

The Effect of Resilience on Entrepreneurial Intention in Higher Education Students in a Post-Covid Stage 19

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The situation resulting from the COVID-19 pandemic has affected several areas: economic, social, relational, and, of course, education. This article aims to determine the impact on education, transposed to Resilience and entrepreneurial intention. A quantitative study was carried out, and 550 undergraduate university students were surveyed by random probability sampling, and the data were analyzed by factor analysis for the reduction of dimensions, and subsequently, linear and correlational regressions were applied. We found that there is a positive impact between Resilience and the entrepreneurial intention of university students, and it was also demonstrated that the greater the Resilience, the greater the perceived control of the entrepreneurial intention. Both attitude and subjective norm showed the highest positive relationships. The present work provides essential findings on the effect of Resilience on students and supports the importance of including entrepreneurship in education as a post-pandemic triggering factor. Furthermore, it opens future lines of research related to the inclusion of entrepreneurship in university students and the specific social impacts that may affect entrepreneurial intention.

Keywords: entrepreneurship, resilience, COVID-19, entrepreneurial intention, higher education

INTRODUCTION

Entrepreneurship has been positioned in different areas due to its importance in contributing to the generation of wealth, the use of resources, and addressing problems such as unemployment (Hoda et al., 2020), and has also generated attention for its ability to adapt to different contexts such as the digital economy (Hu et al., 2022). In the same way, entrepreneurial activity is cataloged as a substantial activity that increases the levels of competitiveness and innovation (Barba-Sánchez et al., 2021), as well as technological progress (Fellnhöfer & Kraus, 2015). Therefore, analyzing elements that provide the identification that leads individuals to start a business has become an object of research (Nowinski & Haddoud, 2019).

In addition to the above, Tomy & Pardede (2020) consider entrepreneurship as a career option, increasing its importance and visibility, with universities being important promoters to encourage this task in students. Therefore, entrepreneurial intention allows an understanding of entrepreneurial behavior (de Mares et al., 2018). That is, it is a crucial factor as a predictor of action prior to creating new businesses since it demonstrates the magnitude of effort an individual has to perform a given behavior (Hueso et al., 2020). The above is reaffirmed by Kautonen et al. (2015), who stipulate that 80% of people who started a business reported a positive intention the previous year.

However, entrepreneurs naturally face unexpected events as part of their business creation processes, such as economic crises, inventions, or competition (Duchek, 2018), and more recently, epidemiological situations worldwide, as in the case of the pandemic caused by COVID-19. According to the latest Global Entrepreneurship Monitor report, only 6 out of 34 economies worldwide experienced a drop in their levels of early-stage entrepreneurship during the years 2019-2021. However, economies with less perceived entrepreneurial support, lack of jobs, and other sources of income pushed people to start their businesses between 2020 and 2021 (GEM, 2022).

The above confirms that entrepreneurs must be able to cope with or adapt to traumatic and adverse changes; this competence is, known as resilience, which is essential for entrepreneurs (Lee & Wang, 2017). González-López et al. (2018) argue that resilience can be seen as a crucial competence in entrepreneurship since it is defined as a dynamic process that allows people to continue with their venture, despite adversities, whereby individuals who start an enterprise in abnormal circumstances tend to alter their status quo and visualize new ways to succeed (Bullough & Renko, 2013). Existing literature has shown the importance of resilience in entrepreneurship as a triggering factor in people's intention to start new businesses (Hartmann et al., 2022; Neneh, 2022; Bullough et al., 2014), however, despite the importance of the study of these two phenomena, given their ability to delve into cognitive aspects of entrepreneurial behavior intentions, there is a relevant gap in the literature to measure the relationship between resilience and entrepreneurial intention, especially in educational environments.

Therefore, the present work aims to find the impact of resilience on the entrepreneurial intention of university students, which will allow a deeper understanding and knowledge of cognitive aspects (such as resilience), and their relationship that inspires an individual to have an entrepreneurial behavioral intention.

LITERATURE REVIEW

Entrepreneurial Intention

Empirical evidence shows that entrepreneurship has been categorized as a fundamental process for economic and social growth (Boldureanu et al., 2020; Malecki, 2017); moreover, in recent years, it has been visualized as an activity that promotes sustainable development (Liargovas et al., 2017), since it functions as a transformative process that drives and promotes economic development, in addition to multiple forms of social value (Apostolopoulos et al., 2018). Fisher et al. (2020) conceptualize entrepreneurship as generating ideas through concepts with novel value. For Schumpeter (2000 cited by Potuguez & Gomez, 2020), an entrepreneur is an innovative person who develops products and services dynamically through a search process. Other authors mention that the entrepreneur possesses well-defined competencies and skills, such as proactivity, opportunity identification, leadership, innovation, socialization, and risk (Morales et al., 2020; Branicki et al., 2018).

The entrepreneurial intention has received importance within the field of entrepreneurship study as a fundamental part of understanding entrepreneurial behavior. Entrepreneurial intention can be defined as a person's belief to start and develop a new venture (Wang & Huang, 2022). Teixeira & Forte (2017) add that entrepreneurial intention is a mental state that precedes behavior and plays an essential role in a person's decision to create a new business because the intention is considered a valid, significant, and unbiased predictor of a specific behavior (Almobaarek & Manolova, 2012), that of entrepreneurship in this case. The entrepreneurial intention of university students is a fundamental variable to understanding how to promote entrepreneurial intention and promote the culture of entrepreneurship, and it can be seen as a career option (Tomy & Pardede, 2020).

Several authors have shown the effect of entrepreneurial intention from various perspectives (Trivedo, 2016); Li et al. (2021a) found in Chinese university students that entrepreneurial intention provides theoretical evidence to support the foundations of education and culture of entrepreneurship. Likewise, other studies have found that elements such as education and knowledge are crucial to strengthening entrepreneurial intention in university students, which contributes to the economic growth of regions, including in critical stages such as post-COVID-19 (Li et al., 2021b; Wang et al., 2021; Engidaw, 2021).

For Hoda et al. (2020), there is no consensus definition of "entrepreneurial intention." However, it states that a state of mind guides the action, experience, form, and direction of a new venture. Nakara et al. (2020) mention that individual and contextual factors determine entrepreneurial intention; the former relates to the attitude and ability to perform a behavior, while the contextual factors refer to political and economic events. Similarly, Jena (2020) argues that entrepreneurial intention is a mental orientation such as a desire, longing, or hope that influences an individual to make decisions and, in turn, is used as a multivariate model that reduces errors (Bacq et al., 2017).

Theory of Planned Behavior

Although several models allow studying the behavioral intention of an individual, the Theory of Planned Behavior (TPB) has become one of the most widely used models; since it allows studying and understanding the behavioral intention of a person (Szczepanik & Casais, 2021; Turulja et al., 2020; Al Saiqal et al., 2019). In addition, it being the research model that has been mostly applied to determine entrepreneurial intention in students (Martinez & Kobylinska, 2019; Dimitrov & Dimitrova, 2020). In this regard, Bonsjak et al. (2020) found that the TPB is used in more than 4200 research papers as part of the empirical analyses.

The TPB was created by Ajzen (1991) and had its foundation in three reflections that the individual has: 1) it refers to the consequences of behavior; 2) it is about the norms of society; and 3) it is the belief of controlling elements that may come to impede behavior (Bosnjak et al., 2020). Therefore, it is established that attitudes, subjective norms, and perceived control establish behavioral intention (Isiwu & Onwuka, 2017).

On the other hand, the subjective norm is an individual's beliefs of close third parties if they deliberate about behavior; such beliefs are formulated through social pressures, that is, they are elements that evaluate the approval of other people, which can be mainly from family, friends and other role models (Conner, 2020; Saraih et al., 2018). Shi et al. (2020) consider that the norms, values, and beliefs of the individual's family environment affect the creation of new businesses. Within the literature, there are contradictions regarding the effect of subjective norms on entrepreneurial intention. On the one hand, authors claim that there is a negative or weak relationship with entrepreneurial intention (Naia et al., 2017; Fenech et al., 2019; Roy et al., 2017); on the other hand, authors highlight the influence of subjective norms as part of the social fabric of entrepreneurial intention (Feola et al., 2019; Munir et al., 2019; Al-Jubari et al., 2018).

Finally, perceived behavioral control, according to Ajzen (1992), defines it as "a person's perception of the ease or difficulty of performing a behavior of interest" (p. 193), i.e., it is how the individual defines the ease or difficulty of executing entrepreneurial behaviors (Munir et al., 2019). The variable of perceived control is the most controversial since empirical inconsistencies have been generated due to its relationship with the influence of intention and, on the other hand, disagreement in its conceptualization and operationalization (Vamvaka et al., 2020; Yap et al., 2013). Perceived control is influenced by the access that a person may have to monetary and material resources, in addition to the perception that he/she has about his/her abilities and opportunities, i.e., if the subject feels that he/she has control over different factors, he/she will have a greater propensity to perform a behavior (Nguyen, 2017). Several authors have shown a positive influence between behavioral control and entrepreneurial intention (Nguyen et al., 2019; Ridha et al., 2017; Zhang et al., 2015).

Resilience

Within the study of social sciences, resilience is a variable increasingly used to measure social success in complex and challenging situations or contexts (Lozano-Díaz et al., 2020). However, its construction is

complex and multidimensional and has been approached by different studies (Soutwick et al., 2014). For Hatami & Shekarchizadeh (2022), resilience is a process in which a person adapts to an adverse environment, such as trauma, threat, tragedy, and stress, i.e., it is a quality that people have to overcome adversity. Wang et al. (2022) state that people who demonstrate high levels of resilience are persevering, self-sufficient, and set clear goals, so they try to achieve them despite the difficulties or challenges that this entails (Wagnild & Collins, 2009).

Ross et al. (2022) argues that resilience in a person depends on a series of factors that influence the individual, such as social interactions, external factors, beliefs, and events that influence a person, for example, life changes derived from COVID-19. Likewise, Darryl et al. (2021) add that other factors affect resilience in individuals, such as family members, friends, school, and even culture. However, in general terms, resilience can be seen as a dynamic and contextual process focused on adapting to situations caused by changes (Brewer et al., 20219).

Derived from resilience as an ability to overcome different challenges and abnormal and changing circumstances, resilient people show unique characteristics in response to critical situations, such as perseverance, self-reliance, and nonconformity, and reflect on their experiences to strengthen their competencies and knowledge to cope with the challenges they face (Mostafa & Lim, 2020).

On the other hand, Jay et al. (2022) state that resilience in educational settings refers to the ability of students with different disadvantages to achieve educational excellence. Likewise, Eri et al. (2021) detail that resilience in school environments is the ability of a student to overcome adversities in their academic context since resilient students maintain motivation, achievement, and performance while coping with stressful events. For their part, Korber & McNaughton (2017) state that within the literature, resilience term is used as a synonym for survival and persistence that entrepreneurs develop, as well as part of behavioral and cognitive traits that they have to adapt to new circumstances.

Resilience and Entrepreneurial Intention

Resilience is an area of study adapted to various disciplines, such as Management Sciences, increasing the number of contributions that study the relationship between resilience and entrepreneurship (Korber & McNaughton, 2017). For example, recently, Ahmed et al. (2022) found that as entrepreneurs face adversity, professionally or personally, they develop a learning process that translates into evaluating and challenging future stressors, so entrepreneurs are often characterized as resilient individuals.

Several resilience studies have shown that motivations play an essential role in overcoming adversity (Richardson, 2002) and the entrepreneurial process. Similarly, Gonzalez-Lopez et al. (2018) argued that resilience in entrepreneurship is a dynamic and integral process that is part of the entrepreneur to adapt to change and challenge uncertain futures effectively. Other authors have found that resilience impacts the personal decision to start a business when aiming to overcome adverse economic contexts (Bollough et al., 2014) or changes in personal situations (Corner et al., 2017).

In the literature analyzed, research has shown that resilience can impact entrepreneurship by creating social and ecological value since entrepreneurship and resilience locate resources and use them frugally (Vlasov et al., 2018; Morrison et al., 2017). Similarly, Krober & McNaughton (2017) argue that resilience in the field of study entrepreneurship has two visions. The first is a synonym of persistence visualized in companies' performances, and the second is appreciated from a cognitive approach of the entrepreneur, as it fosters the adaptive capacity of companies and contributes to sustainable development.

On the other hand, for Santoro et al. (2020a), resilience is related to entrepreneurship with the ability of a person to do innovative business dealing with difficulties. In the business, i.e., resilience is associated with the promotion of starting a new business. Similarly, entrepreneurs with resilient skills are more likely to develop their employees' practices focused on increasing the levels of resilience in companies (Santoro et al., 2020b).

Therefore, based on the above evidence, there is a relationship between resilience and entrepreneurial intention; studies have considered TPB and its effect on resilience (e.g., Silva et al., 2019). First, as mentioned above, attitude is related to variables such as risk, implying its relationship with resilience (De Vries & Shields, 2006; Gonzalez-Lopez et al., 2018). Similarly, other authors have identified that mentors,

family roles, and social support are critical in resilience as part of the entrepreneurial process (Bernar & Barbosa, 2016; Yang & Danes, 2015). Finally, perceived control is visualized as the ability to face obstacles, Margaca et al. (2021) found a significant relationship between resilience with perceived behavioral control, as entrepreneurs are more susceptible to overcoming obstacles.

Study Model and Hypothesis

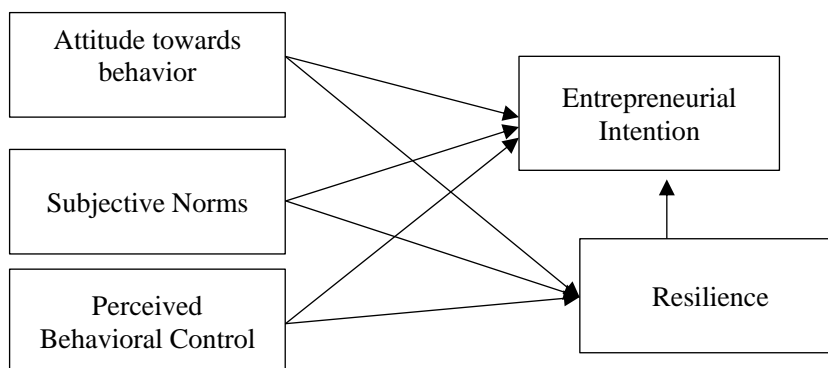
According to the literary evidence presented above, the following hypotheses are stipulated as part of our study, which are presented graphically in Figure 1.

H1. Attitude toward behavior (H1a), Subjective Norm (H1b), and Perceived Control (H1c) have a positive impact on Entrepreneurial Intention.

H2. Attitude toward behavior (H2a), Subjective Norm (H2b), and Perceived Control (H2c) are positively related to Entrepreneurial Intention.

H3. Resilience has a positive impact on Entrepreneurial Intention.

**FIGURE 1
PROPOSED STUDY MODEL**



METHOD

This paper is quantitative with a descriptive and exploratory scope, given the conditions of the current state of the study phenomenon in a post-pandemic era. The online questionnaire tool was used, which was applied by random probability sampling to undergraduate students, particularly in the economic-administrative areas. The data collected were recorded and coded in the statistical program SPSS version 25. In the data analysis, descriptive statistics were used to identify demographic elements such as age, sex, and semester of study of the sample; on the other hand, inferential statistics were used to develop the theoretical model proposed above.

Instrument Design

The applied questionnaire consists of three blocks. The first block contains four demographic variables: sex, age, semester of study, and career; the second block is composed of the Resilience Scale proposed by Campbell-Sills and Stein (2007), which reduces to 10 items the scale made by Connor and Davidson (2003) and which has been used by authors such as Cachón et al. (2020) and Lozano-Díaz (2020), this scale is designed through a Likert scale from 1 to 7 (1= totally disagree and 7= totally agree) to measure the level of agreement of phrases such as: "I am able to adapt to changes".

Finally, the Entrepreneurial Intention Scale was translated and adapted to Spanish from the study by Liñan and Chen (2009) through 20 items, for example: "A career as an entrepreneur is attractive to me,"

"My professional goal is to become an entrepreneur," formulated on a Likert scale from 1 to 7 (1 = totally disagree and 7 = totally agree), measures entrepreneurial intention through the variables of attitude, subjective norm, perceived control and entrepreneurial intention. This scale has been validated in multiple entrepreneurship studies (e.g., Barba-Sanchez et al., 2022; Elnadi and Hani Gheti, 2021; Renko et al., 2020).

Sample

A total of 550 high school students were surveyed, of which 347 (63.1%) were females and 203 (36.9%) were males. Regarding age, the highest number of respondents corresponds to the age of 20 years (19.3%), followed by the age of 19 years (17.3%), and in third place, 16.4% of the respondents are 21 years old. Finally, those in the first year of their undergraduate degree represent the highest frequency of respondents (35.9%), while 22.6% are in the second year of their undergraduate degree. Table 1 shows a summary of the main demographics of the sample.

**TABLE 1
DEMOGRAPHIC RESULTS OF THE SAMPLE**

Demographic Characteristics	Variable	Frequency (%)
Gender	Female	347 (63.1%)
	Male	203 (36.9%)
Age	17 to 19 years	149 (27.1%)
	20 to 22 years	274 (49.9%)
	23 to 25 years	89 (16.2%)
	> 26 years	38 (6.8%)
Semester	Average	4 (+-2.81) Std. deviation

ANALYSIS OF THE RESULTS

First, a dimension reduction was performed for the TPB variables (Attitude towards behavior, Subjective Norm, and Perceived Behavioral Control) using factor analysis with a KMO correlation matrix and Barlett's sphericity test with the Varimax rotation method, which resulted in a KMO of .866 and a significance of less than 0.000. In the same way, the reduction of dimensions was performed for the Entrepreneurial Intention and Resilience variable, with a KMO of .90 and significance levels of less than 0.000. This shows that the study's variables are correctly explained and correlated. Table 2 shows the results of the component matrices, as well as the reliability analysis and the percentage of variance of each variable.

**TABLE 2
MATRIX OF REDUCTION RESULTS OF DIMENSIONS OF TPB**

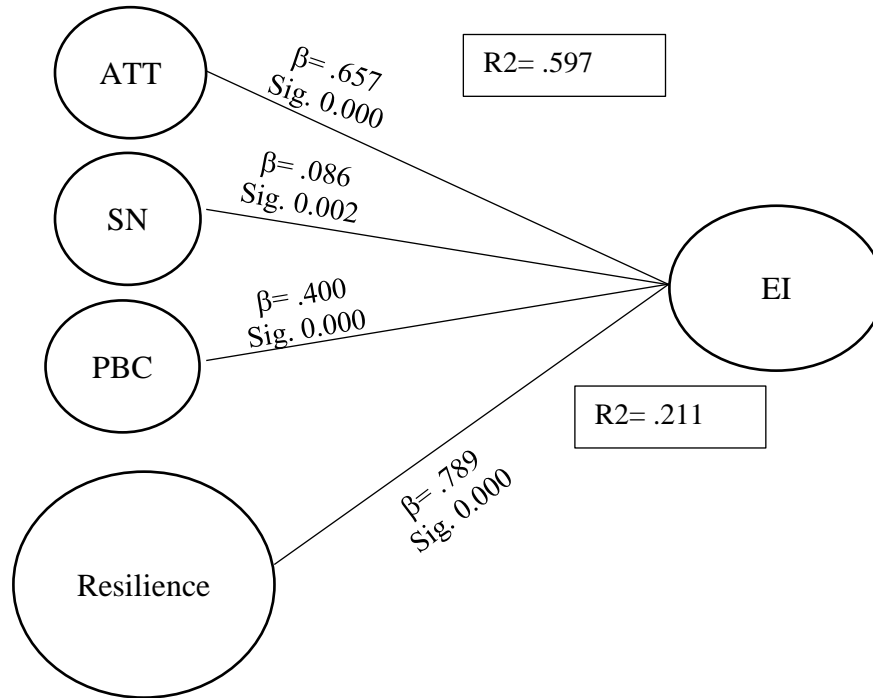
Theory of Planned Behavioral	Loadings	Cronbach's Alpha	Variance
Attitude Towards Behavior		.828	0.2816
ATT1	.592		
ATT2	.815		
ATT3	.688		
ATT4	.811		
ATT5	.789		

Subjective Norms		.842	0.2226
SN1	.809		
SN2	.886		
SN3	.841		
Perceived Behavioral Control		.898	0.1689
PCB1	.653		
PCB2	.799		
PCB3	.877		
PCB4	.810		
PCB5	.792		
PCB6	.789		
Resilience		.914	0.5711
R1	.741		
R2	.808		
R3	.716		
R4	.734		
R5	.762		
R6	.800		
R7	.739		
R8	.718		
R9	.784		
R10	.748		
Entrepreneurial Intention		.936	.7595
I am ready to do anything to be an entrepreneur	.802		
My professional goal is to become an entrepreneur	.876		
I will make every effort to start and run	.924		
I am determined to create a firm in the future	.841		
I have very seriously thought of starting a firm	.881		
I have the firm intention to start a firm some day	.899		

Note. Extraction method: Main component analysis, Varimax rotation method with Kaiser standardization

Subsequently, to validate the H1 of the study's H1, Linear REGRESSION WAS performed with attitude, subjective norm, and perceived behavioral control as independent variables and entrepreneurial intention as the dependent variable. As a result of the linear regression, The Model is explained with an r-squared of .597. In The Same Way, The Same Procedure was carried out with the Resilience variable as independent Variable and Entrepreneurial Intention as a variable dependent, resulting in an r-squared of .211. Figure 2 hows the Corresponding Results.

FIGURE 2
LINEAL REGRESSION OF STUDY MODEL



Note. ATT= Attitude towards behavior; SN= Subjective Norms; PBC= Perceived Behavioral Control; IE= Entrepreneurial Intention

The result confirms that H1, Attitude Towards Behavior, Subjective Norms, and Perceived Behavioral Control positively impact the Entrepreneurial Intention of university students. However, it is evident that the subjective norm, despite the positive impact, is very weak compared to the other variables of the study. On the other hand, H3, which states that Resilience positively impacts university students' entrepreneurial intention, is also tested.

On the other hand, a bivariate correlation analysis was performed with the variables of Attitude Towards Behavior, Subjective Norm, Perceived Behavioral Control, and Resilience, as shown in Table 3. These results prove H2 since the Perceived Control variable is the most associated with Resilience with a Pearson correlation of .404, followed by Subjective Norm and Attitude with a Pearson correlation of .391 and .320, respectively.

TABLE 3
BIVARIATED CORRELATIONS BETWEEN TPB AND RESILIENCE

		Resilience	Perceived Behavioral Control	Attitude Towards Behavior	Subjective Norms
Resilience	Pearson's Correlation	1			
	Sig. (bilateral)				
	N	550			
Perceived Behavioral Control	Pearson's Correlation	.404**	1		
	Sig. (bilateral)	.000			
	N	550	550		
Attitude Towards Behavior	Pearson's Correlation	.320**	.000	1	
	Sig. (bilateral)	.000	1.000		
	N	550	550	550	
Subjective Norms	Pearson's Correlation	.391**	.000	.000	1
	Sig. (bilateral)	.000	1.000	1.000	
	N	550	550	550	550

Note. **. The correlation is significant on the level 0,01 (bilateral).

CONCLUSION

For some years, entrepreneurship has been seen as essential for regions' social and economic development. Therefore, public and private institutions and society increasingly demand more information regarding entrepreneurship and the factors that drive a person to carry out activities aimed at the creation of new businesses. Under this logic, higher education institutions see entrepreneurship as a key and fundamental axis in students' lives, which is why entrepreneurial intention, for some years now, has proven to be the primary predictor of behavior.

In addition to the above, the pandemic caused by COVID-19 has reinvented the way the world was developing and has demanded the generation of new mechanisms, policies, actions, and strategies in order to cushion the economic, cultural, and social effects caused by the confinement, therefore, entrepreneurship became a viable tool to counteract the effects caused by the pandemic, i.e., entrepreneurs developed Resilience.

Therefore, the importance of this study and its results derive from the need to know how the Resilience generated by higher education students after the COVID-19 pandemic influenced their entrepreneurial intention. The results of the present work can be analyzed in three moments. First, as part of the loadings derived from the reduction of dimensions where they show high loadings, thus, it is demonstrated that the phenomena studied, such as entrepreneurial intention and Resilience are widely explained. Likewise, it can be observed that the variables that interpret the behavioral intention are also mainly explained in this study; that is, attitude, subjective norm, and perceived control in university students show to be aligned towards entrepreneurial activity.

In the second part, the results show that attitude towards entrepreneurship has a positive and more significant influence on Resilience, which demonstrates that as unpleasant events occur, they impact attitude toward entrepreneurship; this can be transferred to the economic consequences that the pandemic had. For example, the World Bank (2022) states that more than 50% of households could not sustain their essential consumption as a result of the loss of income; while in Mexico, households earned and spent 6% and 13% less compared to years prior to the start of the pandemic by COVID 19 (Cullell, 2021). This leads to reflecting on entrepreneurship by necessity, i.e., students may be more likely to undertake from the loss of income and jobs.

In the same way, the results obtained from the perceived control variable, it can be argued that Resilience, being a multifaceted concept, can be considered that a resilient person should consider the ability the use resources; in addition, it can be proportionally linked to the entrepreneurship courses that

students take during their educational process. Finally, it is understood that the subjective norm does not generate considerable impacts, unlike attitude or perceived control.

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