

THE MEDIATION EFFECT OF ENTREPRENEURIAL SELF-EFFICACY IN THE RELATIONSHIP BETWEEN ENTREPRENEURIAL PASSION AND LEADERSHIP STYLES

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ABSTRACT

This research aimed to determine the mediating effect of entrepreneurial self-efficacy on the relationship between entrepreneurial passion and leadership styles. Two hundred hardware and footwear entrepreneurs from the Las Malvinas Commercial Emporium, Lima, Peru, were surveyed. The PLS-SEM multivariate statistical technique was applied for data analysis. It was found that there is a complementary mediating effect of entrepreneurial self-efficacy in the relationship between entrepreneurial passion and leadership styles.

On the other hand, it was concluded that entrepreneurial passion has a positive influence on entrepreneurial self-efficacy. Likewise, there is a positive influence of entrepreneurial self-efficacy on leadership styles, and there is a positive influence of entrepreneurial passion on leadership styles.

This research contributed theoretically to the academic literature and provided empirical evidence of the relationship of the proposed variables; it proved a new predictive and explanatory structural model that can now be used in future research worldwide and generated a model of the studied variables that is useful for both academia and the business world.

Keywords: Mediation, Entrepreneurial, Entrepreneurship, Sustainability

INTRODUCTION

Entrepreneurship is a crucial variable for developing any country, as it positively influences health and education and strongly drives economic growth (Mehta et al., 2014; Arshad et al., 2018). Currently, variables such as entrepreneurial self-efficacy, leadership styles, and entrepreneurial passion are being investigated in business, given their positive influence on the sustainability of entrepreneurship and organizations globally (Norena-Chavez, 2020; Norena-Chavez & Guevara 2020; Norena-Chavez, Céliz-Kuong & Guevara, 2021). SARS-CoV- 2 has increased the need for entrepreneurship for many people, as many jobs ceased to exist, but, at the same time, these ventures need to be led by entrepreneurs with solid skills that generate innovative, disruptive, and sustainable models (Szulc & Smith, 2021).

According to Lian & Yen (2017), entrepreneurs require different skills than people working in the corporate world to cope with the new threats emerging in the business environment. The integration of skills, such as entrepreneurial self-efficacy, entrepreneurial passion, and leadership, together with digital skills, increases business success probability (Grandon & Pearson, 2003). According to the Global Entrepreneurship Report (2019), variables related to entrepreneurship, such as leadership, entrepreneurial passion and entrepreneurial self-efficacy, strongly influence the success of companies. Therefore, it is essential to improve the understanding of the interrelationships between these variables, as the lack of it influences the closing of business at a global level.

On the other hand, in early-stage entrepreneurship (less than 3.5 years), Peru ranks 5th out of 54 countries; however, in established entrepreneurship (more than 3.5 years), it ranks 19th

out of 54 countries (GEM, 2019). This, in addition to the dynamic and uncertain environment resulting from SARS-CoV-2, increases the mortality rate of businesses.

The objectives of this research were: a) to determine the mediation effect of entrepreneurial self-efficacy in the relationship between entrepreneurial passion, and leadership styles, never studied before in the academic literature; b) to contribute theoretically to the academic literature and provide empirical evidence of the relationship of the proposed variables, c) to contribute to a better understanding of the interrelationships of entrepreneurial self-efficacy, entrepreneurial passion, and leadership styles, and d) to generate a useful model for both academia and the business world.

This research found the following: a) it was the first scientific research in the world to study the interrelationships between entrepreneurial self-efficacy, entrepreneurial passion and leadership styles, and to add a mediation analysis to this; b) filled the knowledge gap in the mediation of entrepreneurial self-efficacy in the relationship between entrepreneurial passion and leadership styles; c) generated a useful model for academia and entrepreneurship; d) proved a predictive and explanatory structural model that can be used in future research worldwide; and e) was the first scientific research carried out in Las Malvinas, in the hardware and footwear sector, Cercado de Lima, Peru, in a SARS-CoV-2 period.

This research followed a quantitative, cross-sectional cohort, correlational-exploratory methodological approach with a non-experimental design. The multivariate statistical technique partial least squares structural equation modeling (PLS-SEM) was used for analysis and result reporting and the third version of the SMART-PLS software (Ringle, Wide & Becker, 2015). We surveyed 200 entrepreneurs in the hardware and footwear sectors in Las Malvinas, Cercado de Lima, Lima Region, Peru, in March 2021.

The following research questions were posed: a) Is there a positive relationship between entrepreneurial passion and entrepreneurial self-efficacy? b) Is there a positive relationship between entrepreneurial self-efficacy and leadership styles? c) Is there a positive relationship between entrepreneurial passion and leadership styles? and d) does entrepreneurial self-efficacy mediate the relationship between entrepreneurial passion and leadership styles?

This research presented the following hypotheses:

- H1 Entrepreneurial passion influences positively entrepreneurial self-efficacy.*
- H2 Entrepreneurial self-efficacy influences positively the leadership styles.*
- H3 Entrepreneurial passion influences positively the leadership.*
- H4 The entrepreneurial self-efficacy mediates the relationship between the entrepreneurial passion and the leadership styles.*

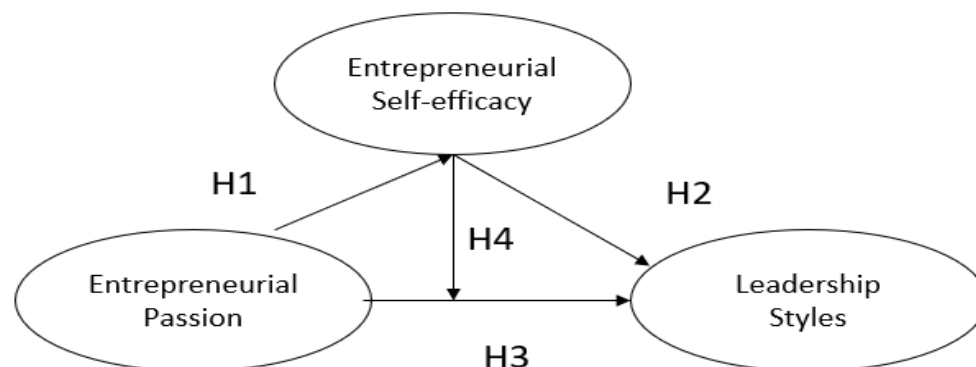


FIGURE 1
ADAPTED FROM “THE MEDIATION EFFECT OF INNOVATIVE BEHAVIOR ON

THE RELATIONSHIP BETWEEN ENTREPRENEURIAL SELF-EFFICACY AND ENTREPRENEURIAL INTENTION” (NORENA-CHAVEZ, 2020).

LITERATURE REVIEW

Entrepreneurial Passion- Leadership

Entrepreneurial passion is a phenomenon directly related to leading motivated ventures (Cardon & Kirk, 2015). To identify, build and lead new businesses, entrepreneurial passion needs to be present all the time to ensure their organizational sustainability (Collewaert et al., 2016; Murnieks et al., 2014). In education, entrepreneurial passion positively influences leadership, as it encourages new businesses (Ali & Abou, 2020; Fayolle et al., 2006).

Anjum, et al., (2021) concluded a strong relationship between entrepreneurial passion and intention to lead new businesses. Hubner, et al., (2019) identified that communicating plans with an entrepreneurial passion to employees increases the desire to lead projects and organizational commitment. Finally, entrepreneurial passion contributes to leading entrepreneurial activities and influences the development of the entrepreneurial ecosystem (Obschonka et al., 2019).

Entrepreneurial Self-Efficacy-Entrepreneurial Passion

Li, et al., (2020) concluded that entrepreneurial passion has a positive influence on entrepreneurial self-efficacy. Entrepreneurial self-efficacy is characterized by the self-confidence to undertake any business successfully and is positively related to entrepreneurial passion (Nowinski et al., 2019). Other studies showed that entrepreneurial passion and entrepreneurial self-efficacy drive new business identification (Jarvis, 2016; Cardon et al., 2005).

In a sample of 500 university students in South Africa, Neneh (2020) examined whether entrepreneurial passion influences entrepreneurial intention and entrepreneurial self-efficacy. He concluded that there is a positive influence by entrepreneurial passion on these two variables. Al Issa, et al., (2019) examined 273 Malaysian entrepreneurs and concluded that entrepreneurial self-efficacy positively impacts entrepreneurial passion. Meanwhile, Cardon, et al., (2015) concluded that entrepreneurial passion helps explain the relationship between self-efficacy and entrepreneurial action.

Entrepreneurial Self-Efficacy-Leadership

Self-efficacy is an essential factor for creativity to develop and drives leadership in organizations (Gong, Huang & Farh, 2009). According to Hong-Da (2014), entrepreneurial self-efficacy mediates the relationship between entrepreneurial leadership and innovative behavior. A variant of self-efficacy is creative self-efficacy. Entrepreneurial leadership positively moderates creative self-efficacy on innovative behavior (Newman et al., 2018).

Barakat, Boddington & Vyakarnam (2014) concluded that entrepreneurial self-efficacy is related to innovation, leadership, creativity, start-up processes, product development, teamwork, and financial skills. Kickul, Wilson, Marlino & Barbosa (2008) studied the influence of entrepreneurial self-efficacy and leadership in young middle and high school students and found that leadership and entrepreneurial self-efficacy are strongly related in both groups. Additionally, Obschonka, Silbereisen & Schmitt-Rodermund (2010) concluded that leadership developed as a child can generate adult entrepreneurial self-efficacy.

RESULTS

Measurement Model Evaluation

For the evaluation of the measurement model, the following criteria were used: a) individual reliability of the indicator, b) construct reliability, c) convergent validity, and d) discriminant validity.

Individual Indicator Reliability

According to Hulland (1999), in the social sciences, researchers find external loadings below 0.70 since often underdeveloped scales are used. Hair, et al., (2019) concluded that the appropriate external loadings threshold should be greater than or equal to 0.707. Figure 2 shows the model and its external loadings.

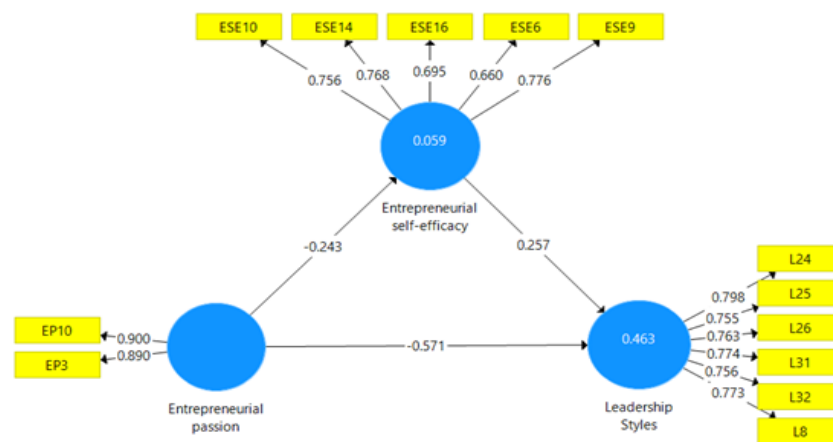


FIGURE 2

THE FIGURE WAS CREATED USING THE 3.3.3 VERSION OF THE SMART-PLS SOFTWARE AND SHOWS THE EXTERNAL LOADINGS OF THE LATENT VARIABLE INDICATORS.

Construct Reliability

To evaluate the construct reliability, internal consistency and discriminant validity were considered. To evaluate internal consistency, Cronbach's Alpha and Composite Reliability were analyzed; both indicators should be greater than or equal to 0.7, but social sciences the indicators should be greater or equal to 0.6 (Cronbach, 1951; Jöreskog, 1971; Hair et al., 2019). On the other hand, to evaluate convergent validity, rho_A and AVE were analyzed. Rho_A resulted higher than 0.7 and AVE higher than 0.5, thus meeting the minimum required thresholds (Hair et al., 2019). Table 1 shows the internal consistency of the measurement model.

Table 1 INTERNAL CONSISTENCY Reliability and Validity				
	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
Entrepreneurial passion	0.751	0.752	0.889	0.801
Entrepreneurial self-efficacy	0.785	0.784	0.852	0.536
Leadership	0.864	0.877	0.897	0.593

To assess discriminant validity, the Fornell and Larcker criteria, Cross Loadings and HTMT were analyzed. The first criterion was the Fornell-Larcker criterion, which assesses discriminant validity by comparing the square root of the AVE values with the correlations of the latent variables (Fornell & Larcker, 1981; Hair et al., 2019). Table 2 shows the Fornell-Larcker criterion.

Fornell-Larcker Criterion	Entrepreneurial passion	Entrepreneurial self-efficacy	Leadership
Entrepreneurial passion	0.895		
Entrepreneurial self-efficacy	-0.243	0.732	
Leadership	-0.633	0.396	0.77

Assessment of Structural Model Path Coefficients and Evaluation of the Model's Mediation

After applying the PLS-SEM algorithm in the program, structural model estimates are obtained. These represent the hypothesized relationships (Hair et al., 2019). In this research, the full bootstrapping technique was applied, and a 5% significance level was assumed; therefore, the p-value should be less than 0.05 (Aguirre-Urreta & Rönkkö, 2015). Table 3 shows that the three hypotheses raised in this research are positive and statistically significant. Therefore, we conclude that: a) entrepreneurial passion and entrepreneurial self-efficacy are positively related (H1), b) entrepreneurial self-efficacy and leadership are positively related (H2), and c) entrepreneurial passion and leadership are positively related (H3).

Path coefficients	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
EP -> ESE	-0.243	-0.265	0.087	2.806	0.005
EP -> L	-0.571	-0.572	0.048	11.846	0.000
ESE -> L	0.257	0.271	0.071	3.615	0.000

The total indirect effect was assessed to determine the mediating effect. It was found that there is an indirect effect of entrepreneurial self-efficacy on the relationship between entrepreneurial passion and leadership. Hypothesis 4 was tested. Table 4 shows the test and the statistical significance of the indirect relationship.

Total Indirect Effects	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
EP -> ESE					
EP -> L	-0.062	-0.07	0.026	2.374	0.018
ESE -> L					

To determine the type of mediation in this research, it was determined that the total effect is positive and significant compared to the indirect effect. Likewise, the existence of complementary mediation was concluded (Hair et al., 2019). Table 5 shows the total effect of the variables and their p-values.

Total Effects	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
EP-> ESE	-0.243	-0.265	0.087	2.806	0.005
EP -> L	-0.633	-0.641	0.04	15.717	0.000
ESE -> L	0.257	0.271	0.071	3.615	0.000

Blindfolding and Q-Square Predictive Relevance

-Square is the out-of-sample predictive power, which should be assessed in addition to R-Square to argue for predictive accuracy (Stone, 1974). Hair, et al., (2019) proposed as a rule that Q-Square values greater than zero, 0.25, and 0.5 show small, medium, and large predictive relevance of a PLS monogram.

Shmueli, et al., (2016) concluded that Q-Square allows assessing the contribution of an exogenous construct to the Q-Square value. According to Hair, et al., (2019), as a measure of predictive relevance, q-Square values of 0.02, 0.015, and 0.35 indicate that a construct has a small, medium, or high predictive relevance on an endogenous construct. Table 6 shows the Q-Square and q-Square of the model. It is concluded that the predictive relevance is medium since the indicator is 0.254; on the other hand, the q-Square effect size is small.

	SSO	SSE	Q² (=1-SSE/SSO)
Entrepreneurial passion	198	198	
Entrepreneurial self-efficacy	495	483.943	0.022
Leadership	594	443.39	0.254
q Square			0.042

DISCUSSION AND CONCLUSIONS

This research aimed to determine the mediating effect of entrepreneurial self-efficacy on the relationship between entrepreneurial passion and leadership styles based on the model proposed by Norena-Chavez (2020); Newman, et al., (2018); Norena-Chavez & Guevara (2020); Newman, et al., (2019). The direct and indirect relationships of the variables presented were tested (entrepreneurial self-efficacy, entrepreneurial passion, leadership styles).

It was concluded that hypothesis 1 is statistically significant H1 (the relationship between entrepreneurial passion and entrepreneurial self-efficacy). This result is supported by previous research (Norena-Chavez & Guevara, 2020; Li et al., 2020; Nowinski et al., 2019; Jarvis, 2016; Cardon et al., 2005; Al Issa et al., 2019).

Regarding H2 (the relationship between entrepreneurial self-efficacy and leadership styles), the hypothesis is statistically significant. Previous research supports the result of this hypothesis. (Gong, Huang & Farh, 2009; Hong-Da, 2014; Neuman et al., 2018; Barakat, Boddington & Vyakarnam, 2014; Kickul, Wilson, Marlino & Barbosa, 2008; Obschonka, Silbereisen & Schmitt-Rodermund, 2010).

On H3 (The relationship between entrepreneurial passion and leadership styles), the hypothesis is statistically significant. Previous studies support this hypothesis (Cardon & Kirk, 2015; Collewaert et al., 2016; Murnieks et al., 2014; Ali & Abou, 2020; Anjun et al., 2021; Hubner et al., 2019).

Regarding H4 (entrepreneurial self-efficacy mediates the relationship between entrepreneurial passion and leadership styles), the hypothesis is statistically significant. Additionally, the complementary mediating effect of entrepreneurial self-efficacy was tested. Research supports this hypothesis (Norena-Chavez & Guevara, 2020; Norena-Chavez, 2020; Newman et al., 2018). According to the variance explained, entrepreneurial passion explains 46 % of the variability of leadership. On the other hand, in the research of Norena-Chavez and Guevara (2020), entrepreneurial self-efficacy explains 35 % of the variance of innovative behavior. In the study of Norena-Chavez (2020), entrepreneurial self-efficacy explains 9 % of the variance of entrepreneurial intention.

Entrepreneurial passion is a strong predictor of leadership styles. Academia and the business world must understand the relationship between these variables, closely related to entrepreneurship in different sectors. This research is the first to test the complementary mediating effect of entrepreneurial self-efficacy on the relationship between entrepreneurial passion and leadership styles. For that reason, this model can be tested in different sectors of the world by researchers in the entrepreneurship and leadership fields.

The model shows a better understanding of the mechanism by which entrepreneurial passion affects leadership styles. In this research, entrepreneurial self-efficacy was proposed as a mediating variable so that other researchers could evaluate the effect of different variables as mediators. Additionally, it is recommended that future research involve variables such as cyber leadership, cyber entrepreneurial intention, and cyber entrepreneurial self-efficacy, using a longitudinal cohort or complementing it with a mixed methodology to learn more about the entrepreneur's profile in this sector.

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