

The Role of Business Incubators in Promoting Entrepreneurship of Higher Education Institutions

Firas Rifai¹, Hani Al-mimi², Mohammed Rasmi³, Ali Aldahoud⁴
Belal Mahmoud AlWadi⁵

¹Department of Business Administration, Faculty of Business, Al-Zatytoonah University of Jordan, f.rifai@zuj.edu.jo

²Department of Cybersecurity, Faculty of Science and Information Technology, Al-Zatytoonah University of Jordan, hani.mimi@zuj.edu.jo

³Department of Cybersecurity, Faculty of Information Technology, Zarqa University, mmousa@zu.edu.jo

⁴Department of Computer Science, Faculty of Science and Information Technology, Al-Zatytoonah University of Jordan, aldahoud@zuj.edu.jo

⁵Department of Basic Sciences (Humanities and Scientific), Faculty of Arts, Al-Zatytoonah University of Jordan, b.alwadi@zuj.edu.jo

Abstract

This study aims to measure the influence of university incubators on promoting the culture of entrepreneurship and to what extent these incubators guide and motivate students, teaching staff, and university employees to achieve entrepreneurial achievements in various disciplines and fields. The questionnaire was used as a tool to collect the required data. The study population consists of students, teaching staff, administrators, and employees from almost all Jordanian universities, which are estimated to be more than tens of thousands. We distributed the questionnaire among 14 universities, and only 310 responses were collected.

Based on the results of the questionnaire that were statistically analyzed, presented, and processed we believe that business incubators are like any existing project. Universities must pay attention to all matters that may lead to their success, including attention to all administrative, financial, and marketing matters, in addition to paying attention to all work they carry out, including the mechanism of helping small projects. It is necessary to introduce an entrepreneurship course within the compulsory requirements at the university level and for first or second-year students, because of its importance in spreading the culture of entrepreneurship among students. We hope that our recommendations will change the horizons of the university community and intellectual level and convert graduate students from “job seekers” into “job creators”

which strongly contribute to solving unemployment and poverty problems.

Keywords: Business incubators, Entrepreneurship, Innovation, Higher Education, University Growth and Development.

1 Introduction

Small businesses are considered the main engine of economic development and growth in most countries because these institutions have particular characteristic features such as high flexibility, high adaptability, innovation, and better job creation. It was necessary to find an effective way to support and help these projects. For this purpose, business incubators (BIs) have been developed to support newly founded small companies and help them to a large extent in their economic life cycle. Far from universities, we can define incubators as an institution that is independent and provides a package of services, facilities, support, and advisory mechanisms within a certain period. This service is mainly provided to entrepreneurs who want to start their small businesses.

1.1 Study problem and questions

Through this study, the authors attempt to highlight the actual role of university BIs. The focus of these incubators is to bring university members closer to the nature and meaning of entrepreneurship and to promote the working spirit and entrepreneurial orientation of university employees through lectures, workshops, publications, and other means. This research is an applied analytical study on university BIs to measure to what extent university BIs (BIs) have an impact on

- 1- Enhancing the culture of entrepreneurship,
- 2- The extent to which the university's employees are oriented to entrepreneurial activities in various disciplines and fields,
- 3- Incubating and developing creative ideas,
- 4- The emergence of projects from those distinguished creative ideas,
- 5- Directing scientific research to serve the entrepreneurial business and solve real problems that the economy and society suffer from,
- 6- Enhancing the university's contribution to community service and solving the problem of poverty and unemployment.

1.2 Objectives of the study

This research is an applied analytical study on university BIs to measure the impact of these incubators on enhancing the culture of entrepreneurship and to what extent university employees are directed to entrepreneurial work in various disciplines and fields, as

well as incubating and developing creative ideas. This study also examines the effective contribution of BIs to reduce the gap between knowledge and application (Knowing-Doing-Gap) by transferring new ideas and concepts from research institutions into an economically viable application in the markets.

1.3 Hypotheses of the study

This study examines the following main hypothesis:

University BIs enable and accelerate the diffusion of the culture of entrepreneurship and innovation by providing many services for creative students and employees to support their small business projects in their earlier and critical stages.

In addition to this main hypothesis, this study is based on several sub-hypotheses:

Hypothesis 1 (H1): BIs enhance the university's contribution to community service and solve the problem of poverty and unemployment.

Hypothesis 2 (H2): The level of awareness, and knowledge of entrepreneurship concepts among the stakeholders is high.

Hypothesis 3 (H3): The university community is willing to get engaged with entrepreneurship.

Hypothesis 4 (H4): The university community understands the concept of incubation and knows the expectations of having an incubator.

Hypothesis 5 (H5): The role and impact of BIs in promoting entrepreneurial work in universities are clear.

1.4 Study methodology and procedures

The research methodology is descriptive and analytical. Data and facts about BIs will be collected and then analyzed. This data is collected through a questionnaire that will be distributed among the university community; students and employees. Then, it will be analyzed to measure the community knowledge of entrepreneurial work, the role of BIs, and their readiness for entrepreneurial work and benefit from the university BI.

The study community consists of all Jordanian university employees, such as students, workers, facilitators, and managers, as well as those working in BIs in higher education institutions.

2 Literature review

Small projects have been known since ancient times because they were the nucleus and the beginning of the trade and industrialization movement. Most countries are well aware of the considerable importance of small businesses, which is why they largely support the establishment of BIs because these incubators in turn largely support and supervise the establishment of new small businesses to ensure the continuity of their work and their future success.

For these projects to be successful, those who work on these projects must have many skills and abilities to make these projects successful. They should have administrative skills such as planning, organizing, leading, and controlling. To do this, they should also have technical skills that enable them to do good production, finance, accounting, marketing, communication, and public relations.

2.1 Business Incubators

Given the important importance of small projects and all the problems and obstacles they encounter in the earlier start-up phases (lack of knowledge of the managerial process), it was very necessary to find a mechanism that would support these projects to a large extent. At the forefront of the available and practical solutions, BIs come first. The terminology “BIs (BI)” is relatively old and goes back to the 1950s (Mian, Lamine, & Fayolle, 2016). It is hard to estimate the actual number of incubators worldwide, but on the other hand, the number of incubators reached thousands globally.

Since the main role of almost all BIs is to support technology-based start-ups, these incubators are usually associated and connected with technology transfer offices and technology or science parks (Torun, Peconick, Sobreiro, Kimura, & Pique, 2018) (Al-Omouh, 2021). The definition of BI is controversial (Dee, Livesey, Gill, & Minshall, 2011). A broadly used definition is “A multitenant facility with on-site management that directs acceleration of the successful development of entrepreneurial companies through an array of business support resources and services, developed or orchestrated by incubator management, and offered both in the incubator and through its network of contacts”.

Several factors have a positive impact on entrepreneurship and its development. According to empirical results, both training programs and funding have a positive impact on entrepreneurship development. In addition, network services have a positive impact on entrepreneurship (Ahmed, Li, Qalati, Khan, & Siddiqui, 2020).

2.2 Previous Studies

Various researchers are trying to answer the following question: "Why do universities create and promote BIs?". The researcher in (Osiope & Winingham, 2020) has been investigating this question and trying to answer it. They focused their search mainly on New Mexico State University (NMSU-UBI) and analyzed their Business Accelerator and Incubator. They also examined the impact of university incubators on entrepreneurship, regional economic growth, and job creation.

They have provided evidence to economic experts, researchers, and policymakers that UBIs encourage students to be more entrepreneurial, which in the long run will push economic growth and development in any economy.

(Lose & Tengeh, 2016) Carried out another study and evaluated the effectiveness of business start-up programs from the users' point of view. The lack of and limited funding was found to be a significant challenge faced by incubators before joining the incubator programs.

Based on many scientific publications, scientists have examined all key performance indicators (KPIs) provided by 42 BI assessment studies (Torun, Peconick, Sobreiro, Kimura, & Pique, 2018). The final benchmark list was drawn up based on seven of the most popular benchmarking studies. In the end, a list of 33 benchmarks was provided to make BI assessment easier for all types of BIs.

Gozali et al. (2020) tried to highlight the connection between the performance of incubators and the success factors of BIs. They found that incubator performance is heavily supported by information technology, access criteria, mentoring networking, and university regulation.

Other scholars such as (Ahmed, Li, Qalati, Khan, & Siddiqui, 2020) have examined the role of incubators in developing entrepreneurship through the delivery of services (network services, capital support, and training programs). They find that incubators play an effective facilitator role in providing networking services, capital support, and training programs to individuals and entrepreneurs.

The Critical Success Factors (CSFs) of BIs in Brazil were examined by the researchers in (Silva, et al., 2019) and tried to determine the critical success factors of the Brazilian BI and to understand their structure. They found that the key roles of any incubator include creativity and innovation, and the diffusion of entrepreneurship.

The authors (Li, Rehman, & Asim, 2019) examined the contribution of incubators to the promotion of entrepreneurship together with entrepreneurship education because both entrepreneurship education and business start-up have a direct positive effect on the

entrepreneurial intentions of the students. According to the study, entrepreneurship training alone is not enough to promote entrepreneurial culture, and BIs play a significant role and are a prerequisite for starting a business.

The question of whether or not university incubators live up to their reputation was explored (Stal, Andreassib, & Fujino, 2016). The authors concluded that such incubators do not promote the transfer from universities to society through the creation of new businesses and that incubators should play an important role in the interaction between universities and industry. As a solution to the problems mentioned above, (Stal, Andreassib, & Fujino, 2016) propose the following: Universities should increase the range of courses and disciplines related to entrepreneurship, increase their effort for transferring academic research results, and expand the capacity of incubators to accommodate more companies.

The authors of (Esponilla, et al., 2019) examined the problems and challenges faced by Technological BIs in the Philippines. They randomly selected a total of eight (8) TBIs. The results of the study showed that lack of funding, slow procurement process, rigidly defined positions in the faculty, and no clear intellectual property rights policy were among the issues and challenges in developing an effective TBI in the Philippines.

In another study, the authors tried through their study to determine the factors that influence the success of BIs and to determine the extent of the effects of these factors (Alpenidze, Pauceanu, & Sanyal, 2019). The authors found that three main factors, such as availability and access to external financial resources, strong social and business networks, and internal strength, including resources and skills, positively influence and are strongly related to the success of incubators. To enhance incubator performance, the authors recommend the following: Incubators should focus on developing their strengths by improving their resources and skills, building and maintaining strong social and business networks, and constantly striving to raise funds.

Furthermore, based on current empirical research results and general industrial and scientific practice, the authors propose the following strategies to increase the efficiency and effectiveness of start-up centers:

- 1- The location of the BI should be in a technology or research park,
- 2- Introduce regional BIs that are adapted to local structures to better promote entrepreneurship, culture, and economic development.

3- Start with the slow transition from stationary to online incubators, partially or completely.

4- Establish BIs at the state or regional level to support and promote the projects, provide special support for new projects, assist the government in improving the laws and regulations related to BIs, etc.

3 Study Methodology

This section deals with the description of the procedures followed by the researcher in implementing the study. It also includes the description of the study population and its sample, in addition to the study tool in terms of its preparation, its development, the extraction of the validity and reliability coefficient, the study procedures, and the statistical treatment of data to conclude. This study adopted the descriptive analytical method using a questionnaire to measure the role of BIs in supporting entrepreneurship in higher education institutions.

This research uses the descriptive analytical model. The data had been collected, and then the hypotheses were tested based on the questionnaire. After that, the results of the questionnaire were processed and analyzed statistically using Microsoft Excel to reach special conclusions to enhance the importance and role of BIs in supporting entrepreneurship in higher education institutions in a way that allows the generalization of these results and recommendations.

3.1 Population and sampling

The population of the study consists of students and workers in Jordanian universities, workers in university incubators, and managers of these incubators. The questionnaire was sent to 14 universities and 9 of them responded. The number of collected questionnaires is (310), distributed among Jordanian universities as shown in Table 1.

Table 1 The distribution of questionnaires among universities

University	Number of correctly filled questionnaires
German Jordanian University	6
University of Petra	3
Al-Balqa Applied University	13
Zarqa university	3
Al-Zaytoonah University of Jordan	185
World Islamic Sciences and Education University	24
Yarmouk University	20
Al-Ahliyya Amman University	50

Technical University College	6
Total	310

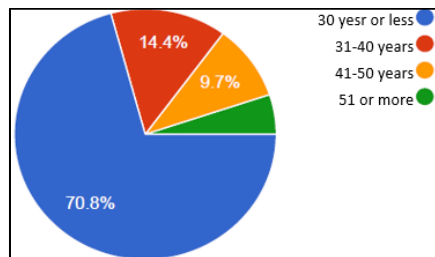
We tried to reach all Jordanian universities that form a very large population. Therefore, a sample of 20 responses per university will be sufficient. The questionnaire was sent to 14 universities, and 9 of them only responded. The universities were contacted more than once to distribute the questionnaire and collect its results. The responses were retrieved from 9 universities with a total return rate of (64%). Some responses were excluded because they were not valid.

The data were collected, reviewed, and corrected, as the distortions in the results of the questionnaire were corrected, especially in the answers that need to be written, such as “university name”, “faculty/department/unit/center” and “specialization”. The responses that were inconsistent with the context of the study or have missing data was deleted, which was 5 questionnaire. The verbal answers were also converted to numerical representation. So the higher the degree, the better the role of BIs in higher education institutions, and vice versa. The data were statistically processed using numbers, percentages, arithmetic mean, and Cronbach's alpha stability coefficient, using Microsoft Excel. The Cronbach's alpha value (Nunnally, 1978) obtained from the 305 respondents gave a value of 0.974, which shows that the reliability of the results is quite high (Gozali, et al., 2020) (M.ASCE, Wu, & Zhang, 2011)

$$\text{Cronbach's alpha: } P_T = \frac{k}{k-1} \left(1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_X^2} \right)$$

The study population included the following demographic variables: (age, gender, educational qualification, specialization, job position, university, department, and experience in teaching entrepreneurship).

Figure 1 Distribution of the study population by age



From the previous numbers in Table 2 and Figure 1, the respondents are distributed among all age groups. The largest percentage is from the youth group, less than 30 years old, which is normal since they are the largest percentage of the university community. Table 3, shows the ratio of males to females. And Table 4, shows the job positions of the

sample population. We can see that all kinds of university members got engaged in this study.

Figure 2 Distribution of the study population by sex

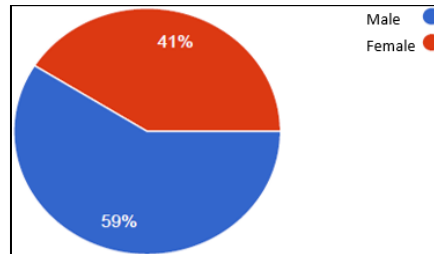
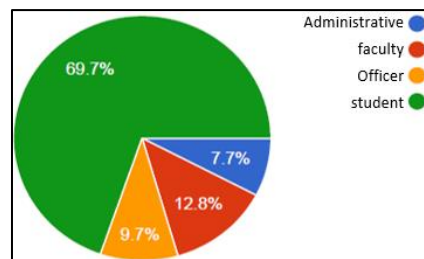


Figure 3 Distribution of the study population by job position



3.2 Data collection tools

For this study, books, articles, literature, and previous studies related to this study, as well as a questionnaire and interview were used in collecting primary data and information. A questionnaire was designed and the development process went through several stages until it reached its final form. The validity of the study tool was verified by sending it to 8 arbitrators from Jordanian universities who made several observations about the paragraphs in terms of clarity, specialization, and soundness of language. Due to the limited size of the paper allowed to be submitted, we were not able to insert a copy of the questionnaire in this research. A sample of the questionnaire can be delivered by request.

4 Results and Analysis

This section includes a complete and detailed presentation of the results, to answer the questions and achieve the objectives of the study, and verify the validity of its hypotheses using appropriate statistical techniques. Study assumptions, from the point of view of the university community, were tested and presented in this section.

Hypothesis 1: BIs enhance the university's contribution to community service and solve the problem of poverty and unemployment.

It is from the point of view of administrators. Table 2 shows the results of testing H1. It is clear that the majority of the study community support that BIs assist in community service provided by the university and help in solving the problem of poverty and unemployment.

Table 2 contribution of BIs to the community and in solving poverty and unemployment problems

No.	H1 Questions	Percent of answers					Average of answers
		Strongly agree	agree	Neutral	disagree	Strongly disagree	
Q1	University BIs contribute significantly to the development process in general	47%	29%	6%	18%	0%	4.1
Q2	University BIs contribute significantly to reducing poverty and unemployment	35%	29%	24%	12%	0%	3.9
Q3	University BIs can enhance the geographical area close to the university economically and scientifically	47%	29%	24%	0%	0%	4.2
Q4	University BIs can enhance cooperation and partnership with economic sectors and civil society	47%	53%	0%	0%	0%	4.5

Hypothesis 2: The level of awareness and knowledge of entrepreneurship concepts in the university community is high.

Table 3 depicts the results of analyzing H2 for those who answer one of the following questions as TRUE:

1. There is a BI at the university
2. The university has a center for innovation and entrepreneurship
3. The university has an academic program, study materials, or training courses about entrepreneurship

It is clear that awareness and knowledge of entrepreneurship concepts among the stakeholders are high.

Table 3 The level of awareness of entrepreneurship in universities that has an incubator, innovation center, or teach entrepreneurship

No.	H2 Questions	Percent of answers					Average of answers
		Strongly agree	agree	Neutral	disagree	Strongly disagree	
Q1	Do you know what entrepreneurship is?	29%	50%	18%	1%	1%	4.0
Q2	Entrepreneurial traits are inherited and acquired traits	14%	39%	20%	23%	4%	3.3
Q3	Entrepreneurial business is one of the main factors that help independence in work and contribute to economic and social growth and development at the state level	42%	49%	8%	0%	1%	4.3
Q4	Entrepreneurship is risky	16%	40%	24%	17%	3%	3.5
Q5	Entrepreneurial work requires people with certain qualities and specials	28%	44%	15%	9%	3%	3.8

For simplicity, we will call a university that has an incubator or an innovation center or teaching entrepreneurship an Entrepreneur University. By comparing the results of Table 3 and Table 4 we can see that the level of confidence is higher when the responses are collected from an entrepreneur university. As a result, the level of awareness, and knowledge of entrepreneurship concepts among the stakeholders is high in both types of universities and it is higher in an entrepreneur university. Therefore, it is concluded that H2 is true.

Table 4 The level of awareness of entrepreneurship in universities that does not have incubator or innovation center

No.	H2 Questions	Percent of answers					Average of answers
		Strongly agree	agree	Neutral	disagree	Strongly disagree	
Q1	Do you know what entrepreneurship is?	17%	35%	32%	11%	5%	3.5
Q2	Entrepreneurial traits are inherited and acquired traits	17%	40%	23%	19%	0%	3.6
Q3	Entrepreneurial business is one of the main factors that help independence in work and contribute to economic and social growth and development at the state level	28%	48%	19%	4%	1%	4.0
Q4	Entrepreneurship is risky	12%	36%	29%	21%	2%	3.3
Q5	Entrepreneurial work requires people with certain qualities and specials	16%	51%	19%	11%	2%	3.7

Hypothesis 3: University community is willing to get engaged with entrepreneurship.

Table 5 indicates that 70% of the sample had a new viable business idea once upon a time and 73% of them believe that BI is a place that helps in implementing their entrepreneurial ideas. A High percentage (72%) of the university population has thoughts about being independent in their future job and 40% of them tried to do freelancing and lay off their job. On the other hand, 16% believe that they are not ready to present their entrepreneurial ideas to the university for incubation and 29% of them don't know if they are ready to do that or not. As a result of these high percentages, we can conclude that H3 is true.

Table 5 The willingness of the university community to get engaged with entrepreneurship

No.	H3 Questions	Percent of answers					Average of answers
		Strongly agree	agree	Neutral	disagree	Strongly disagree	
Q1	Have you ever had a new viable business idea?	19%	51%	18%	11%	1%	3.7
Q2	Is the BI a place that helps you in the process of implementing your entrepreneurial ideas?	26%	47%	22%	4%	1%	3.9
Q3	Are you ready to present your entrepreneurial idea to the university for incubation?	20%	35%	29%	10%	6%	3.5
Q4	Do you believe that the university's BI can help you evaluate and implement your idea?	17%	37%	32%	10%	4%	3.5
Q5	Do you think to be independent in your future job?	38%	34%	18%	9%	1%	4.0
Q6	Have you tried freelancing and laying off the job?	12%	28%	29%	27%	4%	3.2
Q7	Have you taken courses on entrepreneurship?	9%	24%	21%	37%	9%	2.9

Hypothesis 4: Stakeholders understand the concept of incubation and know the expectations of having an incubator.

It is seen from Table 6 that the majority of the university population did not deal with a BI. But 42% of them know what kind of services and facilities are provided by incubators. The majority, (70%), do know that BIs are among the most important entities that help entrepreneurs implement their ideas. Moreover, they are not afraid of ideas disclosure, and BI deal with their ideas seriously and confidentially. The average of answers for Q5 (the incubator provides the necessary logistical support, i.e. technical services) is 3.6, while the average of answers for Q6 (The incubator provides funds or financing services) is

3.5 which are considered supportive answers. In the end, the answers support the test hypothesis and we can conclude that H4 is true.

Table 6 The concept of incubation and the expectations of having an incubator

No.	H4 Questions	Percent of answers					Average of answers
		Strongly agree	agree	Neutral	disagree	Strongly disagree	
Q1	Have you ever dealt with BIs?	4%	21%	18%	42%	15%	2.6
Q2	Are you aware of the services and facilities provided by incubators?	7%	35%	24%	24%	10%	3.1
Q3	Incubators are among the most important entities that help entrepreneurs implement their ideas	21%	49%	24%	4%	3%	3.8
Q4	Incubators treat the presented creative ideas seriously and confidentially	17%	41%	35%	5%	2%	3.7
Q5	The incubator provides the necessary logistical support (technical services)	13%	45%	34%	5%	3%	3.6
Q6	The incubator provides funds or financing services	12%	37%	40%	9%	3%	3.5

Hypothesis 5: The role and impact of BIs in promoting entrepreneurial work in universities are clear.

The following questions that appear in Table 7 are intended for those who had received any kind of service from an incubator. Generally speaking, the overall evaluation of the impact of the BIs in promoting entrepreneurial activities in the universities is 4 out of 5 which is considered high. Where 88% of the questioned people agree that BIs provide the necessary material facilities such as desks, computers, printers, and so on. The results also show that 74% of them believe that BIs provide the necessary technical support such as feasibility

studies, business plans, financial and accounting advice, marketing plans, and so on. Since some BIs do not provide full financial support and part of its support is services, 70% of the people who dealt with incubation issues think that the BI provides financial support to entrepreneurs. BIs help in strengthening public relations and networking with related people or companies, which was the opinion of 76% of the questioned people. Finally, 84% believe that BIs help in developing creative ideas and producing new ideas. The overall evaluation of H5 is 80% which makes it a true hypothesis.

Table 7 The role and impact of BIs in promoting entrepreneurial work in universities

No.	H5 Questions	Percent of answers					Average of answers
		Strongly agree	agree	Neutral	disagree	Strongly disagree	
Q1	BIs provide the necessary material facilities (desks, computers, printers, etc.)	41%	47%	10%	0%	2%	4.3
Q2	BIs provide the necessary technical support (feasibility studies, business plans, financial and accounting advice, marketing plans, etc.)	31%	43%	16%	6%	4%	3.9
Q3	BIs assist in forming the work team and identifying the necessary human resources	27%	59%	4%	6%	4%	4.0
Q4	BIs provide information technology advice and help with e-commerce issues	29%	55%	12%	2%	2%	4.1
Q5	BIs provide support regarding financing and financial support	25%	45%	24%	2%	4%	3.9
Q6	BIs help in strengthening public relations and networking with related people or companies	33%	43%	12%	10%	2%	4.0
Q7	BIs help in developing creative ideas and producing new ideas	33%	51%	10%	4%	2%	4.1

5 Findings and Conclusion

This study aimed to identify the reality of BIs and their role in supporting entrepreneurship in higher education institutions and to know whether BIs provide a variety of services, especially in spreading the culture of entrepreneurship. To achieve this goal a questionnaire was designed. It was distributed to the employees and students of Jordanian universities to study the level of services provided by the incubator and how BIs promote entrepreneurship in universities. The following are the findings of the study:

- Since 24% of the answers for H1Q1 and 36% of the answers for H1Q2 are not supporting H1. Tangible and intangible benefits must be formalized clearly in the goals and objectives of the incubators. These goals need to be disseminated among the university members.
- Related to H2Q3: Entrepreneurial traits are inherited and acquired traits, 53% of the respondents agreed. We think that conducting a series of lectures for gaining the entrepreneur characteristics will lower this percentage and attract more potentially interested people to be entrepreneurs or to be engaged in one of the entrepreneurship activities.
- Depending on the results in Table 3 and for simplicity, we will call a university that has an incubator or an innovation center or teaching entrepreneurship an Entrepreneur University. By comparing the results of Table 3 and Table 4, we can see that the level of confidence is higher when the responses are collected from an entrepreneur university. As a result, the level of awareness, and knowledge of entrepreneurship concepts among the stakeholders is high in both types of universities and it is higher in an entrepreneur university. Therefore, it is concluded that H2 is true.
- We can see that the level of confidence is higher when the responses are collected from an entrepreneur university. As a result, the level of awareness, and knowledge of entrepreneurship concepts among the stakeholders is high in both types of universities and it is higher in an entrepreneur university. Therefore, it is concluded that H1 is true. Therefore, it is recommended that a university should be an entrepreneurial university to increase the level of awareness among its community.
- According to the results shown in Table 5 that are related to H3, we see that the university community is willing to get engaged with entrepreneurship activities even though 30% of them do not have innovative ideas. This means that entrepreneurship is an attractive field for either entrepreneurs or any other normal person. Therefore, it is recommended that the BI focuses on conducting workshops

related to innovation, innovative ideas, critical thinking, and so on, for all interested people in the university.

- According to the results of testing H4, the university community understand the concept of incubation and knows the expectations of having an incubator. To increase the interaction with the incubators, the BI can offer free awareness courses to students in the university. BI management may encourage employees and staff to participate in its activities. Mentoring entrepreneurs is a mission that staff can contribute and some university regulations may be added or modified to encourage the university communing more.
- While 86% of the university members think that BIs assist in forming the work team and identifying the necessary human resources, we think that this point needs clarification and not mixed with networking and connections with other companies and organizations. Regarding H5Q7, we believe that the creation of ideas depends mainly on the entrepreneur himself. Maybe some sessions may help him to create or elaborate on an idea. More investigation related to this issue is needed.

The BIs support and develop small projects because of their role in reducing the unemployment rate. The goal of BIs in general is to transform the ideas of innovators in all fields and develop the talents of these groups and help them succeed and advance. Most of the services provided from the point of view of the incubated projects, in general were human resources development services, followed by secretarial and information services, and these services are considered inexpensive for the incubator and within its physical and human capacity. Moreover, one of the main goals of the BIs is to spread the culture of entrepreneurship among university students and employees and encourage them to be part of the incubator activities by creating innovative ideas, incubation, or getting a service from the incubator or they may become a service provider to the incubator.

We believe that BIs are like any existing project. Universities must pay attention to all matters that may lead to their success, including attention to all administrative, financial, and marketing matters, in addition to paying attention to all work they carry out, including the mechanism of helping small projects.

Finally, it is necessary to introduce an entrepreneurship course within the compulsory requirements at the university level and for first or second-year students, because of its importance in spreading the culture of entrepreneurship among students and changing their horizons and intellectual level, and changing traditional idea of looking for a job after graduation to creative thinking by creating jobs for

themselves and others in light of unemployment and high competition in the labor market.

Bibliography

- Ahmed, N., Li, C., Qalati, S. A., Khan, A., & Siddiqui, F. (2020). Role of Business Incubators as a Service Provider in Entrepreneurship Development. *Journal of Entrepreneurship & Organization Management*, 9(1), 2-7.
- Al-Omouh, K. S. (2021). The role of top management support and organizational capabilities in achieving e-business entrepreneurship. *Kybernetes*, 50(5), 1163-1179.
- Alpenidze, O., Pauceanu, A. M., & Sanyal, S. (2019). Key Success Factors for Business Incubators in Europe:: an Empirical Study. *Academy of Entrepreneurship Journal*, 25(1).
- Dee, N. J., Livesey, F., Gill, D., & Minshall, T. (2011). Incubation for growth, a review of the impact of business incubation on new ventures with high growth. NESTA.
- Esonilla, F., Alinsunod, J., Ignacio, H., Guzman, H., Borjal, E., Dela Cruz, K., & Valenzuela, I. (2019). Issues and Challenges of Technology Business Incubators in the Philippines. *International Journal of Emerging Trends in Engineering Research*, 7(9).
- Gozali, L., Masrom, M., Zagloel, T., Haron, H., Garza-Reyes, J., Tjahjono, B., . . . Marie, I. (2020). Performance Factors for Successful Business Incubators in Indonesian Public Universities. *International Journal of Technology*, 11(1), 155-166.
- Li, C., Ahmed, N., Qalati, S., Khan, A., & Naz, S. (2020). Role of Business Incubators as a Tool for Entrepreneurship Development: The Mediating and Moderating Role of Business Start-Up and Government Regulations. *Sustainability*, 12(5).
- Li, C., Rehman, H. u., & Asim, S. (2019). Induction of business incubation centers in educational institutions: An effective approach to foster entrepreneurship. *Journal of Entrepreneurship Education*, 22(1).
- Lose, T., & Tengeh, R. K. (2016). An evaluation of the effectiveness of business incubation programs: a user satisfaction approach. *Investment Management and Financial Innovations*, 13(2), 370-378.
- M.ASCE, L. s., Wu, Y., & Zhang, X. (2011). Key assessment indicators for the sustainability of infrastructure projects. *Construction Engineering and Management*, 441-451.
- Mian, S., Lamine, W., & Fayolle, A. (2016). Technology business incubation: An overview of the state of knowledge. *Technovation*, 50-51, 1-12.
- Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Osiobe, E. U., & Winingham, K. (2020). Why Universities Create and Foster Business Incubators. *Journal of Small Business and Enterprise Development*, 8(1), 1-12.
- Qawasmi, M., & Shukur, A. f. (2010). *The Reality of Business Incubators and their Role in Supporting Small Enterprises in the West Bank. The Reality of Business Incubators and their Role in Supporting Small Enterprises in the West Bank*. Hebron University.

Journal of Namibian Studies, 33 S1(2023): 906–924 ISSN: 2197-5523 (online)

Silva, M. C., Rampasso, I. S., Anholon, R., Ordoñez, R. E., Quelhas, O. L., & Silva, D. d. (2019). Critical Success Factors of Brazilian Business Incubators. *Latin American Business Review*, 13(3-4), 197-217.

Stal, E., Andreassib, T., & Fujino, A. (2016). The role of university incubators in stimulating academic entrepreneurship. *IMR Innovation & Management Review*, 13(2), 89-98.

Torun, M., Peconick, L., Sobreiro, V., Kimura, H., & Pique, J. (2018). Assessing business incubation: A review on benchmarking. *International Journal of Innovation Studies*, 2(3), 91-100.