

University Entrepreneurship as a Mechanism to Support Startups

Wafaa MADANI

University of Oran 2 Mohamed Ben Ahmed – Oran, Algeria

wafaa05@live.fr

Houcine BEGUENDOUZ

University of Oran 2 Mohamed Ben Ahmed – Oran, Algeria

houcinestrategie@yahoo.fr

Lahouari BENLAHCENE

University of Oran 2 Mohamed Ben Ahmed – Oran, Algeria

benlahcene.lahouari@univ-oran2.dz

Received: 16/01/2026 ; Accepted: 09/06/2026 ; Published:30/08/2026

Abstract

This study aims to analyze the effect of university entrepreneurship in strengthening the orientation toward the creation of startups among students of the University of Oran 2, through an examination of a set of supporting mechanisms — namely university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 — within the context of a growing orientation toward embedding a culture of innovation, initiative, and venture creation. To achieve this objective, the study adopted a descriptive-analytical approach, using a questionnaire administered to a sample of third-year bachelor's (Licence 3) and second-year master's (Master 2) students at the University of Oran 2, in order to collect data related to the mechanisms of university entrepreneurship and the level of orientation toward creating startups, which were analyzed using SPSS software. The results revealed a statistically significant positive effect of university entrepreneurship mechanisms in strengthening the orientation toward creating startups, reflecting the importance of university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 in developing students' entrepreneurial knowledge and skills, strengthening their spirit of initiative and innovation, and supporting their ability to turn ideas and initiatives into viable startup ventures.

Keywords: Business incubators, Ministerial Decree 1275, entrepreneurial university.

I. Introduction

In recent years, the Algerian university has undergone a notable transformation in its functions and roles. It is no longer confined to teaching, training, and the award of degrees, but has come to play a growing role in knowledge production, the promotion of innovation, the development of entrepreneurial capacities, and the orientation of student ideas and projects toward viable economic activities. This transformation forms part of the university's effort to strengthen its ties with its economic and social environment, to valorize the outputs of scientific research, and to contribute to the creation of startups and the support of economic development.

In this context, university entrepreneurship has emerged as an orientation aimed at providing a stimulating environment for students through education, training, mentoring, and

incubation, and at encouraging them to develop their ideas and acquire the skills needed to create ventures. In Algeria, this orientation has been strengthened through a set of mechanisms and policies, most notably university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 of 27 September 2022, which encourages students to turn innovative graduation projects and ideas into economic ventures and startups. This orientation reflects an effort to achieve greater integration between academic education, innovation, and entrepreneurship, thereby strengthening the university's ability to contribute to meeting the needs of the national economy.

I.1 Research Problem

Amid the Algerian university's orientation toward supporting entrepreneurship and innovation and encouraging the creation of startups, university entrepreneurship has become an important mechanism for developing students' capacities and directing them toward initiative and venture creation. In this framework, the university relies on a set of training, mentoring, and incubation mechanisms and regulatory frameworks — most notably university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 — with the aim of developing students' knowledge and skills and encouraging them to turn their ideas into viable ventures. From this standpoint, the study seeks to measure the extent to which these mechanisms contribute to strengthening the orientation toward creating startups among students of the University of Oran 2. The study accordingly raises the following main research question:

To what extent does university entrepreneurship — through university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 — contribute to strengthening the orientation toward creating startups among students of the University of Oran 2?

From this problem, the following sub-questions arise:

- Is there a statistically significant effect of university incubators on strengthening the orientation toward creating startups among students of the University of Oran 2?
- Is there a statistically significant effect of entrepreneurship education on strengthening the orientation toward creating startups among students of the University of Oran 2?
- Is there a statistically significant effect of Ministerial Decree 1275 on strengthening the orientation toward creating startups among students of the University of Oran 2?

I.2 Research Hypotheses

In order to answer the main research question and the sub-questions, the following hypotheses were formulated:

- There is a statistically significant effect, at a significance level of ($\alpha \leq 0.05$), of university incubators on strengthening the orientation toward creating startups among students of the University of Oran 2.
- There is a statistically significant effect, at a significance level of ($\alpha \leq 0.05$), of entrepreneurship education on strengthening the orientation toward creating startups among students of the University of Oran 2.
- There is a statistically significant effect, at a significance level of ($\alpha \leq 0.05$), of Ministerial Decree 1275 on strengthening the orientation toward creating startups among students of the University of Oran 2.

I.3 Research Objectives

These are as follows:

- Measure the effect of university incubators on students' acquisition of the skills and knowledge necessary for creating startups and on strengthening their entrepreneurial spirit.
- Determine the effect of entrepreneurship education on developing entrepreneurial knowledge, skills, and attitudes among students of the University of Oran 2.
- Analyze the effect of Ministerial Decree No. 1275 in strengthening students' orientation toward creating startups and encouraging them to turn their ideas and graduation theses into viable ventures.

I.4 Significance of the Study

This study derives its significance from addressing the role of university entrepreneurship in supporting students' orientation toward creating startups, amid growing interest in innovation and initiative within the university. It also seeks to highlight the contribution of university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 to preparing students and developing their ability to turn their ideas into economic ventures. Its significance is further reflected in assessing the effectiveness of these mechanisms in linking university training to entrepreneurial practice and the needs of the economic environment, thereby strengthening the university's role in supporting the creation of startups and contributing to economic development.

II. Theoretical Framework

II.1 The Entrepreneurial University and Entrepreneurship Education

The mission of universities was previously limited to teaching and research, but universities today are undergoing a radical transformation known as the "second revolution," becoming institutions that combine education, research, and economic development. Etzkowitz was the first to coin the term "entrepreneurial university," used to describe universities that play a pivotal role in economic and regional development, whereby the university's entrepreneurial activity is viewed as part of its natural evolution; it is defined as the set of activities and consultancy services that universities provide for organizations and individuals seeking to create their own ventures (Jaziri & Paturel, 2009). This role includes the provision of entrepreneurship education aimed at developing the knowledge, skills, and capacities students need to identify opportunities, develop ideas, and turn them into viable ventures. Entrepreneurship education has thus become one of the core elements in building the entrepreneurial university and strengthening its capacity to disseminate a culture of initiative and innovation and to encourage students toward the creation of ventures.

II.2 Startups

Startups are defined as small, independent entities seeking to discover an innovative, repeatable, and scalable business model, by developing new products, services, or technical and administrative solutions. They generally rely on small teams composed of creative individuals and developers, and seek to create genuine value in the market and achieve growth. The concept of the startup reflects a spirit of initiative and drive toward achieving innovative objectives, with a focus on innovation, continuous development, and the capacity for scaling.

II.3 University Business Incubators

Following the Algerian legislature's adoption of the idea of the graduation thesis as a startup, it became necessary to provide support and mentoring by establishing specialized structures to follow up with students during the development of their innovative projects. This is implemented through a ministerial programme covering all universities nationwide, through the creation of university business incubators, located either within university campuses or in scientific research centres. These incubators aim to develop creative thinking among students and researchers and to provide a suitable environment for developing innovative ideas and turning them into applicable projects, thereby contributing to the support of entrepreneurship and the promotion of innovation within the academic community.

University business incubators were established on the basis of Ministerial Decree 1275, providing at their level the basics that every affiliated person needs — a workspace, scientific laboratories, and electronic equipment — with many resources funded by the State in order to facilitate and increase opportunities for innovation and the development of innovative projects (Amrar & Foukha, 2023).

The university business incubator aims to (Bissar, 2022):

- Incubate new ideas characterized by innovation;
- Provide opportunities for students by offering the incubator café as a workspace;
- Contribute to providing ongoing opportunities for self-development that benefit society;
- Market innovative and effective scientific and technical outputs that contribute to economic growth.

II.4 Ministerial Decree No. 1275 and Its Role in Strengthening University Entrepreneurship

Ministerial Decree No. 1275 of 27 September 2022 is among the most important mechanisms adopted by the Ministry of Higher Education and Scientific Research in Algeria to strengthen university entrepreneurship and link university training to venture creation. The Decree aims to enable students to prepare their graduation projects in the form of a startup project or a project holding a patent, thereby encouraging the conversion of knowledge, ideas, and scientific findings into viable economic ventures.

This Decree forms part of efforts to develop university entrepreneurship, by encouraging innovation and initiative, providing mentoring and guidance for students, and strengthening the university's openness to its economic environment. It also contributes to the transition from the traditional university model based on teaching and scientific research to a model more closely linked to entrepreneurship, innovation, and the transfer of knowledge to the economy.

The Decree targets students approaching graduation at the bachelor's, master's, and doctoral levels who possess innovative ideas that are feasible and capable of being turned into startups or innovation-based ventures. The Decree thus constitutes a pedagogical and mentoring mechanism aimed at developing students' entrepreneurial skills, strengthening their spirit of initiative, and encouraging them to turn their ideas and graduation projects into viable economic ventures.

III. The Empirical Study

As part of the study of the role of university entrepreneurship in supporting the creation of startups, a field study was conducted at the University of Oran 2 with the aim of measuring the extent to which university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 contribute to strengthening students' orientation toward creating startups. The study covered third-year bachelor's (Licence 3) and second-year master's (Master 2) students from various faculties, with the aim of assessing the extent to which they benefit from the training, mentoring, and incubation mechanisms available within the university. Data were collected through an electronic questionnaire and analyzed using SPSS software, in order to determine the effect of these mechanisms on developing students' entrepreneurial knowledge and skills and encouraging them to develop their ideas and turn them into viable ventures and startups.

III.1 Study Population, Sample, and Instrument

Study population: the study population consists of all third-year bachelor's (Licence 3) and second-year master's (Master 2) students at the University of Oran 2.

Study sample: the sample consisted of 80 students from the third-year bachelor's and second-year master's levels at the University of Oran 2, enrolled in university incubator programmes, examined in terms of age and specialization as follows:

By age:

Table 1: Distribution of Sample Members by Age

Age Group	L3 – Freq.	L3 – %	M2 – Freq.	M2 – %	Total – Freq.	Total – %
20–25	22	27.5%	31	38.8%	53	66.2%
26–30	4	5%	9	11.2%	13	16.2%
31 and above	6	7.5%	8	10%	14	17.5%
Total	32	40%	48	60%	80	100%

Source: Produced by the researchers.

The table above shows the distribution of the study sample by age group and academic level. The most represented age group is 20–25 years, accounting for 66.2% of the total sample, which is largely explained by the fact that most surveyed students were second-year master's students, representing 60% of the total sample, compared with 40% for third-year bachelor's students, whose ages are usually concentrated within this range. This is followed by the 31-and-above age group at 17.5%, reflecting the presence of a number of older students within the sample, while the 26–30 age group ranked last at 16.2%.

By specialization:

Table 2: Distribution of Sample Members by Faculty

Level	Econ./Commerce/ Mgmt./Acc./ Finance	Earth Sciences	Law & Political Science	Social Sciences	Maintenance & Industrial Safety Inst.	Languages
L3	10 (12.5%)	5 (6.2%)	4 (5%)	2 (2.5%)	8 (10%)	3 (3.8%)

M2	15 (18.7%)	5 (6.2%)	4 (5%)	6 (7.5%)	12 (15%)	6 (7.5%)
Total	25 (31.2%)	10 (12.5%)	8 (10%)	8 (10%)	20 (25%)	9 (11.2%)

Source: Produced by the researchers.

The table shows the distribution of the 80 sample members by faculty and academic level. Second-year master's students represent the largest share of the sample, at 60%, compared with 40% for third-year bachelor's students. The Faculty of Economics, Commerce, Management, Accounting and Finance ranks first in terms of sample size, with 25 students (31.2%), including 15 master's students (18.7% of the total sample). It is followed by the Institute of Maintenance and Industrial Safety with 20 students (25%), then the Faculty of Earth Sciences with 10 students (12.5%), while the Faculty of Languages accounted for 9 students (11.2%). The Faculty of Law and Political Science and the Faculty of Social Sciences ranked last in terms of representation, with 8 students each (10%). This distribution reflects the diversity of the sample in terms of specialization and academic level, with a relative variation in representation across faculties.

Study instrument: the study questionnaire consists of 20 items grouped under three main axes, in addition to personal information, using a three-point Likert scale (agree (3), neutral (2), disagree (1)) to measure respondents' answers.

Validity and Reliability of the Questionnaire

Construct validity: construct validity of the study instrument was verified by calculating the correlation coefficients between the scores of the questionnaire's axes and the overall score of the instrument, using Pearson's correlation coefficient, in order to confirm the extent to which each axis correlates with the overall construct measured by the instrument. The results showed positive, statistically significant correlations between the various axes and the overall score, confirming that the study instrument possesses an appropriate degree of construct validity and indicating its suitability for measuring the variables and dimensions for which it was designed, as shown in the following table.

Table 3: Construct Validity of the Study Instrument

Questionnaire Axes	No. of Items	Pearson Correlation Coefficient (r)	Sig.	Result
Startups	5	0.725**	0.000	Statistically significant correlation
Entrepreneurship education	5	0.836**	0.000	Statistically significant correlation
University incubators	5	0.840**	0.000	Statistically significant correlation

Ministerial Decree 1275	5	0.815**	0.000	Statistically significant correlation
--------------------------------	---	---------	-------	---------------------------------------

- *Significant at the 0.01 level (Sig. / error probability, p-value).*

Source: Prepared by the researchers based on SPSS V.23 output.

Reliability: the reliability of the questionnaire was verified using Cronbach's Alpha coefficient, where a value approaching 1 indicates a high level of reliability, while a value approaching 0 indicates weak reliability. The following table presents the reliability coefficients for the questionnaire's axes.

Table 4: Cronbach's Alpha Values for the Axes of the Study Instrument

Questionnaire Axes	Cronbach's Alpha	No. of Items	Result
Startups	0.803	5	Reliable
Entrepreneurship education	0.724	5	Reliable
Business incubators	0.779	5	Reliable
Ministerial Decree 1275	0.789	5	Reliable
All questionnaire items	0.818	20	Reliable

Source: Prepared by the researchers based on SPSS V.23 output.

The table above shows that Cronbach's Alpha values for the questionnaire's axes range between 0.724 and 0.803, indicating a high level of reliability. The Cronbach's Alpha value for all questionnaire items combined reached 0.818. It can therefore be concluded that the study instrument possesses validity and reliability across all its items, making it suitable for analyzing the research problem.

III.2 Testing the Study Hypotheses

To test the causal relationship between the study variables, simple linear regression analysis was used to measure the effect of each independent variable individually on the orientation toward creating startups. This analysis allows for determining the direction and strength of the relationship, and the extent to which the independent variable contributes to explaining the variance in the dependent variable.

The significance of the model is judged through the F value and the significance level (Sig.), the model being statistically significant if $\text{Sig.} \leq 0.05$. The coefficient of determination (R^2) is used to determine the proportion of variance in the dependent variable explained by the independent variable, while the regression coefficient (B) determines the direction and magnitude of the effect; a positive value reflects a positive effect, and a negative value reflects an inverse effect. The effect is considered statistically significant if $\text{Sig.} \leq 0.05$.

First Hypothesis: There is a statistically significant effect, at a significance level of ($\alpha \leq 0.05$), of university incubators on strengthening the orientation toward creating startups among students of the University of Oran 2.

The results obtained are shown in the following table:

Table 5: Results of the Simple Linear Regression Analysis Between Business Incubators and Startups**Model Summary**

Correlation Coefficient R	R ²	Adjusted R ²
0.450	0.203	0.193

ANOVA

Model	F value	Sig.
Regression	18.843	0.000

Coefficients

Model	B	Std. Error	Beta	t	Sig.
(Constant)	10.915	0.756	•	14.439	0.000
Business incubators	0.250	0.056	0.450	4.454	0.000

Source: Prepared by the researchers based on SPSS V.23 output.

The results of the simple linear regression analysis indicate a positive relationship between business incubators and the orientation toward creating startups, with a correlation coefficient of $R = 0.450$, indicating a positive correlation between the two variables. The coefficient of determination reached $R^2 = 0.203$, meaning that business incubators explain approximately 20.3% of the variance in the orientation toward creating startups, while the remaining proportion is attributable to other factors not included in the model and to random error.

The results of the analysis of variance (ANOVA) showed an F value of 18.843, at a significance level of $\text{Sig.} = 0.000$, which is below the 0.05 significance threshold, indicating that the simple regression model is statistically significant, and thus that a statistically significant relationship exists between business incubators and the orientation toward creating startups.

The unstandardized regression coefficient reached $B = 0.250$, a positive and statistically significant coefficient, indicating a positive effect of business incubators on the orientation toward creating startups; that is, according to the model, a one-unit increase in the level of business incubators leads to a 0.250-unit increase in the orientation toward creating startups. The standardized regression coefficient (Beta) reached 0.450, confirming the positive direction of the relationship between the two variables.

Based on these results, the hypothesis positing a statistically significant effect of business incubators on strengthening the orientation toward creating startups among third-year bachelor's and second-year master's students at the University of Oran 2 is accepted, at a significance level of $\alpha \leq 0.05$. The simple regression equation between business incubators and the orientation toward creating startups can therefore be derived as follows:

$$Y = 10.915 + 0.250X$$

Where:

- Y: the dependent variable (startups).
- X: the independent variable (business incubators).

Second Hypothesis: There is a statistically significant effect, at a significance level of ($\alpha \leq 0.05$), of entrepreneurship education on strengthening the orientation toward creating startups among students of the University of Oran 2.

To test this hypothesis, simple regression analysis was used to verify the existence of a statistically significant effect; the results obtained are shown in the following table:

Table 6: Results of the Simple Linear Regression Analysis Between Entrepreneurship Education and Startups

Model Summary					
Correlation Coefficient R		R ²		Adjusted R ²	
0.415		0.173		0.162	
ANOVA					
Model		F value		Sig.	
Regression		16.261		0.000	
Coefficients					
Model	B	Std. Error	Beta	t	Sig.
(Constant)	11.798	0.617	•	19.114	0.000
Entrepreneurship education	0.194	0.048	0.415	4.032	0.000

Source: Prepared by the researchers based on SPSS V.23 output.

The results of the simple linear regression analysis indicate a positive relationship between entrepreneurship education and the orientation toward creating startups, with a correlation coefficient of $R = 0.415$, indicating a positive correlation between the two variables. The coefficient of determination reached $R^2 = 0.173$, meaning that entrepreneurship education explains approximately 17.3% of the variance in the orientation toward creating startups, while the remaining proportion is attributable to other factors not included in the model and to random error.

The results of the analysis of variance showed an F value of 16.261, at a significance level of $\text{Sig.} = 0.000$, below the 0.05 significance threshold, indicating that the simple regression model is statistically significant, and thus that a statistically significant relationship exists between entrepreneurship education and the orientation toward creating startups.

The unstandardized regression coefficient reached $B = 0.194$, a positive and statistically significant coefficient, indicating a positive effect of entrepreneurship education on the orientation toward creating startups; that is, according to the model, a one-unit increase in the level of entrepreneurship education leads to a 0.194-unit increase in the orientation toward creating startups.

Based on these results, the hypothesis positing a statistically significant effect of entrepreneurship education on strengthening the orientation toward creating startups among

third-year bachelor's and second-year master's students at the University of Oran 2 is accepted, at a significance level of $\alpha \leq 0.05$. The simple regression equation between entrepreneurship education and startups can therefore be derived as follows:

$$Y = 11.798 + 0.194X$$

Where:

- Y: the dependent variable (startups).
- X: the independent variable (entrepreneurship education).

Third Hypothesis: There is a statistically significant effect, at a significance level of ($\alpha \leq 0.05$), of Ministerial Decree 1275 on strengthening the orientation toward creating startups among students of the University of Oran 2.

To test this hypothesis, simple regression analysis was used to verify the existence of a statistically significant effect; the results obtained are shown in the following table:

Table 7: Results of the Simple Linear Regression Analysis Between Ministerial Decree 1275 and Startups

Model Summary					
Correlation Coefficient R		R ²		Adjusted R ²	
0.367		0.135		0.124	
ANOVA					
Model		F value		Sig.	
Regression		12.172		0.001	
Coefficients					
Model	B	Std. Error	Beta	t	Sig.
(Constant)	11.161	0.892	•	12.514	0.000
Ministerial Decree 1275	0.232	0.066	0.367	3.489	0.001

Source: Prepared by the researchers based on SPSS V.23 output.

The results of the simple linear regression analysis indicate a positive relationship between Ministerial Decree No. 1275 and the orientation toward creating startups, with a correlation coefficient of $R = 0.367$. The coefficient of determination reached $R^2 = 0.135$, meaning that the Ministerial Decree explains 13.5% of the variance in the orientation toward creating startups, while the remaining proportion is attributable to other factors.

The results of the analysis of variance showed an F value of 12.172 and a significance level of $\text{Sig.} = 0.000$, confirming that the regression model is statistically significant at the 0.05 level. The regression coefficient reached $B = 0.232$, a positive and statistically significant coefficient, indicating a positive effect of Ministerial Decree No. 1275 in strengthening the orientation toward creating startups.

Accordingly, the hypothesis positing a statistically significant effect of Ministerial Decree No. 1275 on strengthening the orientation toward creating startups among third-year bachelor's and second-year master's students at the University of Oran 2 is accepted.

The simple regression equation between the Ministerial Decree and the creation of startups can therefore be derived as follows:

$$Y = 11.161 + 0.232X$$

Where:

- Y: the dependent variable (startups).
- X: the independent variable (Ministerial Decree).

IV. Research Findings

The results of the statistical analysis revealed a positive, statistically significant effect of university business incubators on the orientation toward creating startups among students of the University of Oran 2, confirming the importance of mentoring and incubation in encouraging students to develop their ideas and turn them into viable ventures. Incubators provide students with the guidance, advice, and mentoring necessary to develop their projects and strengthen their ability to overcome the difficulties associated with the early stages of establishing a venture.

The results also showed a statistically significant effect of entrepreneurship education on the orientation toward creating startups, as it contributes to equipping students with the knowledge and skills necessary to identify opportunities, develop ideas, and prepare projects, thereby strengthening their readiness to move toward creating startups.

On the other hand, the results showed a statistically significant effect of Ministerial Decree No. 1275 on the orientation toward creating startups, as it provides a pedagogical and regulatory framework that encourages students to turn graduation projects and innovative ideas into viable ventures.

Overall, the results confirm the importance of university business incubators, entrepreneurship education, and Ministerial Decree No. 1275 as integrated mechanisms in supporting university entrepreneurship, and in encouraging students toward innovation, the development of their projects, and the orientation toward creating startups.

V. Conclusion

The study concluded that university entrepreneurship represents an important mechanism for encouraging students toward the creation of startups, by providing the training, mentoring, incubation, and support necessary to develop their ideas and turn them into viable ventures. In this context, Ministerial Decree No. 1275 stands out as a supportive regulatory and pedagogical mechanism, by encouraging students to turn graduation projects and innovative ideas into ventures and startups.

Furthermore, the integration between entrepreneurship education, university business incubators, and Ministerial Decree No. 1275 contributes to creating a university environment conducive to innovation and initiative, and to strengthening students' ability to acquire the knowledge and skills necessary to develop their projects. Accordingly, supporting and developing these mechanisms can strengthen the university's orientation toward entrepreneurship, contribute to encouraging the creation of startups, valorize student innovations, and support economic development and job creation.

VI. References

Amrar, N., & Foukha, S. (2023). The role of university incubators in strengthening the knowledge economy in Algeria: A study in light of Ministerial Decree No. 1275. *Journal of Global Politics*, 7(2), 788.

Article 2 of Ministerial Decree No. 1275. (2022). *Establishing the procedures for preparing a graduation thesis for the award of a university degree—startup, by students of higher education institutions*.

Bissar, A. H. (2022). The role of university business incubators in supporting innovative projects and creating startups: A case study of the business incubator at Mohamed Boudiaf University of M'sila. *Journal of Prospects in Management and Economic Sciences*, 6(2), 388.

Jaziri, A., & Paturel, R. (2009). *The entrepreneurial intention of the university: Toward a conceptual consensus from academia to entrepreneurship*. International Conference on Entrepreneurship: *From Research to Entrepreneurship—Imagination at the Service of Management* (p. 8). ESC Bretagne.

National Coordinating Committee for Monitoring Innovation and University Business Incubators. (n.d.). *Implementation mechanisms of the draft decree*. Official website.