



The impact of emotional exhaustion on the performance of SMEs

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ABSTRACT

This study examines the impact of emotional exhaustion on business performance, with a particular focus on small and medium-sized enterprises (SMEs). To achieve this objective, data were collected from business owners in the developing economy of Ecuador. The research specifically explores how the effects of emotional exhaustion vary according to the gender of the business owners and investigates the role of social support in family businesses as a psychological protective factor that may help mitigate the negative consequences of emotional exhaustion. The methodology is based on quantile regression, which facilitates the analysis of the effects of emotional exhaustion across various quantiles of the conditional distribution of business performance. The results reveal that emotional exhaustion has a negative and statistically significant effect on business performance, with businesses led by men showing more pronounced effects. However, family businesses experience a mitigating effect because their organizational structure provides social support that helps counterbalance the detrimental impact of emotional exhaustion. The results underscore the need to consider both the gender of entrepreneurs and the structural characteristics of businesses when designing strategies to improve business performance and resilience. The study provides valuable insights into academic research and business practice, with practical recommendations grounded in the relevant academic literature.

Introduction

According to the approaches of Maestre-Matos et al. (2024) and Li et al. (2023), the relevance of the business sector lies primarily in its role in job creation and economic stimulation. Consequently, studying the business environment and the key factors influencing its performance is important. Within this framework, academic literature indicates that, in addition to being influenced by social and economic characteristics, business performance is also shaped by the psychological well-being of its owners (Lehr, 2022). The findings of Maslach and Leiter (2022) explain that there is a relationship between emotional exhaustion and business performance. The authors define emotional exhaustion as a cognitive response to a certain level of chronic occupational stress that extends over the long term, generating negative repercussions on the individual productivity of economic agents, which leads to declines in business performance (Figueiredo et al., 2024).

Despite these general findings, little research has been conducted in the context of emerging economies like Ecuador, where additional challenges such as structural vulnerabilities, institutional limitations, and social stressors may exacerbate the effects of emotional exhaustion

on business performance. Given these considerations, it is crucial to address the impact of emotional exhaustion on business performance, particularly in emerging economies such as Ecuador.

Ecuador has experienced stable economic growth in recent decades, reflected by an average annual GDP growth rate of 3.5 % between 2000 and 2023 (World Bank Group, 2025). Ecuador also enjoys a controlled macroeconomic environment with relatively low inflation (averaging 3.4 % from 2002 to 2023). However, it still faces substantial challenges typical of developing economies. For example, the economy remains highly reliant on primary sectors such as oil and agriculture, which together accounted for 22.5 % of GDP and 90 % of export revenues in 2022 (Central Bank of Ecuador, 2023). Additionally, the country is vulnerable to external factors, such as fluctuations in commodity prices, which have historically led to fiscal imbalances and dampened growth prospects. Adding to these structural challenges is the growing influence of organized crime, with homicide rates nearly doubling between 2020 and 2023 (United Nations Office of Drugs, 2023). Moreover, there has also been heightened political instability in recent years, as evidenced by the occurrence of four presidential elections within just seven years. These social and political instabilities create an environment where

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psychological stressors are amplified, which may have a direct effect on the well-being of business owners.

Furthermore, recent studies show that emerging economies are particularly vulnerable to the effects of psychological stress due to their limited institutional frameworks and restricted access to mental health resources, underscoring the importance of further investigating this phenomenon (Knapp & Wong, 2020). In this regard, Ecuador offers a unique case for analyzing the interplay between emotional exhaustion and business performance, given its combination of macroeconomic growth and persisting structural challenges.

It is crucial to understand how these additional challenges in emerging economies, like Ecuador's, can impact the psychological well-being of individuals and, consequently, business performance. Lanchimba et al. (2023) explain that the COVID-19 pandemic has exacerbated stress levels among Ecuadorians, increasing the likelihood of experiencing emotional exhaustion due to the unique challenges of social isolation.

While emotional exhaustion has been extensively examined in corporate environments, its specific impact on family-owned SMEs remains insufficiently explored (De Clercq & Kaciak, 2022). Family businesses are subject to distinct stressors, including the intertwining of professional and personal roles, conflicts related to succession planning, and a strong emotional attachment to the enterprise, all of which can exacerbate emotional exhaustion among both owners and employees.

This research aims to contribute to existing literature by examining how gender, family support, and emotional exhaustion interact to influence business performance, with insights that can be applied across diverse contexts, particularly in emerging economies. Therefore, the findings of this research may have important implications for research, business practice, and public policy formulation because the results provide an understanding of the relationships between emotional exhaustion and business performance in Ecuador.

The paper is organized as follows. The next section presents the background literature and the hypotheses. The following section describes the data and provides information on data collection, the study variables, and summary statistics. The estimations are presented, respectively, in the sections that follow. The last section concludes with final remarks and implications for entrepreneurship and academic studies.

Theoretical background

This section presents a review of the literature related to the business sector, with a particular emphasis on analyzing business performance and the potential impact that emotional exhaustion among business owners and employees could have on this performance indicator. However, to better understand the business context, it is essential to begin with a general characterization and description of the business sector. This characterization serves as a reference framework for understanding the dynamics and inherent characteristics of this sector.

The principles of agency theory, introduced by Jensen and Meckling (1976) and reinforced by Puerta and Restrepo (2023), suggest that a company can be conceived as an organization where its collaborators take actions to satisfy their own interests. However, they are aware that their future well-being depends on the prosperity and survival of their organization. In this framework, the agency relationship arises when an economic agent, called the principal, delegates specific activities to another individual, called the agent, who is responsible for carrying out these tasks. This relationship is based on a contract that specifies that the agent must protect the interests of the principal in exchange for compensation that is defined by the remuneration and periodicity established in the contract.

Empirical evidence has shown that phenomena such as globalization, consumerism, technological advances, and the rise of industrialization have forced entrepreneurs to be more competitive to remain in the market. According to Villavicencio et al. (2014) and Veltmeyer (2022),

it is common for business owners to make substantial changes to contractual labor relations and policies in an effort to keep their companies in line with new market trends, mitigating the risk of being displaced by competitors. Leiter and Maslach (2024) found that these phenomena have led to drastic changes in business dynamics, some of which have negatively impacted employees and business owners psychologically, threatening elements such as commitment and identification with the company due to the high levels of psychological stress that often accompany these changes. As a result, it is common for economic agents to exhibit frustration and both physical and cognitive exhaustion, negatively affecting their well-being and leading to declines in overall business performance (Maslach & Leiter, 2022).

In the context of SMEs, the roles of principal and agent often overlap, because managers are frequently also the business owners. This dual role generates distinct dynamics in which decisions are made not solely to maximize business profitability, but also to safeguard the owner's personal well-being. To better understand this context, social capital theory is helpful (Putnam, 1993; Nahapiet & Ghoshal, 1998). Social capital theory emphasizes the value of networks, trust, and social norms in facilitating coordination and cooperation among individuals.

Social capital can play a pivotal role in alleviating the adverse effects of emotional exhaustion on business performance. For example, business owners with strong networks and support systems are more likely to share challenges, exchange advice, and receive emotional support, which can alleviate stress and foster resilience (Burt, 2000). Moreover, high levels of trust within the organization and with external stakeholders can reduce friction in decision-making processes and promote more sustainable business practices.

Given that the social capital embedded in relationships among employees, business owners, and external actors contributes to the creation of a supportive environment, this framework provides a valuable lens through which to analyze the interplay between emotional exhaustion and business performance. By leveraging these networks and fostering cooperation, business owners can reduce the impact of chronic stressors, thereby enhancing both individual well-being and organizational outcomes (Adler & Kwon, 2002).

In recent years, there has been a growing scholarly interest in examining the impact of emotional exhaustion on SMEs in Latin America, a region where structural economic challenges and heightened uncertainty exacerbate the psychological burden on business owners and employees. Sánchez et al. (2023) report that entrepreneurs in this context are subjected to substantial work demands while facing constrained access to financial and institutional support, thereby intensifying stress and burnout. Fernández-Bedoya et al. (2023) identify a marked deterioration in the mental health of entrepreneurs—particularly in terms of heightened anxiety and emotional exhaustion—exacerbated by external shocks such as the COVID-19 pandemic, with notable implications for business continuity and performance. These findings highlight the critical need to investigate emotional exhaustion within the Latin American SME landscape, particularly in countries such as Ecuador, where economic volatility and the prevalence of informal labor structures introduce additional stressors for business owners.

Business performance

The purpose of businesses has long been a subject of debate in economic literature. Several influential theories in this field assert that the primary objective of businesses is to generate profits for their shareholders. However, in contrast to shareholder theory, which highlights profit maximization for owners (Friedman, 1970), more contemporary perspectives, such as stakeholder theory (Freeman, 1984), argue that businesses should balance the interests of all stakeholders, including employees, customers, and the wider community. This viewpoint is especially pertinent in today's business environment, where social responsibility, sustainability, and employee well-being have become

increasingly important considerations. As a result, business performance is now often assessed through a more holistic lens, which considers not only financial outcomes but also the impact on various stakeholder groups.

Taneot et al. (2022) explain that business performance serves as a measure of a company's ability to achieve its objectives. Given that profits are a fundamental goal for most companies (Maestre-Matos et al., 2024), performance is typically evaluated based on the extent to which these financial targets are met. Authors such as Ríos-Manríquez et al. (2019) use sales volume as a proxy for measuring business performance because it serves as an indicator of a company's ability to generate revenue and contribute to its financial sustainability.

Industrial economics has examined various factors that influence business performance. One key aspect emerging from this literature is the relationship between individual productivity and overall business performance. Shan et al. (2023), Jaimes et al. (2018), and Figueiredo et al. (2024) highlight the positive correlation between individual productivity and business outcomes, emphasizing that reductions in individual productivity typically lead to a decline in business performance.

Ortega et al. (2021) note that individual productivity is influenced not only by economic and social factors, but also by psychological conditions. Emotional exhaustion, defined as a state of chronic fatigue and stress resulting from prolonged exposure to work demand, has been shown to strongly impact individual productivity. Literature supports the view that emotional exhaustion undermines an individual's psychological stability, thereby reducing productivity and, consequently, negatively affecting business performance (Figueiredo et al., 2024). This underscores the importance of considering psychological well-being as a crucial determinant of business performance.

Emotional exhaustion and business performance

According to Ligthart (2023), the theoretical foundations for studying the impact of emotional exhaustion on business performance were established by Maslach's model, introduced in 1982. Maslach introduced the concept of burnout syndrome, defining it as a state in which an economic agent experiences emotional exhaustion in the workplace. It leads to major physical and mental health impacts, as well as a reduction in quality of life. In recent years, this phenomenon has been extensively studied from a psychological perspective to the point that the World Health Organization (WHO) declared burnout a labor risk factor in 2000 due to its negative implications for productivity and overall well-being. These implications arise because of emotional exhaustion, one of the key components of burnout (Maslach & Leiter, 2022).

According to Hernández et al. (2024), emotional exhaustion is characterized by a high level of physical or psychological fatigue, arising from prolonged exposure to chronic work stress. Given this definition, it is possible to conclude that emotional exhaustion can affect both workers and business owners, because it is not limited to a hierarchical level but instead reflects cognitive fatigue that can affect any member of an organization due to their job responsibilities (Chen et al., 2024). Lehr (2022) notes that emotional exhaustion is the most critical dimension of burnout, and academic literature has positioned it as the central factor in understanding this phenomenon.

In this context, Maslach and Leiter (2022) argue that emotional exhaustion leads to psychological imbalances that reduce the individual productivity of economic agents, which negatively impacts business performance (Jaimes et al., 2018). In Latin America, emotional exhaustion among SMEs owners and employees has been closely associated with economic instability and the absence of comprehensive social protection mechanisms (Sánchez et al., 2023). Recent empirical evidence suggests that SMEs in the region exhibit higher levels of burnout than their counterparts in developed economies, primarily due to precarious working conditions and the extensive working hours required to sustain business operations (Fernández-Bedoya et al., 2023).

These structural constraints exacerbate psychological distress and restrict access to mental health resources, further intensifying emotional exhaustion and its detrimental effects on business performance.

H1. *Emotional exhaustion, as a psychological risk factor, negatively affects business performance.*

Emotional exhaustion, gender, and business performance

Based on the theoretical principles of Layne and McCormick (2014), resilience is defined as the ability of individuals to cope with adversity and stress. Along these lines, empirical findings by Lee and Kim (2022) indicate that the resilience of economic agents is correlated with gender. Specifically, their findings suggest that women tend to seek out support networks more frequently than men, which helps them better manage adversity and emotional stress. Seeking support more frequently can be considered a key coping strategy that allows women to handle stress more effectively (Maslach & Leiter, 2022). Men tend to seek social support less often during stressful situations because current gender roles place social pressure on them to adhere to ideals of self-sufficiency and strength in the face of challenges (Heilman et al., 2017).

Merlyn et al. (2024) found that this trend is closely related to the rigid and traditional masculinity model that is commonly observed in many Latin American countries, including Ecuador. This rigid masculinity model establishes stereotypes that associate emotional expression primarily with women, leading men to present themselves to society as independent, dominant, and unemotional individuals. These findings align with research published by Heilman et al. (2017), which suggests that the cultural construction of a *real man* is based on seven fundamental pillars: (1) self-sufficiency, (2) physical strength, (3) physical attractiveness, (4) adoption of rigid masculine roles, (5) heterosexuality and homophobia, (6) hypersexuality, and (7) aggression and control. Regarding self-sufficiency, the authors argue that this concept extends to men's physical and emotional health, because men living within the traditional masculinity model tend to conceal their emotions to present themselves as self-sufficient individuals. This makes men less likely to seek support networks during stressful situations.

Maslach and Leiter (2022) show that social support is a crucial factor in managing emotional exhaustion. Individuals who seek emotional support networks tend to mitigate the negative impacts of work-related stress. However, due to the rigidity of traditional masculinity, men generally do not turn to social support networks during adversity (Heilman et al., 2017), making them more vulnerable to the effects of emotional exhaustion than women.

In this context, it can be concluded that men, due to their tendency not to seek support networks, will experience a greater negative impact on their individual productivity, which will, in turn, result in a greater impact on their business performance due to the relationship between individual productivity and business performance described by Figueiredo et al. (2024).

H2. *Being a man and experiencing emotional exhaustion has a greater impact on business performance.*

Emotional exhaustion, social support, and business performance

Rhima et al. (2019) suggest that social support for economic agents constitutes a psychological protective factor that mitigates the harmful effects of emotional exhaustion. In this context, Acuña et al. (2022) define social support as the level of assistance an individual receives from their social network in times of adversity.

The theoretical models of job stress presented by Hobfoll et al. (1990) and reinforced by Rojas et al. (2021) show that social support is an effective construct for mitigating stress generated by work tasks. Consequently, it is necessary to analyze the differences in organizational climate depending on a company's structure (Rafique et al., 2022). Carhuayal (2020) shows that family businesses generally foster open

communication among employees and tend to value both individual and collective achievements, making family businesses a source of social support that can mitigate the consequences of emotional exhaustion.

In contrast, non-family businesses often lack the social support necessary to address the harmful effects of emotional exhaustion. Empirical evidence has shown that the absence of social support networks increases the likelihood of employees experiencing frustration and stress, leading to greater exhaustion and a greater negative impact on individual productivity, which results in a decline in business performance (Ríos-Manríquez et al., 2019). In this context, family businesses exhibit higher levels of performance due to their ability to foster social support, while non-family businesses, which may lack social support, tend to have lower levels of business performance (Acuña et al., 2022).

H3. *Non-family businesses experience a more significant negative effect on business performance due to emotional exhaustion because they lack social support networks that act as psychological protection for individuals.*

Methodology

Data

The information source used for this research is the *Annual Survey on the Entrepreneurial Environment*. This survey was developed by a team of researchers from the National Polytechnic School, along with researchers from the University of North Carolina at Greensboro, and was distributed among Ecuadorian entrepreneurs during the period 2020 to 2023. The relevance of this survey lies not only in its ability to provide an insight into the social and economic conditions of Ecuadorian entrepreneurs, but also in the extensive range of psychological aspects it captures, which are also crucial in analyzing the business sector. The cross-sectional survey contains 486 anonymous responses, as of November 2023. There are no issues with missing data because the digital form was designed to prevent submission if any question was left unanswered. The sample consists of 235 women and 251 men, with an average age of 39.29 years. Additionally, 254 companies (52.26 %) of the sample self-identified as having a family business structure. Regarding the level of education, most entrepreneurs have secondary education (42.18 %), while the least represented educational level is primary education (3.29 %).

Description of variables

Dependent variable

Business performance. According to the frameworks of Taneo et al. (2022), business performance is a measure used to assess the achievement of organizational objectives. Maestre-Matos et al. (2024) argue that the primary objective of business organizations is to create value for their shareholders. The most commonly used proxy variable to measure business performance is the sales volume reported by companies over a given period.

Wooldridge (2012) suggests that sales data can be prone to measurement errors, because individuals are generally reluctant to disclose income-related information. Rosa et al. (1996) and Alejandro (2023) have used intervals to capture agents' income reduces measurement errors by mitigating the reluctance to provide accurate information without asking for exact figures. Entrepreneurs select their sales volume within six ranges, from 0 USD to over 10,000 USD. Based on this information, the dependent variable is constructed as the average of the two limits of the interval in which the reported sales volume falls for each entrepreneur.

Independent variables

Emotional exhaustion. Based on the theoretical formulations of Maslach and Leiter (2022), emotional exhaustion's relevance as a

determinant of business performance lies in its negative impact on individual productivity, which leads to a decline in business performance.

According to Hernández (2024), emotional exhaustion is characterized by high levels of physical and cognitive fatigue, resulting from long-term exposure to chronic work-related stress. The survey includes four questions about emotional well-being. These questions assess emotional exhaustion levels on a Likert scale from 1 to 7, with 7 representing the highest level of emotional exhaustion and 1 the lowest level of emotional exhaustion. The variable was constructed by calculating the mean. These four questions evaluate the degree of emotional exhaustion and stress experienced by the participating entrepreneurs. The questions encompass the perception of each individual's emotional exhaustion, the feeling of being unable to continue with work-related tasks, and the stress caused by decision-making within the organization.

The consistency of this construct was evaluated using Cronbach's alpha, which reached a value of 0.918, indicating high internal consistency. Additionally, the convergent validity of the construct was assessed using the average variance extracted (AVE), with emotional exhaustion achieving an AVE of 0.74. Since an AVE above 0.50 is considered high, it can be concluded that the emotional exhaustion construct has good convergent validity.

Gender. The gender of the entrepreneurs is an essential variable in studying business performance determinants (Mor et al., 2020). Gender inclusion is justified by the differences in how men and women cope with emotional exhaustion. In this context, Heilman et al. (2017) assert that men tend to avoid expressing their emotions, exacerbating the negative impacts of emotional exhaustion, which leads to decreased productivity. According to Figueiredo et al. (2024), this reduction in productivity strongly affects business performance. Thus, gender is a binary variable where 1 represents male entrepreneurs and 0 represents female entrepreneurs. Men are set as the reference category for analyzing their greater vulnerability to emotional exhaustion (Heilman et al., 2017).

Family business. According to Carhuayal (2020), family businesses are characterized by relationships based on trust and mutual commitment, fostering an environment conducive to social support during adversity. Non-family businesses generally lack the necessary social support networks to mitigate the harmful effects of emotional exhaustion. Maslach and Leiter (2022) note that social support is a psychological protective factor against the impacts of emotional exhaustion, which explains why family businesses manage work-related stress better through the social support found in their organizational structures. The family business variable is a binary variable where 1 indicates the company has a family structure, and 0 indicates no family business structure. This approach is employed to examine differences in the impact of emotional exhaustion based on organizational structure.

Control variables

Marital status. According to Mor et al. (2020), marital status influences business performance because married individuals tend to change their behavior due to new family responsibilities. Married entrepreneurs are expected to report higher business performance than their counterparts. Marital status is a binary variable where 1 represents married entrepreneurs and 0 represents unmarried entrepreneurs.

Business tenure. Mor et al. (2020) suggest that business tenure is a determinant of business performance, because older businesses tend to be better positioned in the market, leading to improved performance. Business tenure is included as a numerical variable that records the number of years since the company was established.

Age. Mor et al. (2020) argue that older entrepreneurs are associated with better business skills due to increased experience. Therefore, a positive relationship is expected between age and business performance. The entrepreneur's age is a numerical variable recording the owner's age.

Economic activity. Cruz et al. (2021) argue that the economic activity of businesses is a key determinant of business performance. The *Annual*

Survey on the Entrepreneurial Environment identifies three types of economic activities: services, commerce, and manufacturing. This study categorizes businesses in the services sector with a value of 1, while the non-service sector has a value of 0.

Education. According to Abraham and Mallatt (2022), there is a positive relationship between entrepreneurs' educational level and business performance. Entrepreneurs with higher education levels typically acquire new skills and knowledge applicable to business management and operations. The education variable is categorical, with values of 1, 2, 3, and 4, corresponding to primary, secondary, tertiary, and postgraduate education.

Life satisfaction. Leiter and Maslach (2024) define life satisfaction as a multidimensional concept that measures subjective well-being globally. Entrepreneurs who are satisfied with their lives tend to maintain positive attitudes, enabling them to handle emotional exhaustion better. As Maslach and Leiter (2022) point out, entrepreneurs who are satisfied with their lives are generally more productive, and higher productivity leads to improved business performance. Thus, there is a positive relationship between perceived life satisfaction and business performance.

The *Annual Survey on the Entrepreneurial Environment* includes five questions capturing the perceived life satisfaction of entrepreneurs, rated on a Likert scale from 1 to 7, with 7 representing the highest satisfaction level and 1 the lowest level of satisfaction. The construct was created by calculating the mean of the responses to these questions. The internal consistency of this construct was evaluated using Cronbach's alpha, with a value of 0.914, suggesting high internal consistency. The AVE for this construct was 0.692, indicating good convergent validity.

Resilience. Layne and McCormick (2014) state that resilience is the factor that enables economic agents to effectively cope with adversity. Leiter and Maslach (2024) argue that resilience has a partial effect on work productivity, with more resilient entrepreneurs being more productive. Therefore, resilience is expected to have an inverse effect on emotional exhaustion, similar to life satisfaction, with a positive impact on business performance. The *Annual Survey on the Entrepreneurial Environment* includes six key questions on coping strategies during adversity, which form the basis for the resilience variable. Respondents answered on a Likert scale from 1 to 7, with 7 indicating the highest resilience level, and 1 the lowest level of resilience. Cronbach's alpha for this construct was 0.897, indicating high internal consistency. The AVE for resilience was 0.593, suggesting good convergent validity.

Year. Because observations in the *Annual Survey on the Entrepreneurial Environment* were collected from 2020 to 2023, the year variable is included to control for temporal effects (Wooldridge, 2012). This variable records the year in which the observation was collected.

Descriptive statistics

This section presents a descriptive statistical analysis of the variables used in the econometric model estimation. The variables can be classified into two types: categorical variables and numerical variables. Summary tables displaying statistical information for each variable type are provided below.

Table 1
Descriptive statistics for numerical variables.

Variable	Mean	Standard deviation	Correlation				
			Emotional exhaustion	Seniority	Age	Life satisfaction	Resilience
Emotional exhaustion	2,73	1,58	1				
Seniority	10,41	7,99	−0,04	1			
Age	39,29	12,46	−0,18***	0,41***	1		
Life satisfaction	5,64	1,3	−0,48***	0,13***	0,3***	1	
Resilience	5	0,93	−0,51***	0,07*	0,25***	0,69***	1
Average sales	3294,86	3694,92	−0,33***	0,3***	0,41***	0,48***	0,39***

*** $p < 0,01$; ** $p < 0,05$;

* $p < 0,1$.

Table 1 provides an overview of the descriptive statistics for the numerical variables included in this study. One key observation is that emotional exhaustion is negatively correlated with both life satisfaction and resilience, which supports the conclusion that these factors had effects on business performance, opposite to those of emotional exhaustion. According to the findings of Maslach and Leiter (2022), individuals characterized by resilience and higher levels of life satisfaction typically report increases in individual productivity, contrary to those experiencing emotional exhaustion.

The average seniority of the firms was 10.41 years, and the average sales reported are 3264.86 USD, highlighting the study's focus on SMEs in Ecuador. Table 1 shows that life satisfaction and resilience are highly correlated, with a correlation coefficient of 0.69. These variables were included in separate models to avoid multicollinearity issues and to allow for the analysis of the individual effect of each variable, providing a more detailed understanding of their partial effects on business performance.

Table 2 provides a descriptive analysis that offers an initial look at the categorical variables in the model. It can be concluded that the sample is balanced in terms of gender, because the proportions of men and women are similar. Additionally, the categories of family business and economic activity are also balanced. In contrast, married entrepreneurs make up most of the sample, accounting for 70.58 %. In terms of education level, entrepreneurs with a secondary education represent the largest portion of the sample at 42.18 %.

Cramer's V correlation analysis indicates that there are no significant associations among the categorical variables. The most notable association is between family business status and education level, with a Cramer's V correlation of 0.16, although this relationship is still weak.

Estimation method

Since the data source consists of cross-sectional data grouped by year, the methodology that best fits the available data is multiple linear regression, controlling for the year in which the observation was collected. Multiple linear regression captures the variations explained by temporal effects (Wooldridge, 2012).

After estimating the multiple linear regression model using the ordinary least squares (OLS) method, heteroscedasticity and non-normality of residuals were detected. A Breusch-Pagan test was conducted, yielding a p value of 0.0005, providing sufficient statistical evidence to reject the null hypothesis of homoscedasticity in favor of the alternative hypothesis. Furthermore, a normality test on the residuals, based on the skewness-kurtosis test, resulted in a p value of 0.001, thus rejecting the null hypothesis that the residuals are normally distributed.

According to the theoretical framework presented by Wooldridge (2012), heteroscedasticity leads to a loss of efficiency in estimators, while non-normality of residuals prevents statistical inference. Therefore, it is concluded that one of the alternative methodologies for this scenario is quantile regression, because it constitutes a robust estimation method that does not rely on the assumptions of homoscedasticity and normality of residuals (Koenker & Bassett, 1978).

Table 2

Descriptive statistics for categorical variables.

Variable	Categories	Percentage	Cramer's V correlation				
			Gender	Family business	Marital status	Economic activity	Education level
Gender	1. Male	51,65 %	1				
	0. Female	48,35 %					
Family business	1. Family business	52,26 %	0,1**	1			
	0. Non-family business	47,74 %					
Marital status	1. Married	70,58 %	0,04	0,07*	1		
	0. Not married	29,42 %					
Economic activity	1. Services	47,33 %	0,05	0,04	0,11**	1	
	0. Trade or manufacturing	52,67 %					
Education level	1. Primary	3,29 %	0,11*	0,16***	0,13*	0,14**	1
	2. Secondary	42,18 %					
	3. Tertiary	38,27 %					
	4. Postgraduate	16,26 %					

*** $p < 0,01$;** $p < 0,05$;* $p < 0,1$.

Quantile regression

According to [Koenker and Basset \(1978\)](#), quantile regression is a robust estimation technique that provides an effective solution to both heteroscedasticity and residual non-normality problems. This methodology is based on minimizing weighted deviations, making it less sensitive to outliers and producing more reliable estimates in the presence of these issues.

While the OLS estimation method estimates the average relationship between the independent variables and the dependent variable, quantile regression can estimate different quantiles of the conditional distribution of the dependent variable. This feature allows studying the impact of explanatory variables across the entire distribution of the endogenous variable, not just the average.

The quantile regression methodology is formally defined by the following expression:

$$Y_i = X_i\beta(\vartheta) + e_{\vartheta i}$$

$$Y_i = Q_{\vartheta}(Y_i) + e_{\vartheta i}; 0 < \vartheta < 1$$

Where:

Y_i : Dependent variable of the model.

X_i : Vector of independent variables.

$\beta(\vartheta)$: Vector of parameters to be estimated, considering the quantile ϑ .

$e_{\vartheta i}$: Random disturbance corresponding to quantile ϑ .

$Q_{\vartheta}(Y_i)$: The ϑ -th quantile of the conditional distribution of Y_i , given the exogenous variables vector X_i .

The term ϑ in the formal definition of quantile regression indicates that the researcher can select a specific quantile within the conditional distribution of the endogenous variable. According to [Koenker and Bassett \(1978\)](#), the coefficients in quantile regression are obtained by minimizing absolute deviations in the following equation:

$$\min_{\beta_{\vartheta} \in \mathbb{R}} \left[\sum_{Y_i \geq X_i\beta_{\vartheta}} \vartheta |Y_i - X_i\beta_{\vartheta}| + \sum_{Y_i < X_i\beta_{\vartheta}} (1 - \vartheta) |Y_i - X_i\beta_{\vartheta}| \right]$$

According to [Cameron and Trivedi \(2005\)](#), the estimation of quantile regression directly provides the partial effect of each predictor on a specific quantile of the dependent variable, where the researcher selects this quantile depending on the study's objectives.

The econometric model specification using the quantile regression methodology at the third quantile ($\vartheta = 0,75$) is as follows:

$$\begin{aligned} \text{Average Sales}_i = & \beta_0^{\vartheta} + \beta_1^{\vartheta} \text{Gender}_i + \beta_2^{\vartheta} \text{Emotional Exhaustion}_i \\ & + \beta_3^{\vartheta} \text{Family Business}_i + \beta_4^{\vartheta} \text{Marital Status}_i \\ & + \beta_5^{\vartheta} \text{Seniority}_i + \beta_6^{\vartheta} \text{Age}_i + \beta_7^{\vartheta} \text{Economic Activity}_i \\ & + \beta_8^{\vartheta} \text{Education Level}_i + \beta_9^{\vartheta} \text{Year}_i + e_{\vartheta i} \end{aligned}$$

with $i = 1, 2, 3, \dots; \vartheta = 0,75$

β_0^{ϑ} : Constant term.

$\beta_1^{\vartheta}, \beta_2^{\vartheta}, \dots, \beta_9^{\vartheta}$: Coefficients of the quantile regression, where each β_i captures the partial effect on business performance from a marginal variation in variable i .

Finally, the dependent variable and control variables in the equation are the same as those used in the OLS estimation.

To ensure the robustness of the model, a series of diagnostic tests were conducted. Initially, the presence of multicollinearity was examined using the variance inflation factor (VIF), with all variables yielding values below 5, thereby indicating the absence of significant multicollinearity ([Wooldridge, 2012](#)). Subsequently, heteroscedasticity was assessed through the Breusch-Pagan test, and robust standard errors were employed to address any identified heteroscedasticity. Finally, model specification was validated via the Ramsey RESET test, which confirmed the absence of significant omitted variable bias. These diagnostic tests substantiate the appropriateness of the chosen methodology and enhance the reliability of the study's results.

Results

Table 3 shows the results from seven econometric models estimated using quantile regression methodology at the third quantile ($\vartheta = 0,75$). Models 1 through 4 directly test the hypotheses laid out in this research. Models 5, 6, and 7 incorporate additional variables such as life satisfaction and resilience to enhance the robustness of the conclusions.

Model 1 represents the general model, analyzed using the variables described in the quantile regression specification section. The results confirm hypothesis 1, showing a partial effect of emotional exhaustion on business performance. Specifically, there is a negative and statistically significant relationship between emotional exhaustion and business performance. This finding aligns with the conclusions of [Maslach and Leiter \(2022\)](#), who argued that emotional exhaustion leads to a reduction in individual productivity, negatively influencing business performance.

Model 2 introduces the interaction between the entrepreneur's gender and emotional exhaustion, yielding a negative and statistically significant coefficient for this interaction. This supports hypothesis 2,

Table 3

Results of quantile regression model estimation.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Endogenous variable:	q75	q75	q75	q75	q75	q75	q75
Business performance							
Gender	952,01*** (342,51)	2122,49*** (552,47)	686,35** (339,44)	1607,97*** (399,13)	897,83*** (340,65)	918,97*** (340,93)	1890,51*** (380,56)
Emotional exhaustion (hypothesis 1)	−293,24*** (111,75)		−747,54*** (171,08)				
Family business	−941,28** (373,77)	−919,51** (380,21)	−2966,41*** (700,05)	−772,29* (420,45)	−935,99** (372,10)	−875,74** (374,40)	
Gender * emotional exhaustion (hypothesis 2)		−392,22** (161,49)					
Family business * emotional exhaustion (hypothesis 3)			647,70*** (218,12)				
Gender * emotional exhaustion * family business				−293,04** (146,68)			
Marital status	452,24 (424,13)	726,44* (430,35)	263,93 (420,13)	559,58 (400,95)	444,20 (423,76)	145,45 (422,24)	100,93 (392,93)
Tenure	83,68*** (23,57)	78,45*** (24,10)	80,67*** (23,34)	82,45*** (22,45)	93,48*** (23,48)	111,37*** (23,50)	89,17*** (21,88)
Age	73,89*** (16,63)	73,85*** (17,05)	63,30*** (16,47)	75,55*** (15,82)	62,09*** (16,67)	60,45*** (16,75)	58,18*** (15,58)
Economic activity	−335,54 (339,04)	−273,85 (346,98)	−273,30 (336,25)	−370,44 (323,48)	−504,88 (338,06)	−452,69 (338,41)	−368,54 (316,21)
Education	2. 261,97 (1003,66) 3. 3030,50*** (994,60) 4. 3997,27*** (1024,94)	2. 437,78 (1026,29) 3. 3170,51*** (1013,37) 4. 3994,34*** (1046,81)	2. 262,01 (993,55) 3. 2738,14*** (985,96) 4. 3535,90*** (1015,92)	2. 477,28 (956,44) 3. 3235,97*** (944,01) 4. 4101,36*** (975,72)	2. 733,86 (1000,79) 3. 3398,52*** (987,51) 4. 4218,75*** (1021,83)	2. −195,28 (1001,66) 3. 2322,21** (992,93) 4. 3064,79*** (1026,72)	2. −11,32 (935,87) 3. 2371,95** (929,63) 4. 2984,82*** (958,49)
Year	2021. −737,43 (526,49) 2022. 2253,80*** (471,92) 2023. 2493,80*** (519,99)	2021. −461,63 (537,85) 2022. 2263,53*** (483,12) 2023. 2204,18*** (536,27)	2021. −555,89 (521,80) 2022. 2079,99*** (468,22) 2023. 2271,07*** (515,01)	2021. −570,40 (501,12) 2022. 2311,81*** (448,47) 2023. 2304,71 (495,44)***	2021. −217,66 (523,92) 2022. 2239,61*** (475,32) 2023. 2441,64*** (519,07)	2021. −297,57 (524,26) 2022. 2441,02*** (469,26) 2023. 2816,50*** (518,70)	2021. −136,55 (488,07) 2022. 2476,48*** (422,32) 2023. 2744,43*** (461,88)
Life satisfaction					459,24*** (143,26)		
Resilience						713,11*** (191,29)	814,98*** (175,23)
Gender * resilience * family business							−333,39*** (89,68)
Constant	−3246,08** (1354,69)	−4375,71*** (1308,27)	−1041,17 (1400,68)	−4487,99*** (1221,66)	−6487,21*** (1434,63)	−6665,30*** (1491,79)	−7507,97*** (1311,68)
Pseudo R-squared	0,3077	0,3052	0,3233	0,3029	0,3164	0,3196	0,3212

Note: Standard errors in parentheses.*** $p < 0,01$.** $p < 0,05$.* $p < 0,$.

indicating that the relationship between emotional exhaustion and business performance varies based on the entrepreneur's gender. Specifically, male entrepreneurs experience a more significant negative impact on business performance when facing emotional exhaustion. This finding is consistent with [Heilman et al. \(2017\)](#), who note that men are less likely to seek emotional support during adversity, increasing their vulnerability to emotional exhaustion's negative effects. [Maslach and Leiter \(2022\)](#) explain that psychological support networks play a crucial role in mitigating emotional exhaustion. However, men's lower tendency to utilize these networks amplifies the decline in their business performance more than it does for women, who more frequently seek support in stressful times. Thus, gender is a key factor in how emotional exhaustion affects entrepreneurs, with men being more adversely impacted by this negative interaction.

Model 3 examines the interaction between family business structure and emotional exhaustion, showing a positive and statistically significant coefficient, validating hypothesis 3. This suggests that family businesses are better equipped to handle the negative effects of emotional exhaustion due to the mutual trust and support characteristic of these structures. [Carhuayal \(2020\)](#) notes that family businesses tend to have strong inherent social support networks, helping them more

effectively manage chronic stress. This supportive environment not only allows members to share emotional burdens but also fosters collaboration and resilience in the face of challenges. In contrast, non-family businesses may face greater difficulties in mitigating the negative effects of emotional exhaustion due to a lack of intrinsic support dynamics. These findings highlight the protective role of family business structure in mitigating the impact of emotional exhaustion, leading to better business performance than non-family firms.

Model 4 introduces a three-way interaction between gender, family business structure, and emotional exhaustion, revealing a negative and statistically significant coefficient. Even in family businesses, the negative impact of emotional exhaustion on business performance is more pronounced in men than in women. This suggests that while family businesses offer a supportive environment, this protection is less effective for men. These results highlight the importance of considering how gender, business structure, and emotional exhaustion interact to influence business performance, emphasizing the need for strategies to mitigate emotional exhaustion tailored to both business type and entrepreneur gender.

Model 5 includes life satisfaction as a construct, further supporting hypothesis 1. The positive and statistically significant coefficient for life

satisfaction suggests that individuals with higher life satisfaction experience better business performance. These findings align with those of [Leiter and Maslach \(2024\)](#), who argue that cognitive well-being partially influences business performance.

Model 6 adds resilience to the analysis, further validating hypothesis 1. The positive and statistically significant coefficient for resilience aligns with the results of [Maslach and Leiter \(2022\)](#), who state that emotional exhaustion is a cognitive response to chronic work stress. In contrast, resilience represents the opposite because it involves better stress management ([Layne & McCormick, 2014](#)). Thus, opposite effects are observed, with resilience positively affecting business performance, as shown in Model 6.

Model 7 includes a three-way interaction between the entrepreneur's gender, resilience, and family business structure, yielding a negative and statistically significant result. This supports both Hypotheses 2 and 3, indicating that men, despite working within supportive family businesses, are more negatively affected by emotional exhaustion, because they are less likely to seek support even in conducive environments.

Regarding the control variables, family businesses, while mitigating work stress among employees, exhibit lower business performance than non-family businesses. Gender showed a positive and significant relationship with business performance, indicating that male-led businesses generally perform better than those led by women. However, hypothesis 2 shows that emotional exhaustion has a stronger negative impact on male-led businesses.

Control variables like age and business tenure were positively and significantly related to business performance, suggesting that as the entrepreneur ages or the business becomes more established, performance improves. Education level also shows a positive correlation, with higher levels associated with better business performance. Marital status and the firm's economic activity were not statistically significant, suggesting they do not affect business performance.

Discussion

This study investigates the impact of emotional exhaustion on the business performance of SMEs in Ecuador. The findings offer valuable insights into the psychological factors that influence business performance in emerging economies, specifically within the Ecuadorian context. The confirmation of hypothesis 1 reveals a negative relationship between emotional exhaustion and business performance, consistent with prior research ([Maslach & Leiter, 2022](#); [Figueiredo et al., 2024](#)), which emphasizes that emotional exhaustion—an element of burnout—impairs individual productivity, thereby adversely affecting overall business performance. This outcome aligns with the established literature, reaffirming the detrimental effects of emotional exhaustion on business outcomes.

While this study corroborates these foundational findings, the observed impact of emotional exhaustion on business performance in Ecuador is more notable nuances than in studies conducted in more developed economies. For example, in advanced economies, emotional exhaustion is typically associated with high-stress work environments and excessive workloads ([Leiter & Maslach, 2024](#)). In contrast, the results from Ecuadorian SMEs suggest that emotional exhaustion may be exacerbated by factors unique to emerging markets, such as limited institutional support, economic instability, and heightened social stressors ([Knapp & Wong, 2020](#)). These contextual distinctions underscore the importance of considering the broader socio-economic environment when evaluating the effect of emotional exhaustion on business performance.

Moreover, the validation of hypothesis 2 indicates that emotional exhaustion has a more pronounced negative impact on businesses led by men. This finding is in line with the work of [Heilman et al. \(2017\)](#) and [Maslach and Leiter \(2022\)](#), who suggest that men, due to cultural norms surrounding masculinity, often avoid seeking emotional support, thereby intensifying the effects of emotional exhaustion. In many Latin

American cultures, including Ecuador, traditional gender roles impose greater social pressure on men to exhibit emotional resilience and self-sufficiency ([Heilman et al., 2017](#)). The results of this study contribute to the existing literature by highlighting the gendered dimension of emotional exhaustion and its differential impact on business owners. The more significant negative effect of emotional exhaustion on male-led businesses emphasizes the need for targeted interventions that account for gender-specific coping mechanisms and support structures.

Hypothesis 3 posits that family businesses are less vulnerable to the negative effects of emotional exhaustion due to the protective role of social support networks. The results support this hypothesis, demonstrating that family businesses, by fostering a collaborative and supportive environment, can mitigate the adverse effects of emotional exhaustion. This finding resonates with social capital theory ([Putnam, 1993](#); [Nahapiet & Ghoshal, 1998](#)), which underscores the critical role of networks, trust, and social norms in facilitating cooperation and offering support during times of stress. Social capital theory posits that the relationships and shared values within family businesses create a resilient framework that shields against the harmful consequences of emotional exhaustion. The trust and cooperation inherent in these networks enable family business owners and their employees to share challenges and provide emotional support, thereby alleviating the psychological toll of chronic stress ([Burt, 2000](#); [Adler & Kwon, 2002](#)). [Carhuayal \(2020\)](#) demonstrated that strong family ties can serve as a foundation for collective action and resilience during times of crisis, equipping these businesses to better withstand the pressures associated with emotional exhaustion.

Despite the protective effects of social support, family businesses tend to underperform relative to non-family firms. This underperformance can be attributed to a focus on stability and control, which may hinder the adoption of aggressive growth strategies or innovation factors for achieving high business performance in competitive markets. Thus, while social capital within family businesses plays a vital role in mitigating emotional exhaustion, it may also foster a preference for stability over dynamic business strategies that drive competitive advantage.

The study's findings bear important empirical implications for both business practitioners and policymakers in Ecuador. For business owners, particularly those leading male-dominated or non-family enterprises, it is crucial to recognize the early signs of emotional exhaustion and implement effective stress management strategies. These strategies may include promoting mental health awareness, offering psychological support services, and cultivating a culture of resilience through both formal and informal networks. Specifically, the development of structured support systems, such as mentorship programs and peer networks, could help address the gendered effects of emotional exhaustion observed in male entrepreneurs. Furthermore, business owners could benefit from nurturing their social capital by establishing supportive networks both within and outside their enterprises, utilizing these relationships to reduce stress and enhance performance.

For policymakers, the results underscore the need for policies that not only address the financial and infrastructural challenges faced by SMEs, but also support the psychological well-being of business owners. Creating an enabling environment that prioritizes mental health and work-life balance, especially for entrepreneurs in high-stress sectors, could foster business resilience and long-term sustainability. Given the role of social support in mitigating the impact of emotional exhaustion, policies that promote the formation of entrepreneurial networks and cooperative ventures, particularly in family-owned businesses, could strengthen the social fabric of the business community. By fostering social capital at the societal level, policymakers can enhance the collective resilience of SMEs, ensuring their sustainability in the face of both economic and psychological challenges.

Despite these contributions, this study has certain limitations. The cross-sectional nature of the data prevents an assessment of the long-

term effects of emotional exhaustion on business performance. Future research could employ longitudinal designs to explore how chronic exposure to emotional exhaustion influences organizational resilience, decision-making, and firm longevity. Second, while this study focuses on Ecuador, comparative analyses with other emerging economies could provide deeper insights into the cultural and institutional factors that shape the relationship between emotional exhaustion and business performance. Expanding the scope to diverse contexts would enhance the generalizability of these findings and contribute to a more comprehensive understanding of this phenomenon.

Conclusions

This research found a statistically significant negative relationship between emotional exhaustion and business performance, consistent with the work of Maslach and Leiter (2022) and Figueiredo et al. (2024). Emotional exhaustion, defined as the result of prolonged stress and fatigue caused by work demands, impairs individual productivity, which in turn reduces business performance. This effect highlights the importance of psychological well-being in sustaining business outcomes, aligning with the theoretical insights of Ortega et al. (2021).

The study found that the impact of emotional exhaustion is not uniform across all businesses. The analysis indicates a gendered experience of emotional exhaustion, with men being particularly vulnerable to its negative effects. This result can be explained by the gender norms prevalent in many societies, including Ecuador, which discourage men from seeking emotional support, thereby exacerbating the cognitive and emotional toll of stress (Heilman et al., 2017). The social expectation of self-sufficiency in men, combined with their reluctance to engage in support networks, amplifies the detrimental effects of emotional exhaustion on their individual productivity and business performance (Maslach & Leiter, 2022). In contrast, women's tendency to utilize social support networks mitigates the negative effects of emotional exhaustion, leading to relatively better business outcomes.

Family businesses are less adversely affected by emotional exhaustion due to the social support they provide within their organizational structure. The study showed that family businesses tend to foster a collaborative environment that encourages open communication and emotional support, acting as a psychological buffer against the impacts of stress. In contrast, non-family businesses often lack such networks, making them more susceptible to the negative effects of emotional exhaustion on business performance. Nonetheless, family businesses may still underperform relative to non-family businesses due to their focus on stability and control rather than aggressive performance optimization (Carhuayal, 2020).

In light of these findings, it is crucial for SMEs to adopt targeted strategies to mitigate emotional exhaustion, considering the gender dynamics and organizational structure of the business. For male entrepreneurs, promoting a culture that encourages seeking social support and psychological resources could alleviate the cognitive toll of emotional exhaustion and enhance productivity. For family businesses, reinforcing the already established social support systems can further protect against the psychological strains that lead to reduced business performance. In non-family businesses, creating support networks and fostering a culture of mutual assistance could serve as a protective factor, improving resilience and business outcomes.

This research contributes to the literature by highlighting the importance of emotional well-being in entrepreneurial contexts, particularly within emerging economies. The findings underscore the need for tailored strategies in SMEs, where the interplay between psychological well-being and business performance can have unique implications due to the socio-economic challenges faced by entrepreneurs in these settings.

CRedit authorship contribution statement

Cintya Lanchimba: Methodology, Formal analysis, Data curation. **Dianne H.B. Welsh:** Writing – review & editing, Project administration, Conceptualization. **Carlos Valladares:** Writing – original draft, Methodology, Investigation.

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