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The effects of business environment, opportunity identification and perceived behavioral control: An empirical study of Algerian student' entrepreneurial intention

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***Abstract*---**The aim of this research is to contribute to the ongoing debate in the literature regarding the influence of two categories of factors: contextual (perceived entrepreneurial environment - P2E) and individual (opportunity identification - OI and perceived behavioral control - PBC) on the intention to start a business in a specific context of a developing country, Algeria. Data was collected from 302 final-year students in six higher education institutions. The results show that IE is determined by personality, OI and PBC, not by environment, P2E. The latter even has a negative effect on students' EI. However, these perceptions (P2E) moderate the impact of opportunity identification on the intention to create a business, such that to strengthen this relationship.

Keywords---Algeria, business environment, perceived behavioral control, entrepreneurial intention, opportunity identification.

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1. Introduction

Entrepreneurship holds a central place in both developed and developing countries (Elnadi & Hani Gheith, 2021). Policymakers and researchers recognise its important role in both economic and social terms (Tounés & Mahmoudi, 2022). Socially, it plays a crucial role in job creation, helping to reduce unemployment. Economically, it represents a significant opportunity for growth in these countries (Iakovleva, Kolvereid, & Stephan, 2011; Karimi et al., 2015), thereby promoting their economic development (Hisrich et al., 2012). Developing countries' economies are increasingly oriented toward entrepreneurship (Bruton et al., 2008). However, little is known about entrepreneurship in these countries, particularly in North Africa (GEM, 2009). Most entrepreneurship research has been carried out in developed countries (Nabi & Liñán, 2011), where the entrepreneurial contexts are completely different from those in developing countries (Iakovleva et al., 2011). Consequently, generalising their findings would be inappropriate, or even obsolete (Bruton et al., 2008; Karimi et al., 2017).

In Algeria, entrepreneurship is of capital importance as a strategic lever in the fight against unemployment and the informal economy. However, the rate of business creation remains low, despite the efforts made by the State to improve the business environment. Around 45,000 businesses are created each year, mainly in traditional sectors with little innovation (Ministry of Industry, 2021). Although a range of programs[1] and incentive measures (financing, taxation, and support) has led to an increase in the number of businesses, a genuine entrepreneurial dynamic has struggled to emerge (Abedou et al., 2011; Aknine & Ferfera, 2014; Leghima & Djema, 2014). Aimed at reducing unemployment among young people and students in particular (27.8% according to *Office Nationale des Statistiques*, 2019), the main mechanism —the ANSEJ (National Agency for Youth Employment Support)—has, since its creation in September 1996 and until its restructuring in 2020[2], financed projects with a total value of 1,200 billion Algerian Dinars, or about 9.35 billion US dollars (Ministry of Industry, 2020). Yaici (2014, p.66) goes so far as to describe this situation as 'worrying', given the discrepancy between the substantial resources allocated and the modest results achieved'. The reasons for this weakness are little explored in the literature (Tounés & Mahmoudi, 2022; Nafa et al. 2018). This raises the question of the effectiveness of the entrepreneurial environment established by the state. To shed light on this issue, we propose to study the entrepreneurial intentions of young Algerian students. Are these intentions linked to the business environment, or rather to the personal ability of individuals to identify opportunities and control entrepreneurial behavior? One of the most widely used concepts for measuring entrepreneurship within a population or a country is that of entrepreneurial intention (Kautonen, van Gelderen, & Tornikoski, 2013; Kolvereid & Isaksen, 2006; Krueger, Reilly, & Carsrud, 2000). According to Krueger (2007), entrepreneurship is inherently intentional. Intention is a major phase in the early

[1] From the 1990s, four structural mechanisms were established to address the issues of business creation and employment. These are the ANDI (National Investment Development Agency), the ANGEM (National Agency for Microcredit Management), the ANSEJ (National Agency for Youth Employment Support), and the CNAC (National Unemployment Insurance Fund).

[2] As of November 22, 2020, the National Agency for Youth Employment Support was restructured and is now called the National Entrepreneurship Support and Development Agency (NESDA).

stages of the entrepreneurial process and is the best predictor of it (Bird, 1988; Katz, 1990; Kolvereid, 1996; Krueger & Carsrud, 1993; Tkachev & Kolvereid, 1999).

Recent studies highlight the importance of simultaneously analysing the influence of personal and contextual factors on entrepreneurial intention (Tounés & Mahmoudi, 2022; Schwarz et al., 2009; Taormina & Lao, 2007, Luthje & Franke, 2003). Despite a large body of research on the entrepreneurial process, little is known about how these factors influence entrepreneurial behaviour (Nabi & Liñán, 2013). To study the entrepreneurial intention of Algerian students, we adopt a combined approach, where contextual factors are represented by the business environment, while individual factors are defined by the ability to seek and identify opportunities as well as perceived behavioral control.

Furthermore, to better understand the process of forming entrepreneurial intention (EI), we will analyse the interaction between environmental factors and individual antecedents. More specifically, we will assess the possible moderating role of the business environment on the 'opportunity identification (OI)-EI' and 'perceived behavioural control (PBC)-EI' relationships, respectively.

This research aims to highlight the personal and contextual factors that influence entrepreneurial intention among Algerian students. First, it examines the impact of the business environment, opportunity identification, and perceived control on entrepreneurial intention. Second, it explores the extent to which the entrepreneurial environment (P2E) can strengthen the relationships between "opportunity identification (OI) and entrepreneurial intention (EI)" and between "perceived behavioral control (PBC) and EI." To this end, the study will be based on data collected from 302 final-year students enrolled in bachelor's and master's degrees in economics and management.

Our article is structured as follows. After presenting the theoretical framework and research hypotheses (1), we outline the adopted methodology (2). The results are then analysed (3) and discussed (4). In conclusion (5), we highlight the theoretical and managerial implications of this study, while discussing its limitations and making recommendations for future research.

2. Literature review and research hypotheses

Research in social psychology has established that intention is the best predictor of planned behaviour (Ajzen, 1991; Ajzen, 2002), particularly when it is rare, difficult to observe or subject to unpredictable time delays (Krueger et al., 2000). Bird (1988; 1992) and Bird and Jelinek (1988) define intention as a state of mind directing a person's attention towards a specific objective or goal. It reflects an individual's willingness to adopt a given behaviour (Boyd and Vozikis, 1994; Bruyat, 1993). According to Ajzen (1991), intention is supposed to integrate the motivational factors influencing planned behavior, which makes it a particularly relevant concept in the field of entrepreneurship (Bird, 1988; Krueger and Carsrud, 1993; Kolvereid, 1996). Starting a business is a thoughtful act that cannot be improvised. Entrepreneurial intention is a key stage in the long process leading to the identification and exploitation of opportunities and, consequently,

to business creation (Hernandez, 2008). It has been shown to be not only a central element in understanding this process (Bird, 1988), but also a predictive indicator of future entrepreneurial behavior (Kolvereid and Isaksen, 2006).

In the most studies, intention is generally analysed using Ajzen's (1991) theory of planned behaviour and Shapero and Sokol's (1982) theory of entrepreneurial event formation. These two approaches suggest integrating various personal and contextual factors (Franke and Luthje, 2004). According to Fishbein and Ajzen (2010), elements such as personality and environment can have a direct or indirect influence on behavioral intentions. Furthermore, individuals' actions and behaviors are based not on the reality of the world but on their perception of reality (Robbins & Judge, 2013). In other words, it is their perception of reality that determines whether or not the behavior will be carried out. Entrepreneurial activity follows this logic. Applied to career choice, many entrepreneurship studies have focused on why some people decide to start their own business, while others prefer to pursue a salaried career (Franke & Luthje, 2004). Karimi et al (2015) argue that perceptions of the environment should be measured, as they are more influential than the environmental factors themselves. Such an assessment of the entrepreneurial environment by potential entrepreneurs provides a better explanation of the intention to start a business than if we limit ourselves to personal factors, such as personal attitude or perceived control (Gnyawali & Fogel, 1994; Lüthje & Franke, 2003; Nabi & Liñán, 2013). One of the major difficulties in measuring the influence of individual and contextual factors on intention lies in the difference in scale: attitudes and behavioural control, for example, are assessed at the micro (individual) level, while the entrepreneurial environment is analysed at the macro level (Taormina & Lao, 2007). Thus, analysing the simultaneous influence of perceptions of the business environment (P2E) (micro analysis), on the one hand, and opportunity identification (OI) and perceived control (PBC), on the other, would provide a better understanding of the formation of entrepreneurial intention among students in a developing country as Algeria.

Moreover, many researchers advocate analysing the impact of moderating contextual factors on the relationship between entrepreneurial intention (EI) and its individual antecedents (Liñán and Chen, 2009; Shirokova et al., 2016). From this perspective, we examine how the perceived entrepreneurial environment (P2E) moderates the influence of opportunity identification (OI) and perceived behavioral control (PBC) on entrepreneurial intention (EI), successively.

2.1. Perceived entrepreneurial environment and entrepreneurial intention

A great deal of research has examined the influence of the environment on the choice to become an entrepreneur. It has focused mainly on economic policies to support entrepreneurship, barriers to entrepreneurship and the importance of the individual's network (Begley, Tan and Schoch, 2005, Korunka, Frank, Lueger and Mugler, 2003, Lüthje and Franke, 2003). According to Wilkinson (2006), the entrepreneurial environment is characterised by facilitations, programmes and public policies that support entrepreneurs. These systems take the form of administrative and regulatory simplifications, training, advisory and support services, financial incentives and tax reductions (Roxas et al., 2007).

In our study, the business environment refers to the set of support systems for business creation,, including support for setting up a project (market research, business plan), financial support and tax exemption or relief for young entrepreneurs. According to Lüthje & Franke (2003), entrepreneurship support policies have a significant impact on students' entrepreneurial intentions. The more favourable their perceptions of these policies, the stronger their entrepreneurial intention. Conversely, the more students perceived the environment as hostile to entrepreneurship (e.g., restrictive access to bank credit, etc.), the less likely they are to pursue an entrepreneurial career, regardless of behavioral factors. Gabarret and Vedel (2012) discuss how changes in the work environment and government incentives alter perceptions of the traditional career, encouraging many individuals to consider entrepreneurship as a viable alternative. By analysing politico-economic dimensions such as the availability of finance and access to support and coaching services, Begley et al (2005) show that perceptions of the entrepreneurial environment significantly affect the desirability and feasibility of the entrepreneurial act. The environment perceived by nascent entrepreneurs influences the entrepreneurial intention of individuals (Taormina & Lao, 2007, Schwarz et al., 2009, Nabi & Liñán, 2013). These perceptions explain entrepreneurs' intention to start a business as personal factors such as their personal attitude and perceived behavioural control (Lüthje & Franke, 2003; Nabi & Liñán, 2013). In light of this literature, we propose the first hypothesis:

H1: The perceived entrepreneurial environment positively influences students' entrepreneurial intention.

2.2. Identifying Opportunities and Entrepreneurial Intention

I. Kirzner (1973) laid the foundations for what would later become a veritable paradigm in entrepreneurship, namely ‘entrepreneurial alertness’ and ‘opportunity discovery’. The entrepreneur is perceived as an individual who is alert (Gaglio & Katz, 2001), on the lookout for business opportunities that arise in their environment (Chandler, Dahlqvist, & Davidsson, 2002). Subsequently, the concept of opportunity identification was established as a genuine field of research by Shane and Venkataraman (2000). The entrepreneurial opportunity is considered to be the most distinctive fundamental characteristic of entrepreneurship (Beynon et al., 2018). The discovery and exploitation of opportunities is a fundamental element of the entrepreneurial process (Ardichvili, Cardozo and Ray, 2003). According to Krueger, Reilly and Carsrud (2000), discovering and identifying opportunities has a positive impact on the intention to start a business. In the context of developing countries, Karimi, Biemans, Lans, Chizari, & Mulder (2016) note the positive influence of opportunity identification on students' entrepreneurial intention. In light of this literature, we formulate our second research hypothesis:

H2: The search and identification of opportunities positively influence entrepreneurial intention

2.3. Perceived Behavioral Control and Entrepreneurial Intention

The concept of Perceived Behavioural Control (PBC) was introduced by Ajzen (1991) following the limitations of the original[3] model to develop the theory of planned behavior (TBP). PBC involves taking into account the degree of knowledge and control an individual has over their own abilities, as well as the resources and opportunities required to adopt the desired behaviour. In simpler terms, PBC refers to the degree of ease or difficulty that people perceive in performing a given behavior (e.g. becoming an entrepreneur). Therefore, the more a person is able to master and mobilise external factors, the more control they will have over the behavior they want to achieve. In the field of entrepreneurship, PBC represents an individual's belief in his or her ability to create and manage a business successfully, despite the difficulties and uncertainties of the entrepreneurial process.

Krueger et al (2000) show that perceived behavioral control has a significant influence on entrepreneurial intention, by reinforcing individuals' belief that they can overcome the challenges associated with entrepreneurship. Kolvereid (1996) notes that a high level of perceived behavioural control is associated with a greater likelihood of taking entrepreneurial action, as it reduces the fears and uncertainties associated with starting a business. The author argues that PBC may not be realistic when information about the behavior is limited and when available resources change. Kautonen, Van Gelderen and Tornikoski (2013) highlight that PBC positively and significantly influences entrepreneurial intention. According to these authors, we propose that:
H3: Perceived behavioral control (PBC) positively influences the entrepreneurial intention of Algerian students.

2.4. The Moderating Role of the Perceived Environment on Entrepreneurial Intention

Heuer and Liñán (2013) observe that the majority of research on entrepreneurial intention focuses mainly on the direct effects of the antecedents studied. However, the results that emerge show variations in significance depending on the study and the context, with sometimes ambiguous conclusions (Kautonen et al., 2013). The way in which contextual elements strengthen or weaken the relationship between the various individual predictors and entrepreneurial intention remains theoretically unclear (Hsu et al., 2019). To address this gap, some authors (e.g. Liñán and Chen, 2009; Shirokova et al., 2016; Fayolle et al., 2014) recommend to study entrepreneurial intention by incorporating the moderating effects of environmental factors on its individual antecedents.

According to Bird (1992), new organisations are the direct result of individual intention, moderated or influenced by environmental conditions. An extensive body of research argues that the entrepreneurial environment determines the ability to identify and exploit entrepreneurial opportunities within a country (e.g. Lüthje & Franke, 2003; Schwarz, Wdowiak, Almer-Jarz, & Breitenecker, 2009;

[3] The theory of planned behavior is an extension of the theory of reasoned action by Fishbein & Ajzen (1975) and Ajzen & Fishbein (1980), made necessary by Ajzen himself, following the limitations of the original model in addressing behaviors over which individuals have incomplete volitional control, i.e., which are not entirely under voluntary control.

Taormina & Lao, 2007). According to Goetz & Freshwater (2001), the business environment moderates the effect of perceived behavioral control (PBC) on entrepreneurial intention. On the basis of this work, we propose the following fourth and fifth hypotheses:

H4: The perceived entrepreneurial environment moderates the effect of identifying opportunities on entrepreneurial intention such that the relationship is stronger.

H5: The perceived entrepreneurial environment moderates the effect of PBC on entrepreneurial intention such that the relationship is stronger.

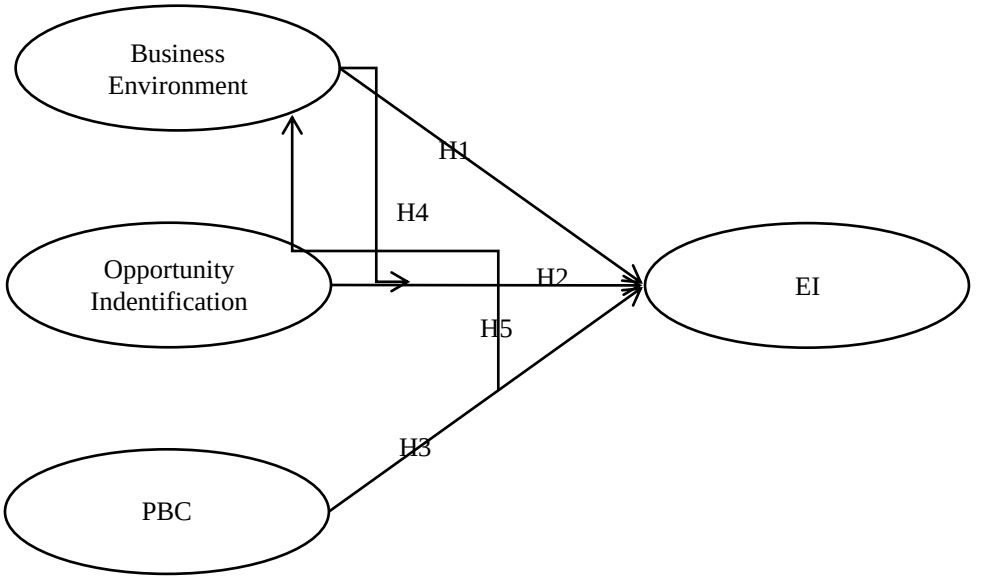

Fig. 1- Hypothetical research model

3. Methodology

The first phase of the empirical methodology consists in developing a research questionnaire adapted to the context of our study. Based on the literature review, a first draft of the questionnaire was developed. The second phase of the empirical protocol consists in purging some items and modifying others. The questionnaire was submitted to an expert consultation (6 teaching and research in entrepreneurship, 9 experts, 3 trainers and business start-up coaches), then tested with a small sample of 10 students. The objective is to verify the validity of the content of the research questionnaire. The third stage consists of a quantitative survey conducted among 312 Algerian students at the end of their cycle (3rd year «Bachelor», Master I and II) in economics and management.

3.1. Data collection

Using our personal and professional network, we contacted 16 higher education institutions. nitially, requests were made via email through Google Forms. After receiving few responses, we approached the institutions with a formal survey authorization request. We even conducted interviews with some hesitant officials, during which we presented the purpose and importance of our research. In the

end, half of these institutions agreed to comply with our request. These include the Algerian School of Business (ESAA Algiers), the Higher School of Commerce (ESC Algiers), the University of Bejaia, the University of Constantine, the University of Guelma, the University of Tlemcen, the Higher School of Commercial Studies (HEC Algiers), and MDI Algiers Business School. After filtering out the unusable questionnaires, the final sample consists of 302 respondents across 6 institutions, as follows:

Tab. 1– Distribution of respondents by university establishment

Institutions	**Number of usable questionnaires**
ESAA Alger	18
ESC Alger	94
FSEGC Bejaia	107
FSEGC Constantine	13
HEC Alger	55
MDI Alger	15
Total	**302**

3.2. Measurement of variables

Dependent variable: Entrepreneurial Intention (EI).

To measure entrepreneurial intention, we adapted Kolvereid's (1996) measurement. Thus, entrepreneurial intention evaluates the probability that students choose between a salaried career and an entrepreneurial career. On a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree), students respond to the following question: "If you had to choose between being an employee and starting a business, you would prefer to."

Independent variables:
Perceived Entrepreneurial Environment (P2E)

The operationalisation of the P2E is based on 5 items evaluated on a 7-position Likert scale (1 = totally disagree, 7 = totally agree). Students present their perception of the entrepreneurial environment in the following terms:(1) Entrepreneurial supports are available; (2) Tax policy is supportive to business creation; (3) Public policies for entrepreneurship are stable; (4) Entrepreneurial policies encourage business creation, and (5) bureaucratic procedures do not constitute an obstacle to business creation. The main component analysis with varimax rotation indicates a single factor explaining 50% of the variance. The level of reliability of this variable is considered acceptable with a score of 0.69.

Opportunity Identification

This variable is measured by means of a single item indicating the permanent search for entrepreneurial opportunities. Students are asked, on a 7-point Likert scale (1 = totally disagree, 7 = totally agree), to answer the question: “Are you constantly looking for opportunities to start a business?”

Perceived Behavioural Control (PBC)

To operationalise perceived behavioral control (PBC), we relied on different research sources (Krueger, 1993; Kautonen, Van Gelderen & Tornikoski, 2013). Expressed on a Likert scale in 7 points (1 = totally disagree, 7 = totally agree), this variable is evaluated through four items: (1) You think you are able to carry out a business creation project; (2) You think it is possible to set up a business start-up project and ensure its completion; (3) You believe that you personally control the process of starting a business; (4) You are confident in your ability to start a business. The main component analysis indicates that a single factor is involved in 67.6% of the variance. The reliability score is very satisfactory (0.84).

Control variables

To control the effects that may explain entrepreneurial intentions, we took into account variables related to the socio-demographic characteristics of students and their immediate environment. Regarding socio-demographic attributes, entrepreneurial intent is controlled by the effects of gender (0= male, 1= female), age, entrepreneurship training (0= no, 1= yes) and entrepreneurial experience (0=no, 1= yes). For the students' close entourage, entrepreneurial intent is monitored by taking into account potential influences of mentors (0= No, 1= Yes) and parents (0= No, 1= Yes).

Tab. 2- Socio-demographic characteristics

		Frequencies	**Pourcentage**
Gender	Male	113	37.4
	Female	189	62.6
Age	Average	23 years	
	Under 25 years old	239	79.1
	25 to 35 years old	63	20.9
Education level	Bachelor's	55	18.2
	Master's	247	81.8
Entrepreneurship Education	Yes	139	46
	No	163	54
Current or subesequent entrepreneurial experience	Yes	227	75,2
	No	75	24,8
Mentors	Yes	166	55
	No	136	45
Entrepreneur within the parental family	Yes	170	56,3
	No	132	43,7

4. Results

Before testing the hypotheses, we examine the Pearson correlations between all variables. The maximum value of the correlation coefficients is 0.345 (table 4). This score is below the recommended threshold of 0.70, thus not revealing the

existence of a correlation that could invalidate the results of hypothesis tests (Gavard-Perret et al., 2008; Jolibert and Jourdan, 2006). We also performed a complementary analysis to detect multicolinarities between independent variables. The values of VIFs (maximum = 1.211) are below 10, as recommended by Lomax (1992) and Neter et al. (1996).

To test hypotheses H1, H2, and H3, as well as the effect of control variables, we conduct two linear regressions (Table 3). Model M1 includes all control variables. The examination of the effect of students' characteristics and their immediate environment on entrepreneurial intention appears to be limited. Only gender significantly and negatively influences students' entrepreneurial intention (Beta = -.115; sig = 0.05). This suggests that male students are more inclined towards an entrepreneurial career than female students, which is generally accepted.

Model M2 incorporates the main independent variables. The change in the F-statistic values between the two models is significant (F change = 15.308; p = 0.001), indicating that the main variables contribute significantly to the explained variance of the dependent variable. Indeed, the adjusted R^2 value increases significantly from 0.17 to 0.163 when the main variables are included in Model M2. The Fisher-Snedecor coefficient value shows that this R^2 value is statistically significant (Model 2: F = 6.54; sig = 0.001; with 9, 302 degrees of freedom). Therefore, we conclude that the overall goodness-of-fit of the model obtained through multiple regression is significant.

The first hypothesis predicts that the entrepreneurial environment positively influences the intention to start a business among Algerian students. As can be seen, the variable related to the business environment (P2E) contributes significantly but negatively to explaining entrepreneurial intention. Specifically, perceptions of support mechanisms for business creation, tax policies in favour of entrepreneurship, the stability of public policies supporting entrepreneurship, encouragement through incentivising policies and, finally, bureaucratic obstacles negatively influence the entrepreneurial intention of students (Beta = -.132; sig = 0.05). Therefore, our first hypothesis (H1) is not validated.

The second hypothesis examines the role of opportunity recognition and identification (OI) in shaping the entrepreneurial intention of Algerian students. This hypothesis is confirmed by the multiple regression tests. According to the results in Table 3, the (OI) variable significantly and positively influences the entrepreneurial intention of Algerian students (Beta = 306***; sig = 0.001). Thus, hypothesis H2 is validated.

Our third hypothesis postulates the positive impact of perceived behavioral control (PBC) on the entrepreneurial intention of students in Algeria. Our results indicate that perceived behavioral control (PBC) significantly explains the formation of entrepreneurial intention among students in Algeria (Beta = 0.140, sig = 0.05). Thus, our third hypothesis H3 is validated.

Tab. 3– Multiple linear regression

	M1	M2
Control variables		
GENDER	**-.115***	-.052
AGE	-.052	-.081
ENTREP EDUC	.044	.027
MENTORS	.106	.080
PARENT ENTREP	-.007	-.025
PRIOR ENTREP EXPER	-.072	-.015
Main variables		
ENTREP ENVIR (P2E)		**-.132***
OPPORTUNITY (OI)		**.306*****
PBC		**.140***
R^2	.036	.163
Adj. R^2	.017	.138
F	1.891	**6.540*****
F-change	1.891	**15.308*****

Standardized coefficients. *p <.05 ; **p < .01 ; *** p<.001

Table 4 - Correlation[a] and descriptive statistics

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
EI (1)	5,4391	1,95680	1									
Age (2)	23,0609	2,06941	,001	1								
Gender (3)	,6218	,48572	-,116**	-,217***	1							
E. Educ (4)	,4712	,49997	,071*	,174***	-,085	1						
Mentor (5)	,54	,499	,116**	-,007	,044	,128**	1					
Ent. Fam (6)	,5641	,49667	,022	,045	-,019	,027	,183***	1				
Ent. Exp (7)	,2564	,43735	,101**	,285***	-,178***	,166**	,153**	,117**	1			
PBC (8)	5,1378	1,15004	,216***	,162**	-,214***	,134**	,097**	,082*	,273***	1		
Bus Env (9)	4,0897	1,18503	-,094**	,003	,045	,006	,120**	,071*	,118**	,164**	1	
Op. Id (10)	4,8109	2,04282	0,345***	,163**	-,163**	,091**	,142**	,112**	,306***	,308***	,040	1

Notes: [a] Corrélation de Pearson, p* <0,1, **p < 0,05, ***p < 0,001.

To test the moderating role of perceptions of the entrepreneurial environment (P2E) on the influence of opportunity identification (OI) (H4) and perceived behavioral control (PBC) (H5), in predicting entrepreneurial intention among students, we conducted a moderation test using Heyes' method (2018) with the PROCESS v.3.3 software, which is an extension of SPSS. The results of the tests for hypotheses H4 and H5 are presented in Tables 4 and 5, respectively.

Tab. 4–Moderation test of Heyes – Opportunity Identification

```
**************************************************************************
OUTCOME VARIABLE:
Entrepreneurial Intention
Model Summary
          R        R-sq       MSE         F         df1         df2           p
       ,3759      ,1413     3,3201    16,8925     3,0000    308,0000     ,0000
Model
                  coeff         se          t           p       LLCI      ULCI
constant         5,4312      ,1032     52,6096      ,0000     5,2281     5,6343
OI                ,3408      ,0507      6,7198      ,0000      ,2410      ,4406
Env-Affair      -,1996      ,0880     -2,2690      ,0240     -,3727     -,0265
Int_1             ,0821      ,0419      1,9592      ,0510     -,0004      ,1646

Product terms key:
 Int_1   :       OI x       Env-Affair

Test(s) of highest order unconditional interaction(s):
            R2-chng         F        df1        df2           p
X*W        ,0107        3,8386     1,0000   308,0000      ,0510
----------
    Focal predict: OI (X)
          Mod var: Env-Affair (W)

Conditional effects of the focal predictor at values of the moderator(s):

   Env-Affair    Effect        se         t           p       LLCI       ULCI
    -1,1850      ,2435      ,0687     3,5424      ,0005     ,1082      ,3787
     ,0000       ,3408      ,0507     6,7198      ,0000     ,2410      ,4406
    1,1850       ,4381      ,0732     5,9869      ,0000     ,2941      ,5822

**************************************************************************
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The regression results show that the overall model with interaction is significant: F (3, 308) = 16.89; p < 0.000; R = 0.37; R2 = 0.14.
The search and identification of opportunities seems to positively influence the intention to create a business among students (Beta = 0.34; p <0.000). On the other hand, the business environment significantly inhibits students' orientation towards entrepreneurship (beta = -0.20; p < 0.000).

The results of the interaction between these two variables (Int_1) show that perceptions of the entrepreneurial environment moderate the influence of opportunity identification on entrepreneurial intention (Beta = 0.08; p ≤ 0.05). This interaction contributed an additional R^2 = 0.01 to the main model. Figure 2 illustrates the interaction between our two predictors. At a low level of perceptions of the entrepreneurial environment, opportunity Identification significantly influences entrepreneurial intention (Beta = 0.24; p = 0.0005). This relationship strengthens at a moderate level of perception (Beta = 0.34; p < 0.000), and even more at a high level (Beta = 0.43; p = 0.000). In other words, the higher the

perceptions of the business environment, the stronger the influence of opportunity identification on entrepreneurial intention. Our hypothesis H4 is confirmed.

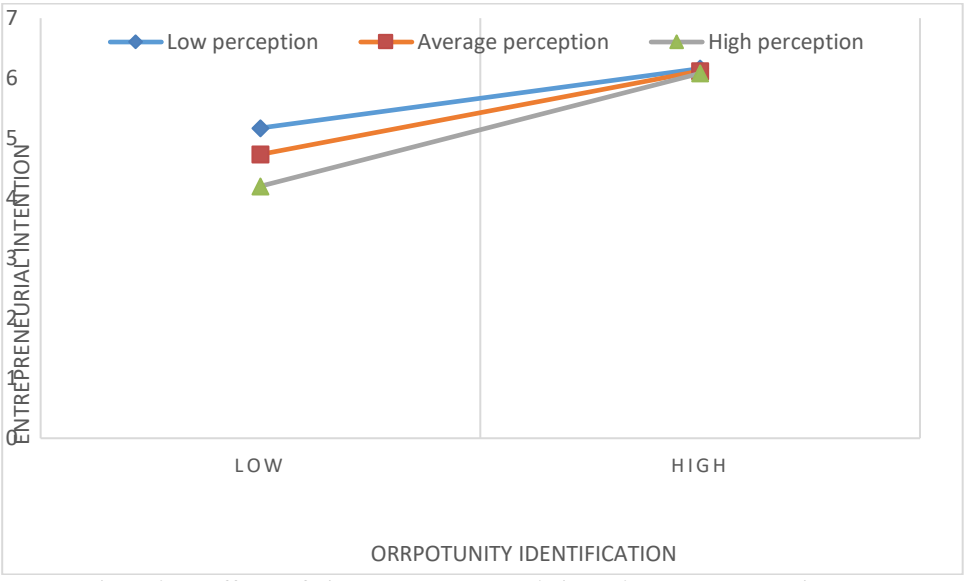

Fig. 2 –Moderating effect of the entrepreneurial environment on the "Opportunity Identification - Entrepreneurial Intention" relationship

Tab. 5–Moderation test of Heyes – PBC

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**************************************************************************
OUTCOME VARIABLE:
 Entrepreneurial Intention
Model Summary
        R       R-sq        MSE     F(HC0)       df1       df2          p
    ,2534      ,0642     3,6181     6,8598    3,0000   308,0000    ,0002

Model
                 coeff     se(HC0)         t         p        LLCI       ULCI
constant       5,4470      ,1085     50,1991    ,0000     5,2335     5,6605
PBC             ,4070      ,0980      4,1535    ,0000      ,2142      ,5998
Env-Affair     -,2143      ,0937     -2,2870    ,0229     -,3986     -,0299
Int_1          -,0354      ,0745      -,4754    ,6348     -,1820      ,1112

Product terms key:
 Int_1    :        PBC x  Env-Affair

Test(s) of highest order unconditional interaction(s):
       R2-chng     F(HC0)        df1        df2          p
X*W      ,0007      ,2260     1,0000   308,0000      ,6348
----------
  Focal predict: PBC (X)
        Mod var: Env-Affair (W)
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The results show that the overall model is significant: F (3, 308) = 6.85; p < 0.001; R = 0.25; R2 = 0.06.

As with the first regression (Tab.3), PBC positively influences entrepreneurial intent (beta = 0.40; p < 0.000), while business environment negatively impacts student enterprise intent (beta = - 0.21; p < 0.05). However, the result of the interaction (Int_1) is not significant. This excludes the existence of a moderating effect of the entrepreneurial environment on the relationship "PBC-EI". Our hypothesis H5 is therefore rejected.

5. Discussion

This study explored the debate in the literature regarding the influence of two categories of factors: contextual (perceived entrepreneurial environment - P2E) and individual (opportunity identification - OI and perceived behavioral control - PBC) factors on the intention to start a business in the specific context of a developing country, Algeria. The results show that entrepreneurial intention (EI) is influenced by individual factors, OI and PBC, rather than by contextual factors, P2E. In fact, the business environment (P2E) is even significantly negative. However, while the variance explained in EI is at an acceptable level (13.8%), these results must be viewed in the context of their relatively low score compared to other studies using Ajzen's (1991) theory of planned behavior, which typically range from 30% to 40% (Liñán & Chen, 2009). Therefore, it is important to incorporate other contextual and individual variables to increase the variance and better explain the formation of entrepreneurial intentions among Algerian students (Tounés & Mahmoudi, 2022).

First, it seems that the battery of incentives and public policies, in terms of access to finance, tax facilitation, support and advice for young entrepreneurs, had no significant effect on the entrepreneurial intent of Algerian students. Curiously, and contrary to our H1 hypothesis, the perceived entrepreneurial environment (P2E) has a negative effect on the intention to create a business. When students perceive an unfavourable entrepreneurial environment, they become more reluctant to start a business than when the business environment seems favourable to them (Lüthje & Franke, 2003; Nabi & Liñán, 2013; Karimi et al., 2015). Our results align with those of other authors, such as Crane and Meyer (2006), who emphasize that entrepreneurs have a negative perception of the role played by the business environment in the development of entrepreneurship in Canada. This result does not seem particularly surprising when we consider that Algeria often ranks at the bottom of regional and international indices in terms of ease of doing business (Doing Business, 2019). Several explanations can be proposed to account for the negative effect of the business environment in Algeria. First, the failure of local structures responsible for supporting project promoters. These structures focus mainly on administrative procedures and the preparation of financial files from a list of eligible activities proposed to young entrepreneurs, thus neglecting the training and maturation aspects of projects essential for the identification and exploitation of real business opportunities. Moreover, bureaucratic burdens and clientelistic practices significantly hinder the process of

business creation in Algeria (Amir and Bellache, 2018). Finally, bad entrepreneurial experiences, especially in the context of ANSEJ, as well as a mortality rate of enterprises reaching 10% and unpaid debts amounting to 25 billion dinars[4], may be part of the reason for students' reluctance to use these devices to start their own businesses. The social logic underlying the various programs encouraged the development of necessity entrepreneurship, thereby hindering the emergence of innovative businesses with high added value (Souidi and Ferfera, 2014; Yaici, 2014).

Furthermore, we tested our hypotheses H2 and H3, which correspond to the individual factors studied, OI (Opportunity Identification) and PBC (Perceived Behavioral Control), respectively. The results indicate that students' entrepreneurial intention (EI) is determined by their personality. First, OI positively influences the intention to start a business among Algerian students. In other words, the identification of new products and services to launch in the market significantly contributes to predicting EI. Similarly, Karimi et al. (2016) found that opportunity identification positively influences entrepreneurial intention. Their results show that students with perceptions of high opportunity have a higher intention to start a business. According to Krueger and Brazeal (1994), the entrepreneurial act is the result of two successive events: the identification of a business opportunity and the intention to exploit this opportunity in the form of a new enterprise.

At the same time, students' confidence in their ability to master and mobilize external factors to create a business (PBC) is a significant predictor of EI. This result supports the work of Karimi et al. (2014), Kolvereid and Isaksen (2006) and Wilson et al. (2007), who point out that PBC is a critical predictor of EI. This contrasts with the results of Nafa et al. (2018), who note that entrepreneurial self-efficacy[5] does not influence the EI of Algerian students. This can be explained by the difference in indicators used to measure the two constructs, PBC and entrepreneurial self-efficacy. So, when an individual does not have complete control over the environment in which they operate, PBC is strongly associated with the intention to create a business (Ajzen, 1991).

Finally, by examining the moderating role of the entrepreneurial environment (P2E) on entrepreneurial intention (EI), our results indicate that perceptions of the business environment (P2E) moderate the influence of opportunity identification (OI) on entrepreneurial intention (EI). In other words, the perceived entrepreneurial environment (P2E) strengthens the influence of opportunity identification on entrepreneurial intention (EI). However, P2E negatively affects EI. This should inhibit the search for and identification of opportunities among students (Tounés & Mahmoudi, 2022), thus decreasing the effect of OI on EI. How can this result be explained? Several interpretations can be advanced. The strengthening of the OI–EI relationship by P2E is likely due to students perceiving

[4] "Since the implementation of the ANSEJ program in 1996, over 372,000 micro-enterprises have been created, with a mortality rate for these businesses estimated at 10%... To date, 21,000 projects have been compensated by the Guarantee Fund, amounting to 25 billion dinars repaid to the banks" (statement by the Director General of ANSEJ, Mrs. Samira Djaider, quoted in the daily "Le Courrier d'Algérie" on 08.03.2018).

[5] Kolvereid and Isaksen (2006) explain that the concept of Perceived Behavioral Control (PBC) is similar to that of entrepreneurial self-efficacy in predicting entrepreneurial intention (EI).

a highly encouraging entrepreneurial climate, particularly in terms of fiscal policy and the stability of public policies, thus motivating them to exploit the opportunities available in the market. The negative effect of P2E on EI is largely related, as mentioned earlier, to endemic bureaucracy, clientelist practices, and poor experiences in support programs. Indeed, the fear of becoming indebted unemployed individuals, when they were previously just unemployed– fear of failure (GEM, 2009), may explain students' reluctance to turn to structures such as ANSEJ. On the other hand, the very family-oriented culture of Algerian entrepreneur often encourages him to call on the family and/ or friendly sphere to finance his project or seek advice, rather than to request state agencies or banks. A deeper analysis of the entrepreneurial climate and its various components would help better illuminate the issues surrounding business creation in Algeria.

6. Conclusion

By jointly examining the effect of contextual and personal factors on entrepreneurial intention, our study contributes to the general literature on entrepreneurial intention. This approach allowed for the investigation of the influence of perceptions of the entrepreneurial environment, opportunity identification, and perceived behavioral control on the prediction of entrepreneurial intention in Algeria.

Our research contributes to the theoretical development of entrepreneurial intention at two levels. First, we showed that the opportunity identification and perceived behavioral control are relevant concepts to predict entrepreneurial intention in the Algerian context. Our results indicate that despite the financial resources and support mechanisms put in place by the state, perceptions of the entrepreneurial environment do not influence the entrepreneurial intention of Algerian students. In fact, they even have a negative effect. However, these perceptions moderate the impact of opportunity identification on the intention to start a business, thereby strengthening this relationship.

Our managerial contribution provides entrepreneurship program leaders with a better understanding of the effects of perceived behavioral control (PBC) and opportunity identification (OI) on entrepreneurial intention. Students must be able to recognise and exploit opportunities. According to Carrier (2009), the ability to identify, exploit and develop a business opportunity is a key competency and it is important to train future entrepreneurs in these functions. It also offers policymakers a better perspective to improve the business environment and enhance the effectiveness of support and assistance mechanisms for business creation. Since 2020, the government has undertaken a major restructuring of existing systems, placing greater emphasis on entrepreneurship training. For example, the National Agency for Youth Employment Support (ANSEJ) has been restructured and is now known as the National Entrepreneurship Support and Development Agency (NESDA). The goal of this restructuring is to move away from the social logic in which it was embedded for nearly 25 years and adopt a new strategy that is more entrepreneurial, wealth-creating, and job-generating. To achieve this, Entrepreneurship Development Centers (CDE) have been established within higher education institutions to support the agency and train micro, small,

and medium enterprise project holders to develop the competences intrinsic to the entrepreneur.

Our research does, however, present certain limitations. First, the study focuses on students' perceptions at a specific stage of the entrepreneurial process (i.e., the intention phase) and within a specific context, that of university students. As a cross-sectional study, it does not allow for definitive conclusions. Second, the constructs used to operationalise the perceived entrepreneurial environment are limited to institutional aspects, neglecting social and cultural dimensions. Finally, the temporal gap between intention and behavior poses a major challenge in entrepreneurship, particularly in understanding why some individuals who express an entrepreneurial intention proceed to create a business, while others do not.

Several lines for future research can be considered to extend this work. The first would be to conduct a longitudinal pre-post-test study (Sanchez, 2013), incorporating various dimensions of the entrepreneurial environment, whether institutional, social, or cultural. Distinguishing between financial, fiscal, social, and cultural components of business environment could provide a deeper understanding of this concept (Tounés and Mahmoudi, 2022). The second research line involves broadening the scope of analysis beyond the intention phase to also include entrepreneurial action in the study process. In this perspective, the Entrepreneurship Development Center (EDC), through its monitoring and support services, could supply data on project holders who have been trained and qualify for NESDA funding. This would help identify those who successfully launch their businesses versus those who do not.

References

Abedou, A. al. (2011). L'entrepreneuriat en Algérie. Global Entrepreneurship Monitor (GEM) 116 pages.

Ajzen, I. (1991). "The Theory of planned Behaviour", Organizational Behavior and Human Decision Processes 50, 179-211.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior 1. *Journal of applied social psychology*, *32*(4), 665-683.

Aknine, S. R. & Ferfera, M. Y. (2014). Entrepreneuriat et création d'entreprise en Algérie : Une lecture à partir des dispositifs de soutiens et d'aide à la création des entreprises. Revue des sciences Economiques et de Gestion 14 : 65-78.

Amir, O., et Bellache, Y. (2018). Institutions et organisations : quelle articulation dans une problématique de l'entrepreneuriat en Algérie ? *Marché et organisations*, (3), 173-195.

Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business venturing*, *18*(1), 105-123.

Begley, T. M., Tan, W. L., & Schoch, H. (2005). Politico–economic factors associated with interest in starting a business: A multi–country study. *Entrepreneurship Theory and Practice*, *29*(1), 35-55.

Beynon, M. J., Jones, P., & Pickernell, D. (2018). Entrepreneurial climate and self-perceptions about entrepreneurship: a country comparison using fsQCA with dual outcomes. *Journal of Business Research*, *89*, 418-428.

Bird, B. (1988). Implementing Entrepreneurial Ideas: The Case for Intention. Academy of Management Review 13(3) : 442-453.

Bird, B. (1992). The Operation of Intentions in Time: The Emergence of the New Venture. Entrepreneurship: Theory & Practice 17(1) : 11-20.

Bird, B., & Jelinek, M. (1989). The operation of entrepreneurial intentions. *Entrepreneurship theory and practice*, *13*(2), 21-30.

Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, *18*(4), 63-77.

Bruton, G. D., Ahlstrom, D., & Obloj, K. (2008). Entrepreneurship in emerging economies: Where are we today and where should the research go in the future. *Entrepreneurship theory and practice*, *32*(1), 1-14.

Bruyat, C. (1993). *Création d'entreprise: contributions épistémologiques et modélisation* (Doctoral dissertation, Université Pierre Mendès-France-Grenoble II).

Chandler, G. N., Dahlqvist, J., & Davidsson, P. (2002). Opportunity recognition processes: A taxonomy and outcome implications. In *The twenty-second annual Babson College Entrepreneurship Research Conference*. Babson College.

Elnadi, M., & Gheith, M. H. (2021). Entrepreneurial ecosystem, entrepreneurial self-efficacy, and entrepreneurial intention in higher education: Evidence from Saudi Arabia. *The International Journal of Management Education*, *19*(1), 100458.

Fayolle, A., Liñán, F., & Moriano, J. A. (2014). Beyond entrepreneurial intentions: values and motivations in entrepreneurship. *International entrepreneurship and management journal*, *10*, 679-689.

Fishbein, M., & Ajzen, I. (2010). Predicting and changing behavior: The reasoned action approach. New York, NY: Psychology Press.

Franke, N., & Lüthje, C. (2004). Entrepreneurial intentions of business students—A benchmarking study. International journal of innovation and technology management, 1(03), 269-288.

Gabarret, I., & Vedel, B. (2012). Quitter son emploi pour devenir entrepreneur. *@ grh*, (3), 79-97.

Gaglio, C. M., & Katz, J. A. (2001). The psychological basis of opportunity identification: Entrepreneurial alertness. *Small business economics*, *16*, 95-111.

Gavard-Perret, M. L., Gotteland, D., Haon, C., & Jolibert, A. (2008). Méthodologie de la recherche. *Editions Pearson Education France*, *42*.

GEM (2009) Rapport Régional GEM-MOAN (Moyen-Orient & Afrique du Nord) », Global Entrepreneurship Monitor (GEM) 178 pages.

Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship theory and practice*, *18*(4), 43-62.

Hernandez, E. M. (2008). L'entrepreneuriat comme processus d'émergence organisationnelle. Revue française de gestion 2008/5(185) : 89-105.

Heuer, A., & Liñán, F. (2013). Testing alternative measures of subjective norms in entrepreneurial intention models. *International Journal of Entrepreneurship and Small Business*, *19*(1), 35-50.

Hisrich, R. D., & Al-Dabbagh, A. (2012). Governpreneurship: Establishing a thriving entrepreneurial spirit in government. Edward Elgar Publishing.

Iakovleva, T., Kolvereid, L. and Stephan, U. (2011), "Entrepreneurial intentions in developing and developed countries", Education + Training, Vol. 53 No. 5, pp. 353-370.

Jolibert, A., & Jourdan, P. (2006). *Marketing Reseach: méthodes de recherche et d'études en marketing* (No. halshs-00132470).

Karimi S, al. (2015). Testing the relationship between personality characteristics, contextual factors and entrepreneurial intentions in a developing country. International Journal of Psychology 52(3): 227-240.

Karimi, S., Biemans, H. J. A., Naderi Mahdei, K., Lans, T., Chizari, M., & Mulder, M. (2017). Testing the relationship between personality characteristics, contextual factors and entrepreneurial intentions in a developing country. *International Journal of Psychology*, *52*(3), 227-240.

Karimi, S., Biemans, H. J., Lans, T., Chizari, M., & Mulder, M. (2016). The impact of entrepreneurship education: A study of Iranian students' entrepreneurial intentions and opportunity identification. *Journal of small business management*, *54*(1), 187-209.

Katz, J. A. (1990). Longitudinal analysis of self-employment follow-through. Entrepreneurship & Regional Development, 2(1), 15-26.

Kautonen, T., van Gelderen, M. & Fink, M., (2013). Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. *Entrepreneurship: Theory and Practice,* 39(3), 655-674

Kolvereid, L. et Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. Journal of Business Venturing, 21(6), 866 885.

Kolvereid., L. (1996). "Organizational Employment Versus Self-Employment: Reasons for Career Choice Intentions", Entrepreneurship Theory and Practice, 20(3), 23-31.

Korunka, C., Frank, H., Lueger, M., & Mugler, J. (2003). The entrepreneurial personality in the context of resources, environment, and the startup process—A configurational approach. *Entrepreneurship theory and practice*, *28*(1), 23-42.

Krueger Jr, N. F. (2007). What lies beneath? The experiential essence of entrepreneurial thinking. Entrepreneurship theory and practice, 31(1), 123-138.

Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. Entrepreneurship & regional development, 5(4), 315-330.

Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. Journal of Business Venturing, 15(5 6), 411 432.

Leghima, A. & Djema. (2014). PME et innovation en Algérie : limites et perspectives. Marché et organisations 20(1) : 73-98.

Liñán, F., & Chen, Y. W. (2009). Development and cross–cultural application of a specific instrument to measure entrepreneurial intentions. Entrepreneurship theory and practice, 33(3), 593-617.

Lüthje, C., & Franke, N. (2003). The 'making'of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. R&d Management, 33(2), 135-147.

Nabi, G. & Liñán, F. (2013). Considering business start-up in recession time: The role of risk perception and economic context in shaping the entrepreneurial

intent. International Journal of Entrepreneurial Behaviour and Research 19(6): 633-655.
Nafa, A., St-Jean, E., Tremblay, M., Baronet, J., Janssen, F. and Loué, C. (2018). Projets entrepreneuriaux des étudiants algériens et comparaison internationale. Les Cahiers du Cread, 34(4): 5–38.
Neter, J., Kutner, M. H., Nachtsheim, C. J., & Wasserman, W. (1996). Applied linear statistical models.
Robbins, S. P., & Judge, T. A. (2013). Personality and values. *Organizational behaviour*, 131-145.
Roxas, B., Lindsay, V., Ashill, N., & Victorio, A. (2007). An institutional view of local entrepreneurial climate. Journal of Asia Entrepreneurship and Sustainability, 3(1):1–28.
Sánchez, J. C. (2013). The impact of an entrepreneurship education program on entrepreneurial competencies and intention. Journal of small business management, 51(3), 447-465.
Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breitenecker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education+ Training*, *51*(4), 272-291.
Shane, S. (2000). The Promise of Entrepreneurship As a Field of Research. *Academy of Management Review*.
Shapero, A. (1982). The social dimensions of entrepreneurship. *University of Illinois Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.
Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2016). Exploring the intention–behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal*, *34*(4), 386-399.
Taormina, R. J., & Lao, S. K. M. (2007). Measuring Chinese entrepreneurial motivation: Personality and environmental influences. *International Journal of Entrepreneurial Behavior & Research*, *13*(4), 200-221.
Tkachev, A. & Kolvereid, L. (1999). Self-employment intentions among Russian students. Entrepreneurship & Regional Development 11(3): 269-280.
Tounés, A. & Mahmoudi, M. (2022). The Entrepreneurial Intention of Algerian Students: Between Disillusionment of the Entrepreneurial Climate and Self-Confidence. Journal of Enterprising Culture 30(01): 91-121.
Wilkinson, T. J. (2006). Entrepreneurial climate and US state foreign trade offices as predictors of export success. *Journal of Small Business Management*, *44*(1), 99-113.
Yaici, F. N. (2014). Les PME et l'emploi en Algérie : Une diversité de dispositifs d'appui pour quels résultats ? Les Cahiers du CREAD 110 : 53-73.