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RESILIENCE IN SMALL AND MEDIUM-SIZED ENTERPRISES

Abstract

Purpose – Building on the recent capability-based conceptualisation of resilience, this paper aims to explore whether the experience of a previous crisis and entrepreneur resilience are associated with SMEs' adoption of different anticipation strategies for adversities.

Design/Methodology/Approach – Using original survey data on 959 Italian and German SMEs, the research uses a multinomial logistic regression model in order to test the influence of the prior experience of a crisis and the entrepreneur resilience on the likelihood of adopting different anticipation strategies.

Findings – The paper shows that the previous experience of a crisis increases the likelihood of regularly adopting proactive but non-formalised anticipation actions while decreasing the likelihood of adopting a pure reactive strategy to adversities; in addition, entrepreneur resilience is nonlinearly associated with anticipation strategies.

Originality/value – The main originalities rely on eschewing a pure binary view in relation to the organisational choice of adopting a reactive or a proactive approach toward adversities and on considering the entrepreneur resilience as a factor with both 'bright' and 'dark' side effects in relation to the anticipation of adversities.

Keywords Anticipation, Adversities, Small and medium-sized enterprises, Organisational resilience, Entrepreneur resilience, Crisis management.

Paper type Research paper

1. Introduction

Modern organisations operate and compete in a turbulent and challenging environment that presents several serious threats. Pandemics, economic instability, natural disasters, cyberattacks and the emergence of new competitors are only a subset of the potential events that could cause organisations to fail. Moreover, other risks for firm survival could originate from within, such as technical failures, man-made hazards or an entrepreneur's personal circumstances. In such a context, small- and medium-sized enterprises (SMEs) are more vulnerable than larger organisations because of their

relative shortcomings regarding technological, managerial and human capabilities (Pelletier and Martin Cloutier, 2019), lower diversification opportunities and a strong dependence on a few customers and suppliers (Branicki *et al.*, 2018; Chowdhury, 2011). In periods of prolonged economic crisis, SMEs' weaknesses may be exacerbated. Indeed, they are generally the first to feel the effects of crises and undergo the most critical consequences of these crises (Etemad, 2020; Juergensen *et al.*, 2020).

To endure and thrive in an uncertain business world, adopting an *anticipation strategy* is crucial. Here, anticipation refers to "the ability to detect critical developments within the firm or in its environment and to adapt proactively" (Duchek, 2020, p. 225). Anticipating threats and preparing accordingly can reduce organisational vulnerability and improve organisational resilience (Burnard and Bhamra, 2011; Burnard *et al.*, 2018; Comfort *et al.*, 2001; Latifah *et al.*, 2021; Mpekiaris *et al.*, 2020; Vargo and Seville, 2011; Williams *et al.*, 2017). The literature on resilience has identified several methods to anticipate and prepare for risks, such as continuity planning and disaster recovery planning (Davison, 2014; Herbane, 2010a, 2010b; Sahebjamnia *et al.*, 2014). However, the most studies provide limited knowledge about anticipation strategies and their determinants in SMEs (Han and Nigg, 2011; Herbane, 2015; Mpekiaris *et al.*, 2020; Sadiq and Graham, 2016; Spillan and Hough, 2003). On the one hand, the literature on SMEs' resilience has emphasised their capabilities to adapt and react to crises (Ates and Bititci, 2011; Pauluzzo, 2021; Smallbone *et al.*, 2012), hence neglecting more in-depth investigations of these firms' anticipation of adversity (Branicki *et al.*, 2018). On the other hand, the strategies adopted to anticipate risks have mainly been studied within the context of larger companies. Indeed, as suggested by Corey and Deitch (2011), SMEs may suffer from limitations in the amount and kind of resources to be allocated to risk prevention that call for different anticipation strategies (Battisti and Deakins, 2017; Burnard and Bhamra, 2011; Herbane, 2015; Mpekiaris *et al.*, 2020; Vargo and Seville, 2011).

Drawing on the recent capability-based model on organisational resilience (Duchek, 2020), this study contends that the organisational experience of previous adversity and the individual resilience of the entrepreneur can influence a SME's ability to anticipate business threats. Both these factors can be considered as critical sources of knowledge upon which a firm builds its preventive actions (Duchek, 2018, 2020).

Therefore, the current paper addresses the following main research question: Is the organisational experience of previous adversity and the individual resilience of the entrepreneur increasing the likelihood that a SME will adopt anticipation strategies for adversities? In particular, it is hypothesised that the experience of previous adversity activates "a self-enhancing process" that "helps organizations regain contextual awareness to be ready for further challenges" (Ma *et al.*, 2018, p. 257). Conversely, as far as the entrepreneur is concerned, it is hypothesised that his/her resilience can positively influence the firm's likelihood of committing to the adoption of anticipation strategies (Duchek, 2018; Korber and McNaughton, 2018; Williams *et al.*, 2017) but that the effect is positive up to a certain level of individual resilience. In fact, the positive effect might turn into a negative effect at high level of entrepreneur resilience, where the entrepreneur's self-confidence could be so strong that individual resilience creates a positive illusion of control over both personal and organisational outcomes (Cannon and Edmondson, 2005), thus reducing the organisational anticipation for adversities ('dark side' effect).

Using an original dataset on 959 German and Italian SMEs, the model is tested through a multinomial logistic regression. The results show that in SMEs, the experience of a previous shock increases the likelihood of adopting regular anticipation strategies while decreasing the likelihood of adopting a reactive strategy to adversities and that entrepreneur resilience is nonlinearly associated with anticipation strategies.

The contribution to studies on resilience is threefold. First, by proposing and analysing the adoption of a set of anticipation strategies to adversities that are characterised by a growing level of commitment, this study adds to previous studies that – in particular as SMEs are concerned - have focused on the organisational capabilities to react to crises rather than anticipate them (Herbane, 2015, 2019). Second, considering that extant empirical studies are not unanimous regarding the advantages given by the previous shock's experience and the role played by entrepreneurs' resilience, this study shows the non-linear effect of individual and organisational experience on building anticipation capabilities. Third, by analysing both individual- and organisational-level variables, the study addresses the call for more "insights into how these different levels of analysis are linked to each other" (Linnenluecke, 2017, p. 25) in contributing to organisational resilience.

The present study proceeds as follows: next section reviews extant literature on anticipation of adversities in SMEs and its antecedents. Then, section three presents data, variables and methodology. Section four describes the results, while section five reports the discussion and highlights the theoretical and practical implications. Finally, section six assesses the limitations and possible avenues for further studies.

2. Literature review

2.1. Anticipating adversities in SMEs

The literature on organisational resilience has suggested that micro, small-sized and medium-sized enterprises are more vulnerable to crises than larger organisations (Pal *et al.*, 2014) and that their capacity to anticipate threats is limited (Burnard and Bhamra, 2011). As suggested by Duchek (2020) drawing on environmental scanning literature (Fahey and King, 1977; Fahey *et al.*, 1981) and high reliability theory (Weick and Sutcliffe, 2006, 2007; Weick *et al.*, 1999), to anticipate the unexpected, companies need to enhance their 'attention' to the internal and external environment and preparing accordingly. This includes the ability to look forward to the opportunities and potential sources of crises while recognising threats and their consequences ahead of time. Indeed, critical events often start with weak signals and discontinuities that can be noticed by organisational members. Therefore, a major crisis can be prevented by developing an organisational state of alert that permits the organisation to anticipate problems and prepare for them (Weick and Sutcliffe, 2007).

Notwithstanding the relevance of anticipation in preventing crises and limiting their negative effects, there is a lack of empirical evidence in management studies about crisis-prevention activities in SMEs. Specifically, whereas SMEs display a comparatively higher capacity to react in the face of hardships than larger firms (Ates and Bititci, 2011; Battisti and Deakins, 2012; Pauluzzo, 2021; Smallbone *et al.*, 2012), they are less likely to possess the ability to anticipate adversities because of a lack of resources and dedicated organisational processes (Budge *et al.*, 2008; Herbane, 2013; Ritchie *et al.*, 2011; Runyan, 2006; Spillan and Hough, 2003). Moreover, as suggested by Herbane (2015), crisis management studies adopt a definition of adversity planning that is focused on the practices adopted by large companies, hence overlooking SMEs

where planning is less likely to be formalised into organisational procedures (Falkner and Hiebl, 2015; Gao *et al.*, 2013; Herbane, 2015).

Addressing these limitations, this paper states that to detect weak signals of crises in the internal and external environment, SMEs can adopt different anticipation strategies characterised by an increasing level of organisational commitment. In particular, the present study defines organisational commitment as a combination of the frequency of the anticipation activities activated by the company and their level of formalisation. As noted by Fahey and King (1977) and Fahey *et al.* (1981), frequency and formalisation are strongly interrelated when it comes to the activities devoted to scanning the environment in search for adversities.

In particular, this study identifies four anticipation strategies that are characterised by a growing level of organisational commitment. Companies adopting a *reactive strategy* devote little or no resources to the identification and evaluation of adversities; rather than planning, they react to unanticipated crises. Facing a crisis, they leverage their organisational capability to improvise and solve problems by recombining already existing resources (Weick, 1993). SMEs adopting a *desultory anticipation strategy* devote their attention to the analysis of the components of the environment deemed important. Such a strategy does not entail the development of formal planning procedures, but it is instead based either on ad hoc analyses of relevant information (e.g., studies, reports) or on monitoring the warnings coming from employees who operate in direct contact with major contingencies. As a result, the detection of a forthcoming crisis may happen 'by chance', exploiting sensemaking capabilities of single individuals or groups. The adoption of a *regular anticipation strategy* draws on individual and organisational expertise in different fields (i.e., evolution of consumer tastes, technological innovation, and labour market legislation) to gather information on potential risks. The SME moves from occasional problem solving to regular threat detection, with the aim of assessing the impacts of adversities, hence planning the responses to them. The formulation of contingency plans may involve multiple roles, requiring collaboration and dedicated planning activities. This strategy aims to enhance the organisation's capability to handle environmental uncertainty rather than just sensing them. Finally, SMEs adopting a *continuous anticipation strategy* emphasise the capability of constantly monitoring internal and

external environment through organisationally structured procedures. Potential threats to the business' survival and corresponding organisational responses are codified in formal risk registers, that collect information from different sources, updated crisis scenarios and response actions.

2.2. Experience of crisis and anticipation in SMEs

The experience of a prior crisis has been identified as a crucial factor in informing the organisational capability to anticipate adversities (Duchek, 2020), because how an organisation makes sense and responds to new challenges depends on knowledge derived from prior events (Sutcliffe and Vogus, 2003). Investigating business disaster preparations in Memphis and Des Moines, Dahlhamer and D'Souza (1997, p. 277) find that a previous disaster experience is "a significant predictor of preparedness" because prior experience may lead to a valorisation of disaster-related preparedness. Similarly, Spillan and Hough (2003) suggest that *before* a crisis event, a SME maintains a natural tendency to passively wait for future potential challenges instead of proactively detecting and preparing for threats. On the other hand, *after* the appearance of an event that threatens a firm's survival, the organisation tends to anticipate and prepare for potential subsequent adversities. In line with this, Herbane (2015, p. 584) observes a positive influence of the recent experience of a crisis on SMEs' "distinctness and formality of preparations for acute business interruptions".

However, not all the empirical studies confirm the learning advantages of a prior experience of adversity when it comes to preparedness for another crisis. In a case study about a severe flood in 1997 that caused the evacuation of Grand Forks, North Dakota, and damages of USD 1 billion, Flynn (2007) finds that the experience of adversity contributed only marginally to preparedness planning for firms operating during the disaster. Studying business recovery after a natural disaster, Dahlhamer and Tierney (1998) report an insignificant association between the experience of past adversities and recovery after a subsequent negative event. As for the reasons of these findings, authors (e.g., Josephson *et al.*, 2017; Spillan and Hough, 2003) suggested that prior knowledge may restrict a firm's scanning activities when it comes to familiar sources of crises. In addition, firms could find it difficult to learn from crises because such events are rare.

Overall, empirical studies in crisis management lack a consensus about the influence of prior experience of a crisis on anticipation and preventive actions towards future adversities. Concentrating on SMEs, further considerations are possible. Although SMEs may be poorly equipped for transferring the experiences of previous crises into future formal prevention strategies because of a lack of managerial resources, their limited size can favour the sharing of information and interpretation among individuals. Therefore it may be expected that SMEs which experienced a crisis are more likely to generate common mental maps among employees, retaining interpretations of problems, solutions and lessons learned (Sutcliffe and Vogus, 2003). This cognitive capability is essential for perceiving and making sense of adversities in the environment, and therefore anticipating future crises. As a consequence, notwithstanding the limited organisational resources devoted to formalisation, this study hypothesises that in SMEs the experience of a prior shock increases the likelihood of adopting anticipation strategies with a higher level of commitment:

Hypothesis 1: The previous experience of a crisis increases the likelihood of adopting anticipation strategies characterised by higher levels of commitment.

2.3. Entrepreneur resilience and anticipation strategies in SMEs

Individual resilience can be defined as the individual ability of adaptation and thriving in face of adversities through anticipation, management, recovery and learning from personal and professional threats (Branicki *et al.*, 2018; Duchek, 2018; Fisher *et al.*, 2016). Resilient individuals tend to excel in the face of ambiguity and change, identify previously unexploited opportunities, persist during times of adversity, and proactively take initiatives. All these behaviours are common attributes of an entrepreneur (Adomako, 2020; Branicki *et al.*, 2018; Fisher *et al.*, 2016; Markowska, 2018; Smallbone *et al.*, 2012) and can conduct to organisations' resilience, in particular in the case of SMEs, in which entrepreneurs directly shape the strategy and structure of the organisation (Ayala and Manzano, 2014; Branicki *et al.*, 2018; Santoro *et al.*, 2020). Indeed, organisational resilience "can be conceptualized as a meta-capability consisting of a set of organizational capabilities/routines that allow for a successful accomplishment" of anticipation, coping and adaptation in face of adversities (Duchek

(2020, p. 224). However, not all studies support the existence of a positive relationship between the resilience of the entrepreneur and the resilience of the organisation ('bright' side effect). Conversely some studies suggest that the resilience of the entrepreneur can also negatively affect the resilience of the organization ('dark' side effect) (Korber and McNaughton, 2018; Williams *et al.*, 2017).

According to the 'bright side' perspective, entrepreneur resilience increases organisational resilience as the former is expected to positively influence the organisation's ability to anticipate threats (Duchek, 2018; Korber and McNaughton, 2018; Williams *et al.*, 2017). As suggested by Korber and McNaughton (2018), entrepreneurs play a prominent role in anticipating and preparing for potential threats: resilient entrepreneurs "are better equipped to deal with disruptions" (Korber and McNaughton, 2018, p. 1133) because as a result of the combination of their individual characteristics (e.g., personal traits, skills and emotions) and situational factors (e.g., parents' behaviours and experiences, personal lives and business failures), they acquire the capacity to constantly sense the environment, adjust their perceptions and re-evaluate different situations (Duchek, 2018). Entrepreneur resilience is connected with the human capacity to anticipate and learn from the past (Gallopín, 2006). Therefore, because the "entrepreneurial activities and resilience strategies" are "interconnected" (Kantur and İşeri-Say, 2012, p. 772), it can be expected that resilient entrepreneurs positively affect the anticipation capability of their enterprise.

The 'bright side' view of entrepreneur resilience as a positive meta-capability that contributes to organisational resilience (Lengnick-Hall *et al.*, 2011; Ma *et al.*, 2018) is contrasted by the 'dark side' perspective of individual resilience (Korber and McNaughton, 2018; Williams *et al.*, 2017). The 'dark side' perspective points out that the individual aspects associated with entrepreneur resilience (e.g., self-confidence, self-efficacy and positive self-image; for example, see De Vries and Shields, 2006, and Fatoki, 2018) might nurture optimistic self-conception (also "self-enhancing biases", per Westphal and Bonanno, 2007, p. 422) that, at higher levels, could produce negative organisational outcomes. As suggested by Cannon and Edmondson (2005, p. 302), "high self-esteem is accompanied by […] 'positive illusions'" of control over both personal and organisational outcomes, and this "may be incompatible with an honest acknowledgement of failure, and thus, while promoting happiness, can inhibit learning".

Hence, such positive illusion may reduce the likelihood to dedicate organisational resources to anticipation and preparation for adversities: overcoming or avoiding one or more business adversities may increase entrepreneurs' self-esteem and perception of self-efficacy in facing professional challenges (Tinsley *et al.*, 2012; Williams *et al.*, 2017). Entrepreneurs' self-confidence could increase to such an extent to consider their individual resilience as a substitute for organisational anticipation strategies, in particular in SMEs where the costs of resilience are potentially prohibitive (Branicki *et al.*, 2018).

Drawing on the conflicting expectations indicated by the bright and dark side perspectives on the relationship between the entrepreneur and the organisational resilience, this paper hypothesises a nonlinear association between entrepreneur resilience and the likelihood of adopting different anticipation strategies according to their level of commitment. In particular, in the case of anticipation strategies characterised by lower levels of commitment (reactive and desultory), it is expected that with the increase in the resilience of the entrepreneur there will be an initial reduction in the likelihood of adopting those strategies subsequently followed by an increase in their adoption (U-shaped relationship). Conversely, in the case of anticipation strategies characterised by higher levels of commitment (regular and continuous anticipation), it is expected that with the increase in the resilience of the entrepreneur there will be an initial increase in the likelihood of adopting those strategies progressively followed by a decrease in their adoption (inverted U-shaped relationship).

Concerning the first hypothesis (U-shaped relationship), it is expected that anticipation strategies characterised by lower levels of commitment (reactive and desultory) are most likely to be adopted in companies either by entrepreneurs with a low or a high level of individual resilience. Low resilient entrepreneurs are scarcely equipped to sense adversities and notice anomalies, and they are likely to transfer their low attention towards risks to their companies (the descending part of the U shape). Conversely, highly resilient entrepreneurs would devote reduced attention to organisational anticipation because according to the 'dark side' perspective of individual resilience, they are confident in their individual ability to sense risks and detect weak signals in the market; therefore, they would not implement organisational processes to address this issue (the ascending part of the U shape). Again, it is expected

that anticipation strategies characterised by lower levels of commitment would less likely be adopted by entrepreneurs with an intermediate level of resilience because they are expected to possess a personal awareness about the potential negative effects of adversities and, hence, about the necessity to build organisational capabilities for detecting business threats. Therefore, hypothesis 2a is formulated:

Hypothesis 2a: Entrepreneur resilience has a U-shaped relationship with the likelihood of adopting anticipation strategies characterised by lower levels of commitment (i.e., reactive strategy and desultory anticipation strategy).

Concerning the second hypothesis (inverted U-shaped relationship), it is expected that anticipation strategies characterised by higher levels of commitment (regular and continuous anticipation) are most likely to be adopted in companies by entrepreneurs with a medium level of individual resilience.

Entrepreneurs low on individual resilience are more likely to share their concerns about the environment and their preoccupations with failure with their collaborators and employees (the ascending part of the inverted U shape). However, in the case of highly resilient entrepreneurs, it is expected that overconfidence about their personal ability and judgement of the environment will likely prevent them from committing their organisation to the prevention of adversities (the descending tract of the inverted U shape). Therefore, hypothesis 2b is formulated:

Hypothesis 2b: Entrepreneur resilience has an inverted U-shaped relationship with the likelihood of adopting anticipation strategies characterised by higher levels of commitment (i.e., regular anticipation strategy and continuous anticipation strategy).

3. Data and methodology

The sample for the current study comprises 959 German and Italian SMEs (according to the Commission Recommendation of 6 May 2003 concerning the definition of micro, small-sized and medium-sized enterprises). The data were collected through the research project 'Building Better Business Resilience', a two-year study on small business resilience in five peripheries of big cities (Paris, Frankfurt, Milan,

Madrid, and London), funded by the JPMorgan Chase Foundation and led by the Enterprise Research Centre (ERC) at Warwick Business School and Aston Business School [1]. Data collection was conducted in late 2018 and early 2019. The data were surveyed using a computer-assisted telephone interview (CATI). The respondents were all leaders of their businesses. The current research is based on data from German and Italian SMEs, given that (1) these countries "present both similar institutional and economic features" (Delmestri, 1997, p. 93), (2) the SMEs in these countries present a similar "investment and innovation behavior", whose activities decline "throughout a crisis" (Abel-Koch *et al.*, 2015, pp. 12-13), and (3) the two national contexts present certain similarities in terms of their entrepreneurial characteristics (Del Junco and Brás-dos-Santos, 2009).

To analyse the several strategic choices towards the SMEs' anticipation and preparation for business adversities, the multinomial logit model (MLM) is used. This regression model is used with a categorical dependent variable that has more than two categories (outcomes) and can also be used when the categories are ordered, especially "ordered on multiple dimensions" (Long and Freese, 2014, p. 385), or when there are doubts or failure in meeting the assumption of parallel regression. It "may be understood as a set of binary logits among all pairs of outcomes" (Long and Freese, 2014, p. 389). In this study, the *reactive strategy* is the 'natural' base outcome used to compare the different categories of *anticipation*. Note that the MLM is characterised by a certain complexity in interpretation aggravated by the nonlinearity of the model (Long and Freese, 2014). However, this study refers to Wulff (2015) to clearly present and interpret the results of the regression.

3.1. Dependent variable

3.1.1. Anticipation strategies. This categorical and ordered variable represents four anticipation strategies for adversities that are characterised by a growing level of organisational commitment. Specifically, the strategic choices are derived from the question 'Which one of the following best describes how you feel about business risks?' with four possible answers:

1) 'We don't think about risks at all until they arise, and then, we deal with them'.
2) 'We sometimes think about risks but do not make specific plans to deal with them'.

3) 'We regularly think about risks and formulate plans'.
4) 'We have a formal risk register with response strategies, which is kept under review'.

The first item delineates a *reactive strategy*, which characterises 148 firms (15.43% of the sample), whereas the others represent a *desultory anticipation strategy* (item 2, 291 firms, 30.34% of the sample), a *regular anticipation strategy* (item 3, 406 firms, 42.34%) and a *continuous anticipation strategy* (item 4, 114 firms, 11.89%), respectively.

3.2. Independent variables

3.2.1. Experience of a previous crisis. This dichotomous variable indicates whether a firm has experienced (or not) a crisis that has threatened the firm's survival in the previous five years as compared with the year of the dependent variable. In the sample, 262 firms (27.32% of the sample) had experienced a crisis, whereas 697 firms (72.68%) had not.

3.2.2. *Entrepreneur resilience*. This continuous variable represents the level of resilience of the entrepreneur. It is measured by the 10-item Connor Davidson Resilience Scale (10-item CD-RISC) (Campbell-Sills and Stein, 2007; Connor and Davidson, 2003), which is similar to Fatoki (2018). Every item is rated on a 5-point Likert scale (from 1, 'not true at all', to 5, 'true nearly all the time'), and the measure is calculated by summing the 10 items and ranging them from 0 to 40 (Shin *et al.*, 2018). The Cronbach's α for this measure is 0.79, which suggests an adequate level of internal consistency (Acock, 2018). The mean of the variable is 31.90, and the standard deviation is 5.23.

3.3. Control variables

Following the previous literature on organisational preparedness for adversities, this study controls for firm age and size (Herbane, 2015) as well as the gender of the leader (Bremser *et al.*, 2014), and whether the firm is migrant led or not (migrant-led firms are typically more prone to informality; see Pugliese, 1993). Moreover, this study controls for the geographical location of the SMEs through a dummy variable in which Italy is the base category. Following the literature on entrepreneur resilience, this study

controls for factors that could be involved with resilience, such as the entrepreneur's age, education and experience (Ayala and Manzano, 2014; Markowska, 2018). Table I reports information about the control variables.

[Insert Table I about here]

As reported by Velu *et al.* (2019, p. 12), "controlling for endogeneity is not advisable in predictive modelling whereas for explanatory modelling, controlling for endogeneity is essential". Considering that the MLM is predictive modelling and that the purpose of the research is not to explain but to predict a certain strategic choice towards anticipation and preparation for business adversities, this study eschews endogeneity issues. Moreover, potential common method bias is considered. Both a procedural and statistical remedy to control for this (Podsakoff *et al.*, 2012) are used. First, a proximal separation between the dependent variable and predictors has been created by putting the questions in different sections of the questionnaire (procedural remedy). Second, the Harman's single factor test (Podsakoff *et al.*, 2003) is performed through an exploratory factor analysis, examining the unrotated solution to define how many factors are necessary to explain the variance in the variables. The results of the principal component factor analysis show that neither a single factor emerges nor a single factor accounts for the majority of the variance. Therefore, common method variance does not call the findings into question.

4. Results

Table II presents the correlation table for the dependent and independent variables.

[Insert Table II about here]

Table III presents the results of the multinomial logit regression. In Model A, only the control variables are considered, whereas in Model B, the experience of a previous adversity, entrepreneur resilience and its squared term are introduced. These results are not immediately interpretable. As stated by Wulff (2015), interpreting the

results from a MLM requires several steps based on the results of the regression. First, the model fit is tested while also comparing the final model with the model in which there are only the control variables. Second, the statistical significance of the crucial variables is confirmed through a Wald or likelihood ratio (LR) test; finally, the predicted probabilities of the strategic choices and the marginal effects of the key variables are analysed.

First, the LR test in the model with only the control variables (Model A) is significant ($p < 0.001$, R^2 Nagelkerke = 0.152), thus suggesting that at least a subgroup of independent variables has nonzero effects. The final model (Model B) shows an increase both in LR (from 145.035 to 180.219, with $p < 0.001$) and in Nagelkerke R^2 (from 0.152 to 0.186). These results demonstrate the improved explanatory power of the final model. Moreover, the AIC of Model B (2.478) is lower than the AIC of Model A (2.496), suggesting that the fit of Model B is increased enough to compensate for its greater complexity than that of Model A. Overall, these results suggest a good model fit with the predictors introduced here: the dichotomous variable regarding the experience of a prior adversity, the continuous variable entrepreneur resilience and its squared term.

[Insert Table III about here]

Second, a Wald test is used to examine the significance of the predictors, here with more than one coefficient for each variable. The category of firms that have experienced a crisis is statistically significant (chi-squared = 8.21, $p = 0.0418$). Moreover, both entrepreneur resilience (chi-squared = 10.65, $p = 0.0138$) and its squared term (chi-squared = 11.47, $p = 0.0094$) are statistically significant (jointly, chi-squared = 24.90, $p = 0.0004$). In sum, the crucial variables are all statistically significant, with $p < 0.05$. To analyse the direction of the relationships, this study estimates the predicted probabilities of each anticipation strategy and the marginal effects of the key variables.

4.1. Predicted probabilities and marginal effects

The predicted probabilities refer to the likelihood of adopting a certain strategy towards adversities, which is computed considering the value of the independent

variable. They provide "informative graphical information about the direction and magnitude of the relationship" (Wulff, 2015, p. 305). However, to complete the interpretation of the results of the regression model, an analysis of the marginal effects of the independent variables on each anticipation strategy is essential. The marginal effects permit an analysis of the change in predicted probabilities given by the change of a particular independent variable. The marginal effects calculated both for the variable means and average are reported, in which the former is calculated based on the mean values of the predictors and the latter on the independent variables' actual values.

Following the graph, Figure 1 plots the predicted probabilities of each anticipation strategy with respect to the experience of a previous adversity. In general, SMEs are more likely to adopt an anticipation strategy (desultory, regular or continuous) of adversities rather than one based on reaction regardless of prior crisis. Such evidence contradicts previous literature toward the pure reactive character of SMEs toward adversities. However, comparing the adoption of a reactive strategy with the likelihood to practice a continuous anticipation – therefore a formalised anticipation strategy usually adopted by large firms – it may be noticed that the former strategy (reactive) is more likely than the latter one (continuous anticipation).

[Insert Figure 1 about here]

Tables IV and V present the predicted probabilities of different SMEs' strategic approaches towards business adversities and the marginal effects of the crucial variables on them. For the continuous variable measuring entrepreneur resilience, these measures are calculated at low (1 standard deviation below the mean), medium and high levels (1 standard deviation above the mean).

As reported in Table IV, the experience of previous adversity decreases the likelihood of adopting a *reactive strategy* towards business adversities from 16.96% to 10.77%. The difference, which is represented by the marginal effects calculated for both the variable means and average, is statistically significant. Moreover, the probability of adopting a *regular anticipation strategy* increases from 40.25% to 47.98%, and the difference is statistically significant. However, neither *desultory anticipation* nor *continuous anticipation* significantly change the likelihood of being adopted after the

experience of a prior adversity. These findings suggest that the previous experience of a crisis reduces the likelihood of adopting a *reactive strategy*, conversely increasing the likelihood of implementing a *regular anticipation strategy,* thus confirming Hypothesis 1.

[Insert Table IV about here]

Considering entrepreneur resilience, Figures 2, 3, 4 and 5 plot the predicted probabilities of the several strategic choices towards adversities. They are reported starting from the value of entrepreneur resilience, in which the predicted probabilities are statistically significant (at least with $p < 0.10$). Every plot has a different scale. The graphs show that the adoption of a reactive strategy has a U-shaped relationship with entrepreneur resilience, whereas the other *anticipation strategies* have a different relationship: an inverted U-shaped for the *regular anticipation strategy* and a convex nonlinear relationship for both the *desultory* (inverted J-shaped) and *continuous anticipation strategies* (J-shaped). Therefore, this results partially confirmed Hypothesis 2a (for the *reactive strategy*) and Hypothesis 2b (for the *regular anticipation strategy*).

[Insert Figure 2 about here]

[Insert Figure 3 about here]

[Insert Figure 4 about here]

[Insert Figure 5 about here]

Analysing the results in Table V, that represents the point estimation of predicted probabilities and marginal effects based on specific values of entrepreneur resilience, the likelihood of adopting a *reactive strategy* towards business adversities moves from 12.84% for lower levels of resilience (i.e., 1 standard deviation below the mean) to 13.32% for medium levels and 17.91% for higher levels (i.e., 1 standard deviation above the mean). Moreover, the marginal effects increase in the *continuum* of entrepreneur resilience and are statistically significant for the medium and high levels. Thus, strongly resilient entrepreneurs are less likely to adopt anticipatory and preventive actions towards business adversities.

The likelihood of adopting a *desultory anticipation strategy* decreases along the *continuum* of resilience (from 33.11% to 29.17% and 27.63%), even if the marginal effects suggest that the lower levels of resilience have a higher influence on this choice, being that the related marginal effects are statistically significant (and negative).

The probability of adopting a *regular anticipation strategy* significantly increases passing from low to medium levels of resilience (from 45.44% to 46.31%), but after that, it decreases at higher levels (39.17%). The marginal effects are weakly statistically significant for lower and medium levels of resilience, positive for lower levels and negative for medium levels but only when considering the marginal effects calculated as 'average marginal effects'. The marginal effects are strongly statistically significant for higher levels but negative otherwise.

The probability of adopting a *continuous anticipation strategy* increases along the *continuum* of resilience of the entrepreneur. The curve increases from low to medium and high levels of resilience, from 8.62% to 11.19% and, finally, 15.29%, with the tendency to increase. The marginal effects are positive and significant for medium and high levels.

[Insert Table V about here]

5. Discussion

Drawing on the resilience literature (Burnard and Bhamra, 2011; Duchek, 2018, 2020; Korber and McNaughton, 2018; Sutcliffe and Vogus, 2003; Williams *et al.*, 2017), in particular on the recent capability-based conceptualization of organisational resilience (Duchek, 2020), the present research has proposed and tested a model of the relationship between the organisational experience of previous adversity and the individual resilience of the entrepreneur to the likelihood that a SME adopts anticipation strategies for adversities.

Regarding the relationship between the organisational experience of previous adversity and a SME's anticipation strategies, the results show that such experience diminishes the probability of adopting a reactive approach towards adversity through coping actions aimed at limiting only the consequences of adversity once the crisis has occurred. Conversely, the results confirm that if the firm experienced a crisis in the past, it has a higher probability of committing more time and resources to proactively scanning the environment, identifying potential threats and preparing accordingly through regular actions of anticipation. It is worth noting that the results do not confirm that experiences of adversities promote the highest level of commitment for anticipation, that is, the use of continuous formal procedures. These results can be explained by both the learning advantages that a firm has gained through the experience of a prior shock and the limits of formalisation that SMEs usually encounter. Knowledge and sensing go hand in hand (Weick *et al.*, 2005), and several contributions on resilience have pointed out that learning is an essential outcome of the process that begins with crisis recognition and ends with enhancing environmental monitoring (Burnard and Bhamra, 2011; Duchek, 2020; Ma *et al.*, 2018; Tasic *et al.*, 2020). Contributing to these studies, the results confirm that SMEs that have experienced a crisis are more likely to anticipate adversities but with an intermediate level of commitment, therefore without formalising a structured risk planning procedure. In developing their resilience, SMEs balance adaptation and planning (Herbane, 2015; Vargo and Seville, 2011). By adopting a regular anticipation strategy, SMEs temper both the risk of rigidity associated with formalised planning (i.e., through the adoption of a *continuous anticipation* strategy) and the risk of uncertainty associated with simple adaptation (i.e., a *reactive strategy*) or occasional anticipation (i.e., *desultory*

anticipation). In other words, what could count the most for a SME is a diffused, not occasional forward-looking, mentality that a consistent, albeit informal, anticipation strategy produces.

As far as the relationship between the entrepreneur resilience and SME's anticipation strategies is concerned, the results show the existence of a nonlinear and quadratic relationship. The resilience of the entrepreneur is an individual capability resulting from addressing and overcoming personal and professional difficulties (Bernard and Barbosa, 2016). Entrepreneurs with low levels of resilience are less characterised by the experience of challenging events and successful actions compared to both medium and highly resilient entrepreneurs. When it comes to entrepreneurs characterised by low levels of resilience, the results suggest that they are more likely to adopt anticipation strategies characterised by low commitment compared to entrepreneurs with medium levels of resilience. This can be the result of less experience of prior challenge events and the related subsequent actions to overcome those difficulties.

Entrepreneurs with medium levels of resilience show more attention to anticipation, decreasing the tendency to adopt strategies characterised by a low organisational commitment and increasing the likelihood of adopting strategies characterised by high commitment. In this case, entrepreneurs' resilience could 'complements' the adoption of organisational practices aimed at anticipating for adversities. Again, entrepreneurs displaying medium level of individual resilience and who are leveraging their awareness of adversities, recognise problems and understand their implications. Compared to entrepreneurs with low resilience, such entrepreneurs have experienced more negative events, are better aware of their consequences and of how to cope with them (Bernard and Barbosa, 2016). As a consequence, it is more likely that they know that both to identify potential threats in complex and uncertain environments and to react promptly to crises, they can hardly build only on their own resources. Instead, the support the support of the whole organisation is essential. Hence, they are more likely to promote the adoption of actions of regular detection and preparation that draw on their individual sensemaking and collections of information (i.e., research reports, informal exchanges with business partners), as well as on employees' cognitive capabilities (Santoro *et al.*, 2020).

Highly resilient entrepreneurs demonstrate an increasing tendency to both passively react and continuously anticipate business threats. What diminishes is the likelihood of adopting anticipation strategies that, sometimes emerging by occasional interactions, are not formally planned. Passively reacting can be in line with recent studies (Bonini *et al.*, 2019) that show the risk of overconfidence due to high individual resilience and, consequently, the higher probability to incur in risky situations without planning in advance because highly resilient people have the tendency to believe that they can control, or at least influence, outcomes that are governed by chance ('dark side' effects of resilience). On the other hand, the results on continuously anticipating business threats by highly resilient individuals counter this belief by showing that the resilience of the entrepreneur can lead to the adoption of a formal strategy of planning for adversities that also incorporates the risk of rigidity. The findings do not offer conclusive results on the role of high level of individual resilience on the adoption of anticipation strategies: it was out of the scope of the paper demonstrating whether firms led by highly resilient individuals should adopt organisational resilience practices based on anticipation or could, conversely, leverage on such trait of their founder. However, it is worth underlying that even if the formal planning can lead to a certain organisational rigidity in face of threats, having a continuous review process of the formal plan and response strategy can help to better adapt the organisation in face of crises thanks to the anticipation mentality formal planning advances. Again, having a pure reactive approach can help to promptly and flexibly respond to a negative event that does not match the assumptions of planning through ad hoc and intuitive decisions (Duchek, 2020). Different professional (and personal) adverse events, upon which the resilience of the individual entrepreneur is built (Bernard and Barbosa, 2016; Duchek, 2018), could have influenced the perceived benefit of an approach instead of the other. Individuals with high resilience more likely experimented highly traumatic adversities. This means that they can rely on more (negative) experiences, that have helped to distinguish the benefits of a purely reactive strategy compared to those of a formal planning approach. Furthermore, this accumulated experience can positively affect the possibility to transfer resilience from the individual to the organisation, since that the higher the experience of adversities (and of the actions adopted to overcome it), the

higher the probability the individual will share the associated knowledge within the organization.

In sum, the relationship between the individual resilience of the entrepreneur and the adoption of anticipation strategies is a nonlinear relationship that relies on the prior individual traumatic experiences and the knowledge of the benefit of adopting a reactive or a more formal proactive approach to threats.

6. Conclusion and limitations

The findings contribute to the studies on resilience in several ways. First, by demonstrating that SMEs adopt different anticipation strategies for adversities, this study addresses the limitations of the literature, which has focused on the ability of SMEs to react to crises rather than to anticipate them. In particular, this study adds to such studies by demonstrating that because SMEs are characterised by limited resources, it is unlikely that a SME adopt a formal plan for adversity, but this does not imply that the SME does not have any anticipation capability. On the contrary, SMEs regularly scan internal and external environments, anticipating risks and preparing for possible solutions, even if such a process does not lead to a formalised risk register. Second, testing the effects of the organisational experience of previous crises and of the individual resilience of the entrepreneur on the likelihood that a SME adopts anticipation strategies, it is demonstrated that learning from critical events (either experienced at the individual or organisational levels) is an essential element of anticipation that can foster a developmental process of building resilience. In this way, this paper contributes to the theoretical perspective of resilience as a process (Duchek, 2020), and it is addressed the call by Korber and McNaughton (2018, p. 1141), who assert that "while this learning aspect of resilience is often mentioned, insights into the underpinning practices and processes are largely missing". Third, the literature on resilience has highlighted that there is a direct but complex link between individual and organisational resilience (Branicki *et al.*, 2018; Lengnick-Hall *et al.*, 2011), even if the comprehension of this link is still limited (Linnenluecke, 2017; Santoro *et al.*, 2020; Tasic *et al.*, 2020). This study adds to the understanding of this relationship, opening the possibility that the individual resilience of the entrepreneur is linked with the

organisational resilience of a SME through the adoption of different anticipation strategies.

The results also have relevant managerial implications. First, the study suggests that SMEs can leverage experience to build future resilience. Although demonstrating the microfoundations of learning from experience was out of the scope of this paper, this research shows that the experience accumulated in previous crises can represent a prior knowledge base that purposefully drives the development of the observation and identification practices that nurture the anticipation and preparation capabilities of resilience. Therefore, managers and entrepreneurs should promote cognitive processes of the articulation of knowledge derived from reflection on experiences to activate regular strategies of anticipation. Second, practical implications for entrepreneurs (and owners/managers) in SMEs are represented by the importance of knowing and valorising their own resilience, being aware of the 'dark side' of this factor and not underestimating the importance and benefits of anticipating adversities at the organisational level.

This study has several limitations. First, even though a time lag is left between the independent and dependent variables, further research could improve the analysis using longitudinal data in order to explore the processual view of the capability model. Second, in the model, the organisational experience of a prior crisis and the entrepreneur resilience are treated as separate factors since the entrepreneur resilience seems to be more associated with the entire personal history of the entrepreneur (Bernard and Barbosa, 2016) rather than with a specific experience of a firm's crisis. Further research could investigate the influence of a specific crisis of the firm on the individual resilience of the entrepreneur. Third, the point of transition between bright and dark side effects requires further study since this study considers entrepreneur resilience as static but – being an ability – it may be nurtured and it may change over time (Duchek, 2018). Further studies could investigate the likelihood of adopting different anticipation of adversities over the life of an entrepreneur as a consequence of the learning process activated by having faced multiple crises.

Notes

1. 'Building Better Business Resilience' is a two-year, five-country study into small business resilience carried out by the Enterprise Research Center in collaboration with academic partners from the University of Nice Sophia Antipolis, the Institut für Mittelstandsforschung (IfM) in Bonn, IE Business School in Madrid and the University of Padova. The study examines the ways in which small- and medium-sized enterprises in general and those led by underrepresented groups in particular experience and respond to adversity.

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SMEs	*N*	*%*	*Entrepreneurs*	*N*	*%*
Location	959		Experience	959	
Germany		45.6	Limited		63.8
Italy		54.4	High		36.2
Age	959		Age	959	
Less than 3 years		5.0	Less than 35 years old		9.0
Over 3 up to 5 years		7.7	35-44 years old		21.6
Over 5 up to 10 years		19.5	45-54 years old		31.8
Over 10 up to 20 years		23.0	55-64 years old		28.1
More than 20 years		44.7	More than 65 years old		9.5
Size	959		Education	959	
Micro		56.9	Below A-levels		16.7
Small		39.1	A-levels or an apprenticeship qualification		41.6
Medium		4.0	A Bachelor Degree or equivalent		15.1
Female-led Firm	959		A Doctorate or Master's Degree		26.6
Yes		47.5			
No		52.5			
Migrant-led Firm	959				
Yes		22.6			
No		77.4			

Table I. Control Variables – Descriptive Statistics

	1a	1b	1c	1d	2	3	4	5	6	7	8	9	10	11
1a. Reactive Strategy	-	-	-	-										
1b. Desultory Anticipation S.	-	-	-	-										
1c. Regular Anticipation S.	-	-	-	-										
1d. Continuous Anticipation S.	-	-	-	-										
2. Experience of a previous crisis	-.107**	.003	.100*	-.037	-									
3. Entrepreneur Resilience	.047	-.085**	-.019	.098**	-.034	-								
4. Entrepreneur Resilience ^2	.056†	-.081*	-.031	.100**	-.038	.993***	-							
5. Firm's Age	-.037	-.028	.043	.016	.047	-.018	-.020	-						
6. Firm's Size	-.064†	-.069*	.043	.105**	-.029	.007	.005	.121***	-					
7. Female-led Firm	.022	.018	-.049	.025	-.048	.088**	.088**	.100**	.010	-				
8. Migrant-led Firm	.121**	-.015	-.060†	-.022	-.041	-.000	-.006	-.364***	-.032	-.025	-			
9. Entrepreneur's Education	-.149**	-.028	.151**	-.024	.090**	-.043	-.051	.045	.079*	-.122***	-.097**	-		
10. Entrepreneur's Experience	-.033	-.086**	.084**	.032	.035	.083**	.086**	-.149***	-.047	-.151***	.049	.057†	-	
11. Entrepreneur's Age	.044	-.077*	.021	.029	-.041	.101**	.108***	.255***	-.023	.078*	-.210***	-.016	.155***	-
12. Location	-.119**	-.016	.161**	-.090**	.073*	.043	.045	.053	-.055†	-.027	.081*	.231***	.052	.089**

Note: For clarity and simplicity, we have reported a single coefficient also for the categorical variables firm's age, firm's size, entrepreneur's education and age, considering them as continuous variables, since they are ordered.

† $p \leq 0.10$ * $p \leq 0.05$ ** $p \leq 0.01$ *** p 0.001

Table II. Correlation Table

	Model A			Model B		
	Reaction vs. Desultory Anticipation	**Reaction vs. Regular Anticipation**	**Reaction vs. Continuous Anticipation**	**Reaction vs. Desultory Anticipation**	**Reaction vs. Regular Anticipation**	**Reaction vs. Continuous Anticipation**
Experience of a previous crisis						
Yes	-	-	-	**0.5229†** (0.2703)	**0.6942**** (0.2600)	0.3001 (0.3277)
Entrepreneur Resilience	-	-	-	0.2027 (0.1562)	**0.5273**** (0.1678)	0.2987 (0.2283)
Entrepreneur Resilience^2	-	-	-	-0.0040 (0.0026)	**-0.0091***** (0.0027)	-0.0043 (0.0037)
Firm's Age						
Over 3, up to 5 years	**1.1010*** (0.5626)	0.9295 (0.5760)	0.9861 (0.7759)	**1.0808†** (0.5660)	0.8413 (0.5818)	0.9152 (0.7780)
Over 5, up to 10 years	0.0419 (0.4737)	0.6093 (0.4710)	0.8069 (0.6563)	-0.0437 (0.4778)	0.4902 (0.4765)	0.7654 (0.6600)
Over 10, up to 20 years	0.4378 (0.4726)	0.6373 (0.4749)	0.3908 (0.6743)	0.3414 (0.4770)	0.4889 (0.4805)	0.2991 (0.6776)
More than 20 years	0.0759 (0.4641)	0.4157 (0.4656)	0.4105 (0.6513)	-0.0357 (0.4694)	0.2499 (0.4719)	0.3502 (0.6546)
Firm's Size						
Small	0.0340 (0.2237)	**0.3602†** (0.2138)	**0.7401**** (0.2697)	0.0584 (0.2256)	**0.3918†** (0.2168)	**0.7555**** (0.2711)
Medium	0.6956 (0.8016)	1.0176 (0.7704)	**1.7022*** (0.8391)	0.7553 (0.8023)	1.0623 (0.7732)	**1.6847*** (0.8415)
Female-led firm						
Yes	0.1453 (0.2150)	0.0340 (0.2079)	0.2730 (0.2655)	0.1894 (0.2178)	0.0691 (0.2113)	0.2457 (0.2675)
Migrant-led firm						
Yes	**-0.9053***** (0.2724)	**-0.9638***** (0.2610)	**-0.8414*** (0.3449)	**-0.9215***** (0.2774)	**-0.9971***** (0.2661)	**-0.8654*** (0.3486)
Entrepreneur's Education						
A-levels or an apprenticeship qualification	0.2539 (0.2822)	**0.5712*** (0.2794)	0.0682 (0.3583)	0.2449 (0.2854)	**0.5854*** (0.2839)	0.1148 (0.3601)
A Bachelor Degree or equivalent	**0.8024*** (0.4076)	**1.1586**** (0.3974)	**1.1687*** (0.4689)	**0.6883†** (0.4112)	**1.0222*** (0.4026)	**1.1164*** (0.4739)
A Doctorate or Master's Degree	0.5061 (0.3359)	**1.0285***** (0.3232)	0.3240 (0.4211)	0.4129 (0.3395)	**0.9113**** (0.3284)	0.2993 (0.4244)

Entrepreneur's Experience						
High	-0.0142 (0.2363)	**0.4476*** (0.2239)	**0.4864†** (0.2812)	0.0193 (0.2393)	**0.4739*** (0.2278)	0.4547 (0.2832)
Entrepreneur's Age						
35 – 44	**-0.9371†** (0.5025)	**-0.9097†** (0.5012)	-0.9449 (0.5925)	**-0.8805†** (0.5069)	**-0.8647†** (0.5070)	-0.9378 (0.5959)
45 – 54	**-1.5159**** (0.4933)	**-1.2788**** (0.4894)	**-1.3338*** (0.5786)	**-1.4399**** (0.4981)	**-1.2078*** (0.4954)	**-1.3168*** (0.5838)
55 – 64	**-0.8809†** (0.5178)	-0.8028 (0.5143)	-0.4156 (0.5949)	-0.7544 (0.5236)	-0.6707 (0.5212)	-0.4015 (0.6004)
More than 64	**-2.0366***** (0.5759)	**-1.5427**** (0.5526)	**-1.3816*** (0.6618)	**-1.8998***** (0.5824)	**-1.3909*** (0.5609)	**-1.3620*** (0.6677)
Location						
Germany	**0.6024*** (0.2380)	**0.9751***** (0.2294)	0.0623 (0.2946)	**0.6325**** (0.2412)	**1.0152***** (0.2335)	0.0736 (0.2964)
Constant	**1.224†** (0.6524)	0.3746 (0.6541)	-0.5851 (0.8482)	-1.1495 (2.3946)	**-7.0755**** (2.6001)	-5.5836 (3.5853)
R^2 Nagelkerke	**0.152**	**0.152**	**0.152**	**0.186**	**0.186**	**0.186**
AIC	**2.496**	**2.496**	**2.496**	**2.478**	**2.478**	**2.478**
Chi-squared	**145.035**	**145.035**	**145.035**	**180.219**	**180.219**	**180.219**
Change in Chi-squared	**-**	**-**	**-**	**+35.184**	**+35.184**	**+35.184**
N	**959**	**959**	**959**	**959**	**959**	**959**

Notes: The base-levels of the categorical independent variables are the followings:
Experience of a previous crisis: No
Firm's Age: Less than 3 years
Firm's Size: Micro
Female-led Firm: No
Migrant-led Firm: No
Entrepreneur's Education: Below A-levels
Entrepreneur's Experience: Limited
Entrepreneur's Age: Less than 35 years old
Location: Italy
Standard Error in brackets

† $p \leq 0.10$ * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Table III. Multinomial Logistic Regression Results

Anticipation Strategies	**Experience of a previous crisis**			
	No	**Yes**		
	Predicted Probabilities	**Predicted Probabilities**	**Marginal Effects**	
			Marginal Effects at Variable Means	***Average Marginal Effects***
Reactive	**.1696***** (.0134)	**.1077***** (.0200)	**-.0525**** (.0199)	**-.0619*** (.0243)
Desultory Anticipation	**.3029***** (.0171)	**.3090***** (.0284)	-.0035 (.0345)	.0061 (.0334)
Regular Anticipation	**.4025***** (.0181)	**.4798***** (.0302)	**.0794*** (.0379)	**.0773*** (.0354)
Continuous Anticipation	**.1250***** (.0122)	**.1035***** (.0190)	-.0235 (.0211)	-.0215 (.0227)

Note: Standard Error in brackets

† $p \leq 0.10$ * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Table IV. Predicted Probabilities and Marginal Effects of the experience of a previous crisis on the several SME's anticipation strategies toward adversities

Anticipation Strategies	**Entrepreneur Resilience**								
	Low (1 *SD* below)			**Mean**			**High (1 *SD* above)**		
	Predicted Probabilities	**Marginal Effects**		**Predicted Probabilities**	**Marginal Effects**		**Predicted Probabilities**	**Marginal Effects**	
		Marginal Effects at Variable Means	***Average Marginal Effects***		***Marginal Effects at Variable Means***	***Average Marginal Effects***		***Marginal Effects at Variable Means***	***Average Marginal Effects***
Reactive	**.1284***** (.0148)	-.0023 (.0024)	-.0024 (.0026)	**.1332***** (.0128)	**.0043*** (.0018)	**.0044*** (.0019)	**.1791***** (.0170)	**.0141*** (.0056)	**.0138**** (.0054)
Desultory Anticipation	**.3311***** (.0225)	**-.0115*** (.0046)	**-.0106*** (.0043)	**.2917***** (.0179)	-.0045 (.0033)	-.0047 (.0031)	**.2763***** (.0214)	-.0015 (.0063)	-.0020 (.0059)
Regular Anticipation	**.4544***** (.0237)	**.0102†** (.0053)	**.0093†** (.0049)	**.4631***** (.0200)	-.0061 (.0037)	**-.0060†** (.0035)	**.3917***** (.0232)	**-.0225***** (.0071)	**-.0210***** (.0065)
Continuous Anticipation	**.0862***** (.0131)	.0036 (.0025)	.0038 (.0026)	**.1119***** (.0129)	**.0064***** (.0020)	**.0063**** (.0020)	**.1529***** (.0168)	**.0099†** (.0059)	.0092 (.0057)

Note: Standard Error in brackets

† $p \leq 0.10$ * $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Table V. Predicted Probabilities and Marginal Effects of the entrepreneur resilience on the several SME's anticipation strategies toward adversities

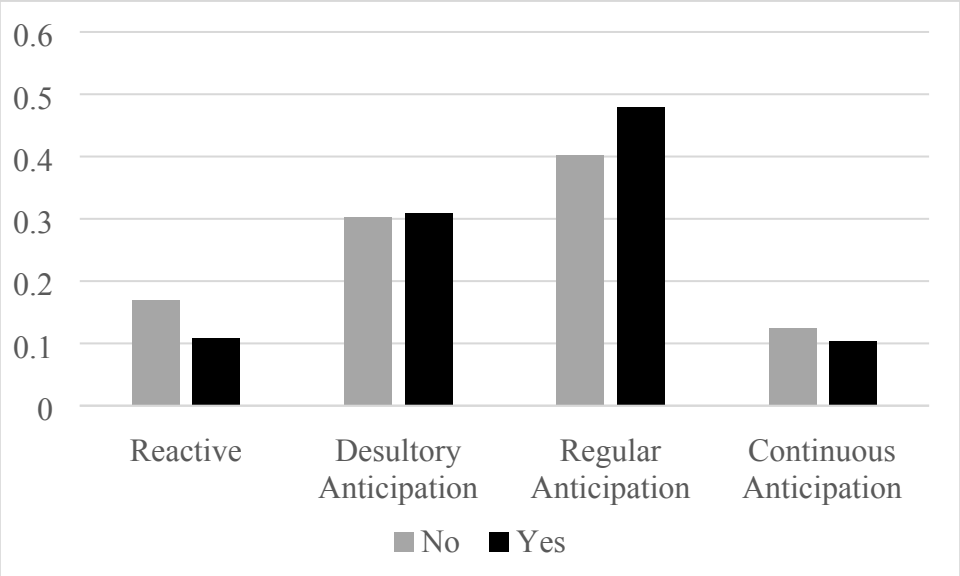

Figure 1. Predicted Probabilities of the Adversities Strategies based on the experience of a previous crisis

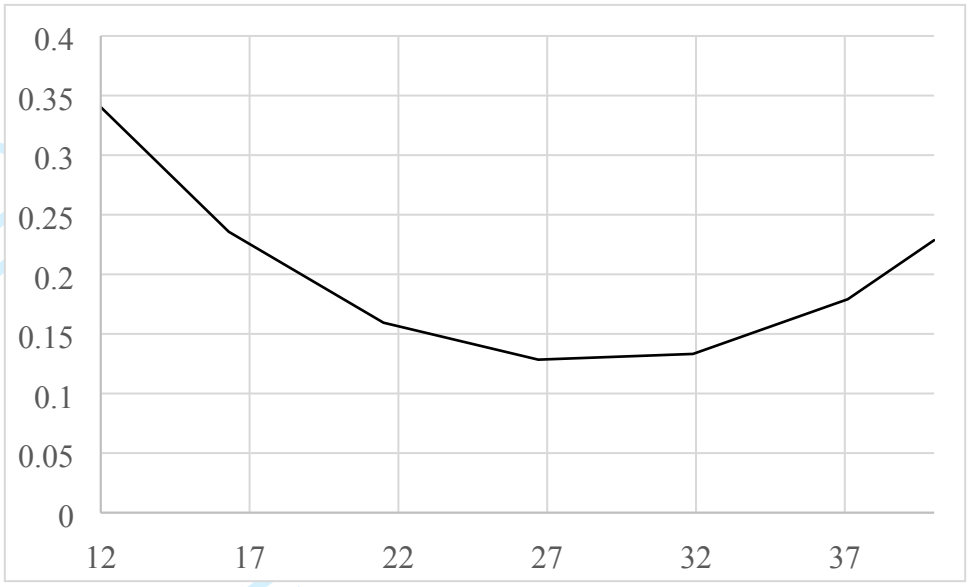

Figure 2. Predicted Probabilities of the *Reactive Strategy* based on the entrepreneur resilience

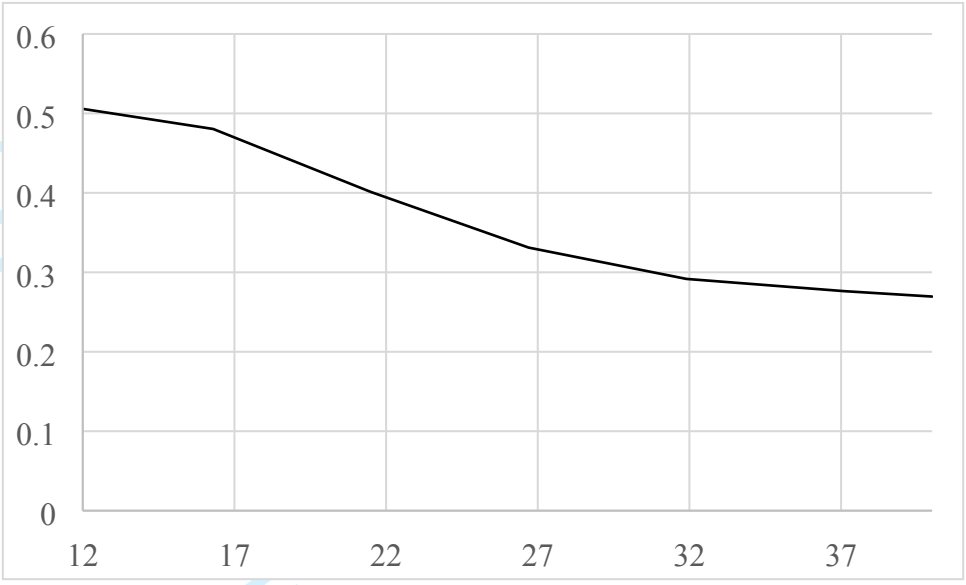

Figure 3. Predicted Probabilities of the *Desultory Anticipation Strategy* based on the entrepreneur resilience

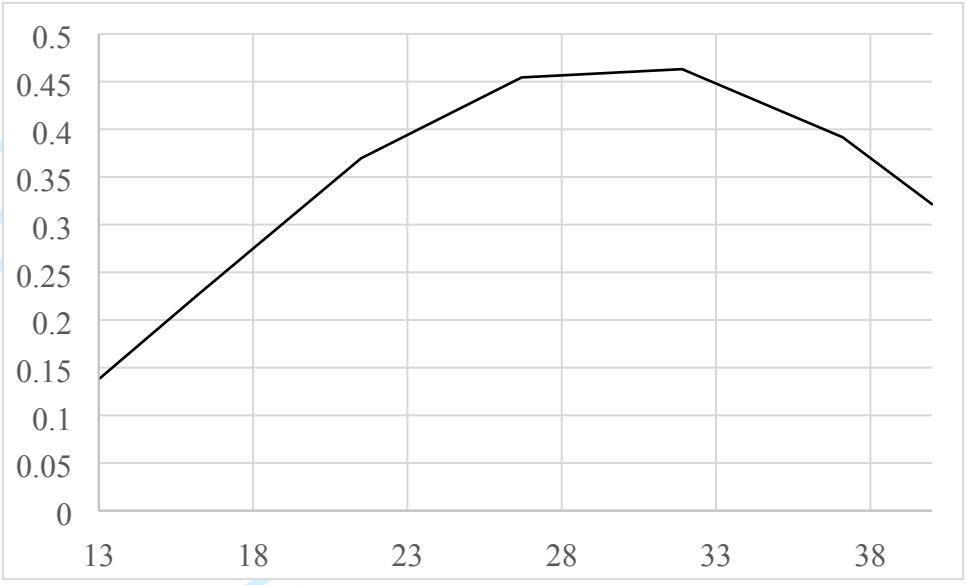

Figure 4. Predicted Probabilities of the *Regular Anticipation Strategy* based on the entrepreneur resilience

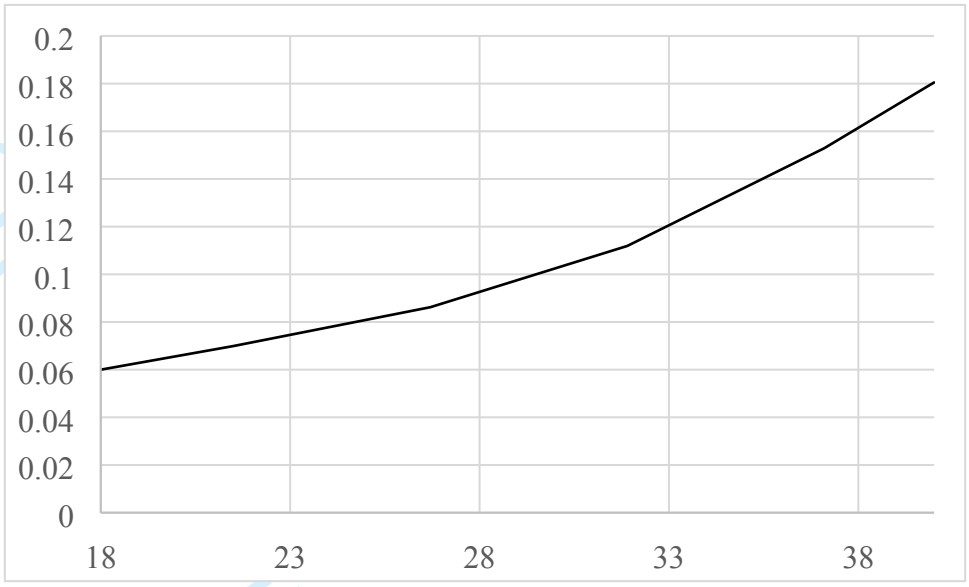

Figure 5. Predicted Probabilities of the *Continuous Anticipation Strategy* based on the entrepreneur resilience