

The Role of the business incubators in developing the entrepreneurial culture of university students –a case study of the University of Adrar

دور حاضنات الأعمال في تطوير الثقافة المقاولاتية لدى طلاب الجامعات دراسة حالة جامعة أدرار

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Abstract:

This study aims to analyze the role of business incubators in developing the entrepreneurial culture of university students. The study used PLS-SEM to test the hypothesis that states that business incubators have a positive significant effect on fostering the entrepreneurial culture. Findings showed that these incubators highly contribute to developing their innovative and entrepreneurial skills, as the influence rate was 0.744, which shows their efficiency in pushing the students towards developing their ideas and transforming them into successful projects. Our findings support the hypotheses and confirm the role of the incubators in providing an educationally supportive environment that allows the students to explore their entrepreneurial potential and contribute to economic growth. Hence, there is an urgent need to reinforce the role of business incubators as an efficient tool to develop the entrepreneurial culture of university youths.

Keywords: business incubators; entrepreneurial culture; entrepreneurship; innovation; University Student .

JEL Classification Codes: L26, M13, Q31, I23, L53

ملخص:

تهدف هذه الدراسة إلى تحليل دور حاضنات الأعمال في تطوير الثقافة الريادية لدى طلاب الجامعات. استخدمت الدراسة نموذج المعادلات الهيكلية *PLS-SEM* لاختبار الفرضية التي تنص على أن حاضنات الأعمال لها تأثير إيجابي كبير في تعزيز الثقافة الريادية. أظهرت النتائج أن هذه الحاضنات تساهم بشكل كبير في تطوير مهاراتهم الابتكارية والريادية، حيث كانت نسبة التأثير 0.744، مما يدل على كفاءتها في دفع الطلاب نحو تطوير أفكارهم وتحويلها إلى مشاريع ناجحة. تدعم نتائجنا الفرضيات وتؤكد دور الحاضنات في توفير بيئة تعليمية داعمة تتيح للطلاب استكشاف إمكاناتهم الريادية والمساهمة في النمو الاقتصادي. لذا، هناك حاجة ملحة لتعزيز دور حاضنات الأعمال كأداة فعالة لتطوير الثقافة الريادية لدى شباب الجامعات.

كلمات مفتاحية: حاضنات الاعمال، الثقافة المقاولاتية، ريادة الاعمال، الابتكار، الطالب الجامعي .

تصنيفات JEL : L26، I23، Q31، L53

Introduction:

Amid the modern technological and economic changes, the importance of supporting the entrepreneurial culture among the youth emerges as an engine for innovation and sustainable development. In this regard, business incubators are one of the efficient tools, as they provide a supportive environment for the development of entrepreneurial skills, innovation, and creativity. This research investigates the function of business incubators in fostering the entrepreneurial culture among university students. It specifically focuses on the potential impacts and obstacles associated with this process. The issue in this domain is the absence of comprehensive research that elucidates the impact of these incubators on fostering an entrepreneurial mindset among university students, while also addressing the obstacles that hinder their effective implementation. The study question focuses on the impact of business incubators in fostering students' entrepreneurial mindset and enhancing their long-term influence in academic and economic communities.

Literature review:

2.1 The business incubators:

They are basic tools in supporting entrepreneurship, as they provide the support, tools, and communication between the individuals who aim at developing and executing new ideas (Kishinchand et al., 2022), They play a key role in motivating the establishment of successful commercial projects that create jobs and generate wealth and economic growth (Shekapure & Shekapure, 2022), The incubators take different forms, such as commercial, social, and university. Each provides different tangible and intangible materials for the entrepreneurs to help command the costs and reduce the risks in their projects (Kishinchand et al, 2022), In addition, there is an increasing focus on the potential of incubators to support sustainable development through new businesses that target sustainability, despite the need for more research to understand and support their role (Samuel et al., 2022).

2.2 The development of the entrepreneurial culture:

The entrepreneurial culture is supported by different tools, such as education and the development of new concepts. In this context, education is key in installing the values that generate new ideas and support competitiveness, as communication between the students and teachers is vital in building an entrepreneurial culture (Triwardhani et al., 2022), The cultural perspective of entrepreneurship widens the classical model and recognizes the cultural, psychological, and environmental effects on entrepreneurial behaviors (Jianda, 2022), Furthermore, the development of environmental systems in entrepreneurship insists on the importance of culture and provides theoretical and scientific visions through “the environmental system services of the cultural entrepreneurship.

Business incubators and developing entrepreneurship culture:

Business incubators play a paramount role in developing entrepreneurship, as they provide the necessary support and materials. The previous studies confirm their role in providing communication opportunities, financial support, and training programs that are vital to developing entrepreneurship (Cai et al., 2020), In addition, they help establish an environmental system that supports entrepreneurship (Ibrahim et al., 2020), The studies validate

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the positive role of incubators in providing physical infrastructure, financial support, and commercial assistance, which all have a positive effect on entrepreneurship (Daniya & Nasseb, 2022), In general, they guide and motivate the students, the educational board, and the employees towards more achievements and the establishment of an entrepreneurial culture inside the educational institutions (Firas et al., 2023; Rifai et al., 2023).

The study hypothesis: H₁: There is no statistical effect for the business incubators on developing the entrepreneurial culture at a significance level of 5%.

2.3 Gaps in existing literature:

The focus on sustainability and environmental issues: despite the orientation towards the use of business incubators to support sustainability, we still need detailed analytical studies on the effect of business incubators on supporting environmental projects and sustainability in general. The prior studies lack sufficient focus on each type of business incubator (commercial, social, and university) and their respective regions.

The sociocultural effect of entrepreneurship: there is a need for analytical studies that include the sociocultural factors that may affect the adoption or refusal of this culture.

Theoretical and methodological perspective: A discrepancy exists in the theories employed to examine the impact of business incubators, which might differ regarding economic, social, and behavioral trends.

Methodology:

Research method: We utilized quantitative research techniques to establish a correlation between students' involvement in business incubators and the enhancement of their entrepreneurial culture and skills.

2.3 Data collection methods:

We distributed questionnaires to students who were trained in business incubators in order to obtain information about their opinions on the impact of incubators on enhancing their entrepreneurial capabilities.

3.3. The logical basis of the chosen methods:

Surveys are a useful tool for collecting large amounts of data from a diverse sample, through which their impact on economic growth and innovation can be understood.

4. Data Presentation and Analysis:

First: Assessment of the measurement Model:

4.1 The convergent validity:

It is a vital test in SEM and checks whether the apparent variables of the factor measure the same concept in PLS-SEM. The study assessed convergent validity, including factor loadings, Cronbach's alpha, composite reliability, and AVE.

Table 01: the results of the consistency and composite reliability tests

Variables	Items	Loadings	Cronbach's Alpha	Composite Reliability	The average variance extracted AVE
business incubators	BI_1	0.607	0.873	0.902	0.570
	BI_2	0.800			
	BI_3	0.714			
	BI_4	0.749			
	BI_5	0.824			
	BI_6	0.798			
	BI_7	0.774			
developing entrepreneurial culture	DEC_1	0.651	0.889	0.911	0.564
	DEC_2	0.810			
	DEC_3	0.776			
	DEC_4	0.728			
	DEC_5	0.779			
	DEC_6	0.688			
	DEC_7	0.786			
	DEC_8	0.774			

Source: Compiled by researchers based on the outputs of Smart PLS4.

The table shows high loadings and exceeds the recommended value of 0.6. This means that all the items linked to each variable have a strong relation with it. In addition, Cronbach's Alpha, the composite reliability, and AVE tests show accepted high values.

4.2 The discriminate validity:

The Fornell-Larcker criterion measures the discriminate validity based on the value of AVE for each structure compared to the correlations between each structure and the other. Besides, we use the HTMT test that relies on estimating the correlation rate to determine the discrimination of each structure from the others. It is advisable to utilize a value of 0.85 in HTMT.

Table 02: Fornell-Larcker Criterion

Variables	business incubators	developing entrepreneurial culture
business incubators	0.755	
developing entrepreneurial culture	0.744	0.751

Source: Compiled by researchers based on the outputs of Smart PLS4.

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Table 03: the heterotrait-monotrait ratio of correlations (HTMT)

Variables	developing entrepreneurial culture
business incubators	0.831

Source: Compiled by researchers based on the outputs of Smart PLS4

From the table above we find that all the measured variance values are very high, exceeding the threshold of 0.7. This shows the extent to which each variable in the model is subject to the required discrimination.

Second: testing the internal model (structural model):

1. The validity of the structural model:

Table 03: Validity of the Structural Model

Variables	Coefficient of Determination (R2)	Effect size (F2)
developing entrepreneurial culture	0.553	/
business incubators	/	1.238

Source: Compiled by researchers based on the outputs of Smart PLS4.

From the table, Regarding the business incubators, R2 does not hold any significance, but F2 has a value of 1.238, indicating that the business incubators play a significant role in describing and elucidating the structural model. These results offer a comprehensive insight into the model's capacity to analyze and elucidate the connections between business incubators and the growth of entrepreneurial culture.

2. Discussion of the hypotheses testing:

The estimates show the potential relations between the structures. In addition, the path coefficient is between +1 and -1. In this context, the values close to +1 show strong positive relations and vice-versa. Usually, the relations with the qualitative statistical values of P-values are less than 5%. The coefficients close to 0 from the two sides generally show weak relations.

1.2 The study hypothesis:

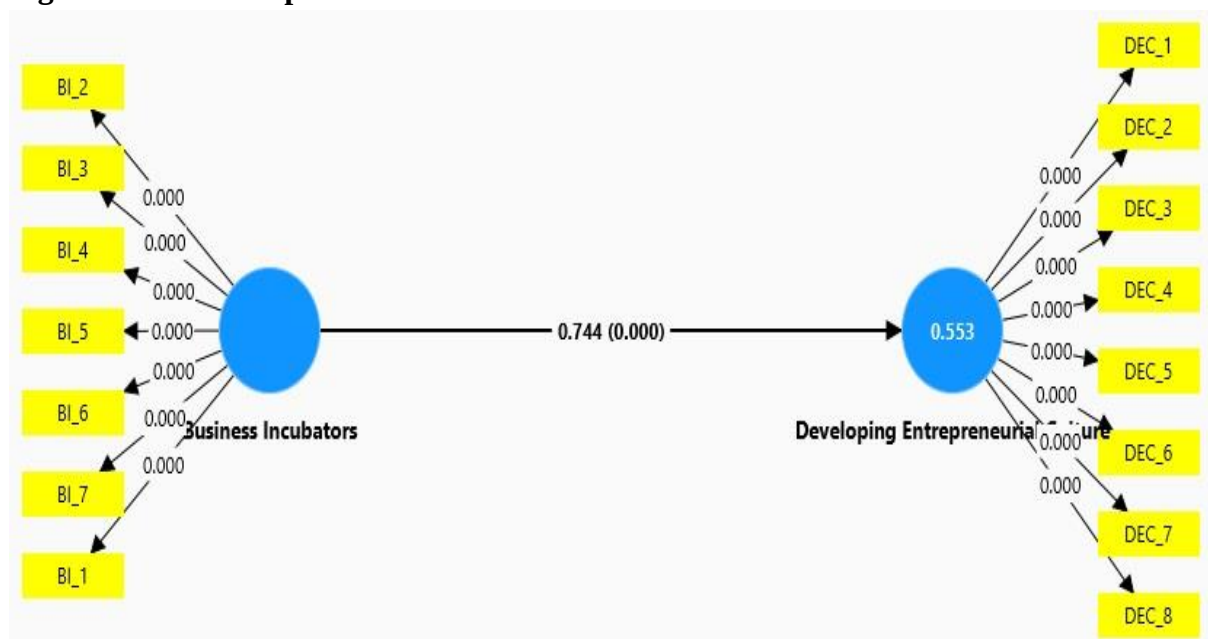
The study hypothesis: H₁: There is no statistical effect for the business incubators on developing the entrepreneurial culture at a significance level of 5%.

Table 5: Testing the Hypotheses for the Study (H₁, H₂)

Hypothesis	Paths	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values	Decision
H ₁	business incubators -> Developing an entrepreneurial culture	0.744	0.754	0.052	14.289	0.000	Hypothesis Accepted

Source: Compiled by researchers based on the outputs of Smart PLS4.

Figure 1: Results of path coefficients



Source: Compiled by researchers based on the outputs of Smart PLS4.

Discussion:

The business incubators have a highly positive and significant influence on developing an entrepreneurial culture, with a rate of 0.744. Business incubators strongly endorse concepts and features that promote creativity and entrepreneurship within university contexts or societies utilizing the incubators. These results suggest that the incubators effectively facilitate the development of entrepreneurial abilities and support individuals in realizing their entrepreneurial ideas by providing essential tools and support.

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Comparison with the previous studies:

Business incubators play a crucial role in encouraging entrepreneurship and fostering the growth of entrepreneurial culture, according to prior studies.

Comparison with the findings of the previous studies: some studies showed contradictory results, as they pointed out that the incubators may not be sufficient in some contexts or with some groups.

They demonstrate that incubators are essential in fostering the entrepreneurial culture, confirming the study's hypotheses, and establishing a solid theoretical foundation for comprehending the role of these incubators in promoting innovation and entrepreneurship within societies.

Conclusion:

Our research has yielded significant results that validate the effective impact of business incubators in fostering the entrepreneurial mindset among university students. In addition, they offer a conducive atmosphere that enables students to engage with professionals and advisors, as well as the essential information and tools to cultivate their ideas and convert them into prosperous endeavors. Ultimately, this study emphasizes the significant role that business incubators play in fostering the entrepreneurial mindset among university students. This highlights the necessity of investing in projects and activities to strengthen the entrepreneurial and inventive capabilities within professional and academic communities.

In this context, business incubators are a vital tool to strengthen the entrepreneurial culture of university students because they play a key role in providing the necessary support to build and increase entrepreneurial skills. Moreover, they help bridge the gap between theoretical teaching and practice by providing real chances for the students to test their ideas in a real-like environment. Furthermore, they provide educational resources and nets of communication with investors and entrepreneurs, which strengthens the students' chances to develop their projects successfully. Additionally, they build an entrepreneurial culture that encourages innovation and creates a new generation of graduates who can make economic changes.

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