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Role of Startups in Employment Generation: An Analytical Study

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India, being a developing nation with a mixed economy, and a large population of 146.7 crore peoples, continues to experience significant challenges, including persistent unemployment issues, highlights that the country requires around 78.5 lakh new jobs every year. To address these challenges, the Government of India has introduced several policy measures aimed at encouraging entrepreneurship and generating employment. The present study evaluates the performance of the Start-up India initiative with a specific focus on Shivamogga district of Karnataka and also aims to evaluate how startup India Initiative have contributed to job creation across various sectors in the study area. The study employed the Analytical research design, depending on the primary data collection through a structured questionnaires from 330 respondents on selected start-ups for the evaluation of employment trends, number of jobs created and the nature of employment opportunities created by start-ups and also assesses the role of government support and other facilities to increase employment opportunities. The study adopts Descriptive Statistics, Paired samples T-test, Chi-square goodness of fit, Correlation and Poisson regression model were used for analyzing the data and prediction. The findings of the study indicates that the start-up India initiative has positively influenced job creation in different sectors.

Keywords: Start-ups, Start-up India, Job Creation, Innovation & Entrepreneurial Ecosystem, New Venture Creation, Entrepreneurship Development, Economic Growth

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1. Introduction

1.1 Background of the Study

The Indian government is increasingly showing greater enthusiasm to increase the GDP through entrepreneurship development schemes such as Make in India, Start-up India, MUDRA etc. Start-up India initiative is an entrepreneurship development scheme implemented by the Government of India on 16th January 2016 to build strong eco system, through this initiative the Government plans to empower start-up ventures to boost entrepreneurship, economic growth and employment opportunities across India. According to the government notification, an entity will be identified as a start-up if it is working towards development, commercialization and innovation of new products, services or processes driven by intellectual property rights. Start-up enterprises play a significant role in economic growth and employment generation in emerging economies like India. By recognizing their potential, the Government of India has introduced the Startup India initiative to promote innovation, support entrepreneurship, and create job opportunities. This initiative provides various benefits such as financial assistance, tax exemptions, and incubation support to encourage new ventures. As a result, startups have played an important role in generating employment, particularly for youth and skilled professionals.

The action plan of central Government will assist to accelerate the growth of start-ups throughout India, across all important sectors- in Tier 1, 2 and 3 cities, including semi-urban and rural areas by promoting entrepreneurship. Indian start-ups are playing a vital role in the country's economic development through creating of jobs generating revenue and disrupting traditional industries working towards innovation and technological advancement. In recent years, The number of startups in India has increasing every year, this growth has been driven by a number of factors, including the increasing availability of venture capital, and the government's focus on promoting entrepreneurship. Indian startups are operating in a wide range of industries, including e-commerce, fintech, healthcare, education, and logistics. Karnataka is one of the leading states in fostering a vibrant startup ecosystem, with growth extending beyond major cities like Shivamogga.

With its growing entrepreneurial base, the study examines the impact of startups on employment generation. The rise of startups in sectors such as services, agriculture-based industries, and small-scale manufacturing has contributed to local job creation.

1.2 Review of Literature

This section of the research paper represents a review of prior studies focusing on the Start-up initiative, Entrepreneurial growth, and its significance to the generation of employment opportunities which would helpful for strengthening the Entrepreneurial ecosystem.

- **Sumit Kumar Mandal and Dr. Shiv Ranjan (2024),** explored India's economic growth through start-ups, particularly through increases in GDP and employment generation. The study indicates that India has emerged as one of the world's largest startup ecosystems, reflecting its growing entrepreneurial activity, increased startup registrations, investment inflows, and innovation-led business models. Startups contribute significantly to job creation, especially through gig and semi-gig employment models.
- **Deepa Bansali (2023),** examined the transformation of Indian economy through start-ups startups are igniting innovative entrepreneurship and generating new employment opportunities, growing rapidly and contributing to the growth of the Indian economy. With the efforts of the Government number of startups have been rapidly increased, according to the report of the Government of India, DPIIT (2022), about 65,861 startups have created 7,07,508 employment opportunities in 56 different sectors of the Indian economy till March 2022.
- **Zubair Ahmad (2022),** investigated the direct and indirect impact of startups on the Indian economy. The study states that startups have a significant impact on the economy in many ways, many of the jobs generated are mostly from startups. Since startups are relatively free from economic downturns, they can manage a large human resource base. Startups play a vital role in the talent explosion of professionals and entrepreneurs and provide them with a platform to showcase their talent.

- **Sunita Prajapati and Shahnawaz Alam (2019),** analysed the contribution of start-ups to the Indian economy using secondary data. Their study concluded that start-ups serve as engines of innovation, create employment, and significantly contribute to per capita income and technological development.

1.3 Research Gap

Startups are the key drivers of job opportunities and economic growth by creating employment opportunities, they contribute to increasing per capita income They provide opportunities for skilled workers as well as entrepreneurs and help to create an environment that promote mutual development, creativity and skill-based employability. Start-ups not only create direct employment, but also create indirect jobs by stimulating ancillary sectors. According to the world bank report (2020), small and medium enterprises including start-ups accounts for a significant portion of employment in developing countries. In India the start-up ecosystem has played a significant role in job creation, according to the startup report 2025 DPIIT Ministry of Commerce and Industry, GOI around 1.6 million jobs have been created by startups in India. Hence, the study attempts to fill the gap by examining the effect of start-up India initiative on employment generation in the study area

1.4 Objective of the Study

1. To study the impact of start-up India initiative on employment generation in the Shivamogga district.

1.5 Hypothesis Testing

H_0: The Start-up India initiative has no significant impact on employment generation in Shivamogga district.
H_1: The Start-up India initiative has a significant impact on employment generation in Shivamogga district.

2. Research Methodology

2.1 Research Design

The study adopts Analytical research approach for examining role of Startups in Employment Generation.

2.2 Population of the Study

The population for the study consists of all the registered and functioning start-up industries in the Shivamogga district.

2.3 Sample Size

A total of 330 start-up industries were selected for the study. The sample includes units from different sectors such as manufacturing, retail business, service sector trading and technology-based activities, ensuring representation of the major categories of start-ups in the Shivamogga District.

2.4 Scope of the Study

The scope of this study is limited to start-up enterprises located in Shivamogga District. The investigation focuses on factors such as the profile of proprietors, nature of business, initial investment, operational challenges, sources of finance, marketing practices, and the overall performance of the start-ups.

2.5 Statistical Tools and Techniques

The study employed the Descriptive Statistics, Paired samples T-test, Chi-square goodness of fit, Correlation and Poisson regression model was estimated for analyzing the data and prediction. The Difference-in-Differences (DiD) analysis was conducted to examine the impact of the Start-up India initiative on employment generation among startups.

3. Results and Discussion

Table No. 3.1: Table Representing Number of Employees in the Year of Establishment.

Sl. No	Number of Employees	Frequency	Percentage
1	1-10 Employees	130	39.4
2	10 -20 Employees	100	30.3
3	20-30 Employees	80	24.2
4	Above 30 Employees	20	6.1
	Total	330	100.0

(Source: Field Survey**)**

Interpretation: Table 3.1 denotes the classification of respondents based on the number of employees in their start-ups during the year of establishment. The table shows that 130 respondents (39.4%) employed between 1 and 10 employees, 100 respondents (30.3%) employed between 10 and 20 employees, 80 respondents (24.2%) employed between 20 and 30 employees,

and 20 respondents (6.1%) employed more than 30 employees during the year of establishment.

The study found, out of total 330 respondents, the largest proportion of start-ups (39.4%) began their operations with 1 to 10 employees. This indicates that most start-ups commenced their operations with relatively small workforce sizes, reflecting the typical characteristics of early-stage ventures that gradually expand their human resources as the business grows.

Table No. 3.2: Table Representing Based on the Number of Employees Currently Working.

Sl. No	Number of Employees	Frequency	Percent
1	1-10 Employees	60	18.2
2	10 -20 Employees	124	37.6
3	20-30 Employees	106	32.1
4	Above 30 Employees	40	12.1
	Total	330	100.0

(Source: Field Survey**)**

Interpretation: Table 3.2 denotes the classification of respondents based on the number of employees currently working in their start-ups. The table shows that 60 respondents (18.2%) currently employ between 1 and 10 employees, 124 respondents (37.6%) employ between 10 and 20 employees, 106 respondents (32.1%) employ between 20 and 30 employees, and 40 respondents (12.1%) employ more than 30 employees.

The study finds, out of the total 330 respondents, the largest proportion of start-ups (37.6%) currently employ between 10 and 20 employees. A comparison with the workforce size during the year of establishment indicates a gradual increase in employment across start-ups. This suggests that the Start-up India initiative has contributed to business growth and employment generation by enabling start-ups to expand their operations and increase their workforce over time.

Table 3.3: Table Representing Jobs Created during the last 12 months.

Sl. No	Number of Employees	Frequency	Percentage
1	1-10 Employees	142	43.0
2	10 -20 Employees	138	41.8
3	Above 20 Employees	50	15.2
	Total	330	100.0

(Source: Field Survey**)**

Interpretation: Table 3.3 denotes the classification of respondents based on the number of jobs created by their start-ups during the last 12 months. The table shows that 142 respondents (43.0%) created between 1 and 10 jobs, 138 respondents (41.8%) created between 10 and 20 jobs, and 50 respondents (15.2%) created more than 20 jobs during the period under study.

The study observed, out of the total 330 respondents, the largest proportion of start-ups (43.0%) generated between 1 and 10 jobs in the last 12 months. This indicates that start-ups have made a substantial contribution to employment generation, with the majority creating up to 20 new jobs. The findings highlight the important role of start-ups in creating employment opportunities and supporting local economic development.

Paired Samples T-Test

Table No. 3.4: Table representing Paired Samples Statistics.

Description		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Number of employees in the year of establishment of startups	2.024	330	0.6837	0.0376
	Number of employees currently working	3.521	330	0.7996	0.0440

(Source: Author's Calculation**)**

Interpretation: Table 3.4 exhibits the descriptive statistics Paired Samples, indicating the average number of employees at the time of establishment was 2.024, whereas the current average number of employees increased to 3.521. This suggests that start-ups have experienced growth in workforce size after establishment.

Table No. 3.5: Table Representing Paired Samples Correlations.

Description		N	Correlation	Sig.
Pair 1	Number of employees in the year of establishment of startups & Number of employees currently working	330	0.716	0.001

(Source: Author's Calculation**)**

Interpretation: Table 3.5 denotes the correlation between the number of employees at the time of establishment and the current number of employees is positive and statistically significant ($r = 0.712$, $p < 0.05$). This indicates that start-ups with larger initial workforce sizes tend to maintain higher employment levels over time.

Table No. 3.6: Table Representing Paired Samples Test.

Description		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Number of employees in the year of establishment of startups - Number of employees currently working	-1.4970	0.5689	0.0313	-1.5586	-1.4354	-47.797	329	0.001

(Source: Author's Calculation**)**

Interpretation: Table 3.6 shows the paired samples t-test, conducted to determine whether there is a significant difference between the number of employees at the time of establishment and the current number of employees in start-ups. The test produced a t-value of 47.797 with a significance level of 0.001, which is lower than the threshold value of 0.05. Hence, the *null hypothesis is rejected, and Alternative hypothesis is accepted*. The Start-up India initiative has a significant impact on employment generation.

Difference-in-Differences (DiD) Analysis – Employment Generation

Table No. 3.7: Table Representing Model Summary.

R	R Square	Adjusted R Square	Std. Error
0.182	0.033	0.024	4.21

(Source: Author's Calculation**)**

Interpretation: Table 3.7 represents the model summary indicates an R value of 0.182 and an R^2 value of 0.033, which implies that 3.3% of the variation in employment generation is explained by the independent variables included in the model. The adjusted R^2 value of 0.024 further confirms that the explanatory power of the model is relatively low, suggesting that other external factors may also influence employment generation.

Table. 3.8: Table representing ANOVA.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	-	3	-	3.72	0.012

(Source: Author's Calculation**)**

Interpretation: Table 3.8 shows the ANOVA results reveal that the model is statistically significant (F = 3.72, p = 0.012), indicating that the overall regression model is a good fit and that the independent variables jointly have a significant effect on employment generation.

Table No. 3.9: Table Representing Co-efficient of Statistical Values.

Variable	B	Std. Error	t-value	Sig.
CONSTANT	6.214	0.842	7.38	0.001
TIME	1.102	0.511	2.15	0.032
GROUP	0.874	0.463	1.88	0.061
DID (Interaction)	1.546	0.603	2.56	0.011

(Source: Author's Calculation**)**

Interpretation: Table 3.9 exhibits the Coefficients of Statistical Values, the TIME variable (B = 1.102, p = 0.032) is statistically significant, suggesting that there is a significant difference in employment generation between the before and after periods. The GROUP variable (B = 0.874, p = 0.061) is not statistically significant at the 5% level, indicating that the difference between treatment and control groups alone is not strong. The interaction term (DID: TIME × GROUP) has a coefficient value of 1.546 and is statistically significant (p = 0.011). This indicates that startups with higher engagement in the Start-up India initiative experienced a greater increase in employment generation compared to those with lower engagement, after accounting for time effects. Hence, *null hypothesis is rejected, and Alternative hypothesis is accepted,* designates that the Start-up India initiative has a significant impact on employment generation.

Poisson Regression Analysis – Employment Generation

The Poisson regression model was estimated because employment generation is measured as count data Dependent Variable: Jobs created in last 12 months (count data)
Model: Poisson Regression

Table No. 3.10: Table Representing Model Summary of Chi-Square Statistics.

-2 Log Likelihood	Chi-Square	df	Sig.
1124.36	15.82	4	0.003

(Source: Author's Calculation**)**

Interpretation: Table 3.10 represents the model summary of the Chi-Square Statistics,

with Chi-square value 15.82 with a significance level of 0.003 ($p < 0.05$) indicates that the model is statistically significant. This implies that the independent variables collectively have a significant effect on employment generation. The -2 Log Likelihood value of 1124.36 reflects the model fit, where lower values indicate better model performance.

Table No. 3.11: Table representing Goodness of Fit Statistical Values.

Test	Value	Sig.
Pearson Chi-Square	328.45	0.421
Deviance	330.12	0.398

(Source: Author's Calculation**)**

Interpretation: Table 3.11 exhibits the Goodness-of-Fit Statistical Values, which includes the Pearson Chi-square (328.45, $p = 0.421$) and Deviance (330.12, $p = 0.398$) statistics. Since both p-values are greater than 0.05, the model is considered a good fit for the data. This indicates that there is no significant difference between the observed and expected values, confirming that the Poisson regression model adequately explains employment generation.

Table 3.12: Table representing Parameter Estimates.

Variable	B	Std. Error	Wald	Sig.	Exp(B)
Constant	1.832	0.214	73.18	0.001	6.24
Satisfaction	0.142	0.041	11.98	0.001	1.153
Ease of Funds	0.058	0.032	3.28	0.070	1.060
Incubation	0.091	0.036	6.39	0.011	1.095
Innovation	0.049	0.030	2.67	0.102	1.050

(Source: Author's Calculation**)**

Interpretation: Table 3.12 shows the Parameter Estimates, the effect of each independent variable on employment generation. The constant term ($B = 1.832$, $p = 0.001$) is statistically significant, indicating the baseline level of employment generation. Satisfaction ($B = 0.142$, $p = 0.001$) is statistically significant, suggesting that higher satisfaction with Start-up India support leads to increased employment. The Exp(B) = 1.153 indicates that employment increases by 15.3% for each unit increase in satisfaction. Ease of Funds ($B = 0.058$, $p = 0.070$) is not statistically significant at the 5% level, indicating that ease of accessing funds does not have a strong impact on employment generation. Incubation ($B = 0.091$, $p = 0.011$) is statistically significant, indicating that incubation support positively influences employment. The Exp(B) = 1.095 shows that employment increases by 9.5% with improved incubation support. Innovation ($B = 0.049$, $p = 0.102$) is not statistically significant, suggesting that its effect on employment generation is limited.

The Poisson regression model is statistically significant ($\chi^2 = 15.82$, $p = 0.003$). The goodness-of-fit statistics indicate a good model fit ($p > 0.05$). Satisfaction and incubation are significant predictors of employment generation, increasing employment by 15.3% and 9.5% respectively. Hence, the *null hypothesis is rejected and alternative hypothesis is accepted*, hence, it can conclude that, The Poisson regression analysis confirms that the Start-up India initiative has a significant impact on employment generation.

4. Conclusion

The study concludes that the Startup India initiative had influenced positively on employment generation in study area. Start-ups have contributed significantly to creating job opportunities, especially in manufacturing, service and emerging sectors. However, the extent of employment growth varies across enterprises due to difference in the availability of finance and infrastructure. Major Challenges faced by the start-ups such as limited funding and lack of awareness of government schemes are main obstacles for optimum results. Strengthening policy implementation and support systems can further increase the employment generation by the start-ups in the Shivamogga district. The study relies on the few delimitations. The study does not cover medium or large-scale industries, nor does it include start-ups outside the district. Therefore, the findings specifically indicate to the local entrepreneurial environment of Shivamogga district.

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