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## EFFECTS OF BELIEFS, MOTIVATION AND ENTREPRENEURIAL SELF-EFFICACY ON ENTREPRENEURIAL INTENTIONS: THE MODERATING ROLE OF FAMILY SUPPORT

Entrepreneurship is crucial for promoting innovation, creating employment opportunities and generating social and economic wealth in a country's economy. In order to increase entrepreneurial activity, it is important to investigate entrepreneurial behavior by analyzing the process of businesses creation and the set of factors that favor the development of entrepreneurial aspirations, intentions and actions, which is a central goal of psychology of entrepreneurship. This research aims to deepen the knowledge about the relationship between the entrepreneurial self-efficacy, belief, motivation, family support and entrepreneurial intentions by developing a moderated mediation model. This study suggests that entrepreneurial self-efficacy partially mediates the effect of beliefs and motivations on entrepreneurial intention. This mediation is moderated by family support, which is also directly related to the intentions. The study was conducted on a sample of 446 students from four different high schools, and results support our hypotheses. Theoretical and practical implications from this research are further examined in the study.

**Keywords:** entrepreneurship; beliefs; motivation; entrepreneurial self-efficacy; entrepreneurial intentions; family support.

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## INTRODUCTION

Entrepreneurship is defined as the identification and exploitation of business opportunities (Shane & Venkataraman, 2000) and involves three phases: pre-launch, where the entrepreneur identifies business opportunities, launch, in which he or she searches the resources to start a business, and post-launch, in which the entrepreneur manages the new company in order to make it survive and eventually grow (Baron, 2007). In each of these stages, individual factors, both of psychological and contextual nature, play a significant and differentiated role, however, in the first stage of pre-launch these are even more relevant for research and education (Hambrick, 2007). Consequently, studies on entrepreneurship have focused primarily on the stage of business creation and on the personal and contextual factors that can promote the development of entrepreneurial aspirations, intentions and actions (Battistelli, 2001, 2003).

Scientific literature, concerning entrepreneurship has progressively grown during the last 25 years as supported by the great number of researches, conferences and journals on the topic (Busenitz, Plummer, Klotz, Shahzad, & Rhoads, 2014; Frank & Landström, 2016). Particularly, one stream has focused on the intention to become an entrepreneur and the personal and context factors influencing this process (Busenitz, West, Shepherd, Nelson, Chandler, & Zacharakis, 2003).

Identifying psychological and contextual antecedents of the decision to undertake an entrepreneurial activity is extremely important, because entrepreneurial intention (EI) depends primarily on a personal drive, as well as development and implementation depend on the individual ability to recognize and pursue opportunities (Liñán, Urbano, & Guerrero, 2011). Scholars have found several contextual and individual factors affecting of EI, such as personal traits (Ciavarella et al., 2004), motivation (Segal, Borgia, & Schoenfeld, 2005), role models (BarNir, Watson, & Hutchins, 2011), self-efficacy (Zhao, Seibert, & Hills, 2005) and family background (Zellweger, Sieger, & Halter, 2011).

However, despite these findings, there is only a limited understanding of the factors and decision processes that lead a person to become an entrepreneur, as most studies have examined variables in isolation instead of investigating mechanisms of EI (Markman, Balkin, & Baron, 2002). This approach has resulted in an extensive list of possible antecedents but just a few models integrating inter-construct relationships (Zhao et al., 2005).

In order to fill this gap, this study aims to develop and test a model in which entrepreneurial self-efficacy mediates the relationship between beliefs and moti-

vation and entrepreneurial intentions. Furthermore, we suggest that family support not only has a direct relationship, but also moderates the relationship between self-efficacy and entrepreneurial intention. Therefore, this research contributes to the literature by theorizing and empirically testing a model by which individual and contextual factors affect entrepreneurial intention of high school students.

### **THEORETICAL BACKGROUND AND HYPOTHESES**

Entrepreneurial research does not only regard people disposition or socio-economic environmental factors, but rather all those features that can promote entrepreneurial actions (Tolentino, Sedoglavich, Lu, Garcia, & Restubog, 2014). Thus, entrepreneurship is not just a career choice, but a complex and detailed process, in which people self-direct themselves through new situations, continuously changing their career paths.

Individual intention to create an enterprise is a fundamental predictor for future business actions (Aparicio & Battistelli, 2008; Krueger, Reilly, & Carsrud, 2000; Reynolds, 1995), as intention is a key factor in understanding the decision-making process. Correspondingly, many studies have indicated this variable as the most effective in predicting actual behavior (Ajzen, 1991; Ajzen & Fishbein, 1980; Shaver & Scott, 1992).

An important aspect, related to entrepreneurial behavior, is entrepreneurial self-efficacy (ESE). According to Boyd & Vozikis's model (1994), high levels of entrepreneurial self-efficacy, defined as the confidence of a person in his ability to successfully execute business tasks and roles (Chen, Greene, & Crick, 1998; Zhang, Wang, & Owen, 2015), facilitate the development of entrepreneurial intentions. Subsequently, different empirical studies have confirmed that entrepreneurial self-efficacy shows a significant positive relationship with intentions to start a business (Zhao et al., 2005; Sequeira, Mueller, & McGee, 2007; Kibler, 2013).

Based on Boyd and Vozikis's (1994) entrepreneurial intentions model which has its theoretical roots both in self-efficacy theory and in the theory of planned behavior, the present study aims to test the relationship between individual and contextual factors such as entrepreneurship motivation, students' beliefs associated with the entrepreneur profession, entrepreneurial self-efficacy and family support and entrepreneurial intention among high school students in Italy. Previous studies have underlined that intentions are strongly influenced by self-

-efficacy (Bandura, Adams, Hardy, & Howells, 1980). Also, according to the theory of planned behavior, subjective norms affect attitudes toward behaviors, thus affecting their subsequent intentions and behaviors (Ajzen, 1991). Therefore, this model posits that, in addition to a direct link between entrepreneurial self-efficacy and entrepreneurial intention, motivation and beliefs are indirectly linked to entrepreneurial intention through entrepreneurial self-efficacy. Furthermore, this study argues that family support, as subjective norm, not only influences directly entrepreneurial intentions but moderate the relationship between self-efficacy and intentions.

Past researches have not concentrated on understanding the relationship between beliefs regarding the social role of the entrepreneur and entrepreneurial self-efficacy. Despite this, some results show that this kind of beliefs relate to entrepreneurial intentions (Battistelli, 2001; Odoardi, 2003). Sánchez and Odoardi (2008) stated that positive beliefs, linked to the perception that the entrepreneur plays an important role in the society, appear to be related to entrepreneurial intentions.

Self-efficacy can be developed and strengthened in four different ways, observational learning, mastery experiences, social persuasion and self-judgments of physiological states (Bandura, 1982; Wood & Bandura, 1989). People form performance judgments from an integration of efficacy information originated from all four of these sources (Gist & Mitchell, 1992; Lent & Hackett, 1987). Observational learning provides an effective system of strengthening self-efficacy through role model adoption (Wood & Bandura, 1989). When people see others accomplishing something, they experience an increased perception of their own ability to succeed, therefore the adoption of positive role models enhance self-efficacy by conveying effective strategies for handling situations. Additionally, self-efficacy is affected by role models through social comparison (Wood & Bandura, 1989). Role models' adoption may be associated with individual's belief on entrepreneurship. Beliefs toward entrepreneurship consist on people's positive or negative evaluations of entrepreneurial role. Individuals with positive beliefs on entrepreneurs may be more likely to relate themselves to an entrepreneurial job position and therefore to adopt entrepreneurial role models.

Consequently, it is possible to speculate that a positive belief regarding entrepreneurs' social status may influence self-efficacy by facilitating the adoption of entrepreneurs as role models. As a positive belief on the entrepreneurial role may foster a richer vicarious experience which in turn may facilitate higher confidence in their ability to create a business.

**Hypothesis 1:** Beliefs are positively related to perceived entrepreneurial self-efficacy.

Motivation is often associated with entrepreneurial intentions (Shane, Locke, & Collins, 2003). Scientific evidences show that people that are highly self-directed and able to dynamically control their activities, are also more likely to undertake self-employment as a career (Odoardi & Corallo, 2014). The level of intrinsic motivation and effort that the person exercises and for how long he will persevere to achieve a goal are both factors that can regulate entrepreneurial intentions (Antonioli, Nicolli, Ramaciotti, & Rizzo, 2016).

Motivation is commonly defined as an energizing force from inside and outside the individual, leading to intentional action (Pinder, 1998). This force controls direction, intensity and persistence of behaviors within his work experience (Battistelli, Galletta, Portoghese, & Vandenberghe, 2013). More specifically, entrepreneurial motivation is defined as individual forces that drive nascent entrepreneurs to and through the process of venture emergence and growth (Gartner, Bird, & Starr, 1992).

According to self-determination theory (Ryan & Deci, 2000), motivation is a center of biological, cognitive and social regulation involving the energy, direction and persistence as well as the activation of intentions. This indicates that motivations play an important role in predicting human intentions and behaviors. In several motivational theories, goal setting is an essential cognitive process affecting motivation (Bandura, 1988). In Locke's motivational framework (1996), goals affect behaviors by modifying intensity, duration, and direction of action. Self-efficacy influences goals which people set for themselves. The achievement of sub-goals gives a sense of task mastery and competence, that supports the development of even stronger self-efficacy beliefs, which in turn facilitates higher level of motivation. Goal setting has an impact on self-efficacy (Locke & Latham, 1990), as specific goals can increase levels of performance by identifying the amount of effort required for success and the self-satisfaction anticipated (Schunk, 1990).

Moreover, self-efficacy can influence commitment to personal goals (Schunk, 1990). The dynamic link between self-efficacy and its effect on individual goal setting, self-evaluation of performance and feedback, and consequent regulation of self-efficacy and personal goals is an essential process of the self-regulation system of social cognitive theory. Consequently, it is possible to consider that the motivation to start and develop an enterprise may influence entrepreneurial self-efficacy beliefs.

**Hypothesis 2:** Entrepreneurship motivation is positively related to perceived entrepreneurial self-efficacy.

Intentions are strongly influenced by the perception of having specific skills, namely self-efficacy (Bird, 1988; Krueger et al., 2000). Bird's model of entrepreneurial intentionality is grounded in cognitive psychology theory and tries to explain entrepreneurial behavior. Intentions are a function of attitudes which provides a connection between attitudes and following behaviors (Fishbein & Ajzen, 1975). Thus, attitudes toward a given behavior are formed on the belief that acting that behavior will produce certain consequences, in addition to normative beliefs about the behavior.

Boyd and Vozikis (1994) integrated self-efficacy in Bird's model of entrepreneurial intentionality in order to explain the strength of the association between intentions and behavior. The socio-cognitive theory (Bandura, 1974) states that self-efficacy is a central mechanism of action. Accordingly, a high level of self-efficacy can facilitate a behavior while a low level can hinder it. Thus, self-efficacy defines the perception of difficulty in performing a behavior (Ajzen, 1987). Intentions reflect the willingness to pursue a given behavior, while perceived control relates to realistic constraints and limitations. Self-efficacy, according to Ajzen (1987), is closely related to the concept of perceived behavioral control (Bandura, 1977, 1982). Both conceptions refer to perceptive factors specific to act a behavior or achieve a goal. Likewise, it has been suggested that perceived feasibility, the degree to which a person feels able to successfully start a business, is an important factor of entrepreneurial intentions (Krueger, 1993).

The incorporation of self-efficacy into Bird's model offers additional understanding of the process by which entrepreneurial intentions are created and carried out. Although Boyd and Vozikis's model (1994) appears well structured and theoretically founded (Battistelli, 2001), it has not yet received adequate empirical evidences, even though the role of self-efficacy in building entrepreneurial intention has been recently confirmed by numerous researches (Appelbaum & Hare, 1996; Chen et al., 1998; De Noble, Jung, & Ehrlich, 1999; Zhao et al., 2005; Tsai, Chang, & Peng, 2016).

**Hypothesis 3:** Perceived entrepreneurial self-efficacy is positively related to student's entrepreneurial intention.

Several entrepreneurial studies have focused on intentions to pursue a business career, showing a strong association between entrepreneurial self-efficacy and intentions. However, little has been done to examine the role of beliefs and personal motivations in the development of entrepreneurial intentions through the mediating function of self-efficacy.

Self-efficacy can also mediate the effects of other variables (Bandura, 1988; Bulger & Mellor, 1997; Shields, Brawley, & Lindover, 2006), although is usually described as a direct predictor for intentions (Bandura, 1997).

According to Boyd and Vozikis's model (1994), attitudes and perceptions about the creation of new businesses develop from cognitive processes and may affect entrepreneurial intentions. These processes also determine the development of self-efficacy through experience of mastery, observational learning, social persuasion, and perceptions of well-being resulting from personal and contextual variables. According to Ajzen's (1985) theory of planned behavior, entrepreneurial intentions are influenced by attitudes towards entrepreneurship and perceived self-efficacy beliefs. Similarly, in this study it is argued that self-efficacy mediates the relationship between motivation and beliefs with entrepreneurial intentions.

**Hypothesis 4:** Perceived entrepreneurial self-efficacy mediates the relationship between both beliefs and entrepreneurship motivation and student's entrepreneurial intention.

Research has examined the relationship between subjective norms and entrepreneurial intentions (Abebe, 2012; Solesvik, 2013). Theory of planned behavior (Ajzen, 1991) states that subjective norms, perceived expectations that people have toward salient others, are strictly related to behavioral intentions (Ajzen, 1991).

In entrepreneurial research, subjective norms refer to a "person's perceptions of reference people, including family, friends, and significant others, who would or would not approve the decision to become an entrepreneur" (Tsai et al., 2016, p. 449). Thus, perceived family support is possibly associated with subjective norms. Ajzen (2002) suggests that individuals may have higher levels of intentions when their family are perceived as supportive to these behaviors. Similarly, Ahmad and colleagues (2014) stated that family support can provide perceived subjective norms that potential entrepreneurs can use to establish whether the intention to start a business is accepted and supported by other people considered significant. Lastly, Dyer (1995) proposes that if one's family is not favorable an individual may be discouraged to begin a business. Generally, relevant people help others for whom they have high expectations to start a new venture by offering existing resources (Greve & Salaff, 2003). Literature suggests that when people create a business, they normally gain support from family members (Greve & Salaff, 2003; Anderson, Jack, & Drakopoulou-Dodd, 2005).

**Hypothesis 5:** Family support is positively related to student's entrepreneurial intention.

Prior literature proposes that subjective norms are related to entrepreneurship in both positive or negative way (Dyer, 1995). The current study states that together with a direct effect on the decision to start a new venture, family support may also moderate the relationship between entrepreneurial self-efficacy and the intention to create a new business, so that high levels of perceived family support are associated to a greater entrepreneurial intention, and, vice versa, at low levels of family support, to a weaker intention. Therefore, the perception of entrepreneurial self-efficacy is hypothesized to impact entrepreneurial intention on condition that family support is perceived. Which, in this case, it may operate as proximal contextual factor supporting the development of entrepreneurial intentions.

**Hypothesis 6:** Family support moderates the relationship between perceived entrepreneurial self-efficacy and student's entrepreneurial intention.

In the Figure 1 is presented the research model.

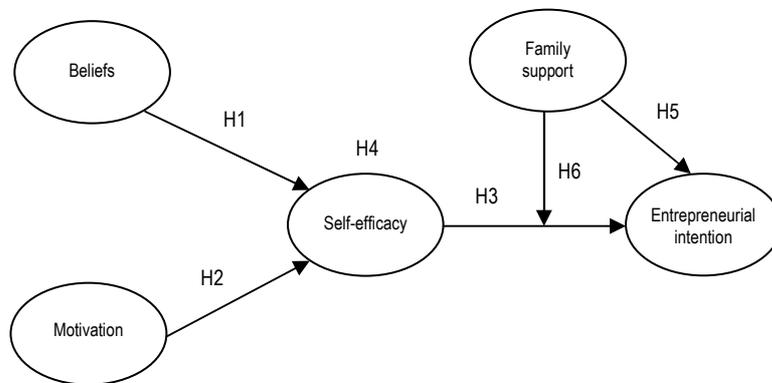


Figure 1. Hypothesized model of the relationship between variables.

## METHODS

### Study design, participants and procedure

A cross-sectional survey was carried out to understand factors related to entrepreneurial intention in high school students. The survey involved a sample including a total of 446 high school students from four different schools (i.e. scientific, linguistic, and artistic) based in a single town in northern Italy. Half of the sample (50.2%) was female, enrolled in the 4<sup>th</sup> (55.4%) and 5<sup>th</sup> (44.4%) year of high school. The average age of the students was 18 years ( $SD = 0.90$ , range = 16-21).

Participation was voluntary and anonymous, and all the students were informed of the research aim. A structured questionnaire was administered during lesson. After completing questionnaire, students returned it in locked boxes placed in each classroom.

### Measures

A self-reported paper questionnaire was used to collect data. The questionnaire included based validated scales from literature and ad hoc developed to obtain information about family support on entrepreneurial choice and entrepreneurship belief. Not all the measures used were validated in Italian, therefore the translation-back-translation procedure was adopted (Brislin, 1980). 20 students participated to a pilot questionnaire conducted to ensure further validity of the whole instrument. Some improvements were made to the phrasing for improving understandability of the items. The time required to complete the questionnaire was about 15 minutes. A brief description of the scales is presented:

*Entrepreneurial motivation.* An adapted version of Multidimensional Work Motivation Scale (MWMS) by Battistelli, Galletta, Odoardi, Núñez, and Ntalianis (2017) was used. For the aim of the study, we used specifically four items of the intrinsic motivation form. A sample item was "I would put efforts into entrepreneurial activity." The measure items were assessed on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree);  $\alpha = .71$ .

*Entrepreneurship beliefs.* Students' beliefs about entrepreneur profession was assessed by three items drawn from prior studies (Battistelli, Odoardi, & Sanchez, 2006). A Sample item was "The entrepreneur plays an important social role." The measure items were assessed on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree);  $\alpha = .72$ .

*Entrepreneurial self-efficacy.* Three items from self-efficacy scale of De Noble, Jung, and Ehrlich (1999) were used. A Sample item was “Tolerating unexpected changes in market conditions.” The measure items were assessed on a five-point scale ranging from 1 (completely false) to 5 (completely true);  $\alpha = .60$ .

*Family support.* Family support was assessed by three items drawn from prior studies (Battistelli, 2001). A sample item was “My parents stimulate me to consider the entrepreneurial choice.” The measure items were assessed on a five-point scale ranging from 1 (completely false) to 5 (completely true);  $\alpha = .87$ .

*Entrepreneurial Intention.* We used five items by Liñán and Chen (2009). A sample item was “I am determined to create a Company in the future”. The measure items were assessed on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree);  $\alpha = .94$ .

### **Data analysis**

Statistical analyses were carried out using the principles of structural equation modeling techniques with AMOS 19.0 (Arbuckle & Wothke, 1999). A two-step approach was performed by following Anderson and Gerbing’s (1988) suggestions. First, we assessed a measurement model via exploratory factor analysis, with Maximum Likelihood extraction method and Oblimin rotation method, complemented by confirmatory factor analysis. Cronbach’s Alpha was used to assess reliability of the single measures. Second, we tested the hypothesized model with tests of competing models.

The mediation effect (Hypothesis 4) was tested in structural equation modeling by comparing the mediation model with the (hypothesized) baseline model, and we also applied bootstrapping technique to test for the significance of the indirect effect (Cheung & Lau, 2008) Confidence intervals (95%) of mediation effects were calculated.

The moderation effect (Hypothesis 6), was examined by following Little, Bovaird and Widaman’s (2006) recommendations. Specifically, orthogonal centered product terms of the latent construct were used to simulate the interaction in the structural model. In a first step, uncentered indicator of entrepreneurial self-efficacy (independent variable) was multiplied with an uncentered indicator of family support (moderator). Nine product terms were obtained. Successively, each of the nine products was regressed on all indicators. The unstandardized residuals of this regression were saved in the data file. Then, the nine residuals were used for the measurement of the latent product term variable. Second, nine

orthogonalized product terms were included as indicators of a single latent interaction construct (self-efficacy\*family support). In addition, error covariances between the residual variances of the interaction products were specified. The nature of the interaction was tested by following Aiken, West's and Reno (1991) method. Regression lines were plotted for the association between self-efficacy (independent variable) and entrepreneurial intention (dependent variable) defining the high and low values of family support (moderator variable).

The  $\Delta\chi^2$  test with one degree of freedom (Kline, 2005) was used to test our hypothesis by comparing models. The following fit indices were used to evaluate goodness of model fit: IFI, CFI, TLI and RMSEA. The IFI, TLI and CFI critical values should be  $\geq .90$ , and RMSEA  $\leq .08$  (Kline, 2005). Finally, correlation analysis between variables was performed by using Pearson coefficient ( $r$ ).

## RESULTS

Table 1 shows correlations, means, standard deviations and Cronbach's Alpha for the variables.

Table 1. Means, Standard Deviations and Correlations of Variables (N = 446)

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Beliefs	3.14	0.80	(.72)				
2. Motivation	3.76	1.65	.295**	(.71)			
3. Self-efficacy	3.22	0.73	.121*	.229**	(.60)		
4. Family support	3.21	0.96	.322**	.263**	.197**	(.87)	
5. Entrepreneurial intention	3.05	1.51	.335**	.442**	.263**	.433**	(.94)

Note. \* $p < .05$ , \*\* $p < .01$ . Cronbach's Alphas are shown in the parentheses.

### Factorial validity (measurement model)

The exploratory factor analysis results revealed a five-factor structure explaining 70.3% of the variance of the indicators. Reliability analysis of measures showed good internal consistency (inter-correlation between items of the same scale, from .60 to .94).

Confirmatory factor analysis was carried out for the five-factor structure. All indicators loaded significantly on their corresponding constructs ( $p < .001$ ) and

the measurement model showed a good fit to the data,  $\chi^2(df = 125) = 343.0$ , IFI = .95, TLI = .92, CFI = .95, RMSEA = .06. Also, the five-factor structure was compared to a four-factor structure in which self-efficacy and family support items loaded on one common factor (Alternative Model 1). Then, the five-factor structure was compared to a one-factor structure (Alternative Model 2) in which all the items loaded on one common factor. Both the four- and one-factor models fitted the data worse ( $\Delta\chi^2 [\Delta df = 4] = 86.3$ ,  $p < .001$ ;  $\Delta\chi^2 [\Delta df = 10] = 1016.4$ ,  $p < .001$ , respectively). Hence, the five-factor model was maintained (Table 2).

Table 2. *Fit Indices for Measurement Model*

Model	$\chi^2$	<i>df</i>	$\Delta\chi^2$	$\Delta df$	IFI	TLI	CFI	RMSEA
– Five-factor Model	343.0	125			.95	.97	.95	.06
– Alternative Model 1 (four-factor model combining SE and FS)	429.3	129	86.3	4	.93	.92	.93	.07
– Alternative Model 2 (one-factor model)	1359.4	135	1016.4	10	.71	.67	.71	.14

Note. *N* = 446. SE – self-efficacy, FS – Family support.

### Structure model

In a second step, structural relationships identified in the hypothesized model were analyzed. The hypothesized model fitted the data well:  $\chi^2(df = 306) = 705.6$ ; IFI = .93, TLI = .91, CFI = .93, and RMSEA = .05. All factor loadings were significant, as well as the path coefficients ( $p < .05$ ). The results showed that both beliefs and motivation were positively associated with entrepreneurial self-efficacy ( $\beta = .19$ ,  $p < .05$ ;  $\beta = .57$ ,  $p < .001$ , respectively) and the latter was positively related to entrepreneurial intention ( $\beta = .54$ ,  $p < .001$ ). These results supported hypotheses 1, 2, and 3.

Table 3. *Mediation Effect: Indirect Effects of Beliefs and Motivation on Entrepreneurial Intention through Perceived Self-Efficacy*

Relationship	Mediator	Standardized coefficients		Bootstrapping bias-corrected 95% CI	
		Direct effect without the mediator	Direct effect with the mediator	Lower limit	Upper limit
BE to E_INT	Perceived	.58*	.07 <sup>†</sup>	-.01	.11
MOT to E_INT	self-efficacy	.37*	.36*	.01	.07

Note. *N* = 446. Bootstrap sample size = 1,000; CI – Confidence interval, BE – Beliefs, E\_INT – Entrepreneurial intention, MOT – Motivation; \*  $p < .001$ , <sup>†</sup>  $p > .05$ .

To test Hypothesis 4, one path from beliefs to entrepreneurial intention and one path from motivation to entrepreneurial intention were added. The relationship between beliefs and entrepreneurial intention was not significant in presence of the potential mediator (i.e. self-efficacy) ( $\beta = .07, p > .05$ ). Yet, the added path from motivation to entrepreneurial intention was significant and improved the model fit ( $\beta = .36, p < .001$ ;  $\Delta\chi^2 [\Delta df = 1] = 35.1, p < .001$ ). Thus, the last path was kept in the final model. Also, bootstrapping procedures were performed to analyze the mediation effect. The results from 1,000 bootstrapping samples showed a significant direct relationship between motivation and entrepreneurial intention in presence of the mediator (direct effect without the mediator  $\beta = .37, p < .001$ ; direct effect with the mediator  $\beta = .36, p < .001$ , 95% confidence interval .01, .07). This result suggested that self-efficacy mediated the association between motivation and entrepreneurial intention, and the relationship between beliefs and entrepreneurial intention (direct effect without the mediator  $\beta = .58, p < .001$ ; direct effect with the mediator;  $\beta = .07, p > .05$ , 95% confidence interval -.01, .11). Hypothesis 4 was supported.

Also, the results showed that family support was positively associated with student's entrepreneurial intention ( $\beta = .47, p < .001$ ), thus supporting Hypothesis 5.

Finally, the interaction effect of family support and self-efficacy on entrepreneurial intention was analyzed. The moderating effect was significant ( $\beta = .16, p < .05$ , confidence interval .32, .78). Then, the interaction effect term was restricted to zero in order to verify if the moderating model was parsimonious. This resulted in a worse fit of the model:  $\Delta\chi^2 [\Delta df = 1] = 5.9, p < .05$ . The moderating effect was supported. In order to understand the form of interaction, the equation at the low and high levels of family support was plotted. Results showed that the shape of the interaction was in the predicted direction. High levels of self-efficacy were significantly related to higher entrepreneurial intention, and this relationship was stronger when family support was higher (see Figure 2). Students were more determined to create a Company in response to higher levels of perceived self-efficacy when they had high family support for the entrepreneurial choice. Thus, Hypothesis 6 was also supported. The final model accounted for 36% of variance in self-efficacy and 53% in entrepreneurial intention (Figure 3).

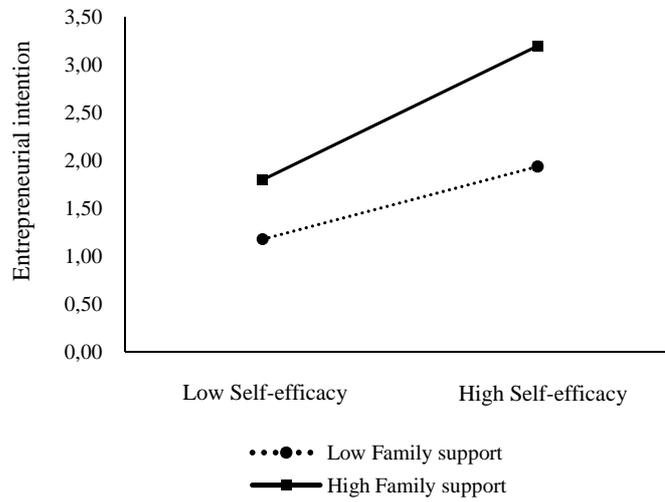


Figure 2.  $N = 446$ . Interacting effect of family support on the relationship between self-efficacy and entrepreneurial intention.

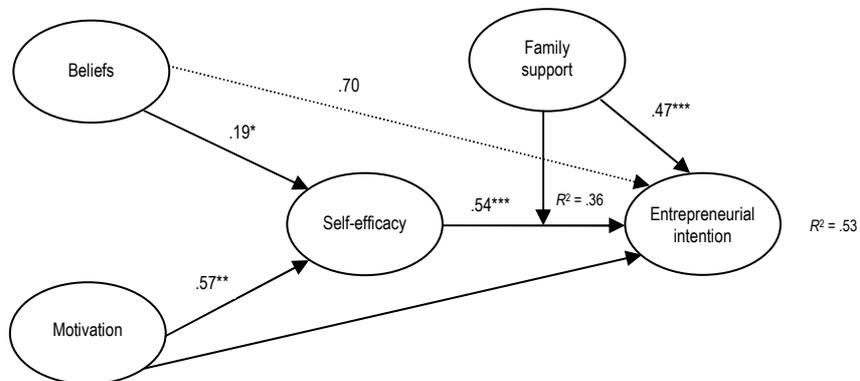


Figure 3.  $N = 446$ . Hypothesized model of the relationship between variables with standardized path coefficients. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

## DISCUSSION AND CONCLUSIONS

This study examined beliefs and motivation as predictors of entrepreneurial intentions with entrepreneurial self-efficacy acting as a mediator. Moreover, family support was studied as a moderator of the relationship between self-efficacy and entrepreneurial intention. Structural equation modeling techniques were carried out to test the hypothesized model on a cross-sectional survey of 446 high school students from a northern Italian city. Results confirmed the proposed research model.

Perceptions of entrepreneurial self-efficacy were significantly associated to entrepreneurial intentions. This outcome offers empirical support for the idea that entrepreneurial self-efficacy has a positive effect on students' intentions to launch an entrepreneurial venture as stated in Boyd and Voziski's (1994) model. Furthermore, self-efficacy mediated the relationship between beliefs and motivation and entrepreneurial intentions. Although, the relationship between beliefs and entrepreneurial intentions has not been significant in presence of the mediator, the path added by the entrepreneurial intention belief has been significant and has improved the model fit.

Furthermore, a significant direct relationship was found between motivation and entrepreneurial intention in presence of self-efficacy as mediator. This result suggests that beliefs enhances entrepreneurial intentions mostly through self-efficacy, while motivation is positively related with intentions and self-efficacy only partially mediate their association.

Moreover, family support was positively and directly associated with students' entrepreneurial intentions, and, results showed family support moderating the relationship between self-efficacy and entrepreneurial intention, so that high levels of self-efficacy were significantly associated to greater entrepreneurial intention, and this relationship was stronger when family support was higher.

This study makes several contributions to the entrepreneurial literature. First, it further enhances the comprehension of the role of specific antecedents (family support, motivation and beliefs) in determining entrepreneurial intentions. Second, it underlines processes (entrepreneurial self-efficacy) and conditions (family support) by which entrepreneurial intention develops, leading to a deeper and more complete representation of how the choice of business creation takes place. In the model, antecedents, entrepreneurial motivation and beliefs on the social role of the entrepreneur, determine entrepreneurial intentions through a process of entrepreneurial self-efficacy on the condition of perceiving family support. By doing so, the model follows Fayolle and Liñán (2014) suggestion to

consider both interaction (Fitzsimmons & Douglas, 2011), mediation effects (BarNir et al., 2011) in entrepreneurial intention models. Third, by considering the direct and moderation effect of family support, it increases the existing knowledge on how a family background measures may influence the entrepreneurial intentions of an individual (Altinay, Madanoglu, Daniele, & Lashley, 2012; Zellweger, Sieger, & Halter, 2011). This evidence confirms the great extent of importance that proximate social networks play in fostering entrepreneurial intentions.

The results of this study can stimulate some practical implications. Entrepreneurship is a crucial factor for economic and social development and a main driver for employment creation, national wealth and innovation (Moriani, Gorgievski, Laguna, Stephan, & Zarafshani, 2012; Odoardi, Montani, Boudrias, & Battistelli, 2015; Van Praag, & Versloot, 2007; Randerson, 2016). Consequently, many policy initiatives are aimed to lead students toward an entrepreneurial career choice (European Commission, 2003). Thus, understanding the antecedents of entrepreneurial intentions is needed in order to build better active policies to efficiently promote entrepreneurship. Given the close association of self-efficacy and entrepreneurial intentions, education programs should pay attention to positively influencing students' self-efficacy for creating a new firm. They should also promote activities that include establishing interactions between students and entrepreneurs who may create better belief regarding the social role of the entrepreneur and motivation which they have been found to positively influence self-efficacy and directly and indirectly entrepreneurial intentions. Also, given the importance of family support in developing entrepreneurial intentions it would be crucial to build training activities that also involve parental participation, together with governance practices and educational systems. This would help developing entrepreneurial culture by involving families in the educational process.

In addition, in accordance with European Union (European Commission, 2003) guidelines for the development and support of entrepreneurship, these results indicate that for better results in leading young people to the entrepreneurial choice it is necessary that policies, training practices and career counseling consider specific antecedents that can facilitate the entrepreneurial intention, and that policies should be based on models capable of providing a richer and complex vision of the entrepreneurial choice process to be effective.

### LIMITATIONS

This study shows some limitations. Although participants were students from different high schools, they were not randomly chosen. Therefore, random sampling technique was not applied. Moreover, Participants to the research were exclusively high schools' students. While many authors claim that samples consisting of classes of students are the most appropriate to study the phenomenon of entrepreneurial intentions, they still should be very cautious when generalizing the results, because of the homogeneity of some dimensions, such as age or level of education (Krueger, 1993; Sanchez, Crocker, & Boike, 2005). For this reason, further analysis is necessary to investigate the antecedents of the entrepreneurial intentions with samples that also include participants from the business world. Moreover, the research was based in Italy, while a multicultural approach could be beneficial in order to avoid cultural bias.

Finally, it is not certain that students' intentions will be stable over time, the adoption of longitudinal methods would allow to better determine the relationship between intentions and entrepreneurial behavior.

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