.856	1.3254	0.18559
	2	51	4.915	1.66779	0.23354
RISK	What is the number of customers of the firm where you work today when compared to the number of customers before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	51	4.245	1.46415	0.20502
	2	51	4.523	1.61142	0.22564
PROACTIV	What is the number of customers of the firm where you work today when compared to the number of customers before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	51	3.745	1.62698	0.22782
	2	51	4.085	1.73313	0.24269
INOVA	What is the level of default rate of the firm where you work today when compared to the default rate before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	81	4.782	1.60135	0.17793
	2	21	5.286	0.93859	0.20482
RISK	What is the level of default rate of the firm where you work today when compared to the default rate before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	81	4.288	1.55255	0.17251
	2	21	4.754	1.45833	0.31823

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PROACTIV	What is the level of default rate of the firm where you work today when compared to the default rate before the pandemic?	N	Mean	Std. Deviation	Std. Error Mean
	1	81	3.835	1.73055	0.19228
	2	21	4.222	1.47322	0.32148

Source: Prepared by the author following the results of the SPSS tool.

This table shows the correlation between independent variables (propensity for innovation, risk propensity, proactivity) in relation to the dependent variables (revenue growth, number of customers, and reduction of default rate) present in the MSMEs participating in the total respondent population of the questionnaire. Next, the results of the t-test performed in relation to the same variables are presented in Table 7.

Table 7.

Independent Sample Test for increased revenue

F		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
INOVA	Equal variances assumed	0.008	0.93	-1.93	100	0.056	-0.56725	0.29386
	Equal variances not assumed			-1.936	98.496	0.056	-0.56725	0.29304
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
RISK	Equal variances assumed	1.881	0.173	-2.558	100	0.012	-0.76099	0.29751
	Equal variances not assumed			-2.583	99.887	0.011	-0.76099	0.29459
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	SIG.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
PROACTIV	Equal variances assumed	0.063	0.802	-2.896	100	0.005	-0.93359	0.32239
	Equal variances not assumed			-2.903	98.37	0.005	-0.93359	0.32161

Source: Prepared by the author following the results of the SPSS tool.

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To increase the revenue of MSMEs during the pandemic, only the proactivity construct of EO was significant. During this period, MSMEs had to seek alternatives for their economic and financial sustainability, with the need to be proactive in the search for new revenue opportunities for their businesses (Table 8).

Table 8.

Independent Sample Test to increase the number of customers

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
INOVA	Equal variances assumed	4.168	0.044	-0.197	100	0.844	-0.05882	0.2983
	Equal variances not assumed			-0.197	95.148	0.844	-0.05882	0.2983
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
RISK	Equal variances assumed	0.389	0.534	-0.911	100	0.364	-0.27778	0.30488
	Equal variances not assumed			-0.911	99.095	0.364	-0.27778	0.30488
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
PROACTIV	Equal variances assumed	0.351	0.555	-1.021	100	0.31	-0.33987	0.33287
	Equal variances not assumed			-1.021	99.603	0.31	-0.33987	0.33287

Source: Prepared by the author following the results of the SPSS tool.

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Table 8 shows that there was no significant correlation between the increase in the number of customers and the presence of innovative, risk-open, and proactive characteristics. It is assumed that the acquisition of new customers was not a priority in relation to the growth variables of MSMEs during that period (Table 9).

Table 9.

Independent Sample Test for default rate reduction

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
INOVA	Equal variances assumed	9.912	0.002	-1.378	100	0.171	-0.50382	0.36549
	Equal variances not assumed			-1.857	53.903	0.069	-0.50382	0.27131
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
RISK	Equal variances assumed	0.092	0.762	-1.24	100	0.218	-0.4659	0.37568
	Equal variances not assumed			-1.287	32.773	0.207	-0.4659	0.36198
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
PROACTIV	Equal variances assumed	0.576	0.45	-0.939	100	0.35	-0.38683	0.41194
	Equal variances not assumed			-1.033	35.726	0.309	-0.38683	0.3746

Source: Prepared by the author following the results of the SPSS tool.

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This table presents the correlation of significance between reduction of the default rate and the presence of innovative, open to risk, and proactive characteristics. Again, there was no significance among the variables, possibly because the pandemic period was characterized by an increase in the number of defaults of most firms, due to the financial crisis resulting from the actions to contain the contagion of the virus.

DISCUSSION OF THE RESULTS

The results of this research did not validate H1a, H2a, H1b, H2b, H3b, H1c, H2c, and H3c. Only H3a was supported. This result is corroborated by the theoretical foundation. The authors state that firms with proactive characteristics tend to grow and have greater positive results, because proactivity makes managers able to predict new market opportunities and resources to take advantage of them (Lumpkin & Dess, 1996). On the other hand, it is aligned with the findings of Luu & Ngo (2019) because entrepreneurial orientation (EO) has a more complex effect on performance (i.e., non-linear instead of linear) than as previously considered. However, our study differs from that of Luu & Ngo (2019) who identified that innovativeness and proactivity have inverted U-shaped relationships with firm performance, while the effect of risk-taking on firm performance is also non-linear but in the form of increasing returns.

The validation of the proactivity dimension suggests that, during the crisis period, smaller firms were proactive in identifying new sales channels that generated scale for them. On the other hand, there was no significance between proactivity and growth of these firms in relation to the other variables of the research. This can be explained because these firms did not diversify customers, focusing only on those who were not paying their debts, since the situation weakened many economies and increased the default rate of buyers who were not familiar with the business. In addition, studies suggest this is a vital characteristic for the growth of organizations (Yang & Meyer, 2019), positively impacting business results and the firms' growth (Lumpkin & Dess, 1996).

The propensity for innovation was not validated with this research, since there was no significance in the correlation between firms that increased revenue, number of customers, and reduced default rate during the crisis period. Studies show that the propensity for innovation causes business leaders to search for new forms of action, increasing their possibilities of scalability and revenue (Dai *et al.*, 2014). Moreover, entrepreneurs who aim at innovation increase the chance of success by being more confident in their ideas (Martins & Perez, 2020).

These statements were not supported by the research, with the possibility of inadequate hypotheses given the context of MSMEs. The Miller (1983) and Covin and Slevin (1989) scale presents very pragmatic statements, such as strong emphasis on research and development, launch of several new lines of products or services, and significant changes in products or services of the firm, which are usually related to the concept of radical innovation, characterized by the rupture of existing processes/products/services and creation of new ones. However, incremental innovation is more accessible and present in micro, small and medium-sized companies. It is characterized by improvements in existing processes, products or services, without necessarily changing the company's business model or the need for high investment (Neto, 2019). Therefore, it is understood that the scale used in the research covers aspects closer to radical innovation, which consequently is more distant from the reality of MSMEs. Innovation is understood as an important aspect for companies, although it is little present in MSMEs due to lack of resources and knowledge of the need for prioritization for the long-term survival in the market. In this scenario, the justification of high investments and risks inherent to research and development is complex. These companies often lack the capacity to analyze, evaluate and select among the different options related to technological innovations (Rattner, 2013). Therefore, our study is not aligned with the one by Neto & Forte (2023) who identified that EO allow firms to absorb external knowledge, as well as decide what type of incremental or radical innovation they should adopt.

The third aspect of the EO used in the research is the propensity for risk, which was

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also not relevant when analyzing its correlation with the growth of MSMEs in a period of crisis. It is important to note that the lowest average, considering all responses, was found in a statement related to risk propensity, which shows that MSMEs do not have a high propensity to take risks and invest in risky projects.

The fact that family businesses have a low-risk propensity index should be considered when analyzing the results. As seen, in the early stages risk propensity may pose a threat to the survival of MSMEs (Naldi *et al.*, 2007; Zahra, 2005). The present research corroborates this statement, since the rates of risk propensity presented low values, with no significance in the correlations between propensity for risk and growth of MSMEs.

However, it is important to emphasize that entrepreneurs who aim to grow their businesses tend to operate in unstable and risky environments, because companies that only react conservatively to market changes reduce their innovations and, consequently, delay potential innovations that could provide competitive differential and growth in relation to the market (Hughes & Morgan, 2007).

In general, MSMEs are not prone to risk, as they represent great uncertainty regarding the return on investment. In delicate periods, such as the one analyzed in this research that represented a financial crisis for many firms, it is perceived that MSMEs are prone to not risking, since these periods usually represent a turbulent moment for their market sustainability. In this sense, our study differs from Penco *et al*. (2022) who identified EO as a reactive characteristic during external crises such as COVID-19.

FINAL CONSIDERATIONS

The role played by the characteristics of EO in business growth has been relevant over the decades and has been considerably analyzed by different authors in recent years. However, some of its elements are still little accessible to the reality of MSMEs.

The objective of the research was to identify the main dimensions of and broaden the understanding of the influence of EO on the growth of MSMEs during the Covid-19 pandemic, which represented a time of financial instability for many firms. For this main objective to be achieved, some secondary objectives were established as the guide of the study.

It was aimed at understanding how the Covid-19 pandemic affected MSMEs, given the importance of this historic moment for the economy. The theoretical study on the topic reinforced the instability in the firms after that event, with most MSMEs having to search for new sources of revenue. Thus, our study reinforces the findings from Li *et al.* (2021) and Lukito-Bud *et al.*i (2022) detailing the EO dimensions that are relevant to the growth and sustainability of MSMEs.

These statements made it possible to clarify how the EO cooperates for the growth of MSMEs. After the analysis of the literature, this objective proved to be of great relevance to the study, as it indicates the importance that these characteristics have in the growth of firms and how they can act as a growth driver through periods of crisis and instability.

The research also made it possible to identify how the EO drives MSMEs in a crisis context. It was concluded that the EO is strongly present in the figure of a leader and is related to the leader's personality in MSMEs, being an important role to boost the business in a period of crisis. The results indicated that proactivity was shown to be significant for the increase in the revenue of the respondent MSMEs. However, the significance of characteristics prone to innovation and risks in MSMEs for their growth in a period of crisis is not confirmed, attesting to the frequent absence of these characteristics in firms of those sizes.

The context of MSMEs still lacks knowledge regarding the importance of these aspects in the figure of a firm leader and its culture. This factor may have corroborated the low significance in the relationship between business growth and propensity for innovation/risk since there was a low presence of these aspects in the responses. In addition, research shows the low tendency of MSMEs to take risks or innovate more aggressively, especially in the early stages of the business, because these movements may pose a

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risk to the firms' survival in the market.

As a limitation of the study, the respondent sample of the research could be larger. However, due to the context of the pandemic, there was difficulty in collecting the research. Moreover, the use of the reduced construct of the EO can be perceived as a limitation, and the complete model can be used with the following variables: propensity for innovation, risk propensity, proactivity, autonomy, and competitive aggressiveness (Lumpkin & Dess, 1996).

This limitation regarding the EO construct is related to its dimensionality, the interdependence between the subdimensions, and the theoretical relationship between the construct and its antecedent and consequent constructs (George, 2011; George & Marino, 2011; Lumpkin & Dess, 1996). Central to this debate is the relationship between the higher-order construct and its subdimensions, which is critical for second-order constructs such as EO and is directly related to its theoretical definition (George, 2011). As there is no consensus in the literature on the definition of the construct, other applications can use different definitions, for example, as a unidimensional construct, based on Covin and Slevin (1989), or as a formative second-order construct, as proposed by Anderson *et al.* (2015).

Finally, it is suggested in the future the application of the results to firms of different sizes and ages to analyze if there is a difference in the relationship with the dependent variables of this study. In addition, validation with other dependent variables, such as the level of internationalization of firms, is suggested to evaluate their influence on the results obtained. Lastly, a longitudinal or retrospective study would be relevant to analyze engagement in recurrent behaviors, considering the contributions of Anderson *et al.* (2015) and Covin and Miller (2014).

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