

# Examining the Relationship between Psychological Capital and Entrepreneurial Intention: An Exploratory Study

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## Abstract

The aim of this study is determine if Entrepreneurial Intention is related to Psychological Capital in business students. Self-efficacy, Hope, Optimism and Resiliency, which are all dimensions of psychological capital, were assessed with the General Self-Efficacy Scale (GSE), the Hope Scale (HS), the Life Orientation Test Revised (LOT-R) and the Resilience Scale (RS), respectively. The Entrepreneurial Intention was assessed through five statements. According to the results, Entrepreneurial Intention is related to all dimensions of Psychological Capital, mainly with Self-efficacy and Resilience. Psychological Capital as an integrated construct was related to Entrepreneurial Intention as a whole. These findings provide additional evidence about the importance to study Psychological capital as an integrated construct instead of studying its dimensions separately, even more so when studied in relation to Entrepreneurial Intention. In spite of the advances in the knowledge about the individual differences related to entrepreneurial intentions, it is necessary to continue studying this phenomenon, considering that the results are still scarce and inconclusive.

**Keywords:** Entrepreneurial Intention, Psychological Capital, Self-efficacy, Hope, Optimism and Resiliency, Entrepreneurship in Business Students

## 1. Introduction

Entrepreneurship has been object of many academic studies that have included different approaches; nevertheless, it is not sufficiently known what kind of personal factors are related to entrepreneurial intention. It has been associated with social, economic and family conditions, however the psychological characteristics of people who intend to start a new company have not received the same attention. Among these personal features is Psychological Capital, which is defined as a positive psychological state of development, characterized by self-efficacy, hope, optimism and resiliency (Luthans, 2002). Among individual variables that have shown to be related to entrepreneurial behavior are: being a determinate person (Kim-Soon, Ahmad, Saberi, & Tat, 2013), having a tendency to short-term risk taking (Zhang, Wang, & Owen, 2015) and having high necessity for achievement (Mat, Maat, & Mohd, 2015).

It is well known from social psychology, that intention is an accurate predictor of planned behavior. This variable is relevant since it has been found that people with higher entrepreneurial potential usually have more entrepreneurial intentions (Jakopec, Miljković Krečar, & Sušan, 2013). There is evidence that entrepreneurial intention depends on the individual's attitude toward entrepreneurship (Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012), perceived family expectations and beliefs to assume this kind of behavior, perceived behavioral control and perceived ability to execute the intended behavior of entrepreneurship, thus, entrepreneurial behaviour can be predicted accurately, by studying the intention (Krueger, Reilly & Carsrud, 2000). Likewise, entrepreneurship depends on the external circumstances such as socio-economic variables (Hessels, van Gelderen & Thurik, 2008; Jolonch & Ferreira, 2016), for instance, perceived poverty seems to stimulate entrepreneurial intentions (Chen, Shen, Naznin, Wang, & Wu, 2014). Other authors have found a relation between entrepreneurship and family members who have been entrepreneurs (Ahmed et al., 2010; Singh & DeNoble, 2003). However, the individual differences, which could have influence on entrepreneurship, remain unclear (Wilson, Marlino, & Kickul, 2004).

Although there are other variables studied in relation to entrepreneurial behavior, its findings have been inconsistent. For instance, some studies have been conducted to assess the role of the education in entrepreneurial behavior and they found that this variable had a beneficial effect for nascent entrepreneurs (Rotefoss & Kolvereid, 2005) and is perceived as necessary and desirable by the students (Güven, 2013). On the contrary, others have demonstrated that entrepreneurship education is not relevant (Ahmed et al., 2010). Without denying the importance of the context and the opportunities mentioned before, this study is addressed to understand, from a psychological approach, if the entrepreneurial intention is related to Psychological Capital (PsyCap) in undergraduate students, who are currently studying their last semesters of business administration.

PsyCap is considered a state-like capacity, which means that it is changeable, potentially malleable and open to development (Luthans, 2002). Psychological Capital is about one's beliefs and the perception of one's abilities (Caza, Bagozzi, Woolley, Levy, & Barker, 2010; Bandura & Locke, 2003); it turns out to have a strong effect on performance, even on an operational level (Luthans, Avolio, Walumba, & Li, 2005).

PsyCap is defined as an individual's positive psychological state of development, which is characterized by four variables viz. self-efficacy, hope, optimism and resiliency (Luthans, 2002). This construct evolved over the years; the most consistent form comprises all of these as State-Like Psychological Resource Capacities (Luthans & Youssef, 2007). These four dimensions have been studied in organizational settings, and they are providing evidence concerning the influence in diverse work-related performance dimensions.

Self-efficacy in the workplace is defined as "one's conviction (or confidence) about his or her abilities to mobilize motivation, cognitive resources and courses of action needed to successfully execute a specific task within a given context" (Stajkovic & Luthans, 1998, p. 66). Self-efficacy refers to the confidence in one's abilities to mobilize and move towards a set of goals (Luthans & Youssef, 2007). It is a form of self evaluation and leads to social comparison (Steyn & Mynhardt, 2007). Some authors point that this construct turns out to be stable, even though considered a state (Avey, Luthans & Mhatre, 2008). Self-efficacy is the variable of PsyCap that is more sustained and measured as a state (Bandura, 1997), which means that it is potentially developable (Luthans, Avey, Avolio, Norman, & Combs, 2006).

The relation between self-efficacy and entrepreneurial behavior has been widely established (Chandler & Jansen, 1997; Chen, Greene, & Crick, 1998). This association could be due to the fact that self-efficacy is operationally defined in terms of challenging self-set goals, self-directed initiatives, self-motivation and perseverance, amongst others (Stajkovic & Luthans, 1998), all of them related to entrepreneurial behavior and intention. Likewise, it may assert that self-efficacy is linked to entrepreneurial intentions (Boissin, Branchet, Emin, & Herbert, 2009), and it is a significant predictor of entrepreneurial intentions (Moriani et al., 2012; Mat et al., 2015). Zhao, Seibert and Hills (2005), argue that previous experience, risk propensity and formation have an influence on both intentions and self-efficacy as an entrepreneur, as this is about beliefs and perceptions. Foremost, the first step towards creating a company is to believe in one's capabilities to do so. This seems to be more usual in men than in women, in fact, research shows that one of the most important constraints in women entrepreneurs is their tendency to develop less management experience and business skills than men (Heilbrunn, 2004). This might be due to the fact that in business women tend to be subordinate to men, which may cause dynamics that avoids for women create their own companies (Hovorka & Dietrich, 2011).

On the other hand, the relevance of hope and its impact on performance outcomes have been widely established in the workplace (Luthans & Youssef, 2007). Hope is defined as a positive motivational state that is based on an interactively derived sense of success (agency and pathways) (Snyder, Irving, & Anderson, 1991). There are some similarities amongst this concept and the previously cited self-efficacy, although hope involves goal-directed motivations. This manifests in behaviors, of which some could be related to entrepreneurship. However, hope focuses on a different set of mechanisms through which goals are accomplished than self-efficacy; one of these is the sense of agency or internalized control that creates the determination and motivation (willpower) to accomplish one's goals. The other characteristic is the agency-principle, i.e., finding goals and pathways towards those goals (Snyder et al., 2000; Luthans, Norman, Avolio, & Avey, 2008). Jensen and Luthans (2002) found a relationship between entrepreneurs' hope and their satisfaction with business ownership. More recently it has been observed that hope is an important predictor of entrepreneurial intention (Laguna, 2006).

According to Seligman (1998), optimism is an attributional style that explains positive events through personal, permanent and pervasive causes and negative events through external, temporary, and situation-specific ones. This is confirmed by Jackson, (2009) who also argues that optimism is related to internal attribution to positive events could occur. In some way, like self-efficacy and hope, optimism is used to seek and achieve goals that are

valuable for the individual (Luthans & Youssef, 2007), therefore it could also potentially be used to predict leadership behavior and intention (Chemers, Watson, & May, 2000). In fact, Laguna (2006) found that optimism constitutes an important predictor of entrepreneurial intention. In contrast to the other PsyCap variables, optimism incorporates other personal dimensions, such as cognitive, emotional, and motivational components (Seligman & Csikszentmihalyi, 2000).

Finally, resiliency is about positive coping and adapting, being able to rebound (Luthans et al., 2008). Luthans (2002) defines resiliency as the capacity to rebound from adversity, conflict, failure, or even positive events that allow people to progress and to increase responsibilities. In this order of ideas, some events could be viewed as opportunities for learning, growing and developing by resilient people or as a threat by those that lack resiliency (Luthans, Youssef, & Avolio, 2007).

In sum, it seems that having high level of positive psychological resources, such as self-efficacy, optimism, resilience and hope, the entrepreneur may be more able to focus on gains, to persist in the face of adversities, and to successfully move on through the phases of the entrepreneurial process (Gorgievsky & Laguna, 2008). According to the above exposition, the aim of this study is to determine if entrepreneurial intention is related to variables of Psychological Capital.

## **2. Methodology**

### *2.1 Participants*

The data for this study came from 109 students of the last year of business studies, who were asked to participate voluntarily in this study. The sample was composed of male and female students (32% and 68% respectively), with an average of 21.86 years old (1.88 SD).

### *2.2 Procedure*

Previous to participation the students were informed and asked for their consent, the participants were to fulfill the questionnaires. The total average time that students spent filling in the questionnaires was 30 minutes. The applications were collectively invited in groups of about 20 people.

### *2.3 Measures*

#### *2.3.1 Views on Self-employment*

To assess entrepreneurial intention, we used a questionnaire composed of 5 statements, designed by Singh and DeNoble (2003). According to these authors, the questionnaire has demonstrated an adequate internal reliability and consistency for all five statements (0.86). Respondents had to indicate if they agree with statement or not (answer Yes/Not).

#### *2.3.2 General Self-efficacy Scale (GSE)*

This scale is composed of 10 items with 4-point Likert scale. This scale was designed to assess self-efficacy as a general disposition of personality. According to its authors, "General self-efficacy" is the belief in one's competence to cope with a broad range of stressful or challenging demands (Baessler & Schwarzer, 1996), whereas specific self-efficacy is constrained to a particular task at hand. The GSE was originally created in Germany by Jerusalem & Schwarzer in 1981, used and validated in several researches around the world (Schwarzer, Baessler, Kwiatek, Schröder, & Zhang, 1997). The GSE had been translated in different languages preserving its high internal consistency (Cronbach's alpha, between 0.79 and 0.93) and high convergent and discriminant reliability. In general, the questionnaire has shown good psychometrical properties (Juarez & Contreras, 2008)

#### *2.3.3 Hope Scale (HS)*

This scale of eight items with Likert scale of 8 points, was developed and validated by Snyder, et al., (1996). The HS has demonstrated an adequate internal reliability for the overall scale (Cronbach's alpha from 0.90 to 0.95) as well as for the subscales (Cronbach's alpha 0.90). The factorial structure and discriminant validity have also shown to be adequate (Feldman & Snyder, 2000).

#### *2.3.4 Life Orientation Test Revised (LOT-R)*

This instrument was designed to evaluate dispositional optimism or personal expectations about the good events that could happen in the future. This questionnaire consisted of 10 items, of which 4 were neutral; these were rated to a 5-point scale. It has shown high internal consistency (0.78) and its reliability index is 0.67 (Scheier, Carver & Bridges, 1994). The LOT-R has been applied and validated in university students, showing a reliability of 0.68 (Ferrando, Chico, & Tous, 2002).

2.3.5 Resilience scale (RS)

This scale of 25 items and 7-point scale measurement was developed by Wagnild and Young (1993) in order to assess the personal qualities that allow individuals to adapt to new circumstances, which is the capacity to be resilient. RS has demonstrated a high internal consistency (Cronbach’s alpha 0.93) (Heileman, Lee, & Kury, 2003).

3. Results

According to the results, the General Self-Efficacy Scale, Hope Scale and Resilience Scale shown adequate reliability values (Cronbach’s alpha .76, .77 and .78 respectively), all of those values are above the accepted standards (.70). Although the Cronbach’s alpha of Life Orientation Test was slightly lower than this reference value (.64), it may assert that it is a consistent measurement as well.

Entrepreneurial Intention was estimated through Views on Self-employment questionnaire. In general, the results point out a high intention among the students involved in the study. The affirmative answer in each item is presented in the Table 1.

Table 1. Affirmative responses to each item in the Views on Self-employment Scale

Items	Views on self-employment	Yes (%)
Entrepreneur 1	I intend to become self-employed	78.90%
Entrepreneur 2	I have the ability to recognize ideas for self-employment	85.32%
Entrepreneur 3	I have the ability to run a business	92.66%
Entrepreneur 4	In addition to school/work I would devote my free time to further researching and planning my own business	72.48%
Entrepreneur 5	I feel confident enough to quit a secure job in large corporation and start my own business	75.23%

Psychological Capital dimensions were estimated and re-scaled from 0 to 100 through lineal transformation in order to have the same range in each questionnaire, allowing the comparison between variables. The results of the participants shown high personal resources, getting an average score in the psychological capital scales above 66 points (Table 2).

Table 2. Descriptive Statistics of Psychological Capital (n=109)

Psychological Capital	Minimum	Maximum	M(SD)
Self-efficacy	47	100	73.61 (10.96)
Optimism	33	96	66.12 (13.37)
Hope	38	93	73.26 (11.40)
Resilience	41	96	72.39 (10.04)

Subsequently, the relation of the Psychological Capital dimension and Entrepreneurial intention were estimated through a point biserial correlation by Pearson correlation approach. The results all dimensions of psychological capital demonstrated to be related to the last three items of entrepreneurial intention (Entrepreneur 3, 4 and 5); in contrast, Entrepreneur 1 and 2 are not related. Regarding the PsyCap dimensions, the results showed that Resilience and Self-efficacy are most related to entrepreneurial intention. Optimism showed to have a lesser relation and mainly with entrepreneur 3 and 5. Finally Hope showed to have a weaker relation to entrepreneurial intention (Only with entrepreneur 5). In Table 3 the values of correlation’s coefficients can be observed (Table 3).

Table 3. Correlations among Psychological Capital and Entrepreneurial Intentions

	Self-efficacy	Optimism	Hope	Resilience
Entrepreneur 1	.086 (.372)	.118 (.222)	.131 (.176)	.150 (.118)
Entrepreneur 2	.091 (.345)	-.024 (.801)	.068 (.480)	.046 (.634)
Entrepreneur 3	.196* (.041)	.281** (.003)	.159 (.100)	.205* (.033)
Entrepreneur 4	.239* (.012)	.121 (.209)	.135 (.161)	.242* (.011)
Entrepreneur 5	.211* (.028)	.331** (.000)	.271** (.004)	.324** (.001)

Note: Values are Pearson Correlation (Sig. 2-tailed)

Finally, the relationship between PsyCap and Entrepreneurial Intention as a whole was estimated through structural equations model. The maximum likelihood estimate model was used (Figure 1).

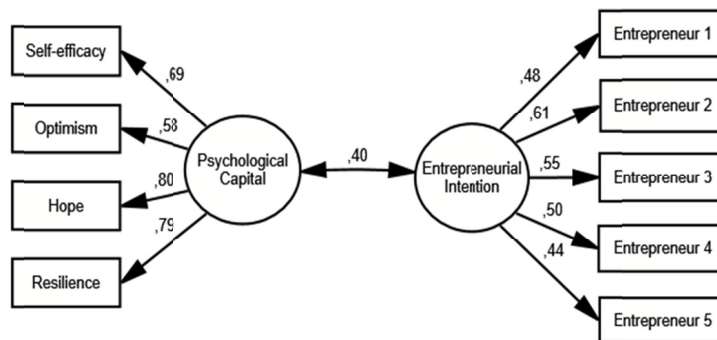


Figure 1. Relationship of Psychological Capital and Entrepreneurial Intentions in business students.

*Note:* Maximum Likelihood Model. Standardized estimates. Model Adjustment: CMIN/DF= 1.379; GFI = .935; CFI = .952 and RMSEA = 0.059

As it can be observed, the fit of the model estimations was highly satisfactory, considering the adjusted values obtained. The Goodness-of-Fit Index (GFI) and the Comparative Fit Index (CFI) were above .90 in both cases, which means that the model has a good adjustment. Moreover, the Chi-square value compared to its associated degrees of freedom (CMIN/DF) is below 3, which is the reference value. Besides, the Root Mean Square Error of Approximation (RMSEA) was below the reference value (0.08) as well. All these fit indexes demonstrated the robustness of the resultant research model in a significant way.

According to the model obtained, it is possible to assert that PsyCap and Entrepreneurial intention, as constructs, can be explained by its components. In the case of PsyCap, Hope and Resilience have more explicative capacity than others. By contrast, Entrepreneurial intentions can be explained in a similar way by its variables. Finally, it is possible to assert that PsyCap and Entrepreneurial Intentions are related, according to the evidence concerning the research objective.

Finally, another important finding obtained by this research is that PsyCap and Entrepreneurial Intention are positive related in a reasonable way, indicating that it could be possible to encourage the entrepreneurial intention in students, through the improvement of their PsyCap, which can be managed at the universities. However, this was an exploratory research and more studies should be developed in order to expand the existent literature. Advances in this scarce field of study, will allow proposing programs of entrepreneurship addressed to business students.

#### 4. Discussion

This research provides additional evidence about the individual characteristics that seem to exert influence on entrepreneurial intention, something that remains unclear and should be studied more (Wilson, et al., 2004). According to the results of this study, the questionnaires used were adequate to assess the psychological capital of students, however, in future studies, we suggest to use a more reliable scale to assess optimism. In general, it can be said that participants showed a high entrepreneurial intention and a positive individual attitude toward entrepreneurship, which has been related to the intention as well, according to previous findings (Moriano et al., 2012).

In order to assess the entrepreneurial intention, five items were used. It is interesting to notice that the item that obtained a lower score in this scale, was the item that involves behavior (entrepreneur 4), in other words, it went beyond the intention. This finding shows the difference between entrepreneurial intentions and actions related to entrepreneurship, for instance, those that may involve researching and planning a new business. In spite of the claim that entrepreneurial behavior can be predicted accurately by studying the intention (Krueger, et al., 2000), we suggest that future studies include a measurement of entrepreneurial actions beside entrepreneurial intention, in order to understand these notions separately.

Regarding the relation between PsyCap and entrepreneurial intention, the results of this study allow us to confirm that Resilience and Self-efficacy are most related to the items of entrepreneurial intention. Hope had less relation with the entrepreneurial intention items. Concerning Self-efficacy, these results confirm previous

findings obtained by several authors (Chandler & Jansen, 1997; Chen, et al., 1998; Boissin, et al., 2009). On the other hand, the relationship of entrepreneurial intention with both hope and optimism were not high.

Although entrepreneurial intention was assessed with five items, not all of them show the same relation to the PsyCap dimensions. Especially entrepreneur 5: "I feel confident enough to quit a secure job in large corporation and start my own business" was related to all four dimensions of PsyCap. This assertion involves the beliefs in one's own capacities, risk assumption, positive expectations about the future and so on, which are all personal resources or psychological capital. This result is related to entrepreneur 3: "I have the ability to run a business" which shows a relation to PsyCap dimensions except for Hope. If PsyCap could be understood as a source of entrepreneurial potential, then the people with more PsyCap will tend to have more intentions towards entrepreneurship. To this respect, there is evidence as reported for example by Jakopec et al. (2013) who found that people with higher entrepreneurial potential usually have more entrepreneurial intentions. These findings seem to indicate that there are individual characteristics that distinguish between entrepreneurs and non entrepreneurs (Kim-Soon et al., 2013; Zhang et al., 2015). This is something that needs to be studied more in order to provide additional evidence to understand entrepreneurial intention from the individual differences.

Finally, according to the resultant model, both constructs can be explained well by their components. Likewise, this research provides evidence regarding the relation between PsyCap and entrepreneurial intention. Although each dimension of PsyCap has a different relation to entrepreneurial intention, the construct as a whole acquired a moderate predictive capacity. This finding shows correspondence with others studies, which have demonstrated the predictive capacity of PsyCap dimensions but in a separate way. Likewise, entrepreneurial intention could be predicted by self-efficacy (Moriani et al., 2012), hope and optimism (Laguna, 2006). In conclusion, the current results provide evidence to support that psychological resources, such as self-efficacy, optimism, resilience and hope, which together conform the PsyCap, are related to entrepreneurship as was proposed by other authors.

This bond between PsyCap and Entrepreneurial Intention has important implications; one of this is that it is possible to encourage entrepreneurial intention in students through improving their PsyCap, which can be included in the education system, due to the fact that PsyCap is considered a capacity that can be developed as Luthans (2002) asserts. Although this is an exploratory study, the results provide evidence of the relation between PsyCap and entrepreneurial intention.

Finally, it is important considerer that the sample size was a limitation of this study as well as the sex of participants (most of them were women). In future studies we suggest increase the sample size and have a more balanced sample between men and women. Likewise, to have a more diverse sample of participants, including students from different academic backgrounds, due to entrepreneurship is not an exclusive activity of business students.

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