Impact of Critical Factors on Entrepreneurship Development: Evidence from Business Incubation Center of Pakistan

Shah Hussain Awan

Ph.D. Scholar, Institute of Business Studies and Leadership, AWKUM
shah.awan@awkum.edu.pk

Dr. Fahad Sultan

Assistant Professor, Institute of Business Studies and Leadership, AWKUM
fahadsultan@awkum.edu.pk

Dr. Arif ud din

Assistant Professor, Abasyn University, Peshawar
Corresponding author arif@abasyn.edu.pk

Abstract

The purpose of the research is to investigate the effect of the business incubation critical factor on entrepreneurship development in university business incubation centers. The research design used in the study was descriptive. 228 managers of business incubators at Pakistani public and private institutions made up the study's sample. Through a cross-sectional survey, data from incubator managers were gathered using a standardized questionnaire. Smart-PLS 3.3.3 for structural equation modelling (SEM) was used to evaluate the data. The research revealed that infrastructural facilities, management support, training & development, financial support, and networking had a positive significant effect on entrepreneurial development. The study offers a number of theoretical and practical ramifications for academics, government agencies, and business professionals in developing nations who must take into account the essential elements for the growth of entrepreneurship.

Keywords: Critical Factors, University Business incubation center, Entrepreneurship development.

Introduction

Entrepreneurship is a driver of innovation, economic expansion, and employment generation, it is crucial to encourage the youth and educated to pursue it (Farrukh et al., 2018). Economic revolution, job creation, and business development are possible because of entrepreneurial activities; therefore, it is beneficial for attracting educated youth to become entrepreneurs (Li et al., 2020). In the same way, globally it has been considered documental as a driver of job creation in the youth which is ultimately good for the maintenance of economic development. Therefore, in most countries, Entrepreneurship has been endorsed by Business Incubation Centers (BICs) (Zulkefly et al., 2021).

The literature clearly demonstrates that the majority of industries worldwide have been generated from clusters or incubators (Rajeev et al., 2017). Business incubators as a main function, strongly facilitate new enterprises ultimately enhancing employment by generating new opportunities for jobs nationally, and by providing them technical and financial help. Further, it contributes to the creation of early-stage enterprises to also support the systems of economic development (Al-Mubaraki & Busler, 2010). The universities provide opportunities to young entrepreneurs through business incubator centers for obtaining technical skills, making protprototypes product development, and then providing access to the market to creative products (Mason & Brown, 2014).

The idea to facilitate new small businesses through business incubation plays a key role in streamlining the economic policies and practices which ultimately leads to new business development for years (Mian et al., 2021). Numerous studies have identified the potential for the creation of new businesses as a means of promoting overall economic development (Baumol, 2021; Ribeiro-Soriano, 2017). Business incubators were widely developed throughout the world as "supportive" institutions that are intended to sustain the emergence and nascent idea development of new enterprises by granting access the fundamental resources, such as infrastructure, networks, and support services (Bergek & Norrman, 200 8). The Business Incubator Centers provide important services for giving it value including three important stages: pre-incubation, incubation, and post-incubation. These services include co-working spaces, advanced scientific laboratories, training the

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business skills, technical training, mentoring, financial support, technology transfer programs, networking, etc (Mian et al., 2021). Mahmood (2015) in his study increasingly recognized that innovations and entrepreneurship are the principal drivers of the financial growth in Pakistan, thus, proceedings are being taken to excavate science the technology originalities in order to advance the groundbreaking base of the economy. Thus, the efforts for the secondary setting of the new business formations and their success shaped the business incubators in Pakistan. Therefore, the study aims to examine the critical factors of business incubators in the development of entrepreneurship.

Problem Statement

According to the researchers (Idress & Hassan, 2019), entrepreneurship has an important role in the economic progression of developed nations like the United States, and how it has likely to have a pivotal role in the case of an emerging country like Pakistan. Furthermore, Pakistan has a 175 million population, and it is the 6th populated county internationally, having 60 percent of the population under the age of 25 years. A well train and entrepreneurial-oriented population can become an asset for the developing economy (Idress & Hassan, 2019).

The government has initiatives for supporting entrepreneurship in Pakistan but there still exists a plethora of difficulties that obstruct the growth and success of SMEs. The usual persistent issues, in general, comprise extended and unscheduled power failure, poor funding from the government, stringent government rules, higher business rate, and low-profit margin, corruption, political effect, and seasonal belongings (Haleem, 2019).

According to Jaygoft (2018), start-ups and new companies fail due to the lack of support and mentoring at the early stages of development. This is because these individuals lack the necessary skills and experience to successfully run an enterprise. Despite, the growing interest in business incubators, confusion about the exact qualities of incubator performance still exists. That is, whether business incubators are certainly reaching their drives and the precise influence it has on creativities living in the incubator facilities (Olaolu & Obaji, 2020).

Objective of the Study

The purpose of this study is to use theoretical perspectives to analyze the effects of critical factors on business incubation centers in public and private institutions in Pakistan and their connections to encouraging entrepreneurship.

Review of Literature

The process of fostering an entrepreneurial culture involves encouraging an entrepreneurial mindset, fostering creativity and invention, entrepreneurial intention, encouraging an entrepreneurial orientation, and supporting the launch and expansion of new businesses.   The right working environment and ecosystem that endorses entrepreneurship in aspects of easy policy and program, funding availability, infrastructure facilities, information accessibility marketplaces, the availability of appropriate technology, and business support services are crucial components that promote entrepreneurship (Ogutu & Kihonge, 2016). According to Mahmood et al. (2015), business incubation is one of the most successful methods for fostering community entrepreneurship, supporting job creation, and fostering business opportunity diversity.

Infrastructure describes the incubator's physical facilities, such as the workstation and office furnishings. The initial generation of business incubators was characterised by this service, which is the most prevalent one offered there (Lalkaka, 2002). It also offers shared services such as conference halls, meeting rooms, administrative support, and reception (McAdam & McAdam, 2008).

Infrastructure has been named by a number of academics as one of the essential material resources that must be considered for a business incubation programme to be successful. But the fundamentals that can be used to build company incubation sustainability and competitiveness have essentially moved from tangible to intangible resources. In the current knowledge economy, a firm's intellectual capital demonstrates its resources, capabilities, and competencies (Olaolu, D. 2018).

Even when it was taken into account along with the other incubation components, infrastructure facility support had a substantial impact on the establishment of technology-based new ventures (Njau et al., 2019).

Exposure to professional networks that enable information sharing and learning as a component of business support within business start-ups received the highest rating from respondents when access to markets, channels of suppliers, networks of experts, network nodes, and external partnerships were also measured. Consequently, professional connections should be provided by business incubators in an organised manner (Njau et al., 2019). Business networks are a collection of connections made through interactions with different people or organisations that give firms access to vital resources (Pettersen et al., 2016).

It is important to continue enforcing the provision of business management services, such as marketing and business plan preparation, to ensure the success of business ventures in business incubators. Since the majority of respondents believed that the incubator did not adequately deliver these particular services, the management of the incubator should also take this into consideration (Mungai & Agnes Njeru, 2016).

Venture capital serves as a supporter by providing the necessary cash for incubators and other business organizations (Clara Wijaya Rosa et al., 2018). According to Wulan and Hermanto (2019), company incubators are essential for giving financial support for the creation of funds. Access to capital is a significant issue for refugees with entrepreneurial aspirations (Alrawadieh et al., 2019). According to Xiao and North (2018), the distribution of BIs capital assistance among the incubators is crucial. They come to the conclusion that it can be delivered as a grant, a loan, or an equity investment. According to Dee et al. (2019), startup companies stay in business incubators for an average duration of two years during which time they receive a variety of advantages like cash, office space, equipment, etc. from the incubators.

The National University of Science and Technology in Islamabad served as the first business incubator centre in Pakistan back in 2005. Additionally, many small businesses were started without any prior planning by budding entrepreneurs, and there were also established professionals who started their IT careers. Additionally, numerous backers provided mentoring, and knowledgeable financial professionals who helped the fledgling businesses financially (Mumtaz et al., 2017). Universities and Research Centers in Pakistan significantly boost the national economies through innovative research and technology transfer (Chiesa & Piccaluga, 2000; Schutte, 1999).

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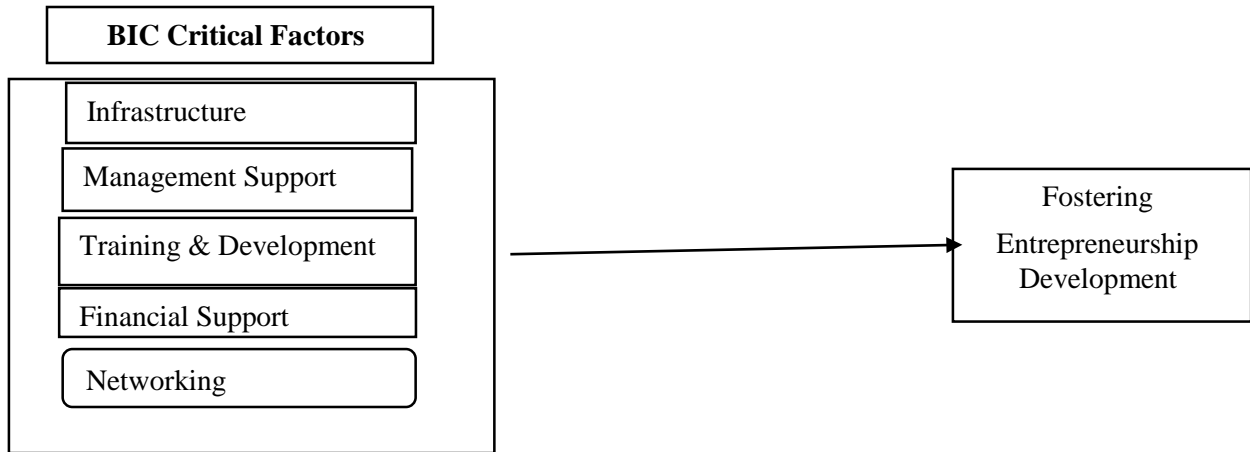
Resource Based View Theory

According to the RBV hypothesis, emerging businesses need a variety of both tangible and intangible resources, which they can then transform into goods and services that generate income for the business (Barney, 1991). According to the notion, a start-up company's ability to grow and develop depends on how effectively and efficiently it makes use of its resources and innate capabilities to gain a competitive edge through organisational processes (Somsuk et al., 2012).

According to the RBV hypothesis, emerging businesses need a variety of both assets, which they can then transform into goods and services that generate income for the business (Barney, 1991). According to the notion, a start-up company's ability to grow and develop depends on how effectively and efficiently it makes use of its resources and innate abilities to gain a competitive edge through organisational processes (Somsuk et al., 2012).

The RBV is a theory that emphasises the significance of the resources that an organisation has among the various elements influencing its performance. According to the RBV approach, an organisation can improve its performance by being able to keep some resources or develop new ones internally, comprising physical, human, and organisational resources, rather than relying on external elements that are simple for rivals to obtain (Barney et al., 2001; Wernerfelt, 1984). These assets and skills can help small businesses thrive by encouraging entrepreneurs to take advantage of opportunities and create new ones (Ferreira et al., 2010; Lin & Nabergoj, 2014).

According to Newbert's (2007) argument, the initial stages of the start-up of a new enterprise depend greatly on the availability of resources and capabilities. For instance, the availability of numerous and pertinent materials on the market aids the entrepreneur in choosing how to best utilise these resources and establish a competitive advantage. In the context of this study, an entrepreneur is a person who makes an effort to effectively employ limited resources to exploit a workable business idea by starting a new firm (Sobel, 2008; William, 2016). By starting a new business, the entrepreneur has access to more resources, which helps to boost the new business' competitiveness and point of uniqueness.

Figure 1

Theoretical Framework

BIC Critical Factors

Infrastructure

Management Support

Training & Development

Financial Support

Networking

Fostering Entrepreneurship Development

Research Methodology

This study employed a descriptive research methodology since its goal was to apply systematic and controlled data gathering and analysis to understand the current situation (Saunders et al., 2009; Creswell, 2013). The decision to utilize a descriptive research design was pertinent to this study since this type of design is employed in studies whose goals are to identify and explain the characteristics of research variables and comprehend organisational traits that share similar characteristics. The participants in this study were 16 business incubators (BIs) from public and private institutions in Pakistan. A systematic questionnaire was used to gather information from 228 incubator managers using a 5-point Likert scale using purposive sampling. Using descriptive and inferential statistics, quantitative data were examined. The PLS structural equation model, which combines the BIC crucial factors reflective components through partial regressions to evaluate route regression, serves as the final step in the quantitative analysis (Hair, 2018).

Results and Discussions

Response Rate

A total of 450 questionnaires were sent out to the respondents out of which 228 were filled in total. The response rate of 50.66 percent was regarded as acceptable in this study.

Table 1   Response Rate

	Questionnaires Administered	Questionnaires filled & returned	Percentage
Respondents	450	228	50.66%

Nature of   Business

Most of the respondents were in the technology business at 27%, followed by those in the agri-business sector at 21.6%. Those in the services and industrial sectors were each at 18.9% and the least sector was other sectors classified as a mixed-use sector at 13.5%.

Figure 2

 Nature of Business
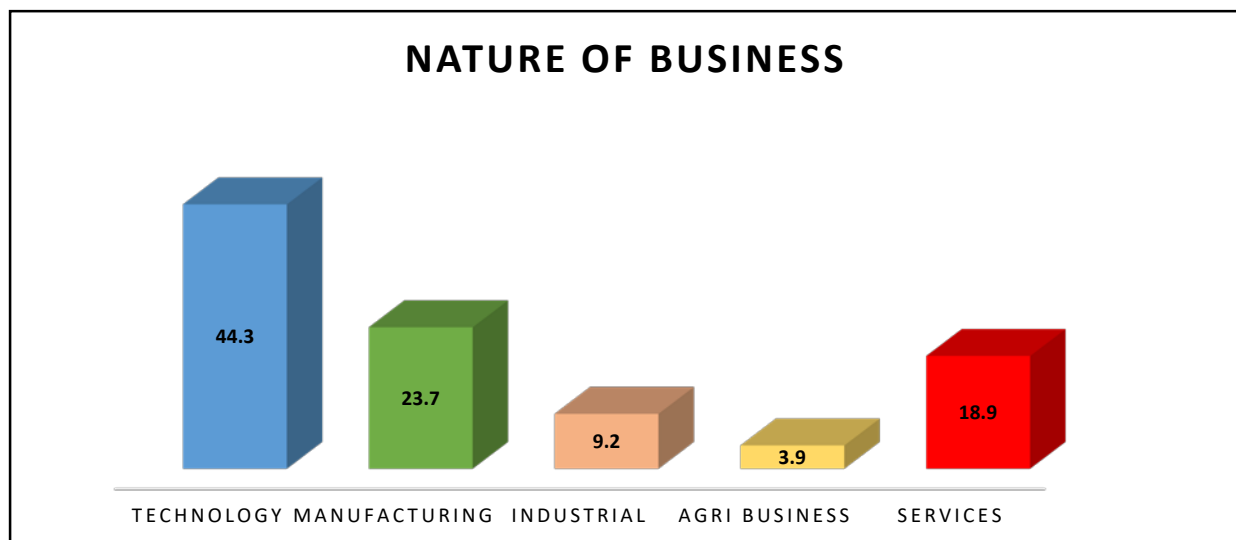
Common Method Bias (CMB)

The constructs were tested for CMB. The results indicated that the CMB was less than 0.50. The results for the common method bias are 25.831.

Assess Structural Model for Collinearity Issues

Path coefficients for each latent variable in the structural models are calculated using OLS regressions, collinearity must be investigated. The path coefficients may be biased if the model is constructed with critical levels of collinearity (Hair, 2014). The inner values of all the predictor constructs are clearly below the threshold of 5. The VIF was between 1.48 and 2.96 in the current study. It showed no multicollinearity.

Assessment of Measurement Model

A good reflective measurement model should be evaluated with regard to its reliability. This step involves assessing its various features and determining its validity. An index of reliability that is greater than or equal to 0.70 is considered acceptable (Fornell & Larcker, 1981b). The values of all AVE components are above the critical threshold value 0.50. This supports the convergent validity of the calculation. Two methods were used to evaluate the discriminant validity of various constructs. The first one was the cross-loadings analysis which is Fornell and Larcker's criterion, which calls for the highest possible AVE for every construct, and was also examined.

Measurement Model Loadings

The measurement model is a conceptual framework that explains the relationships between the latent variable components and the items. The test was carried out to determine the cross-loadings requirement for each indicator. It was then used to evaluate the model's correctness. The test was performed to determine the cross-loadings of the various indicator (item) sizes. The test results indicated that the loading requirements are higher than those of the cross-loadings (Bagozzi & Yi, 1988). The test to evaluate the cross-loadings of each indicator was performed. The test required the indicator to be at least 0.60% beyond the threshold (Hair et al., 2016). The factor loading for items is depicted in Table 2 below with a 60% or higher cut-off point acceptable. The items are distributed as follows: five items of BIC Financial Support, five items of BIC Infrastructure, and five items of BIC Management Support. Moreover, five items of BIC Networking, five items of Training and Development, and these five constructs defined all the

determinants of business incubation success factors and entrepreneurship fostering (Endogenous variable) have five items. All the items have loadings greater than 0.7 (Hair et al., 2014).

Table 2: Endogenous & Exogenous Variable, Measurement Model Loadings

Construct Code	Entrepreneurship Fostering	BIC Financial Support	BIC Infrastructure	BIC Management Support	BIC Networking	BIC Training and Development
ENPFOS1	0.816					
ENPFOS2	0.879					
ENPFOS3	0.868					
ENPFOS4	0.828					
ENPFOS5	0.819					
BICFS1		0.740				
BICFS2		0.804				
BICFS3		0.817				
BICFS4		0.740				
BICFS5		0.724				
BICINF1			0.875			
BICINF2			0.792			
BICINF3			0.842			
BICINF4			0.734			
BICINF5			0.838			
BICMGTS1				0.829		
BICMGTS2				0.767		
BICMGMTS3				0.769		
BICMGMTS4				0.770		
BICMGMTS5				0.781		
BICNW1					0.789	
BICNW2					0.778	
BICNW3					0.799	
BICNW4					0.786	
BICNW5					0.794	
BICTD1						0.758
BICTD2						0.787
BICTD3						0.777
BICTD4						0.742
BICTD5						0.796

Reliability and Validity Tests

This study focused on the reliability factors extracted from the Likert scale based on the values of the alpha coefficients ranges but 0.7 and above is acceptable (Nunnally, 1978). The alpha coefficient of Cronbach's constructs ranged from 0.740 to 0.897, which indicates that the constructs have high reliability coefficients. Entrepreneurship fostering and BIC Infrastructure had the highest reliability scores.

The average variances for each item are calculated to determine convergent validity. The constructs in the study that had average values more than 0.5 and a composite reliability value greater than 0.7 showed convergence validity (Fornell & Larcker, 1981). Table 4. shows the convergent validity and composite reliability of all the variables of the study.

Table 3. Discriminant Validity (Fornell-Larcker Criterion)

Construct/Variable	1	2	3	4	5	6
1. BIC Financial Support	**0.766**					
2. BIC Infrastructure	0.517	**0.818**				
3. BIC Management Support	0.575	0.655	**0.784**			
4. BIC Networking	0.348	0.604	0.449	**0.789**		
5. BIC Training and Development	0.648	0.546	0.576	0.326	**0.772**	
6. Entrepreneurship Fostering	0.568	0.745	0.646	0.594	0.573	0.842

Table 4: Construct Reliability and Validity

Construct/Variable	Cronbach's Alpha	rho_A	CR*	AVE*
BIC Financial Support	0.824	0.829	0.876	0.587
BIC Infrastructure	0.876	0.888	0.910	0.669
BIC Management Support	0.843	0.853	0.888	0.614
BIC Networking	0.849	0.849	0.892	0.623
BIC Training and Development	0.831	0.833	0.881	0.596
Entrepreneurship Fostering	0.897	0.898	0.924	0.710

CR* (Composite Reliability), AVE* (Average variance extracted)

The discriminant validity was assessed to see if items that are meant to be unrelated are actually related. The discriminant validity was confirmed by comparing the absolute distances between the squared multiple correlations and the relative AVEs. It was concluded that the instrument met both discriminant and convergent validity. Results are discussed in Table 4.

In this study, Henseler et al. (2016) show that the discriminant validity of two reflective constructs can be established if the HTMT value is less than 0.90. All of the HTMT values for all of the constructs in this study, as indicated in the table below (5), are less than 0.90, indicating that the reflective constructs are valid.

Table 5. Heterotrait-Monotrait Ratio (HTMT)

Construct/Variable	1	2	3	4	5	6
1. BIC Financial Support						
2. BIC Infrastructure	0.591					
3. BIC Management Support	0.678	0.743				
4. BIC Networking	0.408	0.696	0.521			
5. BIC Training and Development	0.784	0.633	0.685	0.387		
6. Entrepreneurship Fostering	0.647	0.833	0.732	0.680	0.661	

Assessment of Structural Model

 The hypotheses H1, H2, H3, H4, and H5 are accepted. In this study, the two-tailed test significance level was applied. The result of significant paths is presented in Table 6.

In order to assess the first hypothesis, the study looked at how following the BIC Financial Support values generally affected encouraging entrepreneurship. The study's results, which are shown in table (6) and figure (2), obtained a standard beta value (0.149), p-value (0.023), and t-value 2.272, all of which support the first hypothesis. Obviously, this result also supported the beneficial impact of BIC financial support on promoting entrepreneurship.

The study examined the overall impact of BIC Infrastructure on supporting entrepreneurship in order to evaluate the second hypothesis, and the results are displayed in the table as standard beta value (0.135), p-value (0.040), and t-value 2.050 shown in table (6) indicating that the second hypothesis is supported by the p-statistical value's significance at the (0.05) percent level of significance. Clearly, this result also supported the beneficial impact of BIC infrastructure support on promoting entrepreneurship.

The third hypothesis was tested by examining the overall impact of BIC Management Support on fostering entrepreneurship. The results are shown in the above table (6) and figure (2), where standard beta value (0.189), p-value (0.004), and t-value (2.870) were obtained. This means that the p-value obtained was statistically significant at the (0.05) percent level of significance,

supporting the third hypothesis. Obviously, this result also supported the beneficial impact of BIC Management's support on developing entrepreneurship.

The study examined the overall impact of BIC Networking on fostering entrepreneurship in order to test the fourth hypothesis. As shown in the above table (6) and figure (2), the study's results, which support the fourth hypothesis, were as follows: standard beta value (0.236), p-value (0.000), and t-value 3.930. Obviously, this result further supported BIC Networking's beneficial influence on supporting entrepreneurship.

In order to test the fifth hypothesis, the study looked at the overall impact of training and development on fostering entrepreneurship. As shown in the above table (6) and figure (2), this test produced results that supported the fourth hypothesis, with standard beta values of 0.183, 0.040, and 2.051, respectively. Obviously, this result also supported the beneficial role that training and development play in promoting entrepreneurship.

Table 6. Direct Path Analysis

Hypothetical Path		Standard Beta	Standard Error	T Value	P Values	Confidence Interval		Decision
						2.5%	97.5%	
H1	BIC Financial Support -> Entrepreneurship Fostering	0.149	0.066	2.272	0.023	0.023	0.280	Accepted
H2	BIC Infrastructure -> Entrepreneurship Fostering	0.135	0.066	2.050	0.040	0.010	0.259	Accepted
H3	BIC Management Support -> Entrepreneurship Fostering	0.189	0.066	2.870	0.004	0.069	0.322	Accepted
H4	BIC Networking -> Entrepreneurship Fostering	0.236	0.060	3.930	0.000	0.123	0.355	Accepted
H5	Training and Development -> Entrepreneurship Fostering	0.183	0.089	2.051	0.040	0.006	0.348	Accepted

Figure 3

Structural model (Path coefficient and P values)
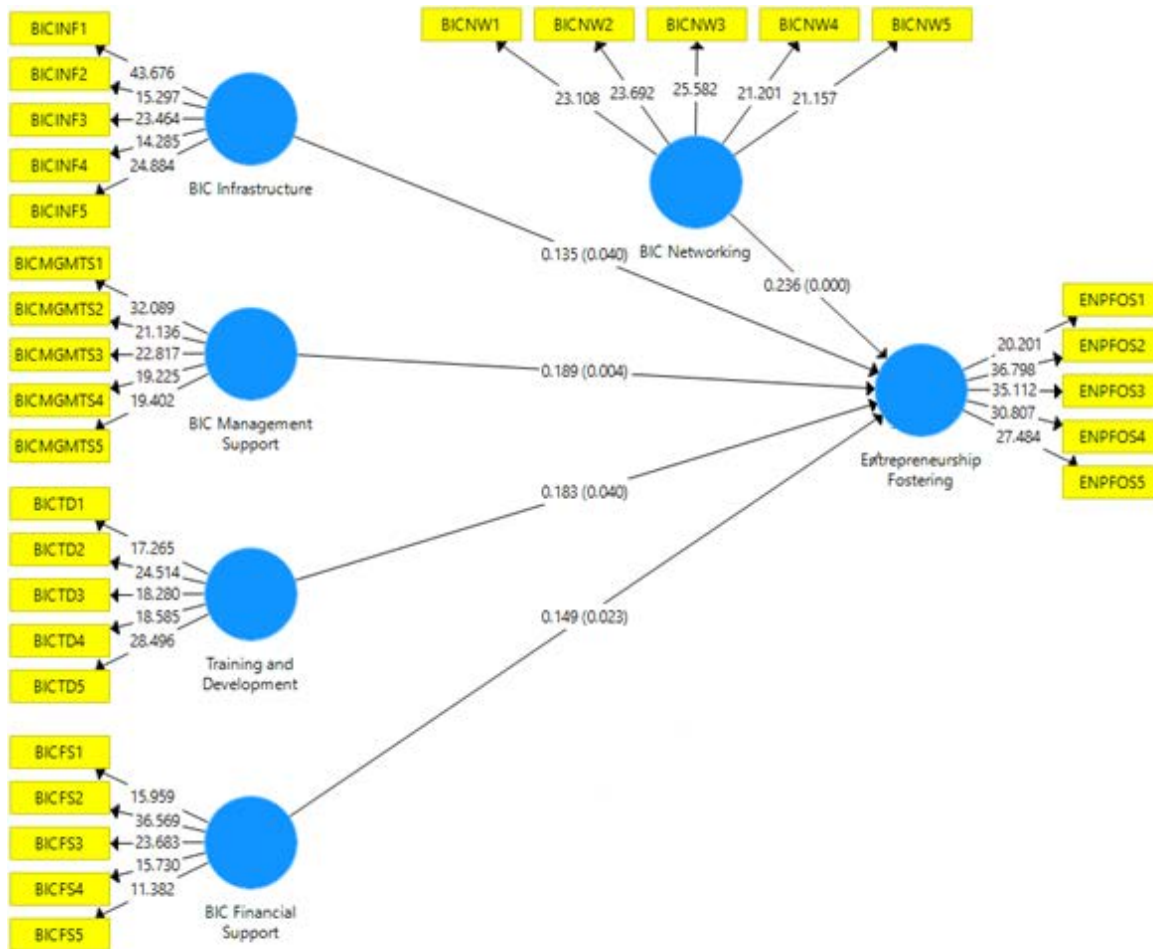
Assess Coefficient of Determination

 The prediction ability of the structural model is gauged by the R-Squared value. The square correlation between the model's accuracy in predicting outcomes and an endogenous component can be used to calculate it (Hair et al., 2014). The coefficient serves as a gauge for how much variance the exogenous structures can explain. It is frequently employed to assess the degree of predicted accuracy (Hair et al., 2014). The value is between 0 and 1. Depending on the complexity and the research subject, there are different general guidelines for accepting R-squared values (Hair, 2014). The general guideline for marketing studies is commonly known as

considerable or moderate values of 0.75, 0.50, or 0.25 for endogenous latent variables (Hair et al., 2011; Hair, 2014; Henseler et al., 2009).

The adjusted R-squared is a good indicator of the complexity of a model. It should also be used as a criterion to avoid bias against complex models (Hair et al., 2014). From the output, the dependent variable, entrepreneurship fostering value (EF) for both R Square and R Square Adjusted is 0.76, which places it firmly in the substantial (strong) range (i.e., above 0.75). Table 7 shows the report summary.

Table 7. Coefficient of determination

	R Square	R Square Adjusted
Entrepreneurship Fostering	0.760	0.752
	R Square	R Square Adjusted
Entrepreneurship Fostering	0.760	0.752

Assess Effect Size

The f-square effect size is a measure of the effects of an exogenous variable on the equilibrium value. It is commonly used to identify the effects of an exogenous variable. The values are 0.02 (small), 0.15 (medium) and 0.35 (large) effects respectively (Cohen, 1988). The effect size of less than 0.02 is not significant enough to show that there is no effect. Two predictor constructs with a medium effect size are contribution and effect size. BIC Entrepreneurial Mindset with an effect size of 0.154 (medium effect), BIC Financial Support with effect size of 0.173 (medium effect), BIC Infrastructure Support with effect size of 0.091 (small effect), BIC Management Support with effect size of 0.131 (medium effect), BIC Networking with effect size of 0.049 (small effect), BIC Training and Development with effect size of 0.149 (medium effect). Details are shown in table 8.

Table 8. Effect size F square

Variable	Effect	Effect size
BIC Financial Support	0.173	Medium
BIC Infrastructure	0.091	Small
BIC Management Support	0.131	Medium

BIC Networking	0.049	Small
BIC Training and Development	0.149	Medium
Entrepreneurship Fostering		

Model Fit & PLS Q2 Predict

In the case of PLS path modeling, the model fit has been evaluated using the variance explained model. Other studies have also added various measures of model fit, such as the goodness of fit and predictive relevance (Hair et al., 2016; Henseler & Sarstedt, 2013; Vinzi et al., 2010; Wetzels et al., 2009). The proposed model was then subjected to a validation test using the path coefficients and the variance derived from the endogenous variable.

The model's in-sample explanatory power is gauged by R2. It is frequently employed to assess the model's capacity for explanation. It is created by selecting values from the model that fall between 0 and 1 (Shmueli, 2010; Shmueli & Koppius, 2011). To support model fit, the SRMR should be near to zero and lower (0.08) (Henseler et al., 2014). The study's results revealed that the SRMR is (0.065) less than (0.08), close to zero, which indicates that the study's results support model fit (table 9).

In terms of predictive relevance, Q2 values are greater than zero (Chin, 1998). Table 10 shows that the model is considered an acceptable fit and has high predictive relevance.

Table 9. SRMR and Chi-Square

	Saturated Model	Estimated Model	Acceptable range
SRMR	0.065	0.065	0.08>
Chi-Square	1799.392	1799.392	

Table 10. PLS Q^2 Predict

Variables	RMSE	MAE	Q^2_predict
BIC Entrepreneurial Mindset	0.854	0.57	0.349
BIC Financial Support	0.671	0.435	0.568
BIC Infrastructure	0.653	0.431	0.592
BIC Management Support	0.557	0.4	0.703
BIC Networking	0.785	0.614	0.403
BIC Training and Development	0.655	0.446	0.589
Entrepreneurship Fostering	0.51	0.41	0.746

Conclusion, Recommendation, and Research Implications

Conclusion

The study's main goal is to comprehend the crucial part that business incubators play in encouraging the growth of entrepreneurship from the perceptions and experiences of business incubator managers. Business incubators are used as the units of analysis in an earlier study (Hackett & Dilts, 2004; 2008). This study, on the other hand, focuses on the vital component of university business incubators. Through the lens of the manager business incubator, the entrepreneurial process may be explored in greater detail owing to this rather unique approach. In contrast to previous studies that focus on a BI's physical facilities, professional appearance, and social networks, the study's findings show the value of using important aspects to examine the impact and process of business incubation. This information gap was noted at the beginning of the study. According to research (Arlotto et al., 2011; Zhang & Sonobe 2011; Todorovic & Moenter 2010; McAdam & Marlow 2007; McAdam & McAdam 2006; Bllingtoft & Ulhi 2005; Voisey et al., 2005), there is a substantial correlation between identity development and entrepreneurial development.

In addition, the research emphasis on a university incubator for businesses that accommodate entrepreneurs from a variety of backgrounds; in other words, not every start-up is high-tech or from the same sector. This makes comparing the results with previous literature

which primarily focuses on high-tech Enterprise development centers more fascinating (Ahmad & Ingle 2011; Cooper & Park 2008; Aerts et al., 2007; Hughes et al., 2007; McAdam & McAdam 2006; Koh et al., 2005).

Additionally, this study illustrates how crucial aspects support entrepreneurship development in public and private institutions, in contrast to earlier studies based on university BICs that emphasize the value of fostering trust between the incubates (McAdam & McAdam 2006; McAdam & Marlow 2007).

Future Recommendations

The role of university BIs in the context of knowledge transfer, learning, and opportunity recognition may be explored in future research using high-tech startups. Future studies might also look into whether the favorable outcomes of university BIC could be applied to other incubators, notably university high-tech ones. However, the theoretical underpinnings for the study's crucial BIC transformational elements provide future researchers with the opportunity to investigate the commonalities and dissimilarities between an academic BI as well as other kinds of BI between various non-academic incubator forms. A mixed method study will further enrich and increase the study's significance. The approach employed in this research is a structured questionnaire. Data may also be gathered from other parties, such as incubators and other organizations. However, it would be beneficial to concentrate exclusively on the entrepreneurship activities of incubators and to make it possible for a detailed examination of how each person's learning occurred in a BI. Future studies should examine elements like policy alignment, BI management strategy, and their interactions with incubates' personal growth.

Research Implications

Implications practitioners: According to the research, there are a variety of factors that influence the growth of entrepreneurship, and that in turn can affect how well business incubators can nurture and create new businesses. The study has the ability to contribute by outlining the crucial elements and procedures of opportunity generation. The study discovered that the knowledge gained during the incubation stage is particularly important to the process of learning.

In contrast to the unfriendly and intensely competitive workplace mentioned by the researcher (McAdam & McAdam, 2006), incubator experts should create and preserve a welcoming work

environment. Therefore, the atmosphere should also be a location in which the incubates can trust one another in order to encourage more productive networking activities (Chell & Baines 2000).

Implications for policymakers: The study's findings emphasize the significance of the vital factors that play a role in the start-up procedure. Additionally, it offers "new" perspectives on how a successful company incubator might be run. A new strategy for the policy agenda may be suggested by a depth study of how company managers investigate, discover, and create opportunities. The study's findings indicate that policymakers could be better able to allocate funds in areas like a more thoughtful approach to talent acquisition in BIs, providing pertinent information to specific incubators, having building experience and knowledge, establishing a network of support, and most importantly encouraging and facilitating learning if they have a deeper understanding of the process of business incubation.

This will promote entrepreneurial ventures in the BI and surrounding areas and help to establish and sustain a more effective BI. At some point, the expansion of entrepreneurship will exert an effect on the local economy (Pickernell et al., 2011; Packham et al., 2010; Matlay 2009,2006; Neck et al., 2004).

Last but not least, Last but not least, the study's findings show how a building with diverse tenant histories and levels of previous knowledge can promote and enable learning, which results in the creation of new business possibilities. Policymakers should take into account switching investment from high-tech startups to mixed hatches in light of this significant discovery.

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