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Research Article

Entrepreneurial expectations towards the beginning of the COVID-19 pandemic: Empirical evidence in Brazil

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Abstract

Objective: To investigate entrepreneurial expectations towards the COVID-19 pandemic through empirical evidence of business practices in Brazil during the beginning of the social distancing period. Also, we sought to test cognitive adaptability and human values as predictors of the decision-making process and to test whether infection with COVID-19 or proximity to the disease related to these constructs. **Method**: A cross-sectional study was developed with a non-probabilistic sample of 313 Brazilian entrepreneurs, in which four instruments were applied. Descriptive and multivariate analyses were carried out (e. g., exploratory factor analysis and multiple linear regressions). **Originality/Relevance**: The study contributes to understanding the business decision-making processes through constructs associated with human values and cognitive adaptability**. Results**: Human and social conditions of survival and the commitment to personal and business financial obligations guide entrepreneurial behaviour. In cases where there was contagion or proximity to the disease, entrepreneurs started to show thoughtful decisions, affective support for employees, flexibility in organizational control, and more empathic values. **Theoretical/methodological contributions**: This study points out the possible impacts that the COVID-19 pandemic has brought to entrepreneurs and how psychological variables explain their behaviour. **Social/managerial contributions:** Additionally, it sheds light on entrepreneurship from the needs and desires experienced at the beginning of the COVID-19 pandemic, and on the broader dimension directed to the serious problems experienced today.

Keywords: Entrepreneurship. Human Values. Cognitive Adaptability. COVID-19.

Expectativas empresariais frente ao início da pandemia da COVID-19: Evidências empíricas no Brasil

Resumo

Objetivo: Investigar expectativas empresariais frente à pandemia da COVID-19, por meio de evidências empíricas de práticas comerciais no Brasil durante o início do período de distanciamento social**.** Também, buscou-se testar a adaptabilidade cognitiva e os valores humanos como preditores do processo de tomada de decisão e testar se o contágio com COVID-19 ou a proximidade com a doença influenciou esses constructos. **Metodologia**: Realizou-se um estudo transversal com uma amostra não probabilística de 313 empreendedores brasileiros, em que foram aplicados quatro instrumentos de pesquisa**.** Procederam-se análises descritivas e multivariadas (p. ex., análise fatorial exploratória e regressão linear múltipla). **Relevância/originalidade**: O estudo contribui para compreender os processos de tomada de decisão empresarial por meio de constructos associados aos valores humanos e à adaptabilidade cognitiva**. Resultados**: As condições humanas e sociais de sobrevivência e o compromisso com obrigações financeiras pessoais e empresariais foram norteadoras do comportamento dos empreendedores investigados. Nos casos em que houve o contágio ou proximidade com a doença, os empreendedores passaram a demonstrar decisões ponderadas, suporte afetivo aos colaboradores, flexibilidade no controle organizacional e valores mais empáticos. **Contribuições teórico-metodológicas**: Este estudo aponta os possíveis impactos que a pandemia da COVID-19 trouxe para empreendedores e como variáveis psicológicas explicam o comportamento destes. **Contribuições sociais:** Adicionalmente, lança-se luz sobre o empreendedorismo a partir de necessidades e anseios vivenciados no início da pandemia da COVID-19.

Palavras-chave: Empreendedorismo. Valores Humanos. Adaptabilidade Cognitiva. COVID-19.

INTRODUCTION

The COVID-19 pandemic, a respiratory disease caused by the SARS-CoV-2, has been responsible for approximately 6,646,562 deaths and 649,244,427 confirmed cases worldwide between January 2020 and December 2022 (World Health Organization [WHO], 2022). In the early stages of the pandemic, in March 2020, given the lack of treatment and absence of a vaccine, many governments around the world implemented mitigation and suppression actions to control the virus, adopting restrictive measures of social distancing, such as mandatory stay-at-home orders and promotion of remote work (home office). To prevent crowds, governments established policies of closures and shutdowns on beaches, parks, schools, and businesses (Anderson et al., 2020; Bedford et al., 2020).

With the closure of businesses, many companies were forced to keep their employees working internally or promote remote work and, in some cases, modify their forms of production and distribution (Nicola et al., 2020). Productive and financial problems became more evident, impacting management models, marketing strategies, and the production of goods and services, probably in an irreversible way (Kabir et al., 2020; Liñán & Jaén, 2022). This suspension of commerce for a few months meant the bankruptcy of companies and widespread default on services of various kinds. The emergency epidemic scenario also caused unease in the business environment and forced abrupt and unplanned decision-making by entrepreneurs and business owners (Belitski et al., 2022; Goodell, 2020; Nassif, Corrêa, & Rossetto, 2020).

Regarding the business and organizational decision-making process, decisions are guided at a psychosocial level, and the ability to adapt determines how an entrepreneur can deal with an untimely, transitory, and uncertain context (Haynie & Shepherd, 2009). On the other hand, personal priorities (values) directly influence the orientation of organizational efforts (Gouveia et al., 2009). Some studies bring cognitive adaptability (Cho & Linderman, 2019; Shea & Frith, 2019) and human values (Bressan & Toledo, 2013; Sawicki et al., 2022) as predictors (antecedents) of entrepreneurial behavior, for example.

In empirical terms, understanding the antecedents of entrepreneurial decision-making can indicate how entrepreneurs will deal with similar situations. Furthermore, considering the atypical context of a pandemic of this magnitude in the 21st century, there are no specific parameters or studies on organizational behavior (Taylor, 2019). In general, pandemics tend to accentuate maladaptive behaviors and defensive reactions, as well as the possibility of psychological vulnerability and social disruption (fear and stigmatization), which play a central role in how people cope with the pandemic threat (e. g., financial problems, deaths, etc.) (Sawicki et al., 2022; Taylor, 2019).

However, in this context, entrepreneurial behavior had not yet been studied. Therefore, the research question is how the onset of the COVID-19 pandemic influenced entrepreneurs' decision-making, especially in the organizational and marketing environment. And specifically, could values (needs and priorities) and adaptability, for example, explain the entrepreneurs' decision-making process?

Based on this context, the present study aimed to investigate business expectations in the face of the COVID-19 pandemic, through empirical evidence of commercial practices in Brazil during the beginning of the social distancing period. As specific objectives, the study sought to test cognitive adaptability and human values as predictors of the decision-making process among entrepreneurs and to test whether contagion with COVID-19 or proximity to the disease impacted the constructs investigated. Thus, this study used psychological theories to explain entrepreneurial behavior (operationally including the term "business owner") at the beginning of the COVID-19 pandemic and shed light on a phenomenon that goes beyond the epidemic and public health sphere and is becoming a sociological phenomenon of economic conjuncture.

THEORETICAL FRAMEWORK

Entrepreneurial Behavior and the COVID-19 Pandemic

With the imminence of the COVID-19 outbreak and soon after its declaration as a pandemic, the economic impact on the market and forms of production became explicit (Liñán & Jaén, 2022; Sharma et al., 2022). According to Lima et al. (2020), the "dilemma" in the business world was between saving lives and saving businesses. In many cases, saving businesses also meant saving lives – given the need for the subsistence of entrepreneurs, employees, and their respective families.

The pandemic also brought numerous business opportunities (Belitski et al., 2022; Nassif, Armando, & La Falce, 2020). According to Cavalcante (2021), e-commerce has shown rapid growth in economic activity. The manufacturing of hand sanitizer and protective masks, for example, encouraged the emergence of new businesses. The increase in online sales and delivery services also showed a willingness of the market to adapt to the new context.

On the other hand, the pandemic heightened fear and anxiety in the business world. The economic impact and slowdown of commerce and industrial production showed recession effects, making common layoffs, salary cuts, and work hours reduction. Psychosocial problems also began to impact people management strategies (Carmo et al., 2021; Felipe et al., 2021; Nassif, Corrêa, & Rossetto, 2020; Sharma et al., 2022).

The COVID-19 pandemic brought entrepreneurial reactions, in which several focused-on business opportunities or directed toward business survival, such as slowing down production to reduce operational costs (Belitski et al., 2022). In these scenarios, the personal stance of entrepreneurs regarding public health aspects and the pandemic context seems to have been decisive in establishing organizational and marketing strategies (Stranieri Junior, 2021). Therefore, the ability to adapt and individual priorities guide organizational decisions. The following sections detail the psychological aspects that underlie the above.

Human Values

Human values are guiding principles of individual and/or collective actions and cognitively express human needs, functioning as a general orientation for behavior (Gouveia et al., 2014; Silva et al., 2022). Specifically, in entrepreneurial behavior, values have demonstrated effective applicability to phenomena related to the organizational context and suggested explanations for decision-making processes (Souza et al., 2018).

Human values demonstrate functional orientation dimensions: (i) social, (ii) central, or (iii) personal. By social orientation, individuals emphasize interpersonal relationships and tend to be concerned with societal problems, while by personal orientation, individuals tend to prioritize their problems. Also, there are a central orientation (Gouveia et al., 2009).

Additionally, Human values demonstrate functional motivators: (i) humanitarian or (ii) materialistic. Individuals who are motivated by humanitarian values are idealistic and generally emphasize vague goals or abstract principles, prioritizing people more than material possessions. On the other hand, individuals who are motivated by materialistic values are pragmatic and generally emphasize specific goals, such as their existence and survival conditions, prioritizing material possessions more than people (Gouveia et al., 2009).

The crossing of the types of orientation and motivator culminates in six subfunctions of human values that derive directly from the main functions and are conceptually defined as latent structures in the form of terminal values, constituting individual patterns (Gouveia et al., 2014), as shown in Table 1.

Table 1

Description of Basic Values

Value Subfunction	Orientation-Motivator	Basic Values (terminal)
Normative Values	Social-Materialistic	*Obedience:* Fulfillment of daily duties and obligations. *Religiosity:* Belief in God, following religious rites and patterns. *Tradition:* Following social and cultural norms, respecting traditions.
Existence Values	Central-Materialistic	*Health:* Concern for health, even when not sick. *Personal stability:* Prioritizing an organized and planned life. *Survival:* Concern for food. Being able to live well always.
Promotion Values	Personal-Materialistic	*Power:* Having the power to influence people and control decisions. Being a team leader. *Prestige:* Feeling known and admired. *Success:* Being efficient in what one does.
Interactive Values	Social-Humanitarian	*Affectivity:* Prioritizing deep and lasting affectionate relationships. Sharing life with someone. *Belonging:* Socializing with other people, in social, religious, sports, groups, etc. *Social support:* Feeling welcomed. Obtaining support from other people.
Suprapersonal Values	Central-Humanitarian	*Beauty:* he ability to appreciate the best of art, music, and literature. Prioritizing aesthetics. *Knowledge:* Discovering new things about the world. Enjoy investigating and studying. *Maturity:* Self-actualizing, feeling that one has achieved life goals and all of one's abilities.
Excitement Values	Personal-Humanitarian	*Emotion:* Living adventures. Enjoying challenges and danger. *Pleasure:* Enjoying life. Satisfying all desires. *Sexuality:* Prioritizing sexual relations.

Note: Adapted from Gouveia et al. (2009, p. 42-43).

Studies (e. g., Bressan & Toledo, 2013; Cruz, 2005; Souza et al., 2018) show a prevalence of Promotion Values (power, prestige, and success) among entrepreneurs (here, referring to and characterizing businesspeople); that is, oriented towards personal goals (such as self-sufficiency) and motivated by materialistic elements (such as goods or money). In a study with Brazilian entrepreneurs, Souza et al. (2018) found that some values are modified or highlighted in specific social contexts, such as financial difficulties, survival needs, or informality culture, guiding the entrepreneurial decision-making process. Socioeconomic vulnerability and instability can lead entrepreneurs to reduce their personal priorities and endorse central values (such as health, personal stability, and survival). Prioritizing Existential values makes entrepreneurs less concerned with moral issues and more likely to make unethical decisions.

Cognitive Adaptability

Essential for decision-making, cognition operates through processes (e. g., memory, attention, perception, etc.) of acquisition and transformation of knowledge (Stevens & Carlson, 2019). Adaptable cognition is central for entrepreneurs who need to identify and process changes in their organization, as well as in the market, economy, and society (Baron & Ward, 2004; Haynie & Shepherd, 2009; Imran & Iqbal, 2021). Cognitive adaptability configures the ability to understand and control thought (ideas and decisions) in a self-regulated and planned way, allowing for flexibility, agility, and adaptive learning (Glöckner et al., 2014). I. e., metacognitive awareness.

As higher-level cognitive processes, metacognition compartmentalizes and optimizes acquired knowledge, organizing what is known about situations, people, phenomena, and oneself (Cho & Linderman, 2019; Winne, 2018). It allows the entrepreneur to effectively evaluate stimuli (e.g., risks, opportunities) and necessary responses (e.g., strategies) for performance in dynamic and highly complex managerial environments (Mitchell et al., 2002). Haynie and Shepherd (2009) propose that cognitive adaptability for the business context subdivides into five dimensions (Table 2).

Table 2

Dimensions of Cognitive Adaptability

Dimensions	Description
Goal Orientation	Metacognitive resources of knowledge and experience are used to identify personal, social, or organizational goals. It determines how decision-making is based on previously defined goals.
Metacognitive Knowledge	Use of previous knowledge in the planning of actions and decision-making. It determines how much the individual believes in their own knowledge about themselves, other people, phenomena, or managerial processes.
Metacognitive Experience	Use of previous experiences in the planning of actions and decision-making. It determines how much the individual believes in their own experiences, emotions, and intuitions about all things (people, phenomena, processes, etc.).
Metacognitive Control	Analysis and selection of possible options for decision-making, aiming to control changes in the organizational environment. It determines how rigorously the individual controls actions and decisions.
Monitoring	Search and use of feedback in the process of monitoring decision-making. It determines how much the individual evaluates/re-evaluates their own decisions, relating them to goals, knowledge, experiences, and capacity for control.

Note: Adapted from Haynie and Shepherd (2009).

Functionally, cognitive adaptability is a process in which psychological, social, educational, and biological conditions shape consciousness for structured and planned responsive behavior (Cho & Linderman, 2019; Shea & Frith, 2019). Contexts of crisis and pandemics, for example, demand greater adaptability. The effect of adaptable cognition, according to Mevarech and Kramarski (2003), lies in the possibility of the individual: (i) preparing and adapting to unexpected situations, using knowledge and experience for logical and quick problem-solving (e.g., when the first indications of closure of businesses due to the growth of COVID-19 cases), (ii) being creative, original, and versatile in generating ideas and selecting solutions (e.g., in adapting to changes in commerce and logistics), and (iii) demonstrating logical reasoning and precision in responding to certain stimuli (e.g., in strategies definition).

METHODS

Research Conceptualization

The research was designed in a theoretical-empirical format, with a descriptive approach to conducting the study and a quantitative data analysis way. According to Malhotra (2011), descriptive research associated with quantitative analysis models is structured by defining relationships between variables from a sample, delineating their relationship with surrounding phenomena, and describing them from a particular view of the problem.

Given the objective of this study, entrepreneurial expectations were operationalized through a specific instrument for the research (as detailed in section Instruments). In turn, human values were measured using the Basic Values Survey (Gouveia et al., 2014) and cognitive adaptability was measured using the Measure of Adaptive Cognition (Haynie & Shepherd, 2009). This study is delimited by a specific period that characterizes the beginning of the COVID-19 pandemic in 2020.

Participants and sampling procedures

The study involved 313 Brazilian entrepreneurs (55% male), with a mean age of 41 years (range 18 to 74 years; SD=11.96), from 26 Brazilian states, with the highest incidence in Minas Gerais (47.3%), São Paulo (14.1%), and Rio de Janeiro (6.4%). Regarding education, 82.5% reported having a college degree, 17.2% reported having a high school degree, and 0.3% reported having only an elementary school degree. Of the participants, 14 (4.5%) reported suspicion or confirmation of COVID-19 infection, and 20 (6.4%) reported suspicion or confirmation of COVID-19 infection among employees of their companies.

The sampling procedure was non-probabilistic, with data collection by accessibility, in which about 2,000 Brazilian entrepreneurs were invited through social networks or e-mail to voluntarily respond to the online questionnaire, between April 23 and 30, 2020 – in operational terms, researchers defined entrepreneurs as business owners, self-employed individuals, individual microentrepreneurs, owners of micro and small businesses, and co-administrators of medium and large companies. Among the feedback received from those who chose not to respond, they claim that the questionnaire was too long.

Participants were informed about the study and the anonymity and confidentiality of their responses. They were required to sign an Informed Consent Form, ensuring the voluntary nature of participation and respect for the ethical guidelines for human subjects research (CAAE: 30555420.4.0000.0008). On average, participants took 17 minutes to complete the online questionnaire.

Instruments

For this study, the instruments used are detailed as follows:

(i) *Entrepreneurial expectations scale towards social distancing* (EES-SD). Due to the exceptional nature of the research problem and the lack of instruments for this context, we developed the instrument specifically for this study to map business decisions and strategies during the onset of the pandemic period. Initially, to write the items of the EES-SD, the authors of this study conducted a brainstorming session to understand entrepreneurial expectations, beliefs, and behaviors during the social distancing period associated with COVID-19. According to the psychometric parameters established by Cohen e Swerdlik (2017), we developed 36 items.

The items of the EES-SD underwent content analysis (items adequacy for the research proposal) and semantic analysis (items intelligibility), which resulted in the exclusion of five items. The application of the EES-SD was based on a continuous 5-point scale (ranging from 1 = Totally Disagree to 5 = Totally Agree), composed of 31 items, such as "I want to turn people's needs during this period into profitable opportunities" and "I have increased the level of financial control in my business". Then, the items were subjected to Exploratory Factor Analysis (EFA) and Cronbach's Alpha to verify the validity and reliability parameters of the instrument. Two factors were extracted from 30 items, with an explanation of 31.69% (see Table 3).

Table 3

Factors of EES-SD

Factors*	Commercial intentions in the pandemic (22 items)	Adverse reactions to the pandemic (8 items)
Factor Loadings	0.674 / 0.301	0.673 / 0.356
Items	1, 2, 3, 4, 5, 7, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 31	6, 8, 9, 14, 16, 27, 29, 30
Eigenvalue	6.528	3.298
Cronbach's Alpha	0.866	0.707

Note: Research data. *Correlation between factors r=0.30; p=0.00.

Factor 1 (Commercial intentions in the pandemic) represents the interest and willingness to modify managerial strategies, conduct market research, diversify the product/service portfolio, promote marketing campaigns, and even, for example, enter into new business areas. It demonstrates a commercially proactive and propositional behavior in the face of the social, epidemiological, and economic scenario during the period of social distancing, taking into consideration business interests and conditions of capital gains and income generation, encompassing items such as "I have been thinking on ways to profit and make money during this period" and "I plan to diversify my product/service portfolio to better meet the demands of society during this social distancing period".

Factor 2 (Adverse reactions to the pandemic) represents restrictive responses to the business or employees, possibly unintentionally, related to negative impacts from the market, such as the closure of commerce and the decrease in sales. The items in Factor 2 explain a behavior of commercial contraction and recession, encompassing items such as "I have considered laying off employees due to the pandemic" and "Because of this scenario, I feel anxious about my business".

(ii) *Basic values questionnaire* (BVQ). It's a 7-point self-report psychometric test (ranging from 1 = Not at all important to 7 = Extremely important), composed of 18 values with brief descriptions of their attributes. In the BVQ, respondents indicate the importance that each value has as a guiding principle in their life. The instrument has confirmatory factor validity in a model of 6 factors (subfunctions: Normative, Existence, Promotion, Interactive, Suprapersonal, and Excitement), with satisfactory fit indices [$\chi 2$ (120) = 13170.15; GFI = 0.90; CFI = 0.91; RMSEA = 0.08] (Gouveia et al., 2014). It includes items such as: "Survival (having water, food, and being able to sleep well every day; living in a place with an abundance of food)" and "Social Support (getting help when you need it; feeling that you are not alone in the world)".

(iii) *Measure of adaptive cognition* (MAC) (Haynie & Shepherd, 2009). A psychometric self-report test of 11 continuous points (ranging from 0 = Not at all Like Me to 10 = Exactly Like Me), composed of 36 items, such as: "I find myself automatically employing strategies that have worked in the past" and "I often define goals for myself". The MAC presents confirmatory factor validity in a model of five factors (Goal Orientation, Metacognitive

Knowledge, Metacognitive Experience, Metacognitive Control, and Monitoring), which has satisfactory fit indices [$\chi 2/df = 3.69$; GFI = 0.91; NFI = 0.93; RMSEA = 0.07].

(iv) *Sociodemographic questionnaire*. This questionnaire aimed to gather information and characterize the sample, including the following items: Gender, Age, Education level, Place of residence, and Suspicions or confirmation of COVID-19 infection among participants and/or their employees.

Analysis

The data were tabulated and processed in PSPP (GNU free software). Descriptive statistical analyses were performed (e.g., frequency, mean, standard deviation, standard error, and 95% confidence interval). For the descriptive analysis of EES-SD items, the interpretation was based on item endorsement, in which values were indicated as low (1 to 2), medium (3), and high (4 to 5) endorsement, to verify the responses in percentage. The Coefficient of Association [$\chi^2(1) \geq 3.84$; $p < 0.05$] and Spearman's correlation coefficient were used to support the interpretation of the results.

We performed exploratory factor analysis (EFA) to conduct the validity and reliability procedures of the EES-SD, using the maximum likelihood method with Varimax rotation and Kaiser normalization, and the Cronbach's Alpha test, following validation parameters recommended by Hair et al. (2013), Damásio and Borsa (2017), and Dancey and Reidy (2019), considering the criteria of statistical significance, factor loading ≥ |0,30| (Damásio & Borsa, 2017; Dancey & Reidy, 2019; Hair et al., 2013). The EFA was possible after verifying data adequacy and the factorability of the correlation matrix of EES-SD items, through the Kaiser-Meyer-Olkin (KMO=0.80) and Bartlett's Sphericity Test [$\chi^2(465)=3288.222$; p=0,000]. In the previous section, Table 3 presented the results.

We performed multiple linear regression (stepwise method) to test the explanatory model of cognitive adaptability and human values as predictors of the decision-making process in the pandemic context. It considers the covariance matrix and evaluates the homoscedasticity and the multicollinearity among predictor variables, within the validation parameters recommended by Hair et al. (2013). I. e., the hypothetical-theoretical model was established with the six BVQ factors and the five MAC factors as independent variables, and the two EES-SD factors as dependent variables.

In addition to the main objective, we sought to test differences influenced by COVID-19 infection or social and affective proximity with infected employees. Mann-Whitney test (U) for independent samples was used, comparing entrepreneurs without infection (group 1.1) and without infected employees (group 1.2) with entrepreneurs with infection (group 2.1) and with infected employees (group 2.2). We considered all collected variables for this analysis. According to Dancey e Reidy (2019), the Mann-Whitney test (U) is more suitable for non-parametric sampling or control groups with a small sample size, as in this study. The effect size (Cohen's d) was used as a validity criterion, according to educational ($d \geq 0.25$) and practical significance criteria ($d \geq 0.50$). Limitations associated with the sample size are attenuated by the effect size (Cohen, 1992).

RESULTS

Entrepreneurial Expectations towards the COVID-19 Pandemic

The descriptive results of the items on the Entrepreneurial Expectations Scale towards Social Distancing (EES-SD) (Table 4a e Table 4b) show that a large number of entrepreneurs showed interest in commercial activities at the beginning of the pandemic period, planning new ways to serve the public, considering the use of creative techniques, and increasing financial control levels, for example, in an attempt to balance business activities with personal, household, and family needs. For the EES-SD, the mean of Factor 1 (Commercial Intentions in the Pandemic) was 3.36 (sd=0.67) and the mean of Factor 2 (Adverse reactions to the pandemic) was 3.22 (sd=0.73).

The desire to maintain commercial activities is associated with issues of necessity and survival. For example, in item 20, 75.4% of entrepreneurs believed that prioritizing the business would also be a way to prioritize family well-being, showing association [$\chi^2(16)=189.85$; p=0.00] and correlation (r=0.47; p=0.00) with item 22 "I try to maintain a balance of priority between my business activities and my personal needs". Items with higher scores (e.g., items 3, 23, 22, 13, 18, and 7) highlight anxiety related to low sales productivity and the need to avoid financial losses since COVID-19 emerged in an economic scenario of crisis and recession.

Results show that most investigated entrepreneurs had reservations about requesting loans (item 8) or entering a new business field (item 19). The Coefficient of Association (χ^2) indicated the existence of a relationship between the lower scores on these items [$\chi^2(16)=52.71$; p=0.00], demonstrating caution in this environment of instability.

Despite concerns about low productivity and caution, for example, in item 5, 49.2% of entrepreneurs claimed they did not plan to conduct marketing research, while another 20.8% had doubts about this assertion. Marketing research planning showed a moderate correlation (significant at p=0.000) with items 4 "I believe that crisis periods can be transformed into good business opportunities" (r=0.36), 11 "I have been thinking on ways to profit and make money during this period" (r=0.36), 15 "I try to use this social distancing period to learn new things about my business" (r=0.31), 17 "I have been looking for business opportunities associated with this pandemic" (r=0.38), and 25 "I plan to diversify my portfolio of products/services to better meet the demands of society during the social distancing period" (r=0.31).

Predictions of Entrepreneurial Expectations based on Human Values and Cognitive Adaptability

Aiming to address the complementary objective of testing cognitive adaptability and human values as predictors of decision-making processes, a hypothetical-theoretical model was analyzed in which the six factors of BVQ (human values) and the five factors of MAC (attributes of cognitive adaptability) were established as possible explainers of Commercial intentions in the pandemic (Factor 1 of EES-SD) and Adverse reactions to the pandemic (Factor 2 of EES-SD).

For descriptive purposes, the means of the BVQ factors (value subfunctions) were Existence at 5.99 (sd=0.78), Interactive at 5.59 (sd=0.91), Suprapersonal at 5.51 (sd=0.86), Normative at 5.47 (sd=1.11), Promotion at 5.09 (sd=1.05), and Excitement at 4.49 (sd=1.01). In turn, the means of the MAC factors (attributes) were Metacognitive Knowledge at 7.91 (sd=1.30), Goal Orientation at 7.83 (sd=1.63), Metacognitive Experience at 7.79 (sd=1.32), Monitoring at 7.70 (sd=1.45), and Metacognitive Control at 7.60 (sd=1.63).

Hierarchical multiple linear regression (stepwise method) indicated a predictive relationship between three of the tested variables and Commercial Intentions in the Pandemic (Factor 1 of EES-SD), presenting acceptable model fit parameters with 23.2% of explained variance (Table 5). No predictive relationships were found between any of the tested variables and Adverse Reactions to the Pandemic (Factor 2 of EES-SD).

Table 4a

Descriptions of entrepreneurial expectations regarding the beginning of the social distancing period

Items of the EES-SD	Item endorsement (%)		
	Low	Medium	High
Commercial intentions in the pandemic (22 itens)			
1. I am using cost management tools to minimize the pandemic's damage to my business.	32.3	19.8	47.9
2. I want to turn people's needs during this period into profitable opportunities.	40.3	16	43.7
3. I have planned new ways of providing personalized service to my clients due to the period of social distancing.	7.3	12.8	79.9
4. I believe that crisis periods can be transformed into good business opportunities.	24.9	20.4	54.7
5. I have been considering conducting some marketing research during this period.	49.2	20.8	30.0
7. I have increased the level of financial control in my business.	14.4	16.0	69.6
10. Despite a possible crisis, I believe that investing is the best solution.	43.8	29.7	26.5
11. I have been thinking on ways to profit and make money during this period.	24.0	16.9	59.1
12. I consider that price increases are natural during this period.	46.6	27.5	25.9
13. To face periods like this, I try to be creative.	6.4	14.4	79.2
15. I try to use this social distancing period to learn new things about my business.	11.2	18.5	70.3
17. I have been looking for business opportunities associated with this pandemic.	41.5	22.7	35.8
18. I am focused on keeping my business healthy/profitable.	8.3	19.5	72.3
19. I am interested in temporarily entering to a new business area if it makes me financially profitable during this period.	52.7	16.3	31.0
20. I believe that prioritizing my business is also a way of prioritizing the well-being of my family.	11.8	12.8	75.4
21. I believe that it is not wrong to carry out marketing campaigns associated with this pandemic.	30.7	24.9	44.4
22. I try to maintain a balance of priorities between my business activities and my personal needs.	3.2	20.1	76.7
23. I will do everything possible to avoid financial losses during this period of social distancing.	5.8	19.8	74.4
24. I believe that employees in social distancing who are not working should be required to take distance learning courses for improvement.	25.6	23.0	51.4
25. I plan to diversify my portfolio of products/services to better meet the demands of society during the social distancing period.	26.5	21.4	52.1
26. I am considering making donations or investments for hospitals or health centers.	45.0	23.3	31.6
28. I have a well-established strategic plan to face crisis situations.	43.5	27.2	29.4
31. I feel willing to lead people to overcome the social and economic problems related to this pandemic.	25.2	27.2	47.6

Note: Research data.

Table 4b

Descriptions of entrepreneurial expectations regarding the beginning of the social distancing period

Items of the EES-SD	Item endorsement (%)		
	Low	Medium	High
Adverse reactions to the pandemic (8 itens)			
6. I am concerned about the decrease in productivity in my business during this period.	17.6	13.1	69.3
8. Because of this scenario, I plan to take out loans from banks and/or financial institutions.	50.8	19.5	29.7
9. I am afraid of the impacts of the social distancing period on my business.	18.8	16.6	64.6
14. I have considered laying off employees due to the pandemic.	47.3	13.1	39.6
16. In commercial terms, I feel positively excited about my business.	42.5	30.7	26.8
27. Because of this scenario, I feel anxious about my business.	16.0	20.1	63.9
29. In my opinion, this period of isolation and closure of commerce is an exaggeration.	38.7	20.4	40.9
30. I believe in the need for temporary salary cuts/ reductions in commerce and industry.	34.5	27.8	37.7

Note: Research data.

Table 5

Model of Promotion, Excitement and Goal Orientation predicting Entrepreneurial intentions towards the pandemic (Factor 1 of EES-SD)

Predictive Variables	Pearson's	B	SE	B	t	p
Constant		1.241	0.220		5.629	0.000
Promotion (BVQ)	0.385 (0.000)	0.157	0.035	0.248	4.528	0.000
Excitement (BVQ)	0.251 (0.020)	0.150	0.036	0.226	4.187	0.000
Goal Orientation (MAC)	0.309 (0.000)	0.083	0.021	0.203	3.926	0.000
R	**R^2**	**R^2 ajustado**		**F(3, 309)**		**p**
0.489	0.239	0.232		32.377		0.000

Note: B = unstandardized coefficients; β = standardized coefficients; SE = standard error; t = t-test; p = significance.

The results show that, hierarchically, the value subfunctions (i) Promotion and (ii) Excitement (factors of BVQ), followed by (iii) Goal Orientation (factor of MAC), jointly explained the Commercial intentions in the pandemic (Factor 1 of EES-SD). Promotion represents esteem needs, originating in personal priorities of professional growth, material achievements, and the search for control and recognition. In turn, Excitement represents physiological and personal satisfaction needs, focusing on prioritizing emotion and pleasure, when seeking adventure or promoting changes and innovations in life and work (e.g., willingness to take risks) (see Gouveia et al., 2014).

Subfunctions Existence (m=5.99) and Interactive (m=5.59) showed the highest scores, indicating a prevalent endorsement of values of Health, Personal Stability, Survival, Affectivity, Social Interaction, and Social Support. In a sanitary and global health crisis moment, with the adoption of restrictive measures of social isolation, the prioritization of these values presents a logic centered on the problems and difficulties of the pandemic scenario.

Regarding cognitive adaptability, Goal Orientation represents decision-making whose priorities are personal, social, or organizational objectives, guided by previous experiences and knowledge (see Haynie & Shepherd, 2009). We note that the dimensions of Metacognitive Knowledge (m=7.91) and Goal Orientation (m=7.83) showed higher scores, which indicates that entrepreneurs kept their personal and business goals grounded in the use of metacognitive knowledge. In practical terms, it suggests that entrepreneurs were predisposed to modify their forms of operation and use new strategies to ensure the achievement of objectives and plans previously defined – those before the onset of the pandemic.

Comparison between groups (1) non-contagion and (2) contagion with COVID-19

In this section, changes in priorities (values) and in the way of guiding their own decisions (cognitive adaptability) were analyzed, comparing entrepreneurs without COVID-19 infection versus entrepreneurs with COVID-19 infection (Table 6), and consequently, entrepreneurs without infected employees versus entrepreneurs with infected employees with COVID-19 (Table 7). The Mann-Whitney test (U) was used to test the mean differences between all variables (items and factors) used in this study and the effect size, Cohen's *d* (1992). Only the variables that showed mean differences between the compared groups are presented in Table 6 and Table 7 (with variables that did not show mean differences being suppressed). In Table 6, mean differences were found between entrepreneurs with suspected or confirmed COVID-19 infection (n=14) and entrepreneurs without suspected or confirmed COVID-19 infection (n=299) in eight tested variables.

We verify that the groups did not show any difference in means for any of the dimensions of cognitive adaptability, which suggests that suspicion or confirmation of COVID-19 infection did not affect the structured and planned responsive pattern related to business or the decision-making process.

Regarding human values, entrepreneurs with suspicion or confirmation of COVID-19 infection tended to prioritize Health (staying alive and healthy) and Social Support (having help from other people), indicating that the proximity to the disease increased concerns and priorities related to improving their health and survival, as well as a need to feel supported and assisted.

On the other hand, entrepreneurs without suspicion or confirmation of COVID-19 infection tended to prioritize the values of Success (being efficient, productive, and achieving their goals), Affectivity (being close to family, friends, and partners), Obedience (fulfilling daily obligations and duties), Beauty (appreciating art, literature, music, shows, and exhibitions), and Maturity (achieving life goals and developing their own capacities). I.e., once healthy, entrepreneurs tended to desire and prioritize the normality of their social and professional lives. Moreover, from another perspective, it can be inferred that once infected or suspected of infection with COVID-19, entrepreneurs naturally tended to score lower in values that may be related to their social and professional lives, due to the more efficient and rapid improvement of their health.

Regarding Commercial intentions in the pandemic (Factor 1 of EES-SD), as can be seen in Table 6 and Table 7, the results highlight that the groups showed a difference in means in both scenarios of suspicion or confirmation of COVID-19 infection by the entrepreneur or by their employees. It suggests, therefore, that not having the disease or not having sick employees exerts a strong desire and intentions to maintain commercial activities. I.e., more business interests are demonstrated, even proactively and purposefully in the market.

The same does not occur with Adverse reactions to the pandemic (Factor 2 of EES-SD), indicating that negative responses to the Pandemic are independent of COVID-19 infection, both by the entrepreneur (Table 6) and by employees (Table 7). In Table 7, differences in means are presented for 7 (seven) of the variables tested between entrepreneurs with infected employees (n=20) and entrepreneurs without infected employees (n=293).

Table 6

Confirmation or suspicion of COVID-19 among entrepreneurs

Variables	COVID-19				Statistics			
	Suspicion or Confirmation (n=14)		No Suspicion or Confirmation (n=299)					
	Mean	SD	Mean	SD	CI (ll, ul, 95%)	U	p	d
Commercial intentions in the pandemic (EES-SD)	3.032	0.656	3.384	0.670	-0.351 (-0.712/0.008)	-2.155	*	0.53
Success (BVQ)	5.29	0.611	5.97	1.026	-0.688 (-1.055/-0.320)	-3.020	**	0.67
Affectivity (BVQ)	5.43	0.646	5.87	1.271	-0.444 (-0.838/-0.050)	-2.334	*	0.35
Obedience (BVQ)	5.14	1.027	6.03	1.150	-0.884 (-1.500/-0.268)	-3.023	**	0.78
Beauty (BVQ)	3.71	0.726	4.75	1.470	-1.035 (-1.479/-0.590)	-3.098	**	0.72
Maturity (BVQ)	5.43	0.756	6.08	0.966	-0.652 (-1.098/-0.205)	-2.947	**	0.68
Social support (BVQ)	6.50	0.650	5.80	1.243	0.704 (0.308/1.100)	2.148	*	0.57
Health (BVQ)	6.93	0.267	6.15	1.089	0.781 (0.589/0.974)	3.089	**	0.73

Note: sd = Standard Deviation; CI (ll, ul, 95%) = Difference of means and 95% Confidence Interval, Lower limit, Upper limit; U = Mann-Whitney test; p = significance; d = effect size.

* p < 0.05 ** p < 0.01 *** p < 0.001

Table 7

Suspected or confirmed contagion of COVID-19 among employees

Variables	COVID-19				Statistics			
	Suspicion or Confirmation (n=14)		No Suspicion or Confirmation (n=299)					
	Mean	SD	Mean	SD	CI (ll, ul, 95%)	U	p	d
Commercial intentions in the pandemic (EES-SD)	3.106	0.557	3.386	0.677	-0.2793 (-0.584/0.025)	-2.062	*	0.42
Metacognitive Control (MAC)	6.670	1.018	7.672	1.654	-1.002 (-1.510/-0.494)	-2.868	**	0.62
Obedience (BVQ)	5.15	1.137	6.04	1.138	-0.894 (-1.412/-0.377)	-3.408	**	0.78
Beauty (BVQ)	3.70	0.865	4.77	1.468	-1.071 (-1.505/-0.638)	-3.734	***	0.75
Tradition (BVQ)	4.25	0.910	4.81	1.462	-0.555 (-1.009/-0.102)	-2.286	*	0.39
Maturity (BVQ)	5.65	0.745	6.08	0.974	-0.428 (-0.792/-0.065)	-2.476	*	0.45
Prestige (BVQ)	5.25	1.251	4.44	1.666	0.810 (0.198/1.421)	1.982	*	0.49

Notae: sd = Standard Deviation; CI (ll, ul, 95%) = Difference of means and 95% Confidence Interval, Lower limit, Upper limit; U = Mann-Whitney test; p = significance; d = effect size.
* p < 0.05 ** p < 0.01 *** p < 0.001

In the scenario presented in Table 6, no differences in means were found regarding the dimensions of cognitive adaptability due to contagion. However, in this scenario where entrepreneurs had infected employees (Table 7), the difference in mean for the Metacognitive Control dimension stands out. The metacognitive control dimension is related to the strict control/domination of changes in the organizational environment and the decisions (see Haynie & Shepherd, 2009). Results indicate, therefore, that having employees with COVID-19, entrepreneurs demonstrated lower organizational control, probably being more flexible and humanizing managerial actions and decisions, due to the health treatment of these individuals and the emergency to avoid contagion in other employees.

DISCUSSION

This study provides an approximate overview of the needs and expectations of Brazilian entrepreneurs regarding commercial activities during the initial period of social distancing related to the COVID-19 pandemic in April 2020. The results indicated the high interest of the investigated entrepreneurs in continuing commercial activities, as well as their work routines, with a favorable disposition towards distribution and logistics adaptations. Additionally, entrepreneurs expressed concern for the well-being of their families and businesses, aiming to avoid or soften financial losses.

Maintaining businesses was a natural response to the pandemic crisis and economic uncertainty. More specifically, the results show that the value subfunctions Promotion (desire to make/produce) and Excitement (desire to test/experience new things) were predictors of Commercial intentions in the pandemic (Factor 1 of EES-SD), in line with findings in the literature (see Bressan & Toledo, 2013; Cruz, 2005; Souza et al., 2018). This result highlights that entrepreneurial characteristics play a central role in the decision-making process and likely influence the prioritization of values capable of projecting the need for success in business, financial gain, and business maintenance in own personal choices amid the pandemic situation – the moment that we conducted the research.

The investigated entrepreneurs demonstrated that their orientations and priorities directly guided their decision-making. I.e., the need for professional success, financial gain, and business maintenance, associated with a goal-oriented mindset, guided commercial intentions, and market strategies – even in the face of the COVID-19 pandemic scenario. In a study with successful and failed entrepreneurs, results by Souza et al. (2016) indicated that the ability to define measurable goals and objectives made entrepreneurs more likely to succeed (i.e., remain longer in the market). On the other hand, according to Imran and Iqbal (2021), implementing changes requires greater cognitive adaptability on the part of leaders, whose resistance to change is one of the reasons associated with high rates of business failure during the pandemic.

In this same scenario, regardless of whether or not they contracted COVID-19, the investigated entrepreneurs demonstrated a focus on values in health, survival, and social support – although the scores of infected entrepreneurs are higher, with statistically significant differences. It means that the pandemic's onset generated more attention to their health and, perhaps even forcibly, greater engagement in the adaptation process.

This study also revealed that survival needs (stable human and social conditions and commitment to financial obligations) guided the behavior of the entrepreneurs investigated; up to the point where risks to their health became evident. Basically, in conditions where there is contagion or proximity to the disease, entrepreneurs began to demonstrate concern and caution, as well as reasoned decisions – including social distancing – taking into account forms of emotional support for employees and showing flexibility regarding organizational control and more empathetic values. It occurs because contracting COVID-19 represents an impediment, or even a rupture (in cases of death), to the real maintenance and continuity of micro and small businesses. These results corroborate the findings of Miranda-Rodríguez and Saldaña-Alfaro (2021), which demonstrate that proximity to COVID-19 has influenced human values and generated more responsible social behaviors.

The results emphasize the perception that the onset of the pandemic brought insecurity to entrepreneurs, and thus, needs and priorities demonstrated a high effect on decision-making. On the other hand, adaptability proved essential for maintaining the businesses, in which the goal and objective orientation (focus and planning) are relevant explanatory elements for entrepreneurial actions.

FINAL REMARKS

This study achieved its objective by investigating the expectations of Brazilian entrepreneurs facing the onset of the COVID-19 pandemic and assessing to what extent human values and cognitive adaptability attributes explained business behavior within the underlying context, along with the occurrence of social distancing measures that compromised commercial and labor activities worldwide.

The impacts perceived by companies with the onset of the pandemic demanded coordinated actions and strategic and financial planning to ensure survival in the market. The moment investigated did not allow for the prospecting of short and medium-term scenarios (consequences of the pandemic were not foreseen), which explains the need for entrepreneurs to make quick, abrupt, and incipient decisions for the sake of their businesses.

From another perspective, overcoming this crisis, which in Brazil has turned into an epidemic, social, and economic catastrophe, represents a challenge for entrepreneurship. The dynamic ability to detect and take advantage of opportunities related to the pandemic or resulting from its effects represents a viable alternative for companies. Therefore, there is a need for policy measures directed at entrepreneurs, especially regarding the increase of credit lines and better debt settlement conditions, for example.

In theoretical-empirical terms, this study contributes to understanding the elements that explain entrepreneurial behavior in typical emergencies, such as the COVID-19 pandemic. In the case of the context under studied here, the concern of the investigated entrepreneurs focused on organizational goals (see Table 4a and Table 4b), based on the ability to be goal-oriented but influenced by proximity to the disease, which consequently led to changes in values (priorities). The study reinforces that human values explain entrepreneurial behavior, motivating and guiding the decision-making. Thus, entrepreneurs who prioritized health demonstrated more empathy and flexibility in the organizational context, while goal orientation led them to think about changes and alternative commercial strategies to achieve their organizational objectives. In similar situations, this study suggests that values and adaptability will be benchmarking elements for understanding entrepreneurial behavior.

Furthermore, fear seemed to be present among most of the investigated entrepreneurs. It indicates, probably, that Brazilian entrepreneur needs to improve their adaptability and find ways to solidify themselves in the market, mitigating the impacts of economic crises. In contrast, governments need create public policies that ensure the survival of companies – especially micro and small business – that employ and assist in the country's socioeconomic growth. Therefore, we suggested that training entrepreneurs (at an affective and structural level) in risk management is essential, aiming for better market preparation for atypical and challenging situations.

Another theoretical-empirical contribution of this study is the construction and validation of the Entrepreneurial expectations scale towards social distancing (EES-SD). Although the EES-SD was developed specifically for the context of this study, the scale was designed to measure business expectations in situations that require social distancing or changes in the way businesses operate, and it can be replicated or adapted in new studies on social distancing or events that generate situations similar to the COVID-19 pandemic, such as periods of recession, wars, etc., and that may affect commercial intentions and reactions to emerging situations. It means that it is possible to propose managerial interventions based on the results of the EES-SD in the coordination of production, distribution, people management, and marketing actions.

Finally, we understand that the main limitation of this study was the small sample size, given the low adherence of the entrepreneurs at the time, which impacted the analyzes carried out. Another limitation was the non-stratification of the sample by size, revenue, number of employees, or business sector. Also, we used different methodological procedures to achieve research objectives, which may have compromised the intelligibility of the results. These and other limitations suggest new research agendas, such as replicating the study in a stratified sample, including for the deepening of the results obtained here and hypothesis testing using Structural Equation Modeling (SEM).

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Conflit of interest statement

The authors declare that there is no conflict of interest.

Authors' statement of individual contributions

Roles	Contributions			
	Souza G.H.S.	Lima N.C.	Coelho J.A.P.M.	Jardim A.C.G.S.
Conceptualization	■	■	■	■
Methodology	■		■	
Software	■		■	
Validation	■		■	
Formal analysis	■	■	■	■
Investigation	■	■		■
Resources	■			■
Data Curation	■	■	■	
Writing - Original Draf	■	■	■	■
Writing - Review & Editing	■	■		
Visualization	■	■	■	■
Supervision	■			■
Project administration	■			
Funding acquisition	■			

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