International Journal of Education, Modern Management, Applied Science & Social Science (IJEMMASSS)
ISSN :2581-9925, Impact Factor: 7.555, Volume 07, No. 02(IV), April- June, 2025, pp. 33-43

Role of Business Incubators in Driving Economic Growth and Fostering Entrepreneurship in India

Komal Sejwal[1*] | Richa Sharma[2]

[1]Research Scholar, Department of Commerce and Management, Banasthali Vidyapith, Rajasthan.
[2]Research Scholar, Department of Commerce and Management, Banasthali Vidyapith, Rajasthan.

*Corresponding Author: sejwalkomal22@gmail.com

ABSTRACT

Purpose– The study proposes to explore the connection between the increasing Business Incubators and their impact on the state's Gross Domestic Product (GDP). Given the role played by startups in promoting economic growth by generating employment and improving standard of living. The study aims to explore the impact of Business Incubators on economic performance at the state level in India.

Design/methodology/approach– The study harnesses historical data published by Indian government agencies, as well as international reports and other credible sources. States to be categorised into four regions and analysed using SPSS software by running correlation and regression between number of incubators and the states' GDP.

Findings– The finding exhibits true relationship between number of business incubators and the states' GDP. It has been seen that the states with more concentration of incubators display positive contributions to their economic performance, demonstrating the impact created by incubators on stimulating entrepreneurship and innovation.

Originality/value– This study offers novel insights into the evidences provided by business incubators and their effectiveness in fostering economic performance at the state level in Indian context. It underscores the pivotal role played by government in scaling the incubation initiatives to bolster innovation and economic resilience across India.

Keywords*: Business Incubators, Economic Performance, Entrepreneurship, Innovation, Women Entrepreneurs.*

Introduction

In today's globalized and multipolar world, economic stability is indispensable for all the economies. To achieve economic stability, nations around the world are investing heavily to promote economic growth and development. In India, where the demographic dividend is at its highest, creating enough jobs to support general well-being is essential to achieving economic stability. Initiatives like Startup India, Digital India, Skill India, and others are receiving significant backing from the Indian government. Promoting and supporting business incubators is one of the most crucial initiatives for developing startup culture. A business incubator is a facility that offers shared office services, reasonably priced space, and support for business growth in an environment that supports the startups' survival, and early-stage expansion (Allen & Mccluskey, 1990). Business Incubators offer resources like in-depth training, customised mentorship, network building, and access to essential financial resources, hence play a critical role in igniting the entrepreneurial ecosystem(Sanyal & (Sultanate of Oman), 2018).

India's economy has grown at one of the quickest rates in the world in recent years, and entrepreneurship is essential to innovation, job creation, and economic growth. The entrepreneurial ecosystem has been further expanded by the Indian government's programs, such Startup India and Make in India, which promote innovation and a self-reliant culture (David et al., 2020). However, due to restricted access to funding, mentoring, infrastructure, and market networks, the process of turning entrepreneurial ideas into long-lasting firms continues to be difficult. By giving entrepreneurs the required tools, direction, and ecosystem support, business incubators have emerged as key facilitators in tackling these issues(Al- Mubaraki & Busler, 2010). These incubators serve as

stimulants to support early-stage businesses, encourage creativity, and quicken their rate of expansion(Aithal et al., n.d.).

India has seen a tremendous evolution in business incubators, which now provide a structured setting for learning, development, and cooperation. In order to scale operations and break into competitive markets, they give businesses access to networking platforms, investment possibilities, and industry expert mentorship (Dikshit et al., 2023). Furthermore, in order to match their initiatives with both domestic and international trends, incubators frequently concentrate on sector-specific innovation, such as in the fields of technology, healthcare, and agriculture. They help build a strong entrepreneurial environment by doing this, which is essential for long-term economic growth(Mohamed et al., 2024).

The role of business incubators extends beyond supporting individual startups; they also contribute to regional economic development by creating employment opportunities, attracting investments, and fostering a culture of innovation(Siddiqui & Ahmad, 2022). In a country like India, where the startup ecosystem is still maturing, incubators play a crucial role in bridging the gap between ideation and commercialization. This research article explores the multifaceted impact of business incubators in driving economic growth and fostering entrepreneurship in India(López-Claros et al., n.d.), highlighting their significance in shaping the future of the nation's entrepreneurial landscape.

Review of Literature

Concept of Business Incubators

Business incubators are distinct programs created to offer a variety of resources and services to early-stage entrepreneurs in order to help their growth and development. These services customarily consist of networking opportunities, synergetic workspaces, mentorship, and financial gateway(Yuan et al., n.d.). By providing such all-encompassing assistance, incubators significantly influence the success paths of businesses, according to research (Kehinde Feranmi Awonuga et al., 2024) that focusses on the US. By providing such resources, business incubators lower the initial risk and expense of starting a new business, enabling business owners to dedicate more time to improving their product or services. Such a conducive environment stimulates creativity and cooperation, helping companies to overcome challenges and meet key goals in a shorter period of time (S. Sharma & Vohra, 2021). Business incubators are essential to stimulating economic growth, fostering an innovative culture, and bolstering the entrepreneurial ecosystem by supporting new enterprises (Bagiyam et al., 2024; Madaleno et al., 2022).

Business incubators are now central institutions in entrepreneurship development and stimulation of national economic growth, particularly in developing economies like India(Carayannis & Von Zedtwitz, 2005). Business incubators facilitate start-up companies to get over initial challenges, thus igniting innovation and national economic growth. This literature review examines business incubators' diverse roles in India, their operation, their impact on start-ups, and their impact on entrepreneurship and national economic growth in general.

Understanding Business Incubators

Business incubators are institutions that facilitate the acceleration of start-up business ventures towards growth and success through various business support services and resources. Business incubators provide services that typically include infrastructure, capital, advice, shared services, and networks of contacts. In India, incubators facilitated start-ups in accessing infrastructure and advice to compete in business. The Indian incubators, according to research (A. Sharma et al., 2019), provide a conducive business environment to start-ups in that it facilitates access to crucial resources and networks, thereby reducing new business mortality.

Functions of Business Incubators

The primary functions of business incubators encompass a range of support services aimed at fostering the growth of startups. These include:

- **Providing Infrastructure**: Incubators offer affordable office spaces equipped with essential amenities, reducing the operational costs for startups (Dikshit et al., 2023).
- **Access to Funding**: They facilitate connections with potential investors and may offer seed funding to promising ventures(Hakim et al., 2024).
- **Mentorship and Training**: Through experienced mentors, incubators provide guidance on business strategies, market analysis, and management practices (Ravichandran & Dixit, 2024).

- **Networking Opportunities**: Incubators create platforms for startups to connect with industry experts, potential clients, and other entrepreneurs, fostering collaboration and knowledge exchange (Mohamed et al., 2024; Panda et al., n.d.).
- **Regulatory Support**: They assist startups in navigating legal and regulatory frameworks, ensuring compliance and smooth business operations (Deyanova et al., 2022).

These functions collectively enhance the survival and success rates of startups, enabling them to contribute effectively to the economy.

Promoting Entrepreneurship through Incubators

By offering services outlined above, business incubators become a driving force of entrepreneurship (Kaggwa et al., 2024). Business incubators lower entry barriers for would-be entrepreneurs by mitigating new business risks. Indian incubators have been in a position to facilitate innovation and advancement in technologies in start-ups, thus fostering a dynamic entrepreneurship culture (Rakshit & Saini, 2022).

Defining Entrepreneurship and Its Economic Benefits

Entrepreneurship involves designing, beginning, and operating a new business, often a small business that sells a product, process, or service for hire or sale. Entrepreneurs are innovators that bring about change in the marketplace through new products or services, thus inducing economic activity (Yuan et al., 2024). Their work brings job creation, productivity, and new market creation (Isher & Gangwar, 2024). The IZA World of Labor (2014) report indicates that entrepreneurs contribute to economic growth through new technologies, products, and services, and also to improving competition, making existing firms more competitive.

Economic Development and Growth

Economic development is a process of enhancing a nation's political, social, and economic well-being of its nationals (Schumpeter, 2021). Economic growth is a sub-field of economic development that deals with a nation's expansion in terms of its production of goods and services, measured in terms of gross domestic product (GDP) (Hill, 2023). GDP growth rate, employment, and infrastructure development are a few of the indicators of economic growth.

The Interplay between Entrepreneurship, Incubators, and Economic Growth

Entrepreneurship serves to catalyze economic growth by inducing innovations that lead to new industries and the revival of existing industries. Business incubators supplement this impact by providing support to start-ups to enable them to survive initial hardships, thereby ensuring their survival chances (Panda et al., 2025). Business incubation in India has been linked to remarkable economic achievements. Economic growth is boosted by incubators in that they enable start-ups that generate employment, innovations, and GDP (Ogutu & Kihonge E, 2013).

Indicators of Economic Growth and the Role of Entrepreneurship

Key indicators of economic growth include:

- **Gross Domestic Product (GDP)**: The total value of goods and services produced over a specific time period.
- **Employment Rates**: The proportion of the labor force that is employed.
- **Innovation Levels**: Measured by the number of patents filed, research and development expenditure, etc.
- **Productivity**: The efficiency of production measured by output per labor hour.

Entrepreneurship positively impacts these indicators in that it introduces new firms that contribute to GDP enhancement, job provision, encouragement of innovation in terms of new services and goods, and productivity enhancement via new processes. According to G. Sharma (2019), entrepreneurship enhances companies' productivity and economies, thereby accelerating structural change by replacing old, sclerotic firms.

Correlation between Business Incubators and Economic Growth

The increasing number of incubators is linked to economic growth, as incubators enable start-up founding and scaling, which is a primary driver of employment and innovation (Ogurtsov et al., 2016). In India, government support has led to the creation of various incubators that are entrepreneurship-oriented (Pradhan et al., 2020). Literature indicates that places that have a high concentration of

incubators have more dynamic economic growth due to the successful commercialization of innovations and high-quality job creation (Lalkaka, 2002). A study conducted, established that business incubators create value by combining the start-up's entrepreneurial character with resources that new companies would otherwise not possess, thus making a great impact on economic growth (Omweri, 2016).

Business incubators play a catalyzing role in entrepreneurship nurturing and inducing economic growth, particularly in emerging economies like India (G. Sharma, 2019). By providing fundamental resources such as infrastructure, advice, finance, and networks, incubators enable start-up survival and success, improving their survival and success chances (Sharma et al., 2023). This, in turn, induces innovation, job creation, and marketplace expansion, all of which result in economic progress. Entrepreneurship is a force that induces economic growth that stimulates productivity, enhances competitiveness, and reduces socio- economic challenges through innovative solutions (Bonfanti et al., 2025). The expansion of business incubators is positively associated with economic progress, a trend that is visible in India's vibrant start-up ecosystem. With government encouragement and a boost in private sector involvement, incubators can continue to fuel economic progress by nurturing high- impact start-ups. As entrepreneurship continues to revolutionize the global economy, incubators' strategic role in sustaining and scaling up business will continue to be fundamental to long-term progress (Salem, 2014).

Methodology

This study is a prescriptive one. The study employed a mixed design of study that utilized desktop, case studies based on historical facts. A case study is found to be the most effective research method that is able to capture in-depth details of complex phenomena (Eisenhardt, 1989; Yin, 1994). The study is a prescriptive one in nature. The study explored regional distribution of incubators in India in terms of northern, southern, eastern, and western regions of countries in comparison to selected states' GDP. The data was compared to describe business incubators' role in entrepreneurship development in the entire nation, determining key indicators of success measured in terms of GDP. The method employed was a broad literature review in terms of regional economic performance in comparison to the number of business incubators. In addition to a regional survey of northern, southern, eastern, and western regions of a country, it was explored comparing GDP, number of incubators, and Total Entrepreneurship Activity, to ascertain any correlation. The data gathered, presented in tables below, was explained and interpreted in a statistical way to enable inferences to be made.

States/ Uts	No. of BIs	GDP (in Crores) 2022-	Tea (%)
Andhra Pradesh	47	₹ 7,64,685.00	6.50
Arunachal Pradesh	1	₹ 18,791.00	14.10
Assam	17	₹ 2,81,093.00	14.10
Bihar	18	₹ 4,25,384.00	14.10
Chandigarh	7	₹ 33,842.00	8.40
Chhattisgarh	17	₹ 3,02,119.00	14.10
Delhi	93	₹ 6,25,981.00	8.40
Goa	16	₹ 54,436.00	12.60
Gujarat	89	₹ 14,65,998.00	12.60
Haryana	36	₹ 5,87,198.00	8.40
Himachal Pradesh	6	₹ 1,33,372.00	8.40
Jammu and Kashmir	9	₹ 1,29,055.00	8.40
Jharkhand	10	₹ 2,65,121.00	14.10
Karnataka	127	₹ 13,35,052.00	6.50
Kerala	56	₹ 5,96,237.00	6.50
Madhya Pradesh	45	₹ 6,22,908.00	12.60
Maharashtra	133	₹ 22,41,196.00	12.60
Manipur	1	₹ 22,256.00	14.10
Meghalaya	2	₹ 26,789.00	14.10
Mizoram	6	₹ 32,829.00	14.10
Nagaland	3	₹ 20,154.00	14.10
Odisha	46	₹ 4,80,402.00	14.10
Puducherry	2	₹ 25,788.00	6.50
Punjab	35	₹ 4,65,079.00	8.40
Rajasthan	50	₹ 7,82,287.00	12.60

Sikkim	3	₹ 22,948.00	14.10
Tamil Nadu	148	₹ 14,51,929.00	6.50
Telangana	87	₹ 7,25,898.00	6.50
Tripura	2	₹ 42,758.00	14.10
Uttar Pradesh	117	₹ 13,24,255.00	8.40
Uttarakhand	17	₹ 1,98,341.00	8.40
West Bengal	24	₹ 8,39,805.00	14.10

Figure 1: Number of Business Incubators, GDP of States and UTs, Total Entrepreneurial Activity (TEA)

Data Analysis Descriptive Statistics

Number of Business Incubators

The study was to ascertain the number of business incubators in selected Indian states. The results of the study are shown in Figure 1. The results of the study show that Tamil Nadu recorded the maximum (148) number of incubators up to 2024, followed by Maharashtra recording 133 incubators in 2024 and then Karnataka recording 127 incubators up to 2024. Uttar Pradesh recorded 117 incubators up to 2024, and Delhi recorded 93 incubators up to 2024. The North Eastern states recorded fewer incubators, predominantly at 1, 2, and 3 up to 2024.

The study was to ascertain the Gross Domestic Product (GDP) of various selected Indian States. Gross Domestic Product (GDP) was used to show the economic growth of such countries. The results of the study show that Maharashtra, Gujarat, and Tamil Nadu recorded the maximum economic growth over time compared to other selected states. The Eastern Region recorded the minimum growth in the economy. Compared to the number of incubators, high-growing states also possess a high number of incubators.

Trends in GDP of Selected Countries

The study also attempted to determine the GDP of Selected States. In the Northern region, Uttar Pradesh had the maximum GDP, while in the Western region, Maharashtra recorded the highest. In the Southern region, Tamil Nadu had a higher GDP. In the Eastern region, West Bengal recorded higher GDP, but in the northeastern states, Assam had the maximum GDP.

Trends in TEA of Selected Countries

In this section, the study attempted to ascertain the Total Early-Stage Entrepreneurial Activity (TEA) of selected areas. The statistics reveal that the East region has the maximum percentage of TEA (14.10%), followed by the West (12.60%). This means that there are more people in these areas that are in the process of starting a new business or that own and manage a business that is younger than 42 months old. The minimum percentage of TEA is in the South (6.50%), suggesting fewer options or entrepreneurship stimuli in this region. The North has a medium percentage of TEA (8.40%), suggesting a midpoint between challenges and entrepreneurship potential in this region. The statistics can be used to ascertain entrepreneurship activity in various areas and ascertain variables that impact it.

Inferential Statistics

Regression analysis (Sykes, n.d.) was used to ascertain whether there is a correlation between a different region's economic growth and the number of incubators. GDP of States was used as a proxy for entrepreneurship development and financial performance of sampled states. The results that were found are presented below.

The purpose of the study was to ascertain a correlation between the number of incubators and a country's economic growth. Gross Domestic Product (GDP) and Total Early Entrepreneurship Activity (TEA) were used as independent variables. The results of the study confirmed that there was a highly strong correlation (R = 0.939) between the number of incubators and a country's economic growth. The result of the study also confirmed that the adjusted R-squared is 0.873. This indicates that a change in a country's economic growth explains 87.3% of the total variance in a state's number of incubators.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.939[a]	.881	.873	15.679
a. Predictors: (Constant), GDP(in Crores), TEA				
b. Dependent Variable: No. of BIs				

Regression Coefficients Analysis

Standardized coefficients are used to replace the unknown beta values in the regression model. The beta values are reflective of the direction and magnitude of the association between the independent variables (GDP and TEA) and the dependent variable (Number of Business Incubators)(Sarstedt & Mooi, 2019).

The significance of each predictor is given by the p-value in the "Sig." column. A p-value less than 0.05 indicates a statistically significant effect at a 95% confidence level, suggesting that the variable has an actual effect. If the p-value is more than 0.05, the predictor is not a meaningful explanation of the dependent variable.

Regression Equation

Since the stochastic error term (ε) is assumed to be zero, the regression equation is:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon}$$

$$\mathbf{Y = 38.469 + 6.854E{-}5(GDP) - 3.067(TEA)}$$

Where:

- **Y** = Number of Business Incubators (Dependent Variable)
- $\mathbf{X_1}$ = Gross Domestic Product (GDP)
- $\mathbf{X_2}$ = Total Early-Entrepreneurship Activity (TEA)
- $\boldsymbol{\beta_0}$ = Constant (Intercept)
- $\boldsymbol{\beta_1}$, $\boldsymbol{\beta_2}$ = Regression Coefficients
- **ε** = Random error term

The analysis shows that GDP has a positive impact on business incubators, indicated by its high t-value and low p-value. This shows that high GDP areas have more business incubators, possibly due to more financial support and infrastructure to facilitate entrepreneurship.

Contrarily, TEA is a statistically significant yet negatively related variable, indicating a reverse correlation between entrepreneurship and formal incubation. This would imply that in areas of high entrepreneurship, there would be support systems of a different nature in place, rendering formal incubation programs unnecessary.

The model is a good fit, explaining 88.1% of the variance in business incubators, indicating a high fit (R^2 = 0.881). Further, a low multicollinearity (VIF < 10) ensures that GDP and TEA each independently explain variance in the dependent variable without having overlapping effects.

Coefficients[a]								
Model		Unstandardized		Standardized	t	Sig.	Collinearity	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	38.469	11.510		3.342	.002		
	TEA	-3.067	.920	-.222	-3.336	.002	.928	1.078
	GDP(in	6.854E-5	.000	.855	12.863	.000	.928	1.078
a. Dependent Variable: No. of BIs								

Analysis of Variance

Analysis of Variance (ANOVA) was employed to ascertain the goodness of fit of the regression model. The analysis results indicated that the regression model was significant at 0.1% (p = 0.000). This shows that the model is highly accurate in forecasting the future impact of economic growth, measured in terms of GDP and TEA, on business incubators. Similarly, it shows that business incubators can impact economic growth.

The calculated F-value (107.556) is highly higher than the F-Critical value, indicating that independent variables (GDP and TEA) significantly impact the dependent variable (number of business incubators). Because the p-value is less than 5%, it shows that business incubators play a crucial role in entrepreneurship and economic growth. This verifies that the model is sufficient in interpreting business incubation's relationship to economic growth.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52881.690	2	26440.845	107.556	.000[b]
	Residual	7129.185	29	245.834		
	Total	60010.875	31			

a. Dependent Variable: No. of BIs

b. Predictors: (Constant), GDP(in Crores), TEA

Residual Statistics

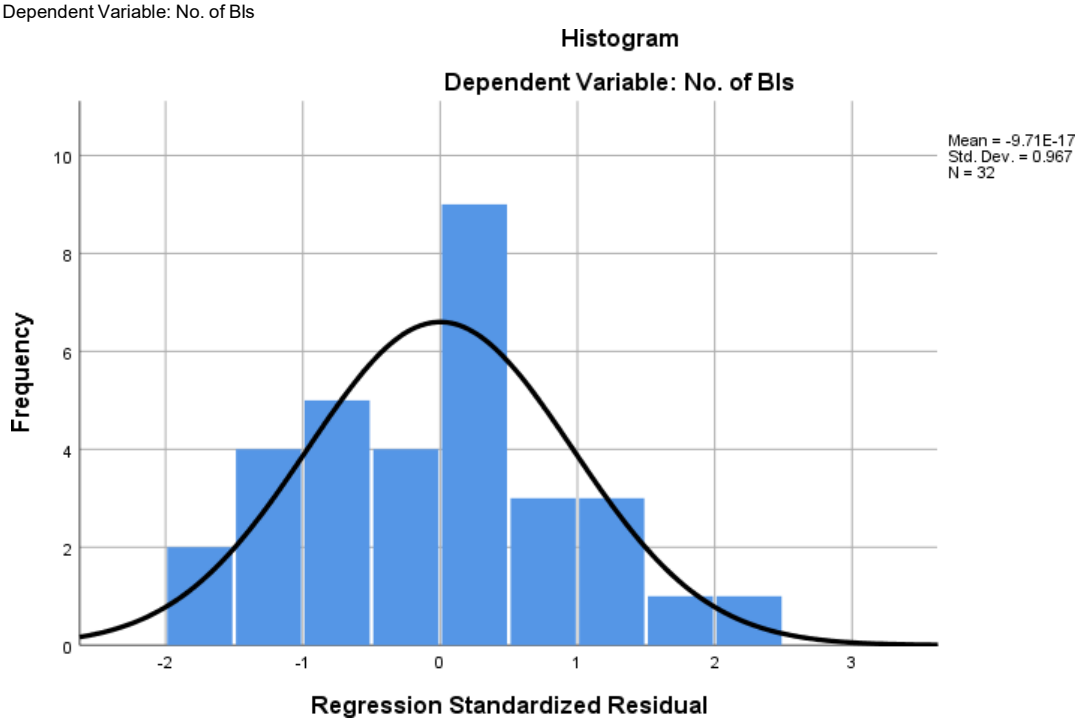
The residual statistics also tell us that there is a good fit of the regression model in forecasting business incubators. The predicted values range between -3.49 to 153.43, averaging 39.69. The residuals (errors) range between -28.78 to 37.39, averaging 0.000, indicating that there is no bias in prediction.

The standardized predicted values and residuals are evenly distributed, having means of 0.000 and standard deviations of approximately 1.000, indicating that there are no outliers in the data. Overall, the error of the model is in a tolerable range, validating its credibility.

Residuals Statistics[a]

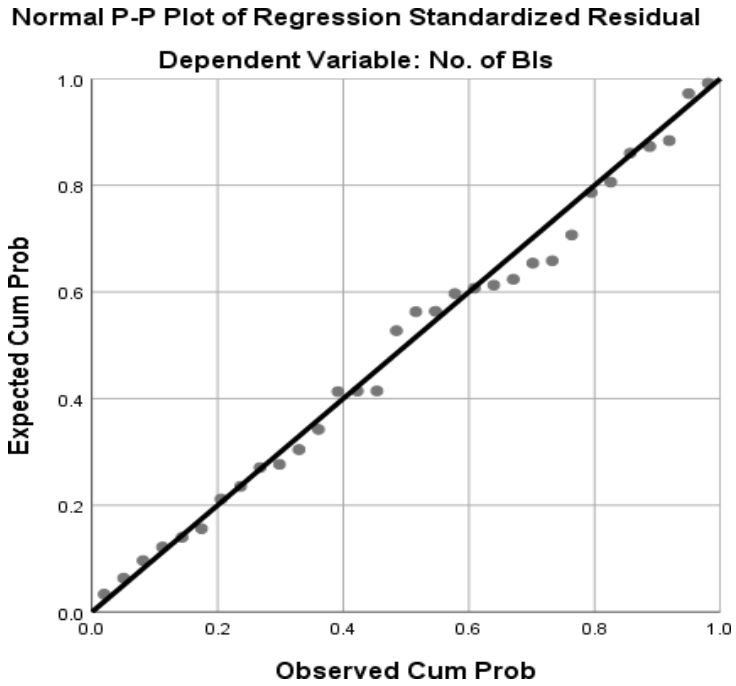
Minimum		Maximum	Mean	Std. Deviation	N
Predicted Value	-3.49	153.43	39.69	41.302	32
Residual	-28.780	37.391	.000	15.165	32
Std. Predicted Value	-1.045	2.754	.000	1.000	32
Std. Residual	-1.836	2.385	.000	.967	32

a. Dependent Variable: No. of BIs



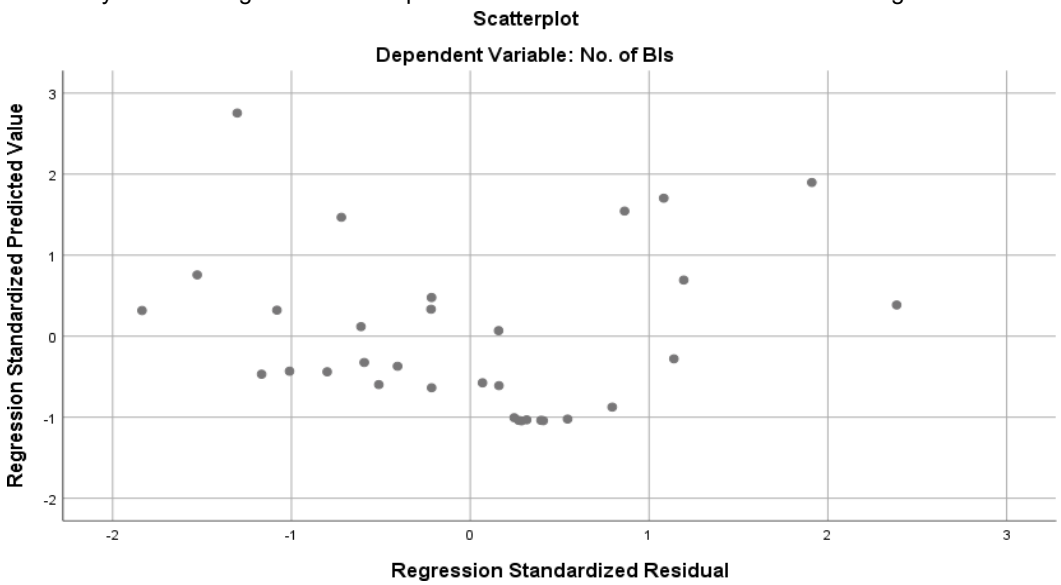
The histogram of regression standardized residuals of the dependent variable (No. of BIs) is a near-normal distribution. The residual's mean is close to zero, suggesting that there is no bias in the prediction of the model, while a standard deviation of 0.967 indicates a well-distributed error structure.

Most of the residual's cluster around zero, with fewer in the extremes, justifying the regression analysis's assumption of normality. The residuals, in general, follow a normal distribution, confirming the credibility of the model.



The Normal P-P Plot of regression standardized residuals of the dependent variable (No. of BIs) verifies that there is a normality assumption. The points are close to the diagonal line of reference, indicating that the residuals are almost normally distributed.

This means that the regression model meets the normality assumption, enhancing its validity and accuracy in estimating the relationship between business incubators and economic growth.



The scatterplot of standardized residuals versus standardized predicted values is employed to verify linearity and homoscedasticity assumptions. The points in the graph appear to be dispersed randomly without any particular trend, suggesting that the residuals are evenly distributed.

This indicates that there is no heteroscedasticity problem in the model and that the constant variance condition is met. The plot generally verifies that the regression model is accurate.

Conclusion

The findings of this research affirm a close link between business incubation in a country and economic development (GDP). The evidence confirms previous studies that link entrepreneurship to economic progress in job creation, income distribution, and poverty alleviation.

The work shows that GDP has a positive impact on business incubation, but the negative impact of TEA shows that there is a need to carry out more studies. Overall, investing in business incubation is a way of developing economies, hence business incubation is a useful tool in entrepreneurship and sustainable development.

Recommendation

Business incubators must be accepted as a key policy instrument for entrepreneurship promotion and economic growth. Governments and policymakers must endeavour to enhance economic policies that support GDP growth, given that it has a direct bearing on business incubator growth.

There is also a need to conduct more studies to ascertain the negative effects of TEA on incubation and to present potential barriers to be addressed. Regular monitoring of business incubation programs is essential to ensure their effectiveness in promoting innovation, job creation, and long-term economic sustainability.

References

1. Aithal, P., Engineering, S. A.-I. J. of A., & 2023, undefined. (n.d.). Super Innovation in Higher Education by Nurturing Business Leaders through Incubationship. *Papers.Ssrn.Com*. Retrieved February 8, 2025, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4673874
2. Allen, D. N., & Mccluskey, R. (1990). *Structure, Policy, Services, and Performance in the Business Incubator Industry*.
3. Al-Mubaraki, H. M., & Busler, M. (2010). Business incubators: Findings from a worldwide survey, and guidance for the GCC states. *Global Business Review*, *11*(1), 1–20. https://doi.org/10.1177/097215090901100101
4. Bagiyam, D., Irfan, M., Singh, S., & Dias, R. (2024). *Business Incubators as Tools for Innovation and Growth of Entrepreneurship*. 115–144. https://doi.org/10.4018/979-8-3693-4302-9.CH005
5. Bonfanti, A., Mion, G., Vigolo, V., & De Crescenzo, V. (2025). Business incubators as a driver of sustainable entrepreneurship development: evidence from the Italian experience. *International Journal of Entrepreneurial Behaviour and Research*. https://doi.org/10.1108/IJEBR-05-2024-0500/FULL/HTML
6. Carayannis, E. G., & Von Zedtwitz, M. (2005). Architecting gloCal (global-local), real-virtual incubator networks (G-RVINs) as catalysts and accelerators of entrepreneurship in transitioning and developing economies: Lessons learned and best practices from current development and business incubation practices. *Technovation*, *25*(2), 95–110. https://doi.org/10.1016/S0166-4972(03)00072-5
7. David, D., Gopalan, S., & Ramachandran, S. (2020). *ADBI Working Paper Series THE STARTUP ENVIRONMENT AND FUNDING ACTIVITY IN INDIA Asian Development Bank Institute*. https://www.adb.org/publications/startup-environment-and-funding-activity-india
8. Deyanova, K., Brehmer, N., Lapidus, A., Tiberius, V., & Walsh, S. (2022). Hatching start-ups for sustainable growth: a bibliometric review on business incubators. *Review of Managerial Science*, *16*(7), 2083–2109. https://doi.org/10.1007/S11846-022-00525-9
9. Dikshit, S., Homavazir, Z., Gambhir, V., & Homavazir, M. (2023). The Role of Business Incubators in Fostering Innovation and Technological Advancement in India. *AMC Indian Journal of*
10. *Entrepreneurship*, *6*(2–3), 52–63. https://doi.org/10.17010/AMCIJE/2023/V6I2-3/173337
11. Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Https://Doi.Org/10.5465/Amr.1989.4308385*, *14*(4), 532–550. https://doi.org/10.5465/AMR.1989.4308385
12. Hakim, A. I., Sukimi, M. F., & Rahma, A. H. A. (2024). Exploring the Role of Business Incubators to Sustainable Startups: A Systematic Literature Review. *Paper Asia*, *40*(5), 307–320. https://doi.org/10.59953/paperasia.v40i5b.250

13. Hill, E. (2023). What Is Economic Development? And What Is the Job of an Economic Development Professional? *Economic Development Quarterly*, *37*(1), 34–48. https://doi.org/10.1177/08912424221147013

14. Isher, A. K., & Gangwar, V. P. (2024). Driving Innovation and Economic Development: The Role of Business Incubators in Agri-Tech Start-Up Ecosystems. *Economic Affairs (New Delhi)*, *69*(2), 831– 841. https://doi.org/10.46852/0424-2513.3.2024.7

15. Kehinde Feranmi Awonuga, Noluthando Zamanjomane Mhlongo, Funmilola Olatundun Olatoye, Chidera Victoria Ibeh, Oluwafunmi Adijat Elufioye, & Onyeka Franca Asuzu. (2024). Business incubators and their impact on startup success: A review in the USA. *International Journal of Science and Research Archive*, *11*(1), 1418–1432. https://doi.org/10.30574/IJSRA.2024.11.1.0234

16. Lalkaka, R. (2002). Technology business incubators to help build an innovation-based economy. *Journal of Change Management*, *3*(2), 167–176. https://doi.org/10.1080/714042533

17. López-Claros, A., Khalil, M., … E. O.-I. for D. R., & 2010, undefined. (n.d.). Enabling innovative entrepreneurship through business incubation. *Springer*. Retrieved February 8, 2025, from https://link.springer.com/chapter/10.1057/9780230285477_2

18. Madaleno, M., Nathan, M., Overman, H., & Waights, S. (2022). Incubators, accelerators and urban economic development. *Urban Studies*, *59*(2), 281–300. https://doi.org/10.1177/00420980211004209

19. Mohamed, W., Ramadan, M., Rezk, A., Soliman, A., Piccinetti, L., Santoro, D., & Sakr, M. M. (2024).

20. The role of technological incubators in fostering entrepreneurial growth: the case of Egyptian universities and research centres. *Jssidoi.OrgW Mohamed, MRA Rezk, A Soliman, L Piccinetti, D Santoro, MM SakrInsights into Regional Development, 2024•jssidoi.Org*, *6*(3). https://doi.org/10.70132/d2467724723

21. Ogurtsov, E. S., Rylov, A. A., Durdyeva, D. A., Lebedev, N. A., Khachaturyan, K. S., Safyan, A. M.,

22. Rochev, K. V., & Tsareva, G. R. (2016). The role of business incubators in supporting economic growth and advancement of small business of the russian federation. *Indian Journal of Science and Technology*, *9*(29). https://doi.org/10.17485/ijst/2016/v9i29/89339

23. Ogutu, & Kihonge E. (2013). Impact of Business Incubators on Economic Growth and

24. Entrepreneurship Development. In *International Journal of Science and Research (IJSR) ISSN* (Vol. 5). www.ijsr.net

25. Omweri, K. (2016). *The Role of Business Incubation Centers in Promoting Youth Entrepreneurship in Kenya: A Case of Youth Entrepreneurial Program at Nailab Center*. http://erepository.uonbi.ac.ke/handle/11295/98307

26. Panda, L., Rath, K., and, N. R.-P. E., & 2025, undefined. (n.d.). Entrepreneurial Empowerment: Maximizing Potential Through Business Incubators. *Igi-Global.ComLP Panda, KC Rath, NVJ RaoPromoting Entrepreneurship and Innovation Through Business Incubation, 2025•igi-Global.Com*. Retrieved February 8, 2025, from https://www.igi-

27. global.com/chapter/entrepreneurial-empowerment/361334

28. Pradhan, R. P., Arvin, M. B., Nair, M., & Bennett, S. E. (2020). The dynamics among entrepreneurship, innovation, and economic growth in the Eurozone countries. *Journal of Policy Modeling*, *42*(5), 1106–1122. https://doi.org/10.1016/j.jpolmod.2020.01.004

29. Rakshit, P., & Saini, A. K. (2022). Role of Business Incubator and Innovative Practices in

30. Entrepreneurial Development. *Entrepreneurial Innovations, Models, and Implementation Strategies for Industry 4.0*, 137–150. https://doi.org/10.1201/9781003217084-8

31. Ravichandran, R., & Dixit, P. (2024). Empowering the Next Generation of Entrepreneurs: The Role of Innovation and Incubation Centres. *Journal of Vocational Education Studies*, *7*(1), 81–100. https://doi.org/10.12928/JOVES.V7I1.8389

32. Salem, M. I. (n.d.). The Role Of Business Incubators In The Economic Development Of Saudi Arabia. In *International Business & Economics Research Journal* (Vol. 13, Issue 4).

33. Sanyal, S., & (Sultanate of Oman), M. W. H. (2018). The Role of Business Incubators in Creating an Entrepreneurial Ecosystem: A Study of the Sultanate of Oman. *Indian Journal of Commerce & Management Studies*, *IX*(3), 09. https://doi.org/10.18843/ijcms/v9i3/02

34. Sarstedt, M., & Mooi, E. (2019). *Regression Analysis*. 209–256. https://doi.org/10.1007/978-3-662- 56707-4_7

35. Schumpeter, J. (2021). The theory of economic development. *The Theory of Economic Development*, 1–234. https://doi.org/10.4324/9781003146766/THEORY-ECONOMIC-DEVELOPMENT-JOSEPH- SCHUMPETER-RICHARD-SWEDBERG

36. Sharma, A. R., Shukla, B., & Joshi, M. (2023). Epistemology of business incubators and the incubation theory. *International Journal of Entrepreneurship and Small Business*, *50*(2), 151–174. https://doi.org/10.1504/IJESB.2023.133486

37. Sharma, A., Shukla, B., & Joshi, M. (2019). *The Role of Business Incubators in the Economic Growth of India*. https://books.google.com/books?hl=en&lr=&id=tz_EDwAAQBAJ&oi=fnd&pg=PP7&dq=sharma,+2019,+business+incubators&ots=eEC4EwXPR5&sig=FFp6KULy4i5u2zwhgVOYtyKnhnw

38. Sharma, G. (2019). Innovation and entrepreneurship research in India from 2000 to 2018: a bibliometric survey. *Journal of Management Development*, *38*(4), 250–272. https://doi.org/10.1108/JMD-11-2018-0316/FULL/PDF

39. Sharma, S., & Vohra, N. (2021). Indian business incubation ecosystem: a multilevel analysis. *Handbook of Research on Business and Technology Incubation and Acceleration*. https://doi.org/10.4337/9781788974783.00024

40. Siddiqui, D., & Ahmad, N. (2022). Study of Support and Services Provided by Business Incubators in Entrepreneurship. *AMC Indian Journal of Entrepreneurship*, *5*(2), 19–29. https://doi.org/10.17010/AMCIJE/2022/V5I2/171467

41. Simon Kaggwa, Tochukwu Onunka, Prisca Ugomma Uwaoma, Okeoma Onunka, Andrew Ifesinachi Daraojimba, & Nsisong Louis Eyo-Udo. (2024). EVALUATING THE EFFICACY OF TECHNOLOGY INCUBATION CENTRES IN FOSTERING ENTREPRENEURSHIP: CASE STUDIES FROM THE GLOBAL

42. SOUT. *International Journal of Management & Entrepreneurship Research*, *6*(1), 46–68. https://doi.org/10.51594/ijmer.v6i1.695

43. Sykes, A. O. (n.d.). *An Introduction to Regression Analysis*. Retrieved February 13, 2025, from https://chicagounbound.uchicago.edu/law_and_economics

44. Yin, R. K. (1994). Discovering the Future of the Case Study Method in Evaluation Research. *American Journal of Evaluation*, *15*(3), 283–290. https://doi.org/10.1177/109821409401500309/ASSET/109821409401500309.FP.PNG_V03

45. Yuan, X., Hao, H., Guan, C., & Pentland, A. (n.d.). *What are the key components of an entrepreneurial ecosystem in a developing economy? A longitudinal empirical study on technology business incubators in China*.

❖◆❖