

Entrepreneurial career choice intentions among secondary students: The role of entrepreneurial exposure.

Abstract

Purpose – Based on a theoretical framework grounded in the social-cognitive theory and its derivative the social-cognitive career theory, the main purpose of this paper is to examine the role of entrepreneurial exposure in moderating the relationship between self-efficacy and entrepreneurial intention in the presence of different levels of outcome expectations.

Design/methodology/approach – Using a sample of secondary school students from Colombia, we tested the validity and reliability of scales used to measure the main constructs of the socio-cognitive career theory, used the construct of entrepreneurial exposure to examine the proposed hypotheses using a 4-step linear regression analysis.

Findings – Our results suggests that although the main social-cognitive career variables (self-efficacy and outcome expectation) and entrepreneurial exposure directly influence the formation of entrepreneurial intention and thus support previous findings, we also discover a new configuration of (interacting) antecedents. While on the one hand, even a low level of entrepreneurial exposure leads to a significant increase in the entrepreneurial intention of students with high outcome expectation and high self-efficacy, on the other hand high entrepreneurial exposure leads to a decrease in entrepreneurial intention among students with high entrepreneurial expectation and high self-efficacy.

Research limitations/implications: The main implication of our findings is although entrepreneurial exposure in beneficial for fostering entrepreneurial intention among students, a high level of entrepreneurial exposure can have a detrimental effect especially among those with high self-efficacy and outcome expectations.

Practical implications: The paper suggests implications and suggestions for educators to foster the development of entrepreneurial intentions among students

Originality/value – Our study provides empirical evidence on the formation of entrepreneurial intention in a new setting. It improves our understanding of the main tenets of social cognitive career theory by taking into account an important environment factor that can have a contrasting impact on the formation on entrepreneurial intention among adolescents.

Keywords: Entrepreneurial intention, self-efficacy, outcome expectancy, entrepreneurial exposure.

Paper type: Research paper.

Introduction

Entrepreneurial intention, the cognitive state preceding entrepreneurial action is one of the important factors driving entrepreneurial behaviour (Shepherd *et al.*, 2019). The wide research on entrepreneurial intention has identified several antecedents of individuals' entrepreneurial intention (Schlaegel and Koenig, 2014; Fayolle and Linan, 2014; Fayolle *et al.*, 2014; Esfandiar *et al.*, 2019). Yet, there is need to understand the non-linear or multiplicative relationships among the antecedent factors especially in less understood contexts and/or among underrepresented populations (Elfving *et al.*, 2009; Lanero *et al.*, 2016; Baker and Welter, 2018). For instance, research on entrepreneurial intention especially among pre-university students remain relatively under-researched compared to graduate/business students (Bird, 2015). Unlike university students, students at the pre-university level might be relatively indecisive with respect to their career decision due to their relative lack of exposure to career related exposure and experience. Hence, they provide opportunities for inculcating specific vocational (entrepreneurial) interests early in their academic life. Specific educational experiences serve as an important socialization mechanism through which individuals develop domain specific self-efficacy beliefs and consequently are more likely to develop intentions towards it (Lent *et al.*, 1994; Zajonc, 2001). Moreover, specific educational experiences might lead to definite career outcome expectation that in turn could lead to intentions towards that particular career. Indeed, several empirical works show that early vocational interests and aspirations tend to be generally good predictors of later occupational choices (Schoon and Parsons, 2002; Schmitt-Rodermund, 2004, Schoon and Duckworth, 2012). In this study, we examine the effect of a specific educational experience related to entrepreneurship in shaping pre-university students'

entrepreneurial intention. As far as we understand there is lack of evidence on the role of entrepreneurial exposure on entrepreneurial intention given one's self-efficacy beliefs and career outcome expectations in an emerging economy context. Therefore, the main objective of our study is to examine the interrelationship between two important antecedents of entrepreneurial intention, self-efficacy and career outcome expectation and entrepreneurial exposure in influencing entrepreneurial intention of pre-university students from the emerging context of Colombia. More especially, we examine how entrepreneurial exposure moderates the effect of general self-efficacy and career outcome expectation on the entrepreneurial intention of pre-university students from the emerging economy context of Colombia.

We ground our conceptual framework on the social cognitive career theory (SCCT), a social cognitive explanation of career choice intentions (Lent et al., 1994; Bandura, 2001; Liguori *et al.*, 2018) and the exposure effect (Zajonc, 1968; 2001). According to the SCCT (Lent *et al.*, 1994) individual level cognitive factors such as self-efficacy and outcome expectations act interactively with contextual factors to influence career choice intention. Based on the exposure effect theory (Zajonc, 2001) we suggest that entrepreneurial exposure is the contextual factor that provides the unconditioned stimulus through which entrepreneurial career choice intentions develop. We also suggest that while entrepreneurial exposure has a direct positive effect on entrepreneurial intention, it could also temper such intentions once pre-university students develop a deeper understanding of the task difficulty of entrepreneurship.

The main contribution of our paper is that we test a new configuration of antecedent factors to reflect the complexity of the entrepreneurial process (Krueger, 2009; Fayolle and Linan, 2014; Fayolle *et al.*, 2014; Liguori *et al.*, 2018) in an emerging economy context in which the antecedents of entrepreneurial intentions are relatively less known. Overall, the results of our study provide three important contributions to the literature on entrepreneurial intention. First, the study answers the call for researchers to understand how the entrepreneurial intention model can be improved by integrating the complexity of social cognitive theory (Liñan and Fayolle 2015; Randolph-Seng *et al.*, 2015; Liguori *et al.*, 2018). Second, the study advances our knowledge on entrepreneurial intention models in places with different cultural and social norms, which in turn can enhance the understanding, validity, and reliability of intention models in its context (Liñan and Chen, 2006; Brannback *et al.*, 2007). Finally, this study contributes to research on entrepreneurial intentions by generating a better understanding of entrepreneurial intention in the literature related to pre-university education (Peterman and Kennedy, 2003).

The following sections present the theoretical elements, hypotheses, methodology, results, discussion, and conclusions.

Theoretical background

Extant research has favoured three theoretical frameworks to explain the cognitive antecedents of entrepreneurial intention (Kruger *et al.*, 2000; Schlaegel and Koenig, 2014). While the theory of planned behaviour (TPB) by Ajzen (1991) and Shapero and Sokol's model of entrepreneurial event (MEE) takes an inside out perspective by focusing on

cognitive constructs comprising attitude and perceptions (Kruger *et al.*, 2000; Schlaegel and Koenig, 2014), the social cognitive theory (SCT) emphasizes not only cognitive factors but also the environment by explicitly stating that individuals act or develop behavioural intentions by applying cognitive elements interactively with environmental factors (Lent *et al.*, 1994; Bandura, 2001; Nabi and Liñan, 2013). As such in recent times socio-cognition based explanations of entrepreneurial behaviour has gained increasing popularity (Boudreaux *et al.*, 2019; Garcia *et al.*, 2019). The core cognitive elements in the social cognition theory are individual's self-efficacy beliefs and outcome expectations (Bandura, 1977). While self-efficacy is related to one's response capabilities (i.e., Can I do this?), outcome expectations involve the imagined consequences of performing particular behaviours (If I do this, what will happen?)” (Lent *et al.*, 2000). A positive outcome, for example, the expectation that the execution of a given behaviour or becoming an entrepreneur produces the desired outcome, such as high income or job satisfaction play an important role in influencing entrepreneurial action (Pfeifer *et al.*, 2016).

The social cognitive career theory (SCCT) is an extension of the SCT to explain career interests and actual choices (Lent *et al.*, 1994). It is increasingly being used as a conceptual framework to explain entrepreneurial career interest and choices (Lanero *et al.*, 2015; Pfeifer *et al.*, 2016; Caines *et al.*, 2019; Pérez-López *et al.*, 2019). In the SCCT career choices are influenced by career interests and different antecedent factors are responsible for the development of each. While actual choices are influenced by objective environmental factors such as one's informal career contacts and/or hiring practices along with self-efficacy beliefs and outcome expectations, career interests are influenced by distal environmental or 'background factors'. Lent *et al.*, 2000 includes exposure to career role models and support (or discouragement) for engaging in particular academic or extracurricular activities as

examples of distal environmental influences that could lead to the development of career interests. As per the SCCT it can be expected that if individuals are exposed to entrepreneurial activities such as identifying opportunities to start a company or spend time in learning about how to start a company, they might develop interest or intention towards that (entrepreneurial) career. In other words, along with beliefs about one's self-efficacy and outcome expectations entrepreneurial exposure through engaging in academic or extracurricular activities related to entrepreneurship could act interactively to influence entrepreneurial intention. The exposure effect also highlights the importance of a learning environment that provide exposure to stimulating objects in the development of preferences or interests towards the stimulating object or behaviour (Zajonc, 2001). In fact, even mere exposure of an individual to a stimulating object can improve attitudes, perceptions, and preferences for that object (Zajonc, 2001; Moreland and Topolinski, 2010). Such an effect, also known as the mere-exposure effect, whereby preference for stimulus increases with repeated stimulus exposures, is an important and robust social psychological phenomenon (Monahan *et al.*, 2000). Thus, exposure to activities related to entrepreneurship could moderate the relationship between the cognitive elements such as self-efficacy and outcome expectations and entrepreneurial intention. In next section, we develop hypotheses about how entrepreneurial exposure moderates the relationship between the cognitive variables proposed by the SCCT (self-efficacy and outcome expectations) and entrepreneurial intention.

Hypotheses

Self-efficacy measures an individuals' belief in his or her ability to execute a given behaviour (Gist, 1987; Bandura, 1997; Bandura 2004). It has a motivational effect to engage in a

behaviour that otherwise would be avoided (Bandura, 1977). According to Schunk and Meece (2001) compared to individuals who doubt their capabilities, those who develop self-efficacy beliefs are more likely to participate readily in that activity as well as work harder and persist longer when they encounter difficulties. So on the one hand the presence of self-efficacy motivates individuals towards a given behaviour while a lack of it may lead individuals not to consider that behaviour, for instance, a lack of self-efficacy towards entrepreneurship could lead individuals not to consider entrepreneurship even if they have entrepreneurial skills (Chen *et al.*, 1998).

With respect to career intention Bacq *et al.*, (2017) suggests that individuals prefer to choose career paths that enable them to leverage their cognitive resources such as self-efficacy beliefs and avoid career paths for which they perceive a lack of self-perceived competencies or self-efficacy. Moreover, higher the self-efficacy beliefs the more likely an individual is motivated towards the behaviour (Wood and Bandura, 1989). In a similar way Boyd and Vozikis (1994) suggests that self-efficacy in early career should lead to strong entrepreneurial intention. Individuals at pre-university level are at an early career stage during which beliefs about self-efficacy might develop. We expect such self-efficacy to be general in nature i.e. the ability to undertake a broad range of novel or challenging tasks (Luszczynska *et al.*, 2005). We suggest that those who develop such self-efficacy (GSE) beliefs are more likely to be motivated towards engaging in entrepreneurship, considered a novel and challenging task and hence develop entrepreneurial intentions.

H1a: There is a positive relationship between secondary students' general self-efficacy beliefs and entrepreneurial intentions.

There are debates as whether GSE alone is sufficient for career or occupation specific intention i.e. whether the task specificity of the behaviour needs to be taken into account to fully explain entrepreneurial intent (McGee *et al.*, 2009). Specific self-efficacy (SSE) is limited to positive beliefs with respect to a particular or specific task at hand (McGee *et al.*, 2009; Newman *et al.*, 2018) and although individuals may have an overall notion of self-efficacy (general self-efficacy), it may vary by domain. Hence, the SCCT emphasizes occupation specific self-efficacy over GSE in exerting a positive influence on the development of particular career intentions (Lent *et al.*, 2000; Luszczynska *et al.*, 2005; Liguori *et al.*, 2018). Occupation specific career self-efficacy requires occupation relevant information sources such as mastery experience through which individuals acquire information about one's own performance accomplishments with respect to the occupation, vicarious experience in which individuals learn about the occupation from others, verbal persuasion from influential people (such as teachers, parents, role models etc.) and emotional (psychological) arousal (Bandura, 1977; Gist, 1987). For pre-university without prior exposure and lack of mastery experience entrepreneurial exposure provides such an 'occupation' context for acquiring entrepreneurial experiences i.e. the ability to gather mastery experience and verbal persuasion from teachers (Bandura, 1977; Bae *et al.*, 2017). However, although such exposure is expected to heighten one's entrepreneurial motivation, it could also lead to a negative evaluation of one's task related capabilities as entrepreneurial (task) exposure reveals the true nature of the task effort and the resources necessary for performing the entrepreneurial task (Vancouver and Kendall, 2006; Beck and Schmidth, 2012; Yeo and Neal, 2013). We suggest that entrepreneurial exposure could have a negative effect

on entrepreneurial intention when pre-university students with general self-efficacy encounter the difficulty of the entrepreneurial task. Therefore, we suggest that,

H1b: Entrepreneurial exposure moderates the relationship between general self-efficacy and entrepreneurial intention. High entrepreneurial exposure have a negative effect on the entrepreneurial intention of those with high general self-efficacy.

According to self-efficacy theory, self-efficacy and outcome expectancy are conceptually distinct (Bandura, 1977; Williams and Rholes, 2016). While self-efficacy is related to one's perceived ability to perform a task as opposed to notions of successful performance outcome (Bayon *et al.*, 2015), outcome expectations is related to the likely goals that can be achieved from performing a behaviour (Bandura, 2004). In this regard, a definite outcome expectation such as attaining high income or earning recognition from others should influence entrepreneurial intention by directing effort towards that goal (Bandura, 2001; Lent *et al.*, 2000). Indeed, previous research in entrepreneurship have suggested that outcome expectation is a key factor in the formation of entrepreneurial intention (e.g., Campbell, 1992; Douglas and Shepherd, 2000; Gatewood *et al.*, 2002; Hayward *et al.*, 2006; Townsend *et al.*, 2010; Pfeifer *et al.*, 2016). Therefore, we suggest that,

H2a: There is a positive relationship between outcome expectation and entrepreneurial intention.

Although both self-efficacy and outcome expectancy are supposed to have an independent effect on entrepreneurial intention, the SCCT also suggests that similar forces are at play in influencing both (Bandura, 1986; Lent *et al.*, 1994). For instance, similar to self-efficacy,

outcome expectations from a given career can be developed through personal experiences, communication, feedback, or information from other people (Gatewood, 1993) such as career guidance methods that lead to weighing the consequences associated with choosing an entrepreneurial career (Lent *et al.*, 1994). Similarly, feedback on the implications of pursuing an entrepreneurial career could affect the entrepreneurial intention of a student once he or she understands the outcomes that this future action can produce. In this sense, Lent, Brown, and Hackett (1994) state that frequent involvement in activities, for instance, high entrepreneurial exposure allows individuals to refine their skills and form a sense of their effectiveness for particular tasks, thus acquiring definitive expectations about the results of their future endeavours. Therefore, we expect a stronger positive effect of entrepreneurial exposure on the relationship between outcome expectation and entrepreneurial intention and thus suggest that,

H2b: Entrepreneurial exposure moderates the relationship between outcome expectations and entrepreneurial intention. An increase in entrepreneurial exposure will exert a positive effect on the entrepreneurial intentions of those with positive outcome expectations.

The theory of exposure effect suggests that the manner in which preferences are acquired (Zajonc, 2001) influences the preference for that stimulus. For instance, frequent exposure to a stimulus influences preferences and such preferences are stronger when exposure to the stimulus are characterised by a notable absence of harmful or adverse consequences. Moreover, it is suggested that the absence of an adverse outcome could act as an unconditioned stimulus and become a safety signal that is associated with the conditioned stimulus, for instance, with repeated occurrences the conditioned stimulus can become

associated with the unconditioned stimulus thereby communicating a response that the current environment is safe. Thus, the repetitive experience such as high entrepreneurial exposure in an educational setting (safe environment) can produce a positive emotional state, thereby changing the perceptions of the individual and consequently his or her intention (Zajonc, 2001). If pre-university students are frequently exposed to formative entrepreneurial activities (high entrepreneurial exposure), then this exposure acts as a support system (Lent *et al.*, 2000) to generate a positive effect on entrepreneurial intention.

H3a: Individuals with high entrepreneurial exposure are more likely to develop entrepreneurial intentions.

According to Bandura (1986) increasing self-evaluation of outcomes (outcome expectation) could increase intention. In this regard, exposure to entrepreneurial activities can increase both skills mastery and outcome expectancy, thus indicating the existence of a joint effect of self-efficacy and entrepreneurial exposure on entrepreneurial intention. Similarly, it can be expected that in a supportive environment in which the adverse consequences of an entrepreneurial career is suppressed, entrepreneurial exposure along with a positive outcome expectations from entrepreneurship could lead to the development of entrepreneurial intention. However, frequent exposure to entrepreneurial activities may also reveal the risks and uncertainty of entrepreneurial outcomes that in turn may affect entrepreneurial intention through reevaluation of one's self-efficacy for the entrepreneurial task. Hence, entrepreneurial exposure could be double-edged. While it can increase individuals' entrepreneurial intention when there is none, it could also lead to a more informed evaluation of one's capabilities leading to a recalibration. For instance, according to Fitzsimmons *et al.*, (2011), the act of

entrepreneurship also implies contemplating possible failures and risks; that in turn could diminish the entrepreneurial intent. Moreover, according to the regulatory focus theory (Brockner *et al.*, 2004) individuals adopt a prevention focus when the pursuit of behaviour (goal) involves pain even through the outcomes may be positive. In addition, individuals at the pre-university level acquire their skills and reinforce their values in an academic environment through processes of social learning (Dawis and Lofquist, 1984). In this stage there is an incomplete level of knowledge about one's own capabilities that could lead to a personal agency motivated by a search for security. This could have a negative effect on entrepreneurial intention. Therefore, we propose that,

H3b: Entrepreneurial exposure moderates the joint effect of general self-efficacy and outcome expectation on entrepreneurial intention. With high entrepreneurial exposure, there will be a negative relationship between general self-efficacy and entrepreneurial intention despite high outcome expectation.

Methodology

Data

The data for this study were obtained from a sample of 643 (260 male and 383 female) tenth grade (n = 268) and eleventh grade (n = 375) pre-university students in the city of Cali, Colombia. The students were between 15 and 17 years of age and were mostly in middle to low income groups as classified by the Colombian Government¹. We reclassified the

¹ Estratos 1, 2 and 3 upto 6. Estrato 1 is the lowest income group while estrato 6 is the high(est) income group. As most of the samples belong to group 1, 2 and 3 we reclassified the income group into low income, middle income and high income, the later comprising students from estratos 3 to 6.

categories into Low income (18.81%), Middle income (31.03%), and High Income (50.16%). 59.81% of the sample was male. The data was collected through a structured survey that was personally administered to the students in their places of study by a team trained for this purpose. The objective of the study was explained by the primary investigator to the students. Students were informed that participation was voluntary, and the responses would be confidential and their answers were kept anonymous and were not linked to their student performance.

Measurement of variables

For the measurement of the concepts used in this study, multi-item scales were used that were developed based on the intention literature. Entrepreneurial intention is measured following the definition by Thompson's (2009) in terms of an individual's degree of self-acknowledge conviction that they will set up a new business venture and consciously plan to do. A 5-point Likert scale was used, ranging from 1 (completely disagree) to 5 (completely agree).

To measure self-efficacy based on the constructs used in the literature (Wilson *et al.*, 2007; Gist, 1987), we asked the interviewees three questions about their perception of their own ability to perform actions that involved proposing innovative solutions, proactively motivating others, and creating projects. A 5-point Likert scale was used, ranging from 1 (never) to 5 (always).

Based on measurements developed by Krueger et al. (2000), outcome expectancy was measured by asking respondents to what extent they agreed that starting a company would allow them to attain high income level, earn recognition from others, to do the work they

like, and to ensure the future. A 5-point Likert scale was used, ranging from 1 (completely disagree) to 5 (completely agree).

Entrepreneurial exposure was measured using the Zajonc approach (1968) by considering the frequency with which students undertook learning activities related to new venture creation. A 5-point Likert scale was used, ranging from 1 (never) to 5 (always).

Unidimensionality of each of the preceding constructs was assessed by means of confirmatory factor analysis of the four constructs employing 12 items (Anderson and Gerbing, 1988). The statements used are shown in the table in Appendix 1. The measurement model provides a reasonable fit to the data ($\chi^2_{(48)} = 239.04$, $p < 0.00$; GFI= 0.94; RMSEA= 0.079; SRMR= 0.042; CFI=0.97; TLI (NNFI)= 0.96). Reliability of the measures was calculated with Bagozzi and Yi's (1988) composite reliability index and with Fornell and Larcker's (1981) average variance extracted index. For all the measures both indices are higher than the evaluation criteria of 0.6 for the composite reliability and 0.5 for the average variance extracted (Bagozzi and Yi, 1988).

As shown in the table in Appendix 1, all items load on their hypothesized factors and the estimates are positive and significant, with the lowest t value being 17.42, that provides evidence of convergent validity (Bagozzi and Yi, 1988). Discriminant validity is indicated since the confidence interval (± 2.0 S.E.) around the correlation estimate between any two latent indicators never includes 1.0 (Anderson and Gerbing, 1988). Furthermore, discriminant validity is also assessed by means of the strongest test suggested by Fornell and Larcker (1981). This test suggests that a scale possesses discriminant validity if the average variance extracted by the underlying construct is larger than the shared variance (i.e. the

squared inter-correlation) with other constructs. Table 1 provides an overview of the construct's means, standard deviations, and inter-correlations.

Insert table 1 about here.

Our results could have presented common bias problems for the sample. However, the respondents were reminded that there were no right or wrong answers to the questions asked, minimising the likelihood of CMV. Furthermore, we empirically checked for CMV by using Harman's one-factor test (Podsakoff *et al.*, 2003) in which all the self-reported constructs were subjected to an exploratory factor analysis with principal axis factoring and varimax rotation. Three factors emerged with eigenvalues greater than 1 and 63.3% of the variance explained. No single factor was dominant with the first factor. Thus, no common method variance was detected in this study.

To rule out alternative explanations, we controlled for gender and socioeconomic conditions. Gender was coded with "1" for male and "0" for female. Socioeconomic conditions were categorised according to the stratification that Colombia uses for housing, starting with a "1" for the lowest level of household income up to the level of "3" for those considered to be in the middle-class socio-economic stratum.

Findings

The hypotheses were tested using a four-step regression analysis. A regression with control variables was initially performed. The second model adds the main effects of general self-efficacy, outcome expectancy, and entrepreneurial exposure. The third model includes the effects of the two-way interaction. Finally, the fourth model includes the effects of the three-

way interaction. To minimise the risk of multi-collinearity that may occur from having the main effects and interaction effects in the same equation, we used the centred average method recommended by Jaccard *et al.*, (1990) and Aiken and West (1991).

The results obtained and presented in Table 2. Model 1 that contains only the control variables (gender, socioeconomic status) and that explains 1.4% of the variance indicates that socio-economic status and gender has no influence on the formation of entrepreneurial intention. In model 2 that incorporates the main independent variables of the study, there is a significant increase in the variance explained ($\Delta R^2 = 0.36$) suggesting that including general self-efficacy, outcome expectation and entrepreneurial exposure in the model provides better explanatory power of entrepreneurial intention. In fact, we find that general self-efficacy has a significantly positive influence on entrepreneurial intention among pre-university students ($\beta = 0.12$, $p < 0.05$). This result provides support for hypothesis H1a that suggested a direct effect of general self-efficacy on entrepreneurial intention among adolescents (Bandura, 1989). Similarly, the effect of outcome expectation on entrepreneurial intention is positive and significant ($\beta = 0.23$, $p < 0.01$), suggesting that higher expectations of positive outcomes of entrepreneurship have a significant influence on the entrepreneurial intentions of secondary students. Thus, we find support for H2a. Similarly, entrepreneurial exposure has a positive and significant impact on entrepreneurial intention ($\beta = 0.49$, $p < 0.01$) of pre-university students *i.e.* frequent exposure to entrepreneurial activities generates a positive effect on entrepreneurial intention, thus supporting H3a.

To test H1b and H2b we add the double interaction terms in Model 3 and we find that adding the double interaction terms do not provide significant additional explanatory power of model

3 over model 2. Moreover, we do not find significant interaction effect between general self-efficacy and entrepreneurial exposure on entrepreneurial intention as well as between outcome expectation and entrepreneurial exposure on entrepreneurial intention. Hence, we do not find support for H1b and H2b. If we analyse model 4 that takes into account the moderating role of entrepreneurial exposure on the joint effect of general self-efficacy and outcome expectation on entrepreneurial intention we find that this model contribute significantly to the explanation of the variance ($\Delta R^2 = 0.01$). We further find that high entrepreneurial exposure has a significantly negative effect on the joint effect of general self-efficacy and outcome expectation on entrepreneurial intention ($\beta = -0.23, p < 0.01$). This is in line with our hypothesis H3b.

Insert table 2 about here

To aid in the interpretation of the interaction effect we used the method proposed by Aiken and West (1991) and plotted the relationship between general self-efficacy and entrepreneurial intention taking into account two different levels of outcome expectation and entrepreneurial exposure. First, we plotted the interaction effect for two levels of outcome expectations, defining high outcome expectation as plus one standard deviation from the mean and low outcome expectation as minus one standard deviation from the mean. Second, for each level of outcome expectation, we plotted the relationship between general self-efficacy and entrepreneurial intention at high and low levels of entrepreneurial exposure. Figure 1 (a) shows the relationship between entrepreneurial intention (y-axis) and general self-efficacy (x-axis) for those with high outcome expectations only. The results show on the one hand for those with low entrepreneurial exposure the entrepreneurial intention is high at

high level of self-efficacy compared to low level of general self-efficacy. On the other hand, for those with high level of entrepreneurial exposure entrepreneurial intention is lower for those with high self-efficacy. In other words, at high outcome expectation there is a decrease in entrepreneurial intention of those with high entrepreneurial exposure and high general self-efficacy suggesting a negative impact of entrepreneurial exposure, while a low exposure has the contrary or a positive effect. This indicates the impact of entrepreneurial exposure on entrepreneurial intention is beneficial at low rather than high levels of entrepreneurial exposure. This also indicates that there is a threshold beyond which entrepreneurial exposure rather than increase actually decreases the entrepreneurial intention of pre-university students with high outcome expectations.

In Figure 1(b) we find that with low outcome expectation and low entrepreneurial exposure there is no effect of general self-efficacy on entrepreneurial intention. However, with low entrepreneurial exposure and high entrepreneurial exposure there is a significant increase in the entrepreneurial intention as self-efficacy increases. Overall, figure 1(a) and figure 1(b) suggests that the relationship between general self-efficacy and entrepreneurial intention is positive when the effect of exposure is high at any level of outcome expectancy.

Insert figure 1(a) and Figure 1(b) about here.

Discussion and Implications

Our results show that entrepreneurial intention among pre-university students can be explained by general self-efficacy (GSE), outcome expectancy (OE), and entrepreneurial

exposure (EE). Thus our study finds support for the social-cognitive theory and is in concurs with several other studies that outcome expectancy has a significant influence on entrepreneurial intention (Townsend *et al.*, 2010; Jiang and Wang, 2014). In this regard, it should be noted that the effect of outcome expectance is higher than that of general self-efficacy.

Furthermore, we find empirical evidence that supports the inclusion of exposure to entrepreneurship as an explanatory variable to the entrepreneurial intention models (Peterman and Kennedy, 2003; Souitaris *et al.*, 2007). In fact, the marginal impact of entrepreneurial exposure is highest among the three independent variables measured in this study. This result highlights the important role that entrepreneurial exposure early in life play in the development of entrepreneurial intention.

The results of our triple interaction on entrepreneurial intention reveals that depending on an individual's entrepreneurial exposure and the outcome expectations the relationship between general self-efficacy and entrepreneurial intention changes. On the one hand, even a low level of entrepreneurial exposure leads to a significant increase in the entrepreneurial intention of students with high outcome expectation and high general self-efficacy, on the other hand high entrepreneurial exposure leads to a decrease in entrepreneurial intention among students with high entrepreneurial expectation and high general self-efficacy. Thus, entrepreneurial exposure exerts a dual effect on entrepreneurial intention, with an increasing or decreasing effect depending on the magnitude (high or low) of outcome expectation. The positive effect of entrepreneurial exposure on intention could be due to the improved self-assessment of one's entrepreneurial self-efficacy as one is exposed to learning activities related to new

venture creation (Von Graevenitz *et al.*, 2010). However, as suggested by Zajonc, (2001), exposure to entrepreneurial activities can only influence a student's intentions when it does not bring with it any adverse consequences. Therefore, combined with positive outcome expectations, the positive effect of entrepreneurial exposure suggests the importance of entrepreneurial exposure through learning activities and simple exposure without adverse consequences is an effective process for influencing entrepreneurial intention (Zajonc, 2001).

The results of our study provide important evidence of an interactive model as postulated by social cognitive theory (Bandura, 1986). Bandura (1989) suggests that individuals are not isolated agents or beings who are simply manipulated by environmental factors but rather their agency occurs within a system of reciprocal causality between social-cognitive mechanisms and environmental factors. In this regard, this study shows that in the formation of entrepreneurial intentions, there exists an interaction between social-cognitive mechanisms and environmental factors. This effect could be positive as well as negative depending upon the amount of entrepreneurial exposure. In other words, the effect of social cognitive factors on entrepreneurial intention is better explained if environmental factors such as exposure to entrepreneurship is taken into account. This has important implications for the spontaneous development of entrepreneurial culture among adolescents in early career studies. For example, by providing support systems in the form of learning activities related to new venture creation the proximal environmental factors provide students with complementary reinforcement, thus improving their efforts in identifying and obtaining resources towards the creation of a new venture. It can improve individuals' perception of their capabilities for undertaking entrepreneurial activities and for the proactive assessment of the expected outcomes to better respond to any future entrepreneurial action (Lent *et al.*,

2000). Based on such exposure adolescents can at any time anticipate the consequences of undertaking an entrepreneurial action and avoid them when they doubt their capabilities. Moreover, students will also develop high levels of self-efficacy that, despite the expected outcomes, will allow them to sustain their motivation in a future course of action.

In light of the results of this study, the formation of entrepreneurial intentions in high school students through entrepreneurial exposure via experiential learning and skills training can enable educators to foster students' intentionality for a future course of action related to entrepreneurship (Ulvenblad *et al.*, 2013). Another important implication is that educators must be concerned with developing students' belief in outcome expectancies. While vocational guidance implicitly includes such beliefs by allowing students to assess the potential outcomes of their career decisions, educators should build on the students' entrepreneurial exposure and create an enabling environment of trial and error that would allow individuals to assess the results of their performance.

Conclusions.

In this study, we tested an alternative configuration of the social - cognitive theory. Our framework proposes an interaction between two social-cognitive mechanisms (self-efficacy and outcome expectancy) and an environmental factor in the form of entrepreneurial exposure on the formation of entrepreneurial intention among adolescents. Using a sample of secondary school students, we confirmed the validity and reliability of scales used to measure the main constructs of the socio-cognitive theory, tested a new construct on

entrepreneurial exposure, and examined our proposed hypotheses using a 4-step linear regression analysis.

This study provides empirical evidence of the formation of entrepreneurial intention based on the tenets of social cognitive theory and reveals a significant interaction between social-cognitive mechanisms (self-efficacy and outcome expectancy) tempered by the contextual factor of the entrepreneurial exposure. Our study reveals that while entrepreneurial intention can be increased by increasing entrepreneurial self-efficacy, outcome expectation and entrepreneurial exposure, there is a threshold of entrepreneurial exposure after which high outcome expectation and entrepreneurial self-efficacy rather than increase may actually decrease entrepreneurial intention. Thus, this contributes to a better understanding of the social cognitive theory by taking into account the role of entrepreneurial exposure in the active educational phase of adolescents. In addition, our study helps to validate and consolidate the intention model based on social cognitive theory by considering scarce empirical evidence on adolescents from regions with Latin American cultural characteristics. Our study provides important directions for further exploring intention models that are based on social cognitive theory that emphasize the triadic relationship among personal factors, environmental factors, and behaviours, as proposed by Bandura (1986). Future studies can explore if such a relationship holds in other contexts.

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Table 1

Constructs measurements summary: confirmatory factor analysis and scale reliability.

Item description	Standardized loading	t-value	Reliability (SCR ^a AVE ^d)
Entrepreneurial Intention^b			SCR=.856 AVE=.749
I believe that my objective of starting my own company is real.	0,84	24.26	
I am clear on the steps to take to accomplish my objective of starting a company.	0,89	25.99	
I am clear of starting a company with new products and services (*)			
Self-efficacy^c			SCR=.751 AVE=.501
I am capable of understanding the different parts of a problem to make changes.	0,71	17.90	
I am capable of creating different solution options for the same problem.	0,72	18.18	
I am capable of motivating people to execute a project.	0,69	17.42	
Outcome expectancy (Starting my own company will enable me to...)^b			SCR=.885 AVE=.661
Attain a high-income level.	0,83	24.76	
Earn recognition from others.	0,74	21.20	
Do the work that I like.	0,78	22.61	
Ensure my future and that of my family.	0,90	28.02	
Exposure effect (I frequently...)^c			SCR=.825 AVE=.613
Conduct research to identify opportunities to start a company.	0.84	24.45	
Work on projects that involve entrepreneurial activities.	0.68	18.57	
Spend part of my time learning about how to start a company.	0.82	23.76	
Solve problems related with financial accounting (*)			

Fit statistics for measurement model of 12 indicators for 4 constructs: $\chi^2_{(48)} = 239.04$; GFI= 0.94; RMSEA= 0.079; SRMR= 0.042; CFI=0.97; TLI (NNFI)= 0.96. ^a Scale composite reliability ($\rho_c = (\sum \lambda_i)^2 \text{var}(\xi) / ((\sum \lambda_i)^2 \text{var}(\xi) + \sum \theta_{ij})$; (Bagozzi and Yi, 1998)). ^b scale: 1= completely disagree; 5= completely agree. ^c scale: 1= never; 5= always. ^d AVE: Average variance reliability ($\rho_c = (\sum \lambda_i)^2 \text{var}(\xi) / (\sum \lambda_i)^2 \text{var}(\xi) + \sum \theta_{ij}$; (Fornell and Larcker, 1981)). (*) Item deleted during the scale-validation process.

Table 2.
Correlation and descriptive statistics matrix

Variable	Mean	Standard Deviation	1	2	3	4	5	6	7	8
1. Gender (male)	0.581	0.48	1.00							
2. Income level (low)	0.189	0.39	0.005	1.00						
3. Income level (medium)	0.310	0.46	0.028	0.325**	1.00					
4. Income level (High)	0.501	0.50	-0.03	0.483**	0.671**	1.00				
5. Entrepreneurial intention	3.58	1.00	-0.05	0.016	-0.008	-0.005	1.00			
6. Self-efficacy	3.75	0.73	0.084*	-0.077	-0.055	0.111**	0.345**	1.00		
7. Outcome expectancy	4.44	0.68	-0.013	0.055	0.000	-0.043	0.299**	0.188**	1.00	
8. Entrepreneurial Exposure	2.73	1.01	-0.024	-0.060	0.046	0.004	0.581**	0.499**	0.247**	1.00

* $p < 0.05$; ** $p < 0.001$

Table 3

Regression analysis results

Dependent variable:	Model 1		Model 2		Model 3		Model 4	
Entrepreneurial intention	β	St. err.	β	St. err.	β	St. err.	β	St. err.
Constant	-0.083	0.076	-0.081	0.060	-0.086	0.063	-0.080	0.063
<i>Control variables</i>								
Gender	0.105	0.082	0.109	0.066	0.110*	0.066	0.110	0.065
Income (middle income)	0.019	0.092	-0.022	0.074	-0.017	0.074	-0.019	0.074
Income (high)	0.040	0.109	0.085	0.088	0.095	0.088	0.099	0.087
<i>Independent variables</i>								
Self-efficacy			0.118**	0.050	0.097*	0.052	0.127**	0.053
Outcome expectancy			0.219***	0.049	0.245***	0.051	0.286***	0.053
Exposure			0.504***	0.036	0.505***	0.037	0.517***	0.037
<i>Interaction terms</i>								
Self-efficacy x Outcome expectancy					-0.096	0.078	-0.017	0.088
Self-efficacy x Exposure (H1b)					-0.06	0.045	-0.037	0.046
Outcome expectancy x Exposure (H2b)					0.067*	0.049	0.091*	0.048
Self-efficacy x Outcome expectancy x Exposure (H3b)							-0.208***	0.080
R^2	0.003		0.374		0.379		0.386	
R^2 Adjusted	0.002		0.368		0.370		0.376	
Change in R^2			0.371 ***		0.005		0.007 **	

*** $p < .01$; ** $p < .05$; * $p < .1$

Figure 1(a)

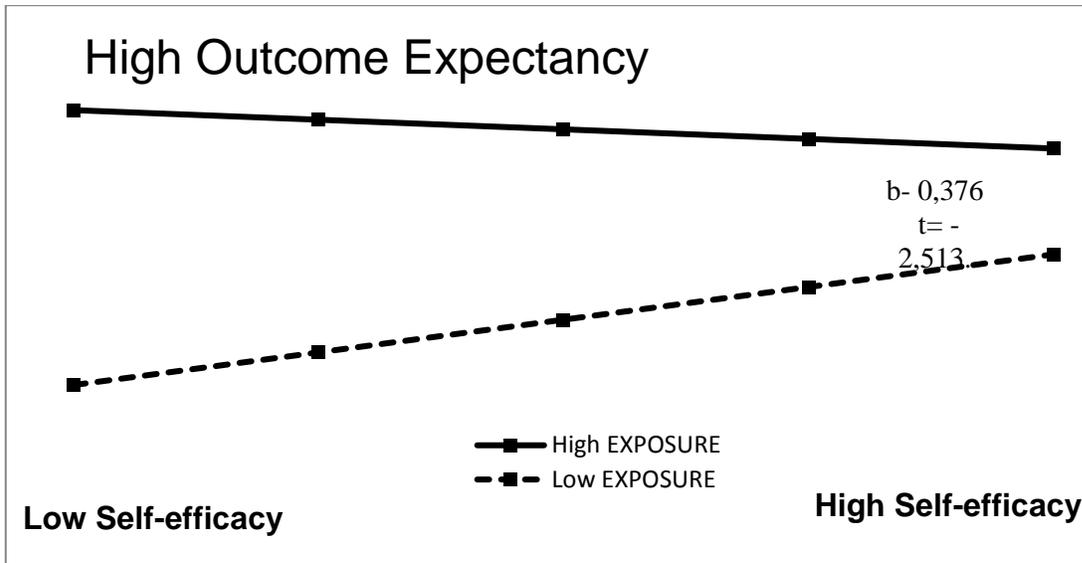


Figure 1(b)

