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Article

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Investigating strategic responses of SMEs during COVID-19 pandemic: A cognitive appraisal perspective

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Abstract

In this study, we investigate the response intentions of small- and medium-sized enterprises (SMEs) during the recent economic crisis initiated by the COVID-19 pandemic. We draw on the cognitive appraisal theory and investigate how an SME's level of proactivity triggers top managers' emotional reactions, which in the end shapes an SME's response strategies (investment vs divestment). To test our assumptions, we use survey data from 155 top managers of Croatian SMEs operating in business-to-business industries. We find that an SME's proactivity positively (negatively) influences the emergence of positive (negative) emotions. Also, we find that top managers charged with positive (negative) emotions are more prone to engage in investment (divestment) as a response to economic crisis. Furthermore, through the broaden-and-build perspective we reveal the mediating effect of emotions on the relationship between proactivity and response intentions as well as the mediating effect of performance expectations on the link between emotions and response intentions.

JEL CLASSIFICATION M10; M19

Keywords

Economic crisis, cognitive appraisal, proactivity, emotions, response strategies

Introduction

Since March 2020, the COVID-19 pandemic has been spreading exponentially, infecting millions of people and halting economic activity around the globe. To deal with these threats, countries enforced strict restrictions on movement and initiated country-wide economic lockdowns with the goal of slowing this alarming trend. Like many crises before, the COVID-19 pandemic has also brought economic insecurity for both firms and consumers, and the consequences will be felt long into the future (United Nations Conference on Trade and Development, 2020). From an economic standpoint, the World Bank (2020) reports that the overall contraction of global gross domestic product (GDP) in 2020 is expected to be 5.2%, while projections from the International Monetary Fund (IMF; 2020) report that the world economy will sustain a cumulative loss of more than US\$12 trillion in the period of 2020–2021. On a wider scale, these economic deteriorations unanimously decrease investment activity, per capita

income, human capital, and they disrupt global supply chains. To confront such negative impacts, governments have introduced many intervention measures and policies. Although these interventions are aimed at lessening the negative side effects of the crisis, the solutions to how to recover from the demand shock caused by the COVID-19 pandemic remains the sole responsibility of businesses (Kraus et al., 2020). This becomes especially challenging for small- and medium-sized enterprises (SMEs) that are known to operate in an environment of scarce resources and need to weigh their responses accordingly.

The academic literature on how small businesses and entrepreneurs cope with economic crises has been gaining

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momentum since the last global financial crisis (2007–2008). Inspired by that very event, studies show that (1) SMEs witnessed reduced employment and reduced growth (Cowling et al., 2015; Varum & Rocha, 2013), (2) larger firms are able to recover more quickly than SMEs (Peric & Vitezic, 2016), and (3) new venture creation stagnates (González-Pernía et al., 2018). Research insights into the resilience of small business during crises are still emerging (Doern et al., 2019), and some recent studies observe that SMEs are heterogeneous and consequently differ in how they approach the economic crisis caused by the COVID-19 pandemic (Lim et al., 2020). In this regard, some studies report that small entrepreneurial firms are not directly impacted by the negative effects of an economic crisis (Davidsson & Gordon, 2016), which can be attributed to the strong opportunity recognition capacity that these firms nurture (Beliaeva et al., 2020; Devece et al., 2016). It is argued that SMEs can navigate through the stormy landscape of the COVID-19 crisis by engaging in organization-wide innovation (Morgan et al., 2020). Consequently, such insights lead to the conclusion that the literature on the impact of economic crises on SME business activity is ambivalent—evidently for some SMEs such crises can represent a window of opportunity, and for some a threat (Greene & Rosiello, 2020).

Economic crises have been framed as a reflection of external environmental uncertainty (Sharma et al., 2020). However, Milliken (1987) warns that the assessment of uncertainty brought about by crises is susceptible to subjective interpretation. In their systematic literature review on the origins of organizational decline, Trahms et al. (2013) reveal why some firms consider a crisis as an opportunity to invest while others consider it a threat that requires retrenchment. The authors conclude that much of the research has been devoted to studying the actual responses firms undertake during crises, with very little focus on the micro foundational underpinnings of such responses. While it can be speculated that these two opposing views can be attributed to a firm's cognitive capacity to develop an awareness of the crisis (Srinivasan et al., 2005), this chain-of-effect remains less understood in the extant literature.

In revealing the impact of the psychological processes underlying managerial decision making, the literature in recent years has offered the emergent view that managing a small business is an emotional endeavor (Foo, 2011), but this stream is dominated by studies on entrepreneurs and founders (e.g., Baron & Tang, 2011; Foo et al., 2009; Huy & Zott, 2019). Although entrepreneurs may at the same time be the top managers of their firms, researchers outline that there is a necessity to gain more insight into how emotional reactions drive top managers' decision making, since they are responsible for managing a firm's performance and future survival (Cardon et al., 2012; Cristofaro, 2019; Delgado-García et al., 2010; Huy, 2012; Mittal &

Ross, 1998). Although the importance of cognitive-affective factors has been emphasized in earlier strategic management literature (e.g., Daniels, 1998), studies investigating how emotions shape strategic responses to economic crises are still scarce, thus mandating further investigation.

To better understand the chain-of-effects that lead to an SME's strategic responses to crises, we draw on the cognitive appraisal theory (Lazarus, 1991). The cognitive appraisal theory suggests that individuals respond to stressful events differently in emotional and behavioral ways depending on their beliefs. In the SME context, the top manager's beliefs about a crisis are embedded in the firm's level of proactivity in regard to economic crises (Gonzalez & Winkler, 2019; König et al., 2020). In our study, we posit that an SME's proactivity influences the top manager's emotional reactions, which eventually shape the strategic responses they undertake on behalf of the firm (Hambrick & Mason, 1984; Lazarus, 1991). On top of this, recent studies on emotions suggest that expectations intervene in the relationship between emotion and coping behavior (Tamir & Bigman, 2018). By complementing our model with this perspective, our study investigates how an SME manager's emotions influence their response intentions (investment and divestment), which are based on future performance expectations.

With our study we aim to contribute to the extant literature in two ways. First, we extend the literature on emotions in strategic management by discussing their role in shaping a manager's strategic responses to the economic crisis caused by the COVID-19 pandemic. Previous studies have found that emotions affect a top manager's strategic decision making (Daniels, 1998; Delgado-García et al., 2010), yet very little is known about the role of emotions in shaping responses to crises. By following the tenets of the cognitive appraisal theory, we develop a model of how an SME's level of proactivity impacts the top managers' emotional reactions to a crisis, which in the end influence an SME's strategic response intentions. While previous studies have dominantly researched how cognitive appraisal shapes emotions and subsequent responses to a crisis in other areas of the social sciences (Jin, 2009; Kim & Cameron, 2011; Wagner, 2014), this study contextualizes such a model to better understand the origins of SMEs' coping behavior during the economic crisis initiated by the COVID-19 pandemic.

Second, we provide the empirical contributions of the indirect effects of when proactivity shapes response intentions through the energizing effects of a top manager's emotions. By revealing that emotions mediate the link between proactivity and an SME's response intentions, we validate the broaden-and-build perspective of emotions (Fredrickson, 2001) in the context of an SME's responses to an economic crisis. In addition, to better understand how negative and positive emotions shape

response intentions, we investigate the mediating role of performance expectations. By building our arguments on recent studies that investigate the interplay between expectations and emotions (Tamir & Bigman, 2018), we find that an alignment between emotions and future performance expectations further explains why top managers are prone to choose a specific response. On the whole, our empirical findings extend the literature (Doern et al., 2019; Trahms et al., 2013) by validating the cognitive appraisal model as an overarching theory that explains an SME's response to a crisis.

We test our assumptions on the survey-based data from 155 top managers from Croatian SMEs. Like many countries around the globe, Croatia was significantly affected by the COVID-19 pandemic, which also had negative consequences for businesses, especially SMEs. For these reasons, we feel that our research context can offer insights that can yield valuable implications in general.

Conceptual development

SMEs and economic crises

Economic crises represent a deterioration of economic activity. In such circumstances, economic crises are considered to be events that trigger uncertainty among market actors (Sharma et al., 2020). How SMEs cope with economic crises has been attracting researchers for years, but this interest has intensified since the last global financial crisis in 2007–2008 (Doern et al., 2019). Research has shown that, unlike large companies, SMEs are under-capacitated to create the preconditions for a quick recovery from a crisis (Peric & Vitezic, 2016). The reason for this can be found in the fact that SMEs suffer from the liabilities of smallness and insufficient resource capacities. However, research has also shown that SMEs are a heterogeneous segment (Smallbone et al., 2012). For instance, studies show that there are a number of SMEs that view a crisis as an opportunity, while the rest view a crisis as a threat to the company's business (Devece et al., 2016), suggesting that they might be less affected by the uncertainty brought about by a crisis (Milliken, 1987; Temouri et al., 2022). Insights offered by recent research in this area indicate that the current economic crisis caused by the COVID-19 pandemic is also significantly disrupting the liquidity and solvency of SMEs (Cowling et al., 2020). In line with previous studies, Greene and Rosiello (2020) argue that the crisis caused by the COVID-19 pandemic, in addition to threats, will create opportunities for many SMEs to reconfigure resources for future growth (Lim et al., 2020). However, the underlying explanations for these differences remain limited to this day (Trahms et al., 2013), suggesting the need to explore the psychological processes that underlie SME decision making during crises. The literature in this area indicates that the emotional reactions of top managers significantly influence the

formation of a firm's strategic decisions (Cardon et al., 2012; Cristofaro, 2019; Delgado-García et al., 2010; Huy, 2012; Mittal & Ross, 1998), thus offering a new angle to investigate an SME's responses to economic crises.

Cognitive appraisal and an SME's responses to a crisis

The long-withstanding argument has been that economic actors are perfectly rational and without cognitive biases (Becker, 1976). However, some seminal works have argued that environmental complexity makes it hard for managers to gain all the necessary information, so they need to rely on other types of decision making, some of which are irrational and often bias-driven (Simon, 1976; Tversky & Kahneman, 1974). In this regard, studies from the fields of entrepreneurship and small business management have refuted the rational choice models (Grichnik et al., 2010) and embraced psychological arousal, which occurs in the venturing process (Baron, 1998; Davidsson & Wiklund, 2001; Hodgkinson & Healey, 2014; Huy, 2012; Omorede et al., 2015; Wiklund et al., 2011). Consequently, there is a growing recognition, both in the entrepreneurship practice (Entrepreneur.com, 2019) and academia (e.g., Baron, 2008; Cardon et al., 2012; Foo, 2011; Nikolaev et al., 2020), that affects are critical drivers of entrepreneurial cognitions, behaviors, and outcomes.

As an umbrella concept, the literature outlines affect as a mental process that includes moods and emotions (Bagozzi et al., 1999). Unlike moods, which may have an enduring impact on how an individual or manager behaves, specific emotions are often short-term in nature and are triggered by specific events from the environment (Forgas, 1992). The literature also makes a distinction between trait and state emotions (Foo, 2009). Trait emotions are predisposed, whereas state emotions are triggered by a specific event within the proximity of an individual's cognitive capacity. In this study, we focus on a top manager's state emotions generated through the cognitive appraisal of an economic crisis impacted by the COVID-19 pandemic.

To better understand the impact of emotions, researchers have utilized appraisal theories which contend that interpretations of external stimuli and events trigger specific emotions (Smith & Ellsworth, 1985; Smith & Lazarus, 1993). The cognitive appraisal theory has been commonly used to assess the cognitive–emotional assessments of events and their impact on coping behaviors (Lazarus, 1991). Since the literature points out that small businesses can respond differently to the same crisis (Cowling et al., 2015), the intrinsic properties of the crises do not matter as much as the interpretation of them by individuals (Jin, 2009). According to Lazarus (1991), one's emotional status is highly dependent on the relationship between an individual's goals and the external event. If the properties of the event are (not) aligned with

the individual's cognitive structures, then the positive (negative) affective outcomes will emerge. Cognition can be defined as the knowledge structure individuals use to valorize the environment (Mitchell et al., 2002), and is essential in forming the beliefs that are instrumental to the cognitive appraisal process, as well as being its first phase (Lazarus, 1991). Previous studies have found that cognitive appraisal can result in emotions with opposing valence (positive and negative), which in the end have an impact on the effectiveness of coping behaviors (Treffers et al., 2020).

Emotions are intensive affective experiences related to certain events, but have short-term effects (Lazarus, 1991). The most commonly mentioned and discussed emotions are those related to anger, fear, hope, and joy. Throughout the past decade, research has shown that positive emotions encourage the entrepreneurial venturing process through opportunity evaluation and exploitation (Grichnik et al., 2010), creativity (Baron & Tang, 2011), and resilience (Chadwick & Raver, 2020). Yet, studies have been dominantly focusing on either negative (Patzelt & Shepherd, 2011; Van Gelderen et al., 2015) or positive emotions (Baron et al., 2012; Cardon et al., 2009; Foo, 2011), while the same level of importance should be attributed to both, since crises may elicit both emotions depending on the cognitive capacity of top managers. The role of emotions is especially relevant in environments that are characterized by uncertainty, which is fairly captured by the economic crisis momentum (Forgas & George, 2001).

Emotions trigger fixed behavioral patterns (Ekman, 1992) and are inherently tied to the context and goals that are expected to be achieved. Decision making is one of the most vital tasks of top management during crisis events (König et al., 2020), and managers need to secure information that gives legitimacy to their decisions. In our study, we investigate strategic responses to a crisis that have a long-term impact on organizational effectiveness and efficiency (Huy, 2012). Wenzel et al. (2020) suggest that one of the most popular response strategies for firms in a crisis are retrenchment and innovation. Retrenchment is a common strategic response a firm can have to a crisis (Bruton et al., 2003), entailing divestment which is evidenced through reductions in costs, assets, products, product lines, and overhead. An alternative to retrenchment is innovation as a strategic response. The innovation perspective entails investments through new employment, expansion of capacities and development, and the launch of the new products and services (Zhao & Thompson, 2019). For the purposes of our study, we believe that investment and divestment response strategies are conceptually robust enough to reflect how managers align their coping approaches with a firm's level of proactivity during an economic crisis (Trahms et al., 2013).

Expectations are important during the decision-making process and can steer how emotions shape behaviors. According to cognitive appraisal theory, future expectancies are an important component of cognitive appraisal and they influence how elicited emotions transform into chosen response strategies (Lazarus, 1991). Mainstream psychological studies on emotions suggest that individuals compare the expected results of a given behavior with the actual decision to engage in such behaviors. Hence, if the valence of elicited emotion is aligned with expectations, then the given behavior will prevail (Tamir & Bigman, 2018). Such a perspective would also make sense in the context of strategic responses on the basis of a top manager's emotional arousal.

On the whole, we posit that a top manager's positive and negative emotions are shaped by an SME's idiosyncratic beliefs regarding the crisis, which is reflected in its proactivity. For these reasons, we draw on cognitive appraisal to explain the relationship between SME proactivity and a top manager's event-generated emotions and subsequent coping behaviors, which are reflected in investment and divestment response intentions. We enrich our model with explanations from the broaden-and-build view perspective as well as the literature that has investigated the interplay between expectations and emotions. Our research model is presented in Figure 1.

Research hypotheses

SME proactivity and event-generated emotions

Cognitive appraisal includes the evaluation of a situation based on an individual's goals. The focal essence of appraisal theories is that individuals compare the event with their set of beliefs. Proactive firms can hold positive beliefs about a crisis by seeing it as a window of opportunity to recognize, develop, and exploit opportunities (Devece et al., 2016; Srinivasan et al., 2005), whereas less proactive firms would generate negative beliefs about the crisis (Smallbone et al., 2012). Following this line of reasoning, proactivity was shown to successfully capture the heterogeneity among SMEs (Brzozowski et al., 2019). According to the cognitive appraisal perspective (Lazarus, 1991), we posit that an SME's level of proactivity will generate emotional reactions from its top managers. Top managers who operate in SMEs that act opportunistically and view the COVID-19 crisis as an opportunity will demonstrate positive emotions (Sharma et al., 2020). On the contrary, top managers running SMEs and who view crises as a threat to business survival will react to crises with negative emotions. Therefore, we hypothesize as follows:

H1. Top managers in SMEs with a strong proactive orientation will witness (a) stronger positive emotional

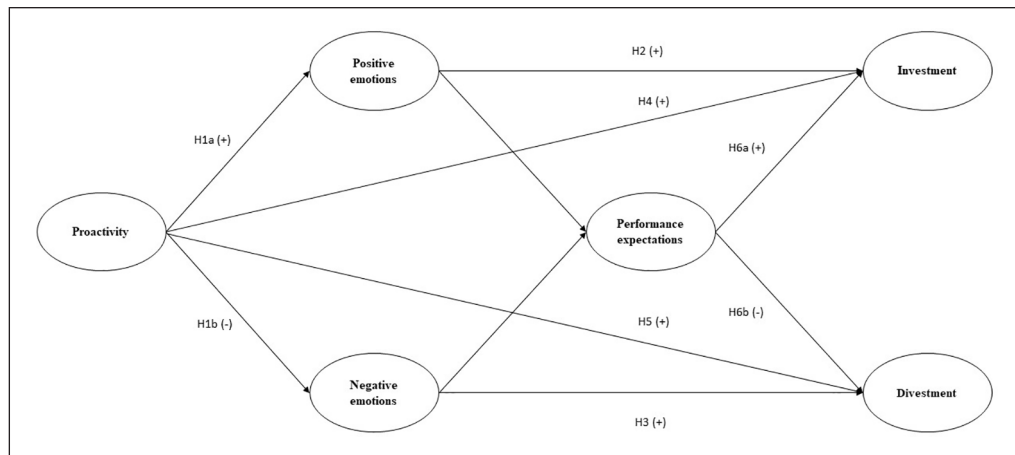


Figure 1. Conceptual model.

reactions and (b) weaker negative emotional reactions to the COVID-19 crisis.

The influence of positive and negative emotions on response intentions

Previous studies show that SMEs are heterogeneous in terms of assessing whether crises are an opportunity or a threat to their business operations (Beliaeva et al., 2020; Devece et al., 2016; Smallbone et al., 2012). However, the antecedents to such views have been less explored in the literature on strategic decision making in crises (Trahms et al., 2013). To this end, the mainstream strategic management literature establishes a clear relationship between emotions and managerial decision making (Delgado-García et al., 2015). Emotions are expected to have a different impact on coping behaviors based on their valence (Forgas, 1992). In the case of experiencing positive emotions, individuals are more prone to engage in expansive decisions, whereas negative emotions generate more conservative managerial decisions (Amabile et al., 2005; Bachkirov, 2015; Foo et al., 2009; Grichnik et al., 2010; Isen & Means, 1983; Poblete, 2018). Studies on founders and entrepreneurs show that fear increases avoidance (Foo, 2011) and negatively influences opportunity recognition and exploitation (Grichnik et al., 2010; Kollmann et al., 2017). On the contrary, managers charged with positive emotions are expected to strive for novel, innovative ways in coping with the aftermaths of a recession (Foo, 2009), which would include expansive behaviors (Isen, 2001). Along the same line of reasoning, studies on managers show that positive emotions enhance the manager's capacity to engage in more ambitious goal setting activities, whereas negative emotions turn the focus of managers toward instant short-term goals (Delgado-García et al., 2012). Hence, we argue that managers who experience positive emotions regarding the COVID-19 crisis will steer an SME's strategic responses toward investment,

whereas managers who experience negative emotions would opt for divestment (Wade & Bjerkkan, 2020). Thus, we offer two hypotheses for testing:

H2. A top manager's positive emotional reaction to the COVID-19 crisis has a positive impact on an SME's investment intention.

H3. A top manager's negative emotional reaction to the COVID-19 crisis has a positive impact on an SME's divestment intention.

The mediating role of positive and negative emotions—the broaden-and-build perspective

Cognition is of paramount importance in understanding how entrepreneurs valorize business opportunities. Kollmann et al. (2017) found that a higher perception of obstacles can increase the fear of failure, which in the end influences entrepreneurs' withdrawal from entrepreneurial venturing processes. According to the broaden-and-build perspective, cognitive repertoires are broadened by positive emotions, through which entrepreneurs become more expansive (Fredrickson, 2001). However, it was also suggested that this process needs to be complemented with negative emotions (Rathunde, 2000). A psychological study by Fredrickson et al. (2003) suggests that positive emotions in the aftermath of crises buffer resilient people against depression and fuel thriving. Hence, we posit that there is a significant mediating mechanism from proactivity to response intentions through the energizing effect of a top manager's emotions. In this process, a top manager's emotions can further explain how an SME's level of proactivity impacts the response strategies to deal with the COVID-19 crisis (Foo, 2009; Wade & Bjerkkan, 2020). Against this background, we argue that SMEs with a strong proactive orientation will opt more strongly for an investment response during a crisis when their top managers

experience the energizing effect of positive emotions. On the contrary, SMEs that valorize a crisis as an imminent threat would opt for divestment when their top managers experience the energizing effect of negative emotions. This leads us to hypothesize as follows:

H4. A top manager's positive emotional reaction to the COVID-19 crisis mediates the link between proactivity and an SME's investment intention.

H5. A top manager's negative emotional reaction the COVID-19 crisis mediates the link between proactivity and an SME's divestment intention.

According to the cognitive appraisal theory, expectations are an important momentum that explains how emotions shape coping behaviors (Lazarus, 1991), and positive emotions can induce positive expectations from future events (Isen, 2001). Expectations are a function of a future temporal focus which enable individuals to engage in future-oriented thinking. A future temporal focus reassures individuals that certain events will actually happen and further increase the motivation for initially chosen coping behaviors (Foo et al., 2009). According to this line of reasoning, Verhees et al. (2010) found that performance expectations positively influence investment decisions. When considering their interplay, emotions become a source of bias in forming expectations, and people are more apt to engage in certain behaviors when they expect success (Roese & Sherman, 2007). Consequently, individuals who experience a specific emotional state will act in a specific way when they have expectations that the emotional state will deliver the goals they have set to accomplish (Tamir & Bigman, 2018). One recent study reveals that a top manager's optimism, as a source of bias, can account for differences in how managers approach the COVID-19 crisis (Schmitt et al., 2020). Against this background, we expect that in SMEs led by top managers who are charged with a positive (negative) emotional reaction to the COVID-19 crisis, an investment (divestment) response will prevail when higher (lower) performance outcomes are expected. Therefore, we hypothesize as follows:

H6. Positive performance expectations mediate (a) the link between a positive emotional reaction to the COVID-19 crisis and investment intention and (b) the link between a negative emotional reaction to the COVID-19 crisis and divestment intention.

Method

Study setting and sample

We tested our hypotheses by analyzing the survey data from Croatian SMEs operating in business-to-business

(B2B) industries. The reason for using such a sampling frame was because of the lockdown measures where most of the firms operating in B2C industries were significantly affected by restrictions which hampered their everyday business activity (e.g., grocery retail). The survey was conducted in the period between April and June 2020. We obtained a sampling frame from one commercial business database. First, we specified the sampling frame to include SMEs from industries that operate in B2B industries. Overall, our sample frame consisted of 2,347 active firms with no less than 10 and no more than 250 employees in total. Next, an e-mail was sent directly to the top managers of the SMEs. The e-mail contained a cover letter and a survey link hosted by a survey app. After the first wave of data collection during April, follow-up reminders were sent between May and June 2020. Eventually, after removing the incomplete responses, our final sample comprised 155 valid responses from top managers, yielding a response rate of 6.3%. Since the conditions of the data collection were severely influenced by the ongoing COVID-19 pandemic, we deem the response rate satisfactory. To test for a possible nonresponse bias we compared the early and late respondents based on firm age, firm size, sales revenues, and industry classification of the firm. We found no significant differences in SME response intentions based on these categories, which led us to conclude that nonresponse bias does not pose a threat to the validity of our results. Also, to analyze the representativeness of our sample we compared the share of firms belonging to a specific industry in our sample and sample frame (see Table 1). There were some slight deviations when comparing our sample to the overall sample frame regarding the proportions of industries.

Measurement operationalization

We measured the constructs of interest by adapting the scales from existing literature sources. To measure *proactivity*, we borrowed scale items from Srinivasan et al. (2005), which measure a firm's general beliefs about a crisis. Since top managers shape the overall orientation of a firm, we believe that proactivity entails a collective cognitive capacity that also reflects the top manager's beliefs. The scale comprised four items with anchors 1—*totally disagree* and 5—*totally agree*.

Next, we asked respondents to read a narrative about the economic consequences of the COVID-19 pandemic. Our narrative used data and statistics provided by domestic (Croatian National Bank and Croatian Chamber of Commerce) and international institutions (World Bank and IMF). After reading the text, respondents were asked to indicate the extent to which forecasts for the upcoming economic downturn elicit their *positive and negative emotions*. In our study we rely on the shortened positive and negative affect scale (PANAS) (Watson et al., 1988),

Table 1. Sample breakdown by industry.

Industry	Sample	Sample frame
Manufacturing	23.8	38.4
Wholesale	16.1	17.1
ICT	13.5	7.1
Professional services	12.6	9.9
Construction	9.0	8.6
Other business services	13.5	5.5
Other industries	11.0	14.4
Total (%)	100	100

ICT: information and communication technology.

which has been usefully used in previous studies (Delgado-García et al., 2010). The positive emotions included determination, inspiration, and interest, whereas the negative emotions comprised feeling upset, nervous, afraid, and insecure. The scale items were measured on a 5-point Likert-type scale with anchors 1—*none at all* and 5—*to a great extent*.

To measure the *performance expectations*, we asked respondents to indicate this year's expectations vis-a-vis the previous year along four business performance indicators, namely, sales revenues, sales growth, profitability, and cash flow. The scale items were measured on a 5-point Likert-type scale with anchors 1—*much worse* and 5—*much better*.

To measure the *response intentions (investment and divestment)*, we relied on scale items borrowed from a study by Zhao and Thompson (2019). In measuring divestment, respondents were asked to what extent they plan to implement the following measures as a response to the crisis: reduction of capacity, decrease in the number of employees, and withdrawal of products/services. Following the same line of reasoning, respondents were asked to indicate how likely they are to implement the following investment responses: new capital investments, increase in the number of employees and development, and the development and launch of new products/services. The scale items were measured on a 5-point Likert-type scale with anchors 1—*extremely unlikely*, 5—*extremely likely*. The full item scale battery can be found in Table 2.

In addition, we also included the following organizational-level control variables, previously confirmed as relevant in the context of economic crises, namely, *firm size* (Varum & Rocha, 2013), *industry (manufacturing vs services)* (Varum & Rocha, 2013), and *a firm's export intensity* (Görg & Spaliara, 2014) and related them to both investment and divestment response intentions. In addition, we included a top manager's self-efficacy as a managerial level control since previous studies indicate that it can impact response intentions in the context of environmental uncertainty (Bullough et al., 2014). Self-efficacy was measured by scale from Wilson et al. (2007).

Findings

Measurement model

Confirmatory factor analysis (CFA) with AMOS 23 was utilized to assess the measurement properties. In Table 2 we provide an overview of the item loadings, composite reliabilities (CR), and average variance extracted (AVE). We estimated a measurement model to assess the fit indices. Besides one divestment item (withdrawal of products/services), the standardized factor loadings for all items were satisfactory and above the proposed cutoff value of .50. The final measurement model showed an acceptable fit ($\chi^2=240.64$, $df=153$; RMSEA=0.06; TLI=0.94; IFI=0.95; CFI=0.95).

The measures had AVE values of no less than 0.50, suggesting the existence of convergent validity (Table 2). Next, to assess whether the constructs exhibit discriminant validity, squared correlations between each pair of constructs and their respective AVE values were compared (Table 3). The findings showed that the squared correlations between any two constructs did not exceed their respective AVEs, providing support for discriminant validity (Fornell & Larcker, 1981).

Because our study exclusively uses self-reported survey data, common method variance (CMV) was identified as a potential issue. In order to minimize the occurrence of CMV, we applied *ex-ante* and *ex-post* procedures (Podsakoff et al., 2003). For *ex-ante* procedures we used different response formats for our survey questions. As for *ex-post* remedies, we examined the fit indices to assess the extent to which a single latent factor might present an alternative explanation to the derived factors. The results indicate unacceptable model fit ($\chi^2=1088.43$, $df=170$; RMSEA=0.18; TLI=0.52; IFI=0.54; CFI=0.54), suggesting no alternative explanation (Hu & Bentler, 1999).

Structural model assessment

To test our hypotheses, we ran a structural equation modeling (SEM) analysis using AMOS 23. The findings suggest that our model had an acceptable fit ($\chi^2=374.29$, $df=226$; CFI=0.93; TLI=0.92; IFI=0.94; RMSEA=0.06; see Table 4). As can be seen in Table 4, in support of H1a and H1b, an SME's level of proactivity was positively related to the emergence of positive emotions ($\beta=0.30$, $p<.01$), and negatively related to the emergence of negative emotions ($\beta=-0.27$, $p<.01$). Next, the regression indices suggest that a top manager's positive emotions are positively related to investment intention ($\beta=0.76$, $p<.01$), lending support to H2. In a similar fashion, we found support for H3 in which a top manager's negative emotions positively influence divestment intention ($\beta=0.19$, $p<.05$).

To test H4, H5, and H6, we inspected the indirect effects through mediation models. The indirect effect of

Table 2. Construct measurement properties.

Construct	Loading	AVE	CR
Proactivity			
We treat the downturn more like an opportunity than as a threat to the firm.	.62	.55	.83
Our marketing plans extensively capitalized on the opportunities that arose because of the downturn.	.87		
We view the downturn as an opportunity that will help us achieve our business objectives.	.81		
We act decisively to seize market opportunities generated by the downturn.	.66		
Positive emotions		.50	.75
Determined	.75		
Inspired	.77		
Interested	.60		
Negative emotions			
Upset	.91		
Nervous	.94		
Afraid	.76		
Insecure	.77		
Performance expectations		.91	.72
Sales revenues	.96		
Sales growth	.98		
Profitability	.91		
Cash flow	.83		
Divestment		.76	
Reduction of capacity	.80		
Decreased number of employees	.78		
Withdrawal of products/services ^a	.40		
Investment		.75	.50
New capital investments	.78		
New employments	.72		
Development and launch of new products/services	.62		

AVE: average variance extracted; CR: composite reliabilities.

^aDue to poor factor loading, the item was excluded from further analysis.

Table 3. Descriptive statistics and correlation matrix.

	M	SD	1	2	3	4	5	6	7	8	9
Firm size	37.90	40.84	1								
Export intensity	29.87	33.69	.32**	1							
Industry (dummy)	0.76	0.42	-.30**	-.16*	1						
Self-efficacy	3.87	0.65	.12	-.14	-.00	1					
Proactivity	2.43	0.99	.11	.02	-.05	.02	1				
Positive emotions	3.45	0.80	.15	-.04	-.13	.19*	.26**	1			
Negative emotions	2.76	1.06	-.14	-.00	-.06	-.08	-.21**	-.22**	1		
Performance expectations	2.50	1.20	.23**	.00	-.11	.14	.37**	.16*	-.32**	1	
Investment	2.77	1.00	.10	.06	-.09	.13	.34**	.44**	-.20**	.32**	1
Divestment	2.17	0.96	-.04	.01	-.04	-.05	-.22**	-.19*	.31**	-.40**	-.39**

** $p \leq .01$.

* $p \leq .05$.

proactivity on investment intention through positive emotions (H4) is significant ($\beta = 0.26$, LLCI = 0.10; ULCI = 0.55; $p < .01$). Since the LLCI and ULCI intervals fall outside the zero value, we conclude that mediation is significant. Also, the main effect (proactivity-investment intention) becomes insignificant, suggesting the presence

of full mediation. A similar occurrence is recorded when negative emotions are analyzed as a mediator (H5) ($\beta = -0.11$, LLCI = -0.25; ULCI = -0.03; $p < .01$). After the inclusion of the mediator, the main effect (proactivity-divestment intention) becomes insignificant, implying the presence of full mediation in this case as well. Such a

Table 4. Results of the SEM analysis.

Path	Hypothesis (expected direction)	Standardized coefficient	t value	Hypothesis test
Main effects				
Proactivity → Positive emotions	H1a (+)	0.30**	3.59	Supported
Proactivity → Negative emotions	H1b (–)	–0.27**	2.77	Supported
Positive emotions → Investment	H2 (+)	0.76**	4.35	Supported
Negative emotions → Divestment	H3 (+)	0.19*	2.07	Supported
Mediating effects				
Proactivity → Positive emotions → Investment	H4 (+)	0.26**		Supported
Proactivity → Negative emotions → Divestment	H5 (+)	–0.11**		Supported ^a
Positive emotions → Expectations → Investment	H6a (+)	0.06*		Supported ^b
Negative emotions → Expectations → Divestment	H6b (–)	0.11**		Supported ^b
Controls				
Size → Investment		–0.00	0.71	
Size → Divestment		0.00	0.86	
Export intensity → Investment		0.00	1.45	
Export intensity → Divestment		0.00	0.10	
Industry → Investment		–0.00	0.01	
Industry → Divestment		–0.16	0.89	
Self-efficacy → Investment		0.05	0.45	
Self-efficacy → Divestment		0.02	0.16	

SEM: structural equation modeling.

 $\chi^2 = 374.29$, $df = 226$; CFI = 0.93; TLI = 0.91; IFI = 0.93; RMSEA = 0.06.* $p \leq .05$.** $p \leq .01$.^aFull mediation.^bPartial mediation.

result gives us the confidence to accept both H4 and H5. Finally, to test for the mediating effect of performance expectations, we found a significant indirect effect from positive emotions to investment intention ($\beta = 0.06$, LLCI = 0.03; ULCI = 0.20; $p < .05$), and a significant negative indirect effect from negative emotions to divestment intention ($\beta = 0.11$, LLCI = 0.04; ULCI = 0.23; $p < .01$). Since the main effect remained significant, we concluded that partial mediation occurred. This led us to accept H6a and H6b. All findings and respective statistical indicators are reported in Table 4. The results suggest that none of our control variables had a significant effect either on investment or on divestment response intentions.

Discussion

Our study set to investigate SME responses to the economic crisis caused by the COVID-19 pandemic. Through our cognitive appraisal model we show that proactive beliefs can significantly increase (decrease) the positive (negative) emotional reactions of a top manager to the COVID-19 crisis. Consequently, a top manager's positive (negative) emotional reactions significantly shape an SME's investment (divestment) response intention. Furthermore, our mediation analyses show that emotions fully mediate the relationship between proactivity and

response intentions, whereas performance expectations partially mediate the relationship between emotions and response intentions. With regard to the influence of control variables, we did not find any significant effects at both the organizational and managerial levels. A possible explanation for such results might be that response intentions are not a function of the size, export intensity, industry, or top manager's self-efficacy. Since crises are very specific and unique contexts, the expected responses might deviate from those we would expect in "business as usual" situations where chosen controls would have a significant impact.

Conclusion

Theoretical implications

During the past two decades, the literature studying how SMEs respond to economic crises has been growing (Doern et al., 2019). Although the literature reveals that SMEs have a broad repertoire of strategic actions when responding to crises (Wenzel et al., 2020), there is surprisingly scant evidence on how these responses are formed (Trahms et al., 2013). A significant number of studies have emphasized the importance of emotions when managing a small business or entrepreneurial venture (Foo et al., 2009;

Welpel et al., 2012), which is not surprising since the entrepreneurial setting is complex, unpredictable, and colored by decision making which goes beyond rational decision making (Baron, 1998). Yet, to the best of our knowledge, there are a very limited number of studies investigating the influence of managerial emotional dispositions on decision making in times of economic crisis. Consequently, our study shows that response intentions are the direct outcome of the cognitive appraisal which is shaped by a firm's proactive orientation, and they are energized through top managers' emotional reactions to the crisis event. Hence, our addition to the literature arises from amalgamating the rich theoretical foundation on emotions in entrepreneurship and small business management and testing it within the cognitive appraisal framework. Our specific contributions are showcased below.

First, the value added of our study is in revealing the background of different response strategies pursued by SME top managers through the cognitive appraisal model during the current COVID-19 pandemic. By doing so, our study adds to the growing literature on the role of emotions in managerial decision making (Daniels, 1998; Delgado-García et al., 2010, 2012). Within the same lines, our study also contributes to the literature that investigates the impact of economic crises on firm responses in general (Trahms et al., 2013) and in SMEs (Cowling et al., 2015; Davidsson & Gordon, 2016).

Second, cognition is a main building block in a manager's appraisal of events occurring in the business environment. In this study we focused on an SME's level of proactivity as a firm-level orientation that further shapes top managers' cognitive capacity (Mitchell et al., 2002). As some studies warn, entrepreneurs only engage in behaviors that are aligned to their cognitive structures (Barreto, 2012). Our findings show that an SME's proactivity has a positive influence on the emergence of positive emotions and a negative influence on the emergence of negative emotions. With this finding, we enrich the previous literature by revealing the cognitive origin of an SME manager's positive and negative emotions (Delgado-García et al., 2012).

Third, we show that positive and negative emotions are distinct in shaping an SME's response intentions. We found that positive emotions generate a more favorable stance toward investment, and negative emotions a more favorable stance toward divestment. By following the broaden-and-build view (Fredrickson, 2001), we show that an SME manager's cognitive capacity is broadened by emotional reactions to a crisis. In addition to the original model, we proposed that negative emotions would also have a broadening effect. Consequently, our mediation analyses show a full mediation from proactivity to both investment and divestment response intentions through a top manager's emotional arousal. We extend previous work (Baron, 2008; Baron & Tang, 2011; Grichnik et al., 2010) by showing how a top manager's emotional reactions shape an SME's response intentions.

Also, we respond to recent calls by researchers for the simultaneous valorization of both negative and positive emotions in forming a top manager's strategic responses (Bernoster et al., 2020).

To further our understanding of how emotions shape responses, we additionally reveal the mediating effect of performance expectations on the relationship between emotions and response intentions. Recent studies on the psychology of emotions show that the way in which how emotions influence behavior depends on how individuals expect emotions to influence behavior (Tamir & Bigman, 2018). Our findings show that performance expectations reinforce the direct link between emotional reactions and response intentions, suggesting a partial mediating effect on both links. Performance expectations, as a source of bias, are shown to be instrumental in generating a more accurate view of how organizations and individuals cope with crises. Besides adding to the previously mentioned literatures, this finding can be of particular interest to other social sciences, especially psychology scholars who investigate cognitive appraisal.

Managerial implications

Our study reveals a differential profile of top managers regarding their cognitive appraisal of the COVID-19 crisis as it is reflected through an SME's proactive orientation. Although the literature points out different response strategies used by entrepreneurs and managers in dealing with economic crises (Doern et al., 2019; Trahms et al., 2013), our study offers a detailed insight into how top management's coping repertoire is being shaped by an SME's proactivity, emotional reactions, and future performance expectations.

The occurrence of positive emotions is increased if an SME nurtures a proactive organizational culture. In proactive SMEs, managers are energized through the effect of positive emotions and encouraged to set more ambitious goals, which would entail further investments into their business during crises. On the contrary, if an economic crisis goes against the firm's beliefs, then managers would consider more pessimistic consequences for their business. Thus, we posit that such misalignment elicits negative emotions and managers charged with negative emotions are more inclined to engage in divestment. SMEs can actually use these findings to create more proactive organizational cultures.

Many firms react to a crisis through fear, which can eventually cloud their judgment and eventually lower their possibility of utilizing and leveraging the resources and capabilities to engage in growth. To cultivate a more proactive organizational culture, in which both top managers and employees would be able to recognize opportunities in times of crises, activities such as psychological counseling on managing through a crisis, as well as training sessions and seminars that address strategic tools such as design

thinking, would become helpful for managers. By refocusing rather than downsizing their business models, firms could tap into the new emerging business needs. Our recommendations also go to managers to carefully regulate their positive emotions. Studies have shown that managers charged with positive emotions can discount negative information, become overly confident, and thus engage in activities of questionable effectiveness and efficiency (Hmieleski & Baron, 2009).

Limitations and suggestions for further research

Our study utilizes the cognitive appraisal perspective in explaining how SME managers cope with upheavals such as economic crises. However, our study features some limitations that need to be acknowledged. First, the structure of our sample slightly deviates from the population in terms of representativeness, and we focus on SMEs from B2B industries from Croatia, and results could differ among firms from B2C industries or in different national settings. Second, we believe that resilience underlies the character of managers in proactive firms (Duchek, 2018); however, we did not capture it in our model; therefore, future studies are encouraged to investigate whether resilience makes a solid foundation for developing proactivity. Third, the literature indicates that cognition and emotions are intertwined in a way that there is a bidirectional relationship between them (Grichnik et al., 2010). Indeed, some theoretical frameworks such as affective events theory suggest that attitudes and judgments can result from experiencing a specific emotion. In addition, the literature points out that cognitive reappraisal may occur when managers reinterpret the events in the environment and change their beliefs accordingly. Future studies could investigate the existence of these effects in a longitudinal setting where specific reappraisals of an event could be measured during different time periods. Fourth, a recent study suggests that time constraints should be included as an important determinant of strategic decision making which occurs through emotional arousal (Treffers et al., 2020). We therefore encourage future studies to investigate whether managers who are charged with a specific emotion (negative or positive) and are limited in regard to time, would again choose their investment and divestment responses. Finally, future studies could account for more effects and controls at the managerial level, including demographics and psychographics. For instance, emotion regulation seems to be instrumental in explicating why responses from some individuals are more dependent on emotional arousal. Since studies show that managers and entrepreneurs might be a segment of individuals who can experience extreme emotions at the same time (Podoyntsyna et al., 2012), future studies are encouraged to investigate how emotion regulation helps top managers in SMEs to adapt their decisions for achieving the best possible outcomes in a given situation.

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References

- Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. (2005). Affect and creativity at work. *Administrative Science Quarterly*, 50(3), 367–403. <https://doi.org/10.2189%2Fasqu.2005.50.3.367>
- Bachkurov, A. A. (2015). Managerial decision making under specific emotions. *Journal of Managerial Psychology*, 30(7), 861–874. <https://doi.org/10.1108/JMP-02-2013-0071>
- Bagozzi, R. P., Gopinath, M., & Nyer, P. U. (1999). The role of emotions in marketing. *Journal of the Academy of Marketing Science*, 27(2), 185–206. <https://doi.org/10.1177%2F0092070399272005>
- Baron, R. A. (1998). Cognitive mechanisms in entrepreneurship: Why and when entrepreneurs think differently than other people. *Journal of Business Venturing*, 13(4), 275–294. [https://doi.org/10.1016/S0883-9026\(97\)00031-1](https://doi.org/10.1016/S0883-9026(97)00031-1)
- Baron, R. A. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review*, 33(2), 328–340. <https://doi.org/10.5465/amr.2008.31193166>
- Baron, R. A., Hmieleski, K. M., & Henry, R. A. (2012). Entrepreneurs' dispositional positive affect: The potential benefits—And potential costs—Of being “up.” *Journal of Business Venturing*, 27(3), 310–324. <https://doi.org/10.1016/j.jbusvent.2011.04.002>
- Baron, R. A., & Tang, J. (2011). The role of entrepreneurs in firm-level innovation: Joint effects of positive affect, creativity, and environmental dynamism. *Journal of Business Venturing*, 26(1), 49–60. <https://doi.org/10.1016/j.jbusvent.2009.06.002>
- Barreto, I. (2012). Solving the entrepreneurial puzzle: The role of entrepreneurial interpretation in opportunity formation and related processes. *Journal of Management Studies*, 49, 356–380. <https://doi.org/10.1111/j.1467-6486.2011.01023.x>
- Becker, G. S. (1976). *The economic approach to human behavior*. The University of Chicago Press.
- Beliaeva, T., Shirokova, G., Wales, W., & Gafforova, E. (2020). Benefiting from economic crisis? Strategic orientation effects, trade-offs, and configurations with resource availability on SME performance. *International Entrepreneurship and Management Journal*, 16(1), 165–194. <https://doi.org/10.1007/s11365-018-0499-2>
- Bernoster, I., Mukerjee, J., & Thurik, R. (2020). The role of affect in entrepreneurial orientation. *Small Business Economics*, 54(1), 235–256. <https://doi.org/10.1007/s11187-018-0116-3>
- Bruton, G. D., Ahlstrom, D., & Wan, J. C. (2003). Turnaround in East Asian firms: Evidence from ethnic overseas Chinese

- communities. *Strategic Management Journal*, 24(6), 519–540. <https://doi.org/10.1002/smj.312>
- Brzozowski, J., Cucculelli, M., & Peruzzi, V. (2019). Firms' proactiveness during the crisis: Evidence from European data. *Entrepreneurship Research Journal*, 9(3), 1–14. <https://doi.org/10.1515/erj-2017-0215>
- Bullough, A., Renko, M., & Myatt, T. (2014). Danger zone entrepreneurs: The importance of resilience and self-efficacy for entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, 38(3), 473–499. <https://doi.org/10.1111/etap.12006>
- Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, 34(3), 511–532. <https://doi.org/10.5465/amr.2009.40633190>
- Cardon, M. S., Foo, M., Der Shepherd, D., & Wiklund, J. (2012). Exploring the heart: Entrepreneurial emotion is a hot topic. *Entrepreneurship: Theory and Practice*, 36(1), 1–10. <https://doi.org/10.1111/j.1540-6520.2011.00501.x>
- Chadwick, I. C., & Raver, J. L. (2020). Psychological resilience and its downstream effects for business survival in nascent entrepreneurship. *Entrepreneurship Theory and Practice*, 44(2), 233–255. <https://doi.org/10.1177/02F1042258718801597>
- Cowling, M., Liu, W., Ledger, A., & Zhang, N. (2015). What really happens to small and medium-sized enterprises in a global economic recession? UK evidence on sales and job dynamics. *International Small Business Journal*, 33(5), 488–513. <https://doi.org/10.1177/02F0266242613512513>
- Cowling, M., Brown, R., & Rocha, A. (2020). Did you save some cash for a rainy COVID-19 day? The crisis and SMEs. *International Small Business Journal: Researching Entrepreneurship*, 38(7), 593–604. <https://doi.org/10.1177/0266242620945102>
- Cristofaro, M. (2019). The role of affect in management decisions: A systematic review. *European Management Journal*, 37(1), 6–17. <https://doi.org/10.1016/j.emj.2018.12.002>
- Daniels, K. (1998). Towards integrating emotions into strategic management research: Trait affect and perceptions of the strategic environment. *British Journal of Management*, 9(3), 163–168. <https://doi.org/10.1111/1467-8551.00081>
- Davidsson, P., & Gordon, S. R. (2016). Much Ado about nothing? The surprising persistence of nascent entrepreneurs through macroeconomic crisis. *Entrepreneurship: Theory and Practice*, 40(4), 915–941. <https://doi.org/10.1111/etap.12152>
- Delgado-García, J. B., de la Fuente-Sabaté, J. M., & de Quevedo-Puente, E. (2010). Too negative to take risks? The effect of the CEO's emotional traits on firm risk. *British Journal of Management*, 21(2), 313–326. <https://doi.org/10.1111/j.1467-8551.2008.00625.x>
- Delgado-García, J. B., De Quevedo Puente, E., & Blanco Mazagatos, V. (2015). How affect relates to entrepreneurship: A systematic review of the literature and research agenda. *International Journal of Management Reviews*, 17(2), 191–211. <https://doi.org/10.1111/ijmr.12058>
- Delgado-García, J. B., Rodríguez-Escudero, A. I., & Martín-Cruz, N. (2012). Influence of affective traits on entrepreneur's goals and satisfaction. *Journal of Small Business Management*, 50(3), 408–428. <https://doi.org/10.1111/j.1540-627X.2012.00359.x>
- Devece, C., Peris-Ortiz, M., & Rueda-Armengot, C. (2016). Entrepreneurship during economic crisis: Success factors and paths to failure. *Journal of Business Research*, 69(11), 5366–5370. <https://doi.org/10.1016/j.jbusres.2016.04.139>
- Doern, R., Williams, N., & Vorley, T. (2019). Special issue on entrepreneurship and crises: Business as usual? An introduction and review of the literature. *Entrepreneurship and Regional Development*, 31(5–6), 400–412. <https://doi.org/10.1080/08985626.2018.1541590>
- Duchek, S. (2018). Entrepreneurial resilience: A biographical analysis of successful entrepreneurs. *International Entrepreneurship and Management Journal*, 14(2), 429–455. <https://doi.org/10.1007/s11365-017-0467-2>
- Ekman, P. (1992). An argument for basic emotions. *Cognition & Emotion*, 6(3–4), 169–200. <https://doi.org/10.1080/02699939208411068>
- Entrepreneur.com. (2019). The emotional roller coaster of entrepreneurship. <https://www.entrepreneur.com/article/329888>
- Foo, M. D. (2011). Emotions and entrepreneurial opportunity evaluation. *Entrepreneurship: Theory and Practice*, 35(2), 375–393. <https://doi.org/10.1111/j.1540-6520.2009.00357.x>
- Foo, M. D., Uy, M. A., & Baron, R. A. (2009). How do feelings influence effort? An empirical study of entrepreneurs' affect and venture effort. *Journal of Applied Psychology*, 94(4), 1086–1094. <https://doi.org/10.1037/a0015599>
- Forgas, J. P. (1992). Mood and the perception of unusual people: Affective asymmetry in memory and social judgments. *European Journal of Social Psychology*, 22(6), 531–547. <https://doi.org/10.1002/ejsp.2420220603>
- Forgas, J. P., & George, J. M. (2001). Affective influences on judgments and behavior in organizations: An information processing perspective. *Organizational Behavior and Human Decision Processes*, 86(1), 3–34. <https://doi.org/10.1006/obhd.2001.2971>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/02F002224378101800104>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226. <https://psycnet.apa.org/doi/10.1037/0003-066X.56.3.218>
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crisis? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84(2), 365–376. <https://doi.org/10.1037/0022-3514.84.2.365>
- Gonzalez, K., & Winkler, C. (2019). The entrepreneurial breaking point: Undergoing moments of crisis. *Management Decision*, 57(11), 2853–2868. <https://doi.org/10.1108/MD-10-2017-1057>
- González-Pernía, J. L., Guerrero, M., Jung, A., & Pena-Legazkue. (2018). Economic recession shake-out and entrepreneurship: Evidence from Spain. *BRQ Business Research Quarterly*, 21(3), 153–167. <https://doi.org/10.1016/2Fj.brq.2018.06.001>
- Görg, H., & Spaliara, M. E. (2014). Exporters in the financial crisis. *National Institute Economic Review*, 228(1), 49–57. <https://doi.org/10.1177/02F002795011422800105>
- Greene, F. J., & Rosiello, A. (2020). A commentary on the impacts of “Great Lockdown” and its aftermath on scaling firms: What are the implications for entrepreneurial

- research? *International Small Business Journal: Researching Entrepreneurship*, 38(7), 583–592. <https://doi.org/10.1177/0266242620961912>
- Grichnik, D., Smeja, A., & Welp, I. (2010). The importance of being emotional: How do emotions affect entrepreneurial opportunity evaluation and exploitation? *Journal of Economic Behavior and Organization*, 76(1), 15–29. <https://doi.org/10.1016/j.jebo.2010.02.010>
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206. <https://doi.org/10.5465/amr.1984.4277628>
- Hmieleski, K. M., & Baron, R. A. (2009). Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of Management Journal*, 52(3), 473–488. <https://doi.org/10.5465/amj.2009.41330755>
- Hodgkinson, G. P., & Healey, M. P. (2014). Coming in from the cold: The psychological foundations of radical innovation revisited. *Industrial Marketing Management*, 43(8), 1306–1313. <https://doi.org/10.1016/j.indmarman.2014.08.012>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Huy, Q., & Zott, C. (2019). Exploring the affective underpinnings of dynamic managerial capabilities: How managers' emotion regulation behaviors mobilize resources for their firms. *Strategic Management Journal*, 40(1), 28–54. <https://doi.org/10.1002/smj.2971>
- Huy, Q. N. (2012). Emotions in strategic organization: Opportunities for impactful research. *Strategic Organization*, 10(3), 240–247. <https://doi.org/10.1177/1476127012453107>
- International Monetary Fund. (2020). *A crisis like no other, an uncertain recovery*. <https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>
- Isen, A. M. (2001). An influence of positive affect on decision making in complex situations: Theoretical issues with practical implications. *Journal of Consumer Psychology*, 11(2), 75–85. https://doi.org/10.1207/S15327663JCP1102_01
- Isen, A. M., & Means, B. (1983). The influence of positive affect on decision-making strategy. *Social Cognition*, 2, 18–31. <https://doi.org/10.1521/soco.1983.2.1.18>
- Jin, Y. (2009). The effects of public's cognitive appraisal of emotions in crises on crisis coping and strategy assessment. *Public Relations Review*, 35(3), 310–313. <https://doi.org/10.1016/j.pubrev.2009.02.003>
- Kim, H. J., & Cameron, G. T. (2011). Emotions matter in crisis: The role of anger and sadness in the public's response to crisis news framing and corporate crisis response. *Communication Research*, 38(6), 826–855. <https://doi.org/10.1177/0093650210385813>
- Kollmann, T., Stöckmann, C., & Kensbock, J. M. (2017). Fear of failure as a mediator of the relationship between obstacles and nascent entrepreneurial activity—An experimental approach. *Journal of Business Venturing*, 32(3), 280–301. <https://doi.org/10.1016/j.jbusvent.2017.02.002>
- König, A., Graf-Vlachy, L., Bundy, J., & Little, L. M. (2020). A blessing and a curse: How CEOs' trait empathy affects their management of organizational crises. *Academy of Management Review*, 45(1), 130–153. <https://doi.org/10.5465/amr.2017.0387>
- Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A., & Tiberius, V. (2020). The economics of COVID-19: Initial empirical evidence on how family firms in five European countries cope with the corona crisis. *International Journal of Entrepreneurial Behaviour and Research*, 26(5), 1067–1092. <https://doi.org/10.1108/IJEBR-04-2020-0214>
- Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, 46(8), 819–834. <https://psycnet.apa.org/doi/10.1037/0003-066X.46.8.819>
- Lim, D. S., Morse, E. A., & Yu, N. (2020). The impact of the global crisis on the growth of SMEs: A resource system perspective. *International Small Business Journal*, 38(6), 492–503. <https://doi.org/10.1177/0266242620950159>
- Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. *Academy of Management Review*, 12(1), 133–143. <https://doi.org/10.5465/amr.1987.4306502>
- Mitchell, R. K., Busenitz, L. W., Lant, T., McDougall, P. P., Morse, E. A., & Smith, B. (2002). Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. *Entrepreneurship Theory and Practice*, 27, 93–104. <https://doi.org/10.1111/2F1540-8520.00001>
- Mittal, V., & Ross, W. T. (1998). The impact of positive and negative affect and issue framing on issue interpretation and risk taking. *Organizational Behavior and Human Decision Processes*, 76(3), 298–324. <https://doi.org/10.1006/obhd.1998.2808>
- Morgan, T., Anokhin, S., Ofstein, L., & Friske, W. (2020). SME response to major exogenous shocks: The bright and dark sides of business model pivoting. *International Small Business Journal: Researching Entrepreneurship*, 38(5), 369–379. <https://doi.org/10.1177/0266242620936590>
- Nikolaev, B., Shir, N., & Wiklund, J. (2020). Dispositional positive and negative affect and self-employment transitions: The mediating role of job satisfaction. *Entrepreneurship Theory and Practice*, 44(3), 451–474. <https://doi.org/10.1177/2F1042258718818357>
- Omored, A., Thorgren, S., & Wincent, J. (2015). Entrepreneurship psychology: A review. *International Entrepreneurship and Management Journal*, 11(4), 743–768. <https://doi.org/10.1007/s11365-014-0307-6>
- Patzelt, H., & Shepherd, D. A. (2011). Negative emotions of an entrepreneurial career: Self-employment and regulatory coping behaviors. *Journal of Business Venturing*, 26(2), 226–238. <https://doi.org/10.1016/j.jbusvent.2009.08.002>
- Peric, M., & Vitezic, V. (2016). Impact of global economic crisis on firm growth. *Small Business Economics*, 46(1), 1–12. <https://doi.org/10.1007/s11187-015-9671-z>
- Poblete, C. (2018). Growth expectations through innovative entrepreneurship: The role of subjective values and duration of entrepreneurial experience. *International Journal of Entrepreneurial Behaviour and Research*, 24(1), 191–213. <https://doi.org/10.1108/IJEBR-03-2017-0083>
- Podoyntsyna, K., Van der Bij, H., & Song, M. (2012). The role of mixed emotions in the risk perception of novice and serial entrepreneurs. *Entrepreneurship: Theory and*

- Practice*, 36(1), 115–140. <https://doi.org/10.1111/j.1540-6520.2011.00476.x>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Rathunde, K. (2000). Broadening and narrowing in the creative process: A commentary on Fredrickson's "Broaden-and-build" model. *Prevention & Treatment*, 3(1), Article 6c.
- Roese, N. J., & Sherman, J. W. (2007). *Expectancy*. The Guilford Press.
- Schmitt, A., Xin, K., & Langan, R. (2020, July). 3 biases that shaped CEOs' pandemic response. *Harvard Business Review*. <https://hbr.org/2020/07/research-3-biases-that-shaped-ceos-pandemic-response>
- Sharma, P., Leung, T. Y., Kingshott, R. P. J., Davcik, N. S., & Cardinali, S. (2020). Managing uncertainty during a global pandemic: An international business perspective. *Journal of Business Research*, 116, 188–192. <https://doi.org/10.1016/j.jbusres.2020.05.026>
- Simon, H. A. (1976). *Administrative behavior: A study of decision-making processes in administrative organization* (3rd ed.). New York: Free Press.
- Smallbone, D., Deakins, D., Battisti, M., & Kitching, J. (2012). Small business responses to a major economic downturn: Empirical perspectives from New Zealand and the United Kingdom. *International Small Business Journal*, 30(7), 754–777. <https://doi.org/10.1177%2F0266242612448077>
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, 48(4), 813–838. <https://doi.org/10.1037//0022-3514.48.4.970>
- Smith, C. A., & Lazarus, R. S. (1993). Appraisal components, core relational themes, and the emotions. *Cognition & Emotion*, 7(3–4), 233–269. <https://doi.org/10.1080/02699939308409189>
- Srinivasan, R., Rangaswamy, A., & Lilien, G. L. (2005). Turning adversity into advantage: Does proactive marketing during a recession pay off? *International Journal of Research in Marketing*, 22(2), 109–125. <https://doi.org/10.1016/j.ijresmar.2004.05.002>
- Tamir, M., & Bigman, Y. E. (2018). Expectations influence how emotions shape behavior. *Emotion*, 18(1), 15–25. <https://psycnet.apa.org/doi/10.1037/emo0000351>
- Temouri, Y., Shen, K., Pereira, V., & Xie, X. (2022). How do emerging market SMEs utilize resources in the face of environmental uncertainty? *BRQ Business Research Quarterly*, 25(3), 212–223. <https://doi.org/10.1177%2F2340944420929706>
- Trahms, C. A., Ndofor, H. A., & Sirmon, D. G. (2013). Organizational decline and turnaround: A review and agenda for future research. *Journal of Management*, 39(5), 1277–1307. <https://doi.org/10.1177/0149206312471390>
- Treffers, T., Klärner, P., & Huy, Q. N. (2020). Emotions, time, and strategy: The effects of happiness and sadness on strategic decision-making under time constraints. *Long Range Planning*, 53, Article 101954. <https://doi.org/10.1016/j.lrp.2019.101954>
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157), 1124–1131. <https://doi.org/10.1126/science.185.4157.1124>
- United Nations Conference on Trade and Development. (2020). *Impact of the COVID-19 pandemic on trade and development: Transitioning to a new normal*. https://unctad.org/system/files/official-document/osg2020d1_en.pdf
- Van Gelderen, M., Kautonen, T., & Fink, M. (2015). From entrepreneurial intentions to actions: Self-control and action-related doubt, fear, and aversion. *Journal of Business Venturing*, 30(5), 655–673. <https://doi.org/10.1016/j.jbusvent.2015.01.003>
- Varum, C. A., & Rocha, V. C. (2013). Employment and SMEs during crises. *Small Business Economics*, 40(1), 9–25. <https://doi.org/10.1007/s11187-011-9343-6>
- Verhees, F. J., Meulenbergh, M. T., & Pennings, J. M. (2010). Performance expectations of small firms considering radical product innovation. *Journal of Business Research*, 63(7), 772–777. <https://doi.org/10.1016/j.jbusres.2009.06.006>
- Wade, M., & Bjerkan, H. (2020). Three proactive response strategies to COVID-19 business challenges. *MIT Sloan Management Review*. <https://sloanreview.mit.edu/article/three-proactive-response-strategies-to-covid-19-business-challenges>
- Wagner, M. (2014). Fear and anger in Great Britain: Blame assignment and emotional reactions to the financial crisis. *Political Behavior*, 36(3), 683–703. <https://doi.org/10.1007/s11109-013-9241-5>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. <https://psycnet.apa.org/doi/10.1037/0022-3514.54.6.1063>
- Welpel, I. M., Spörrle, M., Grichnik, D., Michl, T., & Audretsch, D. B. (2012). Emotions and opportunities: The interplay of opportunity evaluation, fear, joy, and anger as antecedent of entrepreneurial exploitation. *Entrepreneurship: Theory and Practice*, 36(1), 69–96. <https://doi.org/10.1111/j.1540-6520.2011.00481.x>
- Wenzel, M., Stanske, S., & Lieberman, M. B. (2020, April). Strategic responses to crisis. *Strategic Management Journal*, pp. 7–18. <https://doi.org/10.1002/smj.3161>
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387–406. <https://doi.org/10.1111%2Fj.1540-6520.2007.00179.x>
- The World Bank. (2020). *The global economic outlook during the COVID-19 pandemic: A changed world*. <https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>
- Zhao, Y., & Thompson, P. (2019). Investments in managerial human capital: Explanations from prospect and regulatory focus theories. *International Small Business Journal*, 37(4), 365–394. <https://doi.org/10.1177%2F0266242619828264>