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(Article begins on next page)

Exploring the relationship between entrepreneurial resilience and success: the moderating role of stakeholders' engagement

Abstract

This study aims at evaluating the effect of entrepreneur resilience on entrepreneurial perceived success, and the moderating role of stakeholders' engagement on the aforementioned relationship, proposing and testing two related hypotheses. Accordingly, although there has been an increasing interest in organisational resilience, resilience at an individual level has received less attention, especially from the entrepreneur perspective. To reach the paper's goal, we apply a quantitative methodology involving data gathered from 117 entrepreneurs managing small businesses active in different industries. The research findings indicate that perceived resilience of entrepreneurs is positively associated with their perception of success. Moreover, the relationship is stronger for entrepreneurs with a wide network of stakeholders. These findings help making a step forward in this field of research and suggesting entrepreneurs valuable social and practical implications.

Keywords: resilience; entrepreneur resilience; stakeholders' engagement; open innovation.

Introduction

Entrepreneurship literature has a long tradition within social science studies, due to its importance in society's growth, employment, and innovation (Covin & Slevin, 1991; Bygrave & Hofer, 1992; Mitchell, Busenitz, Lant, McDougall, Morse & Smith, 2002). There are numerous views on the definition of entrepreneurship and they arise from differing perspectives including economic, social, cognitive, and behavioural. For the purposes of this research, an entrepreneur is defined as someone who has founded a for-profit business (Kirzner 1997), from an opportunity that he or she identified (McMullen & Shepherd, 2006). In other words, basically the entrepreneur is a person that

manages a business for profit and growth in risky condition with strong efforts put on innovation (Carland, Hoy, Boulton & Carland, 1984; Keith, Unger, Rauch & Frese, 2016). Specifically, the entrepreneur is an individual that is more aware of opportunities than others, someone that is more capable of taking advantage of his superior knowledge (McDougall, Shane & Oviatt, 1994). It is well acknowledged that entrepreneurs operate in dynamic and changing environments and the sustainability of the managed business is threatened by unpredictable factors. In this scenario, firms adapt structures, strategies while entrepreneurs adapt its behaviors to face these changes in the environment in which they operate to survive and even find new business opportunities (Chakravarthy, 1982; Lengnick-Hall & Beck, 2005; Sherif, 2006; Sirmon, Hitt & Ireland, 2007; Lengnick-Hall & Beck, 2009). All type of organisations nowadays face discontinuities caused by instability within their operating environments (Meyer, 1982; Boyne & Meier, 2009; Cheng, Niu & Niu, 2014), thereby being subjected to a broad risk and an unpredictable future characterised by both internal and external uncertainty due to changing in market conditions and technological and social discontinuities (Macko & Tyszka, 2009; Ardito, Messeni Petruzzelli & Panniello, 2016). In this guise, it has been suggested that resilient organisations are able to cope with such uncertainty, increasing the likelihood to tolerate risks and adjust environmental inputs (Cooper, Flint-Taylor & Pearn, 2013; Del Giudice, Campanella & Dezi, 2016; Del Giudice, Carayannis & Maggioni, 2017). A capacity for resilience enables an organisation to take appropriate actions and transformations in response to unanticipated events that potentially threaten its continued existence. In markets characterized by sudden jolts, a capacity for resilience may be necessary for survival (Fiksel, Polyviou, Croxton & Pettit, 2015).

Theoretically, the term “resilience” has been conceived to label the ability of a system or organisation to resist in changing and adverse conditions (Reinmoeller & Van Baardwijk, 2005; Sabatino, 2016). Despite recent interests in organisational resilience within the economics and business management fields (Brand, 2009; Derissen, Quass, & Baumgartner, 2011; Lampel, Bhalla

& Jha, 2014), individual resilience has received scarce attention and related works appear scattered in literature. There is even less research in the specific context of entrepreneur resilience (exceptions are Bullough & Renko, 2013; Bullough, Renko & Myatt, 2014; Korber & McNaughton, 2017), failing to understand how entrepreneurs face difficulties and try to find alternatives to hard situations in daily activities. Furthermore, few studies have explored whether resilience provides positive outcomes to entrepreneurs (Baron & Markman, 2003; Markman & Baron, 2003; Envick, 2005; Hayward, Foster, Sarasvathy & Fredrickson, 2010; Ayala & Manzano, 2014), but there is a need to understand what factors affect such a relationship.

Thus, the aim of this paper is to explore the effect of entrepreneur resilience on entrepreneur perceived success, paying attention on the specific moderating role of stakeholders' engagement (Granovetter, 1973; Ruef, 2002; Laursen & Salter, 2006). This because networks of stakeholders can offer entrepreneurs a substantial source of knowledge and social capital (Pennings, Lee & Van Witteloostuijn, 1998; Laursen & Salter, 2006; Smith & Lohrke, 2008; Santarelli & Tran, 2013) and useful to resist in adverse conditions. Essentially, in this paper we hypothesise that a wide network of stakeholders is useful to increase the benefits of resilience at an entrepreneur level.

A quantitative methodology has been chosen and adopted to test the hypotheses and explore relationship among variables. A unique database of a sample of 117 entrepreneurs managing small businesses has been employed, and data has been gathered through a survey methodology.

Our research findings provide path to contribute to literature. First, we add to the emerging body of research on resilience at an individual level with particular regard to entrepreneurs, a specific context of analysis which received scant attention so far. Second, we outline the key role of networks for entrepreneurs to enhance their resilience and perceived success. In detail, rarely has been investigated how entrepreneurs can leverage networks to acquire competence (Yu, Hao, Ahlstrom, Si & Liang, 2014, p. 687), engage with stakeholders to stimulate entrepreneurial opportunity (Acs, Audretsch & Lehmann, 2013; Burns, Barney, Angus & Herrick, 2014), and even less research on

how network ties could foster resilient entrepreneurs. In this view, our data confirm that a wide network of stakeholders help entrepreneurs in building resilience and augment perceived success.

The remainder of the paper is organized as follows. First, we present the theoretical background referring to the literature on resilience at the entrepreneur level. Second, we develop a baseline hypothesis relating to the direct effect of entrepreneur resilience on entrepreneurial perceived success, and the moderating effect of stakeholders' engagement on the baseline relationship. Subsequently, we present the data, methodology and variables that we used in our study. Finally, we present and discuss the results of the analysis in the light of existing literature, while also proposing several managerial and theoretical implications.

Theoretical background and hypotheses

Resilience is multidimensional and multidisciplinary concept that relates to a variety of fields from physical material properties to psychological behaviors, resulting in various theoretical approaches and perspectives of analysis (Holling, 1973, 2001; Gunderson 2000; Walker et al., 2002; Ponomarov & Holcomb 2009; Chakrabarti, 2012). In brief, the concept of resilience is linked to the ability of a system to return to a stable state after a disruptive condition (Cumming, Barnes, Perz, Schmink, Sieving, Southworth, ... & Van Holt, 2005). Gunderson & Holling (2001) define resilience as *“the magnitude of disturbance the system can tolerate and still persist”*, while Tedeschi & Calhoun (2004) define it as *“an ability to go on with life, or to continue living a purposeful life, after hardship or adversity.”* Others suggest that resilience can be learned over time and with experience (Masten, 2001; Sutcliff & Vogus, 2003; Folke, Carpenter, Walker, Scheffer, Chapin & Rockström, 2010), and a significant ability to improvise (Coutu, 2002).

Despite the importance of this topic in different fields, research on entrepreneurship in adverse, even dangerous, conditions have received scant attention. In this guise, the term “resilience” has been used at the organizational level to describe the characteristics of those organizations that are able to

respond quickly, recover fast or develop unusual ways of doing business under pressure (Marshall, 1993; Sutcliffe & Vogus 2003; Vogus & Sutcliffe 2007; Akgün & Keskin, 2014). Organizational resilience has been thus defined by Coutu as the “*capacity to be robust under conditions of enormous stress and change*” (Coutu, 2002, p. 52). By contrast, Lengnick-Hall, Beck & Lengnick-Hall (2011) intend organisational resilience as the firm’s ability to effectively absorb uncertainty and engage in transformative activities to limit potential threats.

At an individual level, resilience has been defined as a psychological/behavioral attribute as it “*builds on the foundation of the resilience of members of that organization*” (Riulli & Savicki, 2003, p. 228) and requires “*people who can respond quickly and effectively to change while enduring minimal stress*” (Mallak, 1998, p. 8). Therefore, sometimes the term has been used to describe the ability of firm’s employees to bounce back, and even succeed, in the face of problems and adversity (Luthans et al. 2010; Shin, Taylor & Seo, 2012), given that actions and interactions among individuals can build organisational resilience (Morgeson & Hofmann, 1999; Cooper, Stokes, Liu & Tarba, 2017).

As anticipated, resilience at an individual level has been conceptualized as a factor of psychological capital (Luthans et al. 2006). If we consider small businesses as unit of analysis, the entrepreneur covers a key role as decision maker and in spreading culture among employees through leadership and knowledge sharing (Suppiah & Singh Sandhu, 2011; Cassia, De Massis, Meoli, & Minola, 2014), therefore contributing to both individual and organisational resilience.

Resilient entrepreneurs are the ones likely to start again when a business opportunity appears or hardness are encountered (Hayward et al., 2010; Gorgievski & Stephan, 2016). Accordingly, entrepreneurs with resilient capabilities are able to take action in time of adversity and have a higher propensity to act than non resilient individuals, who are easily discouraged by the challenges and dangerous environments.

Resilience can be thought as a resource that individuals are able to mobilize in a time of stress (Hobfoll, 2002; Hobfoll, Hall, Canetti-Nisim, Galea, Johnson & Palmieri, 2007). When entrepreneurs are able to be resilient, they are better able to face the dangerous environment around them (Folkman & Moskowitz, 2000; Tedeschi & Calhoun, 2004). Resilience makes these positive outcomes during adversity possible (Westphal & Bonanno, 2007). The awareness of risk and adversity influences a person's belief and the relative personal abilities (Gist & Mitchell, 1992), and it likely will influence beliefs of people working with the entrepreneur, such as employees, therefore contributing to the whole business and its success. This feeling of helplessness and powerlessness of entrepreneurs will likely transferred to core employees and will affect their attitude toward resiliency.

Individual resilience and organisational resilience are strongly correlated and in the case of small businesses, entrepreneurial resilience can strongly influence both individual resilience and organisational resilience, in turn fostering business growth and overall business success. Indeed, his behavior affect that of people who work around him/her and with him/her (De Jong & Den Hartog, 2007), especially in smaller businesses. In this regard, several authors have proposed that resilience is a major factor underlying success in entrepreneurial settings (Baron & Markman, 2003; Envik, 2005; Ayala & Manzano, 2014; Fisher, Maritz & Lobo, 2016). Others authors have suggested that entrepreneurial success and performance are a function of resilience (Markman & Baron, 2003; Hayward, Foster, Sarasvathy & Fredrickson, 2010), achievement motivation, risk-taking propensity (Stewart, Watson, Carland & Carland, 1999) and the capacity to adapt to and tolerate ambiguity (Bhidé, 2000).

For the above reasons, we can propose the following baseline hypothesis:

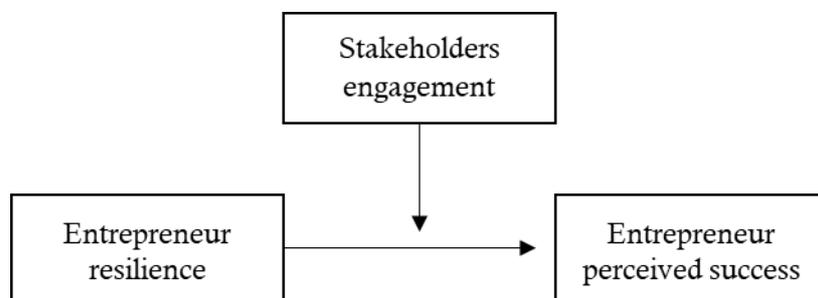
Hypothesis 1: entrepreneurial resilience is positively associated with entrepreneurial perceived success within its business environment.

Entrepreneurs always thrive on unsettling and turbulent conditions, and strive to find paths to business growth. It is well established that network ties are an important resource facilitating business growth (Jack, 2005; Parida, Patel, Wincent & Kohtamäki, 2016; Ferraris, Santoro & Dezi, 2017). Network ties among firms have a significant role, as do the ties of individuals, especially for managers or entrepreneurs of smaller firms who work for the business growth always looking for opportunities (Scuotto, Santoro, Bresciani & Del Giudice, 2017). Networks of stakeholders can provide entrepreneurs access to a wide range of unique and rare resources ranging from information, knowledge, finance, ideas, insights, suggestions, which usually can be the key of survival for small firms and entrepreneurs (Witt, 2004). Especially intangible resources can provide rare and inimitable competitive advantages (Grant, 1996). This is true at an organisational level but also at an individual level. In fact, at an organisational level, recent streams of studies hint that increasing the number of partners and external sources of knowledge and other resources can actually increase performance (Laursen & Salter, 2006). By contrast, a personal network consists of stakeholders with whom an entrepreneur has relations of different type. Stakeholders in this case can be partners, suppliers, customers, venture capitalists, bankers, other creditors, distributors, trade associations, and family members (Moore, 1990). Typically, these are individuals whom entrepreneurs meet on a face-to-face basis, and from whom they obtain services, advice, and moral support. Individual networks allow entrepreneurs to acquire information and knowledge and link products and services to new markets (Dubini & Aldrich 1991), but requiring entrepreneurial contacts, knowledge, and confidence. An entrepreneur's network is a learning habitat from which to gain understanding about opportunities and resources (Bowey & Easton, 2007). Entrepreneurs are thus driven by networking activity to grow (Dubini & Aldrich 1991), because they cannot just rely on their in-house resources and skills to plan and implement activities in a way that could sustain their competitive advantage (Bughin, Chui & Johnson, 2008; Kaufmann & Shams, 2015). Therefore, entrepreneurs exploit stakeholders' competences, mutually utilize opportunities and create value through the collaborative modes and open innovation approaches (Kaufmann & Shams, 2015) and strengthening the number and the

density of network ties, both strong and weak (Granovetter, 1973). Strong ties are essentially close links based on mutual respect, trust and commitment (Söderqvist & Chetty; 2009; Kontinen & Ojala; 2011), while weak ties are superficial links not yet based on strong trust and which parts are not emotionally close to each other (Söderqvist & Chetty, 2009). Also, networks of stakeholders can offer entrepreneurs a substantial source of social capital (Bosma, Van Praag, Thurik & De Wit, 2004; Smith & Lohrke, 2008) and useful to resist in adverse conditions. Overall, these studies suggest that increasing the breadth of ties with external stakeholders can provide entrepreneur with heterogeneous knowledge and information coming from other people useful to cope with different situations. From a psychological and sociological point of view, the strong presence of wide and deep ties with stakeholders can provide entrepreneurs with experience and handholds helpful to build resilience which in turn can increase the likelihood of success. As studies suggested, resilience can be learned over time and with experience (Masten, 2001; Sutcliff & Vogus, 2003; Folke, Carpenter, Walker, Scheffer, Chapin & Rockström, 2010). A wide network of stakeholders can provide information to entrepreneurs improving learning activities, and experience, thus increasing the benefits of resilience.

Hypothesis 2: a wide stakeholders' engagement moderates the relationship between entrepreneurial resilience and entrepreneurial perceived success within its business environment.

Figure 1. Conceptual model and hypotheses



Methodology

Data Collection and Sample

We chose a quantitative methodology to reach the paper's goal, due to the availability of scales for each concept, and consistent with previous studies on this topic (Bullough & Renko, 2013; Ayala & Manzano, 2014). A survey has been conducted among small firms operating in Italy, and the entrepreneur (CEO or owner) was chosen as key respondent. We followed the statement of EU commission to define small firm, that is businesses with 10 to 49 staff headcount¹. We consequently randomly selected firms from a list provided by one of the most important local association of entrepreneurships. Italy is considered a well suited country for entrepreneurial research given the high percentage of self-employed people within the country, that is 23,9% according to the OECD report (2018). Random selection has been successfully used in entrepreneurship studies (see for example Ayala & Manzano, 2014). Then, we sent a questionnaire along a brief introduction of the research scope by using their direct email address. If the email address was not available, the firm was approached by phone requesting an email address and then the questionnaire was sent. With some of them we made a phone call or direct talk because they were interested in knowing more about this research.

The questionnaire was sent in October 2017 and was answered and returned by 117 entrepreneurs in October and November 2017.

The surveyed firms operate in different sectors such as IT (both hardware and services), automotive, food & beverage, retail, consultants.

The questionnaire was developed according to the previously discussed literature with both open and closed questions. We first asked for general information about the respondent such as tenure in his/her firm, age, gender. We asked whether the respondent was the founder and decision maker within the business. If not, the response was discarded. We then asked questions related to

¹ http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_it

entrepreneurs' facets such as entrepreneur's resilience, perceived success and stakeholders' engagement. Finally, we asked questions related to the managed firm such as firm's size and age, performance, innovations developed, business growth.

Due to a single respondent approach to gather data, we have tried to limit common method bias by separating the questions within the questionnaire, especially dependent and independent variables, to reduce the risk of rationalising the answers of the respondents (Podsakoff, MacKenzie, Lee & Podsakoff, 2003).

We also assessed differences between early and late respondents to limit potential non-response bias (Ahammad, Tarba, Liu & Glaister, 2016). To do so, the order of responses to the survey was recorded and it was revealed to be non-significantly correlated with both firm age and firm size, suggesting that concern regarding non-response bias is minimal (Hawes & Crittenden, 1984). We also found no substantial differences in either firm age or firm size across industries. This result is important given the heterogeneity of our sample regarding sectors.

Variables

Entrepreneur resilience is the ability of the entrepreneur to face the dangerous environment around them (Folkman & Moskowitz, 2000; Tedeschi & Calhoun, 2004). The variable was developed using Sinclair & Wallston's (2004) brief resilience coping scale, which is a 4-item, 7-point Likert-type scale ranging from "does not describe me at all" to "describes me very well." The scale is reliable (Nunnally, 1978) with a Cronbach's alpha of 0.947. Moreover, we run factor analysis (principal component analysis) to ensure the reliability of the variable, which generates one factor with all the four items proposed explaining a total of 94,401% of the observed variance. Consequently, we calculated a composite measure of *entrepreneur resilience* by averaging the scores. Moreover, we assessed the correlation matrix through the KMO and Bartlett's test resulted in acceptable level of

KMO statistic (0.804), and a significant p-value for the Bartlett's test of the construct. *Entrepreneur resilience* is the independent variable of the study.

Entrepreneur perceived success has been built using four items already employed in a quantitative study (Fisher, Maritz & Lobo, 2016). These are: a) I am personally satisfied with my life and business; b) I exceed the business goals I set out to achieve in founding at least one business; c) my business continually grows in turnover; d) my business continually grows in the return on investments. We used a 7-point Likert-type scale ranging from "does not describe my business at all" to "describes my business very well." The Cronbach's alpha is 0.959 and this means that the scale is reliable (Nunnally, 1978). Moreover, we run factor analysis (principal component analysis) to ensure the reliability of the variable, which generates one factor with all the four items proposed explaining a total of 89,098% of the observed variance. Consequently, we calculated a composite measure of *entrepreneur perceived success* by averaging the scores. Moreover, we assessed the correlation matrix through the KMO and Bartlett's test resulted in acceptable level of KMO statistic (0.812), and a significant p-value for the Bartlett's test of the construct. *Entrepreneur perceived success* is the dependent variable of the study.

Stakeholders' engagement has been measured following analytical approach used by previous studies (Laursen and Salter, 2006). We first considered each type of external stakeholder as a dummy variable, where 0 referred to external stakeholders not engaged with the entrepreneur, and 1 to those engaged. Then, we created an aggregate measure as a proxy for breadth of external stakeholders, by adding up all the different types of external stakeholders. It is noteworthy to specify that studies consider different approach to engagement. For example, Ruef (2002) consider engagement as the source that can inspire business ideas to entrepreneur, such as family members (strong ties), business actors (weak ties). We asked the same thing but utilising 7 different sources typically involved in open innovation surveys, that is customers, suppliers, competitors, universities or other higher education institutions, government or public research institutions, consultants, and other enterprises

within the same group (Laursen & Salter, 2006; Faems, De Visser, Andries & Van Looy, 2010).

Stakeholders' engagement is the moderating variable in our study.

We finally controlled for different variables that, according to literature, could affect the entrepreneurial resilience and success, such as respondent's age (*Age*) and gender (*Gender*) (Ayala & Manzano, 2014). Moreover, at firm level, we included a dummy *Industry* with 0 meaning services while 1 meaning manufacturing, and the firm's *Size*.

Table 1 shows and describes the variables employed in the Ordinary Least Squares (OLS) models, highlighting the role for each variable.

Table 1. variables and items

Variables	Type	Description	Sources
Entrepreneur resilience	<i>Dependent variable</i>	<i>I actively look for ways to replace the losses I encounter in life</i>	Sinclair & Wallston 2004
		<i>I believe that I can grow in positive ways by dealing with difficult situations</i>	Sinclair & Wallston 2004
		<i>I look for creative ways to alter difficult situations</i>	Sinclair & Wallston 2004
		<i>Regardless of what happens to me, I believe I can control my reaction to it</i>	Sinclair & Wallston 2004
Entrepreneur perceived success	<i>Independent variable</i>	<i>I am personally satisfied with my life and business</i>	Achtenhagen et al., 2010; Fisher et al., 2016
		<i>I exceed the business goals I set out to achieve in founding at least one business</i>	Achtenhagen et al., 2010; Fisher et al., 2016
		<i>My business continually grows in turnover</i>	Achtenhagen et al., 2010; Fisher et al., 2016
		<i>My business continually grows in the return on investments</i>	Achtenhagen et al., 2010; Fisher et al., 2016
Stakeholders' engagement	<i>Moderating variable</i>	<i>Range 0-7 based on the number of stakeholders engaged in the entrepreneur's activity (customers, suppliers, competitors, universities or other higher education institutions, government or public research institutions, consultants, and other enterprises within the same group)</i>	Laursen & Salter, 2006; Faems, De Visser, Andries & Van Looy, 2010
Size	<i>Control variable</i>	<i>Number of employees</i>	Dewar & Dutton, 1986
Industry	<i>Control variable</i>	<i>1=manufacturing; 0=service</i>	Blindenbach-Driessen & van den Ende 2014

Gender	Control variable	1=man; 0=woman	Ayala & Manzano, 2014
Age	Control variable	Entrepreneur's years old	Ayala & Manzano, 2014

Table 2 shows results of the factor analysis for multi-items variables.

Table 2. factor analysis

Variable	No. of items	TVA	KMO	P-value Bartlett's test	Cronbach's alpha
ER	4	94.401%	0.804	0.000	0.947
EntrSuccess	4	89.098%	0.812	0.000	0.959

Data analysis

Descriptive statistics and preliminary analyses

Before presenting the findings of the quantitative study, it is noteworthy to present key descriptive statistics (tab. 3). First, small businesses in our sample have on average 26.74 employees, and they are consistently distributed between services and manufacturing (50% and 50%). Second, 44% of the entrepreneurs of the sample are woman while 56% are men, on average they are 44.58 years old.

Table 3. descriptive statistics

	Mean	Std. deviation	N
Size	26,74	9,548	117
Industry	,5043	,50213	117
Gender	,56	,502	117
Age	44,58	10,152	117
StakeEng	3,7179	1,91116	117
ER	4,3034	1,91490	117
EntrSuccess	4,2671	1,61042	117

Variance inflation factors (VIF) supported the rejection of collinearity issues among variable as they range from 1.134 to 3.975, below the threshold accepted in literature (Foxall & Yani-de-Soriano, 2005). Table 4 shows the correlation matrix among variables.

Table 4. correlation matrix

	Size	Industry	Gender	Age	StakeEng	ER	EntrSuccess
Size	1	-,189*	,176	-,404**	,086	,089	,128
Industry	-,189*	1	-,214*	,439**	-,048	-,064	-,043
Gender	,176	-,214*	1	-,226*	,174	,243**	,117
Age	-,404**	,439**	-,226*	1	-,353**	-,388**	-,342**
StakeEng	,086	-,048	,174	-,353**	1	,655**	,455**
ER	,089	-,064	,243**	-,388**	,655**	1	,581**
EntrSuccess	,128	-,043	,117	-,342**	,455**	,581**	1

* P<.05

** P<.01

Research findings

We used hierarchical OLS regression models to test the hypotheses, because is a wide use method in organisational studies and because is appropriate for metric and continuous dependent variables, while logit analysis is appropriate for dichotomous dependent variables. Analyses were performed through SPSS Statistics 24.

Variables were entered iteratively starting from the sole control variables, that is *Size*, *Industry*, *Gender*, *Age*, in model 1. In model 2 we added the independent variable *ER*, which effect on *Entrepreneur perceived success* is positive and significant ($\beta=0.532$; $pvalue<0.001$), thus confirming the baseline HP. 1. Model 4 has been implemented to test HP. 2. As the table 4 shows, the effect of *ER* on *Entrepreneur perceived success* is still positive and significant ($\beta=0.321$; $pvalue<0.001$), but a little bit weaker. The interesting finding is that the interaction term between *ER* and *StakeEng* is positively and significantly associated with *Entrepreneur perceived success* ($\beta=0.653$; $pvalue<0.001$), thus allowing us to accept HP. 2 that posed a moderation effect.

The effect of the control variables is non-significant in all the models developed, except for the effect of *Age*. However, the strong and significant effect of this variable is only evident in model 1, which included just the control variables, and which is not deployed to hypotheses testing. Nevertheless, in model 4, the effect of *Age* is negative and slightly significant. This means that older entrepreneurs are more likely to have weaker perceived success.

Table 5. Results of the regression analysis

Variable	Entrepreneurial perceived success			
	Model 1	Model 2	Model 3	Model 4
ER	-	0.532 (6.242) ***	0.682 (4.512) ***	0.321 (2.184) ***
StakeEng	-	-	-0.177 (-1.204)	-0.324 (-2.459) *
ER*StakeEng	-	-	-	0.653 (5.747) ***
Size	-0.017 (-0.171)	0.036 (0.426)	0.037 (0.438)	-0.016 (0.829)
Industry (1 = manufacturing, 0 = service)	0.141 (1.432)	0.058 (0.667)	0.060 (0.698)	-0.017 (0.825)
Gender (1 = male, 0 = female)	0.061 (0.665)	-0.041 (-0.510)	-0.048 (-0.596)	-0.085 (-1.190)
Age	-0.0397 (-3.754)***	-0.155 (-1.568)	-0.162 (-1.632)	-0.112 (-1.283) *
R ²	0.134	0.359	0.368	0.515
Adjusted R ²	0.102	0.331	0.333	0.484
F-value	4.350 **	12.454 ***	10.662 ***	16.517 ***

* P<.05

** P<.01

*** P<.001

Discussion and conclusions

This research aimed to explore the effect of entrepreneur resilience on entrepreneur perceived success, and whether such a relationship is moderated by stakeholders' engagement (Granovetter, 1973; Ruef, 2002). The reasoning behind this research choice, is that networks of stakeholders can offer entrepreneurs a substantial source of social capital (Smith & Lohrke, 2008; Santarelli & Tran, 2013) and useful to resist in adverse conditions.

A quantitative methodology has been chosen and adopted to test the hypotheses and explore relationship among variables. Thanks to a unique database of a sample of 117 entrepreneurs managing small businesses, our findings unveil that entrepreneur resilience is positively associated to entrepreneur's perceived success, confirming results of previous studies (Baron & Markman, 2003; Markman & Baron, 2003; Envick, 2005; Hayward, Foster, Sarasvathy & Fredrickson, 2010; Ayala & Manzano, 2014), and that a wide stakeholders' engagement moderates such a relationship, regardless entrepreneur gender, and firm's size and industry.

These findings allow us to provide the following contributions to research. First, we add to the body of research on resilience at an individual level with particular regard to entrepreneurs, a specific context of analysis which received scant attention in literature (exceptions are Bullough & Renko, 2013; Bullough, Renko & Myatt, 2014; Korber & McNaughton, 2017). In this regard, our results

offer a statistical support positing that capacity for resilience enables an organisation to take appropriate actions and transformations in response to unanticipated events that potentially threaten its continued existence. In detail, it is interesting to underline that our findings support those of Fisher, Maritz & Lobo (2016), but we used different scales of individual resilience following Sinclair & Wallston (2004). This means that, no matter the scales used, the relationship between resilience and success will be positive and significant. Second, we outline the key role of networks for entrepreneurs to enhance their resilience and perceived success. Specifically, scholars scarcely investigated how entrepreneurs can leverage networks to acquire competence (Yu, Hao, Ahlstrom, Si & Liang, 2014, p. 687), engage with stakeholders to stimulate entrepreneurial opportunity (Acs, Audretsch & Lehmann, 2013; Burns, Barney, Angus & Herrick, 2014), and even less research on how network ties could foster resilient entrepreneurs. In this view, our data confirm that a wide network of stakeholders help entrepreneurs in building resilience and augment perceived success. Accordingly, entrepreneurs engaging in wide relationships with several stakeholders such as customers, suppliers and so forth, are able to benefit from resilience and increase the perceived success of their business (Jack, 2005; Parida, Patel, Wincent & Kohtamäki, 2016; Ferraris, Santoro & Dezi, 2017). It has been suggested that networks of stakeholders can offer entrepreneurs a substantial source of capital (Smith and Lohrke, 2008), and that entrepreneurs exploit stakeholders' competences, mutually utilize opportunities and create value through the collaborative modes and open innovation approaches (Kaufmann and Shams, 2015). We confirm these findings providing more evidence that stakeholders can also offer a path towards resilience and success for entrepreneurs.

This paper offers also managerial implications to entrepreneurs seeking to improve business success in this even-changing era. Entrepreneurs are traditionally driven by networking activity to find business opportunity and to improve their business. Our findings provide evidence that entrepreneurs should consider heterogeneous and wide relationships with diverse stakeholders. Of course this requires time and social capability to manage each relationship. However, especially in a

context of small business that are obliged to innovate and re-organise themselves through flexibility, diverse and numerous external ties can provide hints to increase resilience and success at the same time. Following an open innovation logic, entrepreneurs must be able to open up their critical and business thinking to increase their social capital and attitudes towards resilience, thus contributing to their businesses. This is because, of course, they cannot just rely on their in-house resources and skills to plan and implement activities in a way that could sustain their competitive advantage. Therefore, entrepreneurs should spend time in networking activities with heterogeneous stakeholders ranging from family members to business actors such as customers, suppliers and Institutions.

This research should be considered in light of several limitations. First, all the measures are affected by subjectivity of a single respondent (entrepreneur). Therefore, despite both common method bias is not worrying issue in our data because we have followed specific and recommended methodological procedures, they must be taken carefully. Consistently, this empirical research is based on measures of perception (such as resilience and success), and thus it is not based on objective measures. Second, the sample only represents the Italian target population, and thus the external validity of the results could represent an issue. Future research should test our model in other countries to check whether the findings are the same.

Concluding, the findings of this study provide supporting evidence that within the context of small businesses, there is a positive relationship among entrepreneur resilience, entrepreneur perceived success and stakeholders' engagement. Future studies could take this study as first step towards open innovation studies at an entrepreneur level.

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