

Entrepreneurial Risk Perception and Sustainable Entrepreneurship Intention among SMEs in Algeria: A Multidimensional Approach

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Abstract: This study examines the relationship between entrepreneurial risk-taking perception and sustainable entrepreneurship intention among SMEs in Algeria, in addition to the precise content of such interventions. It was determined by quantitative research methods using structural equation modeling (SEM) that there is a statistically significant and positive correlation between SMEs' aim to be sustainable in business and their views of financial, social, and personal risks. The mediation analysis results revealed an even greater association for attitude toward risk. This finding demonstrates the significance of the SME's risk-taking attitude as a mediating component in the sustainable entrepreneurial aim model of SMEs in Algeria. The results highlight the importance of attitude toward risk in moderating the impacts of entrepreneurial risk-taking views on intentions for sustainable entrepreneurship.

Keywords: Entrepreneurial risk perception; sustainable entrepreneurship intention; Financial risk; Social risk; Personal risk

1. Introduction

Sustainable entrepreneurs must strike a balance to achieve the triple bottom line of social, environmental, and economic objectives (Patzelt and Shepherd, 2011). The emerging field of sustainable entrepreneurship is more formally defined as "the discovery, creation, and exploitation of entrepreneurial opportunities that contribute to sustainability through providing social and environmental benefits for others in society" (Pinkse and Groot, 2015). Sustainable business owners are driven to positively impact intricate and frequently interconnected social and ecological issues like climate change, nuclear radiation, unequal access to healthcare and education, poverty, and long-term unemployment. More generally, they are driven to contribute to sustainable development, defined as development that satisfies present-day demands without jeopardizing the ability of future generations to satiate their wants (Cohen and Winn, 2007).

Several empirical research has sought to look into the mindset underlying the purpose of sustainable business during the past few years. The key predictors of human behaviors, according to earlier behavioral research, were believed to be attitudes, and it was supposed that attitudes had a direct impact on people's behavioral intents to decide what they wanted to do or how they wanted to do it (Shinnar et al., 2012). The empirical data indicates that attitudes and intentions to launch a sustainable business are directly and indirectly influenced by risk perception, which is defined as having a pessimistic outlook on a scenario (Block et al., 2015). These difficulties could affect people's intentions to launch a sustainable business, often regarded as the most significant and objective predictors of entrepreneurial action (Yukongdi and Lopa, 2017). Unfortunately, we still have a limited understanding of how these issues affect people's intentions to start sustainable businesses.

Although risk has always been central to the definitions of words like entrepreneur and venture, it is typically viewed as a unidimensional construct in the entrepreneurship literature. However, studies on the psychology of decision-making have revealed that taking and perceiving risks are multifaceted, context-dependent, and domain-specific (Zaleskiewicz et al., 2020). The third contribution, which examines the effect of risk perception as a multidimensional concept on SMEs' entrepreneurial intentions, invokes three forms of risk (financial, social, and personal). The multidimensionality of risk

has been highlighted in several studies (Zaleskiewicz et al., 2020), but research on entrepreneurial ambition still views perceptions of risk as a one-dimensional concept.

2. Literature review

2.1. Sustainable Entrepreneurial Intention

The goal of people to become entrepreneurs is a difficult subject to research. Perception-based processes, the complexity of the cognitive systems underlying purposeful acts, and several factors influencing intention (Bouwman et al., 2019; Entrialgo and Iglesias, 2020) are all to blame. A university student typically does not think about entrepreneurship as a career option until a few years after graduating. In this approach, the literature on entrepreneurship has developed methods for connecting the present ambition to develop a notion with its realization in the future. An individual's self-acknowledged conviction that they aim to launch a new business endeavor and intend to do so in the future is called entrepreneurial ambition.

The literature uses the theory of planned behavior to explain this. Growingly, the hypothesis of planned conduct through sophisticated cognitive processes helps understand people's entrepreneurial activity (Nikou S. et al., 2019). These procedures and models have offered an intriguing capacity for forecasting the act that results in establishing a business (Entrialgo and Iglesias, 2020). Intentions are good indicators of how someone will act in a specific situation. This predictor works particularly well in the context of entrepreneurship (Bouwman et al., 2019). The authors claim that there is a larger likelihood of starting a new firm the more zealous the entrepreneurial intention.

2.2. Risk Perception

From a psychological point of view, we examined one of the crucial aspects of the decision-making process. More specifically, we looked at how different perspectives affected the emergence of entrepreneurial intents. Perceptions are mental pictures that people generate in their minds from internal and external settings. Cognitive biases cause these visuals to vary from person to person. It is a truth that when using the available data in challenging circumstances, descriptive errors can occur (Shepherd and Patzelt, 2011). Entrepreneurs are exposed to various cognitive biases that can distort their perceptions because of the high level of uncertainty in their line of work. Due to this, a person may perceive risk differently than others or, conversely, may overestimate their capacity for starting a new business. Recognized the complexity of entrepreneurial risk and proposed three dimensions: financial, social, and personal.

2.3. Financial Risk Perception

The perceived level of financial risk and the financial loss connected with a failed new venture may deter prospective business owners. A business failure may have a financial impact on certain people in the form of lost money or a reduction in family income. People may suffer large financial losses if a new company fails. Personal debt that continues to haunt the entrepreneur for years after failure is another financial risk. (Shawn and Patzelt, 201) Financial uncertainty is one of the most significant elements harming an individual's intention to start a business.

2.4. Social Risk Perception

Capital isn't always monetary; it can also be social. Failure can harm relationships in the family, the workplace, and the social environment. For instance, failure could result in a family member or spouse's interpersonal interactions breaking down (Yukongdi and Lopa, 2017). Numerous people claim that the social devaluation associated with failure can hurt relationships after an unsuccessful entrepreneurial experience (Zaleskiewicz et al., 2020), thereby indicating that perceptions of entrepreneurial risk are linked to how people feel about social devaluation and failure. The acquisition of resources and professional integration can be discriminated against due to social devaluation. These known adverse consequences of the social devaluation of failure may

help to explain why some people think that entrepreneurship carries a high risk. The social consequences of new venture failure have been better-understood thanks to studies on the negative societal effects of such failure.

2.5. Personal Risk Perception

A person's psychology and professional career can be badly impacted by eventual failure (Entrialgo and Iglesias, 2020). Frustration, pain, loss of self-esteem, fear of the unknown, worries about reputation and professional career loss are unpleasant emotions that some people connect with new venture failure. Thus this might impact people's intentions to start their own business. How people view the risk may affect their decision to start a sustainable business. We define risk perception following past models by referring to the financial, social, and personal inherent assessments people make about risk about its scale and multidimensional character. Most research in judgment and decision-making (Zaleskiewicz et al., 2020) showed that various factors, including cognitive and emotional ones, may impact how risk is perceived. And this means that risk perception is created as a general opinion that people have about the seriousness of danger and is influenced by various factors, including monetary, social, and personal factors.

One of the most important predictors of behavioral intention is risk perception. For instance, (Zaleskiewicz et al., 2020) found that people were more inclined to engage in preventive actions when they considered the risk of beginning a sustainable firm higher. In this study, we sought to investigate potential processes that may explain university students' perceptions of risk and risk-taking behavior concerning their intentions to engage in sustainable entrepreneurship. As the primary theoretical model outlining the function of numerous components in risk perception and behavior under danger, the risk-as-feelings hypothesis served as the foundation for our predictions. Following this concept, a risk-taking attitude and the intention to engage in sustainable entrepreneurship are the products of a dynamic interaction between cognitive assessments and sentiments derived from anticipated outcomes.

2.6. Risk Perception and Entrepreneurial Decision Making

It has been claimed that risk behavior, risky choices, and the decision to start a new business are all adversely connected with risk perception (Entrialgo and Iglesias, 2020). Risk perception is typically thought of as a decision maker's evaluation of the risk present in a circumstance (Yukongdi and Lopa, 2017).

2.7 Conceptual Framework and Hypothesis

The degree to which a researcher conceptualizes the relationship between the study's contextual variables and illustrates that relationship graphically or diagrammatically is referred to as the conceptual framework (Mot, H.O. et al., 2012). The relationship describes the association between the independent factors and the dependent variable. The framework offers a useful approach to investigating how SMEs' perceptions of entrepreneurial risk impact their entrepreneurial intentions while capturing the mediation function of attitude toward taking on entrepreneurial risk.

2.7.1 Hypothesis development

H₁: Financial risk positively influences sustainable entrepreneurial intention

H₂: Social risk positively influences sustainable entrepreneurial intention

H₃: Personal risk positively influences sustainable entrepreneurial intention

H₄: Financial risk positively influences attitude towards risk

H₅: Social risk positively influences attitude towards risk

H₆: Personal risk positively influences attitude towards risk

H_{7a}: Attitude towards risk mediates between financial risk and sustainable entrepreneurial intention

H_{7b}: Attitude towards risk mediates between social risk and sustainable entrepreneurial intention

H_{7c}: Attitude towards risk mediates between personal risk and sustainable entrepreneurial intention

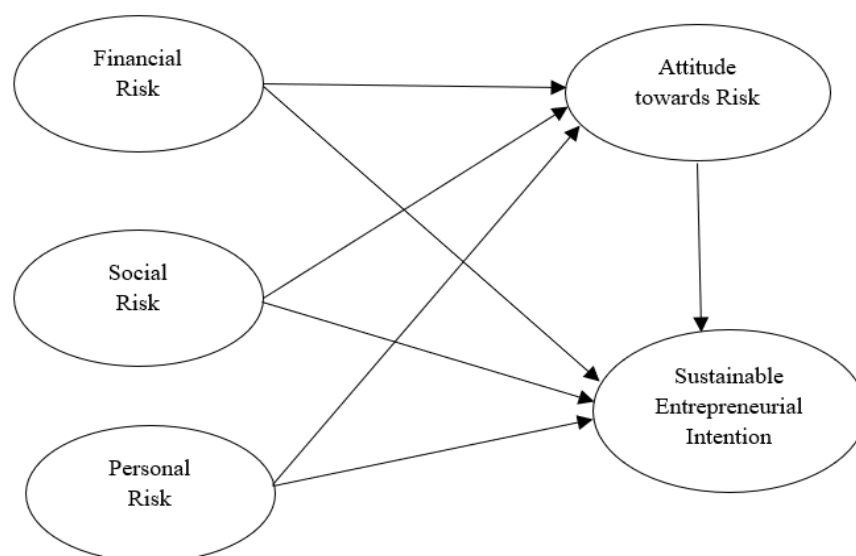


Figure 1: Research model

3. Research Methodology

375 SMEs in Algeria made up our study's sample. In June 2022, questionnaires with an understanding of entrepreneurship were distributed to SMEs from various industries, including manufacturing, retail, and service providers. Email invitations have been sent to SME owners inviting them to complete the survey. Participants agreed that their answers would be kept confidential. Male participants comprised 47.6% of the 375 responses, while female respondents made up 52.4%. Therefore, a more rigorous confirmatory factor analysis (CFA) method based on SEM was applied to validate the constructs under examination. In summary, the data in this study were examined using a two-stage model-building technique. The measurement model was first validated to ensure the constructs were reliable and valid. The structural model is then calculated via hypothesis testing. MLE is used to estimate the measurement as well as the structural model. The outcomes of the research model testing have reported in the next section.

3.1. Research Variables Measurement

A 5-point Likert scale was used to measure the primary variables, with 1 denoting "strongly disagree" and 5 denoting "strongly agree" (Arrighetti, A. et al., 2016). The descriptions of the scales are as follows: based on research, the sustainable entrepreneurial intention scale uses five items to measure (Arrighetti, A. et al., 2016). All hazards have been recognized. The entrepreneurial intention perception variables (financial, social, and personal risk) have been measured using various techniques in earlier research (Barbosa, S.D., e al., 2007). By asking SMEs owners to describe their impression of financial risk before beginning a new project, the financial risk has been measured with three statements (The monetary investment that one could lose by starting a new business is important," rated on a Likert-type scale from 1 "Absolutely disagree" to 5 "Absolutely agree").

Three statements that asked students to describe the effects establishing a business would have on their social and familial lives were used to gauge the social risk (e.g., "We could lose the respect of family members and relatives by launching a new venture," rated on a Likert-type scale from 1 "Absolutely disagree" to 5 "Absolutely agree"). By asking SMEs owners to rate their agreement or disagreement with three statements

on the detrimental effects of starting a new business on one's professional career and self-esteem, the third variable, personal risk, is assessed (e.g., "Starting a new business can have negative consequences on my professional career," rated on a Likert-type scale from 1 "Absolutely disagree" to 5 "Absolutely agree").

4. Results

As explained in the methodology section, the questionnaire was distributed across all the SMEs via an online link to gain a large employee population. A total of three hundred seventy-eight (3780 questionnaires were collected, and 375 completed questionnaires were obtained after removing the ones with incomplete responses, yielding a response rate of 75% because the total targeted respondents were 500 from SMEs. We looked at the measurement model for convergent and discriminant validity first. The structural model was then investigated to determine the strength and direction of the links between the theoretical constructs. Factor loadings (>0.70), reliability (acceptable if Cronbach is > 0.70), composite reliability (>0.70), and variance extracted (>0.50) were all used to determine the instrument's convergent validity (Fornell and Larcker, A factor loading value of more than 0.70 was regarded to be very significant, according to (Anderson et al., 2006)'s recommendation. According to the results in table 1, all the constructs have excellent predictability. Each construct had high internal reliability, according to Cronbach's values.

Table 1: Test of construct validity and reliability

Construct	KMO	Bartlett'sTest	Items	Standardized Loading	C.R.	Cronbach'sAlpha	AVE
	0.932	0.000	SEI1	0.814	0.949	0.938	0.727
			SEI2	0.833			
			SEI3	0.864			
			SEI4	0.894			
			SEI5	0.873			
	0.854	0.000	ATR1	0.853	0.945	0.932	0.784
			ATR2	0.882			
			ATR3	0.894			
	0.820	0.000	FR1	0.904	0.905	0.886	0.771
			FR2	0.873			
			FR3	0.881			
	0.752	0.000	SR1	0.904	0.950	0.911	0.780
			SR2	0.782			
			SR3	0.913			
	0.820	0.000	PR1	0.902	0.889	0.899	0.716
			PR2	0.853			
			PR3	0.854			

Note: SEI = Sustainable entrepreneurial intention, ATR= Attitude towards risk, FR = Financial risk, SR = Social risk, PR = Personal risk.

All of the factor loading values in confirmatory factor analysis of the measurement model were greater than 0.70, as recommended by (Arrighetti, A. et al., 2016). Furthermore, construct reliabilities ranged from 0.88 to 0.950 in terms of composite reliabilities. The composite reliability is interpreted similarly to Cronbach's alpha, except that it also considers the actual factor loadings rather than assuming that each item is equally weighted and they were all higher than the recommended standard of 0.50 (Arrighetti, A. et al., 2016), implying that the hypothesized components accounted for more than half of the variance observed in the items. The degree to which a concept and its indicators differ from those of another concept and its indicators is measured using discriminant validity (Arrighetti, A. et al., 2016). According to (Arrighetti, A. et al., 2016), inter-construct correlations should be less than the square root of each construct's average variance extracted (AVE). The inter-construct correlations were lower than the square root of the average variance derived from the individual variables, implying discriminant validity (Table 2). In conclusion, the measurement model proved reliable, convergent, and discriminant valid.

Table 2: Correlation Matrix and Discriminant Validity

Variable	1	2	3	4	5
SEI	0.852				
ATR	0.243	0.886			
FR	0.261	0.313	0.878		
S.R.	0.352	0.333	0.173	0.883	
P.R.	0.283	0.251	0.190	0.231	0.846

Note: SEI = Sustainable entrepreneurial intention, ATR= Attitude towards risk, FR = Financial risk, SR = Social risk, PR = Personal risk. Diagonal elements (in bold) are square roots of average variance extracted.

4.1. Results of Confirmatory Factor Analysis

We used AMOS version 23 to conduct the confirmatory factor analysis (CFA), as illustrated in figure 1. It could see that the chi-square degree of freedom ratio of the first-order CFA model is 1.941, which is below the threshold value of 3, GFI; NFI, AGFI, and CFI are all above the optional threshold value of 0.9. Furthermore, the value of RMSEA is less than the threshold value of 0.08. The C.R. value is above the threshold value of 0.7; the result computed for the average variance extracted (AVE) in table 2 is above the threshold value of 0.5. Consequently, it can be established that the measurement model satisfies the condition of high validity. Hence Figure 2 is a summary of the results of the fit indices of the measurement model. Based on the recommended values, the values of TLI, CFI, RMSEA, and χ^2 were adequate. Consequently, this model showed acceptance measures for the fit indices.

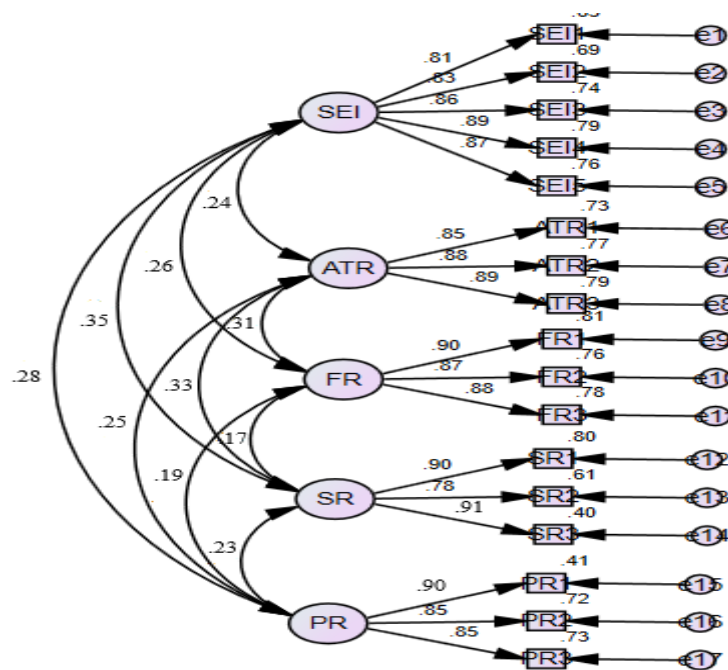


Figure 2: Latent construct for the measurement model

4.2. Structural Model Estimation

In SEM, the inner model refers to the path structure between constructs. The results of the hypothesis testing and path analysis according to the inner model have presented in figure 2 for the standardized path coefficients.

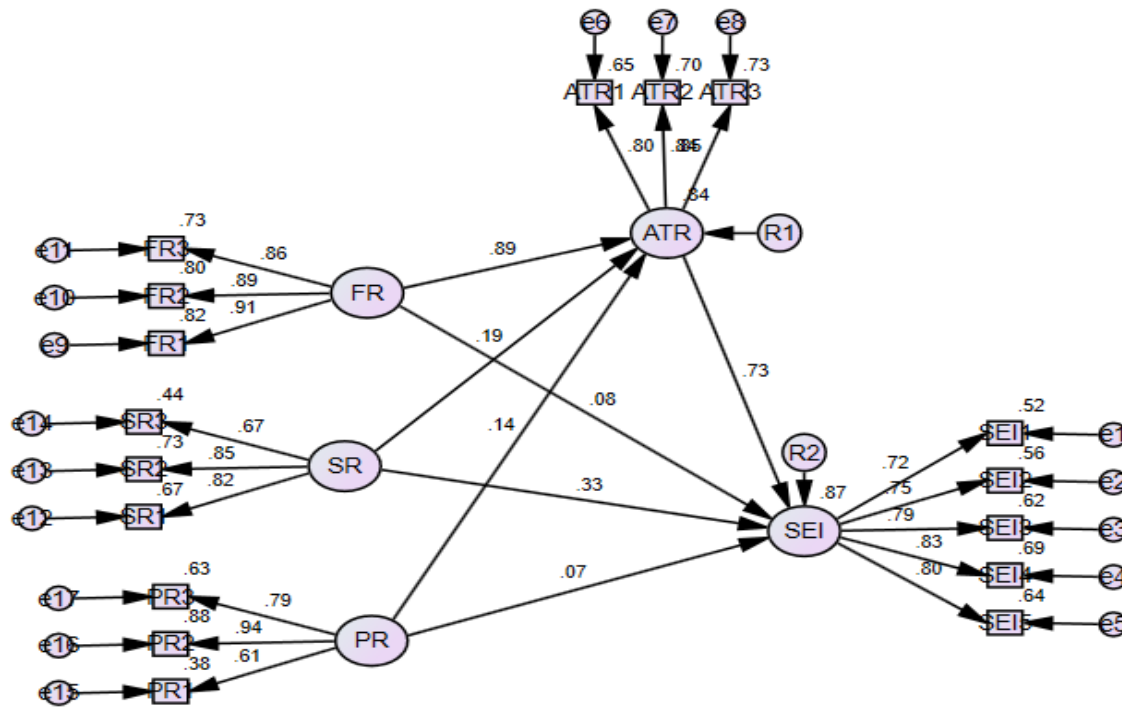


Figure 3: Standardized path coefficients and significance of the model

5. Discussion of the Results

The paper gears towards assessing the association between SMEs' entrepreneurial risk-taking perception and their sustainable entrepreneurial intention and the mediation effect of attitude towards risk and sustainable entrepreneurial intention. The sequence of hypothesized relationships is illustrated in the proposed research model. Therefore, we used SPSS and AMOS to test the relationships (figure 2) and (table 3) by representing SMEs' entrepreneurial risk-taking perceptions (perceived financial risk, perceived social risk, and perceived personal risk) as independent variables and sustainable entrepreneurial intention as the dependent variable. The findings revealed that perceived financial risk positively relates to sustainable entrepreneurial intention ($\beta = 0.084$, $p < 0.01$). This supported hypothesis H₁. The results also revealed a positive and significant relationship between perceived social risk with sustainable entrepreneurial intention ($\beta = 0.332$, $p < 0.01$), supporting hypothesis H₂. Similarly, the result revealed that perceived personal risk positively relates to sustainable entrepreneurial intention ($\beta = 0.074$, $p < 0.01$). This supported hypothesis H₃. The findings revealed that perceived financial risk positively relates to SMEs' attitude toward risk-taking ($\beta = 0.894$, $p < 0.01$). This supported hypothesis H₄. The results also revealed a positive and significant relationship between perceived social risk with SMEs' attitude toward risk-taking ($\beta = 0.192$, $p < 0.01$), supporting hypothesis H₅. Correspondingly, the result revealed that perceived personal risk positively relates to SMEs' attitude toward risk-taking ($\beta = 0.144$, $p < 0.01$). This supported hypothesis H₆.

Furthermore, the results show significant positive mediation effect of SMEs attitude towards risk-taking on the relationship between SMEs entrepreneurial risk-taking perceptions and their sustainable entrepreneurial intentions ($z = 7.393$, $p < 0.01$; $z = 11.424$, $p < 0.01$; $z = 9.851$, $p < 0.01$) for perceived financial risk, perceived social risk and perceived personal risk respectively. Thus, hypotheses H_{7a}, H_{7b}, and H_{7c} have also been supported. Overall, the findings are consistent with all the theories. Risk perceptions generally have a beneficial effect on the purpose of entrepreneurs. According to the proposed hypothesis, social risk affects SMEs significantly and more strongly than those who view entrepreneurial risk-taking as a threat, only when the latter is quantified as the perceived likelihood of establishing a firm. Similarly, personal risk has a big impact on both indicators of intention. However, this effect is restricted to the tendency to start a business for

SMEs that see taking risks as an opportunity and the perceived likelihood of starting a business for SMEs that see risk-taking as a danger.

This study aimed to pinpoint the factors influencing SMEs' desire to launch a sustainable entrepreneurial venture. This impact study used the inclination and likelihood of starting a new firm as a combined measure of sustainable entrepreneurial intention. According to research, participants' perceptions of personal and financial risk favorably affect the indicators of sustainable entrepreneurial ambition. Additionally, the association between SMEs' views of risk-taking and their intention to engage in sustainable entrepreneurship was mediated by their attitudes toward taking risks.

6. Conclusion

The study's main goal was to find the factors influencing SMEs' intentions to launch a viable entrepreneurial enterprise. The inclination and likelihood of establishing a new firm have been coupled to study this impact's impact on sustainable entrepreneurial intention. The study results indicated a favorable correlation between participant perceptions of personal and financial risk and the indicators of sustainable entrepreneurial intention. The association between SMEs' views of risk-taking and their intention to pursue sustainable entrepreneurial activities was also mediated by their attitudes toward taking risks.

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