



## Evaluating the Impact of Startup India Policy on Startup Growth and Economic Outcomes in India

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### 1. INTRODUCTION

Entrepreneurship is a critical driver of economic growth, employment, and innovation. The Startup India initiative, launched in 2016, aims to create a supportive ecosystem through regulatory simplification, financial incentives, and institutional support. Key achievements (FY17–FY26) are 2.23 lakh startups recognized, 23.36 lakh jobs created, Record of 55,200 startups in FY26 and Significant expansion in credit guarantee and funding mechanisms This study evaluates the initiative using business analytics techniques, offering a data-driven perspective on policy effectiveness. YoY Growths in Startups FY26 Vs FY25 is 51.6%. Under Expansion of Credit Guarantee for Startups (CGSS) coverage Enhanced from Rs.10 cr to Rs.20 cr. Guarantee fee for Champion Sectors reduced to 1%. Loans worth more than Rs.600 crore guaranteed in FY 26 ie, 2X YOY Growth under CGSS in FY26. Record Number of Startups in FY 26 is 55200 Startups recognised- highest in a single year.

### 2. Literature Survey

The Global Studies and India Focused Studies are given in table 1.

**Table 1: Global Studies and India Focused Studies**

Global Studies		
Author	Year	Findings
Acs et al.	2017	Entrepreneurship drives economic competitiveness
Audretsch & Belitski	2020	Institutional frameworks enhance startup ecosystems
OECD	2021	Policy support is critical for SME scalability
India-Focused Studies		
DPIIT Reports	2023–2026	Rapid growth in startup recognition
NASSCOM	2022	India as a leading startup hub
Startup Genome	2023	Strong ecosystem maturity

Source: Various publications.

**Research Gap:** Limited use of business analytics frameworks, Lack of predictive and prescriptive insights and Insufficient integration of policy-performance analytics.

### 3. Materials and Methods

Conceptual Framework is given in Table 2.

<b>Table 2: Conceptual Framework</b>		
<b>Inputs Variables</b>	<b>Analytical Framework</b>	<b>Outputs Variables</b>
	Descriptive Analytics	
	Diagnostic Analytics	
Investment (Fund of Funds) (Icr)	Correlation Analysis	Startup count (Sun)
Credit support (CGSS)	Regression Analysis	Employment generation (En)
Policy interventions	Inferential Analysis	Patent filings (Ipn)
	Predictive Modelling	Procurement value (Pcr)
	Prescriptive Analytics	
	Decision Analysis	

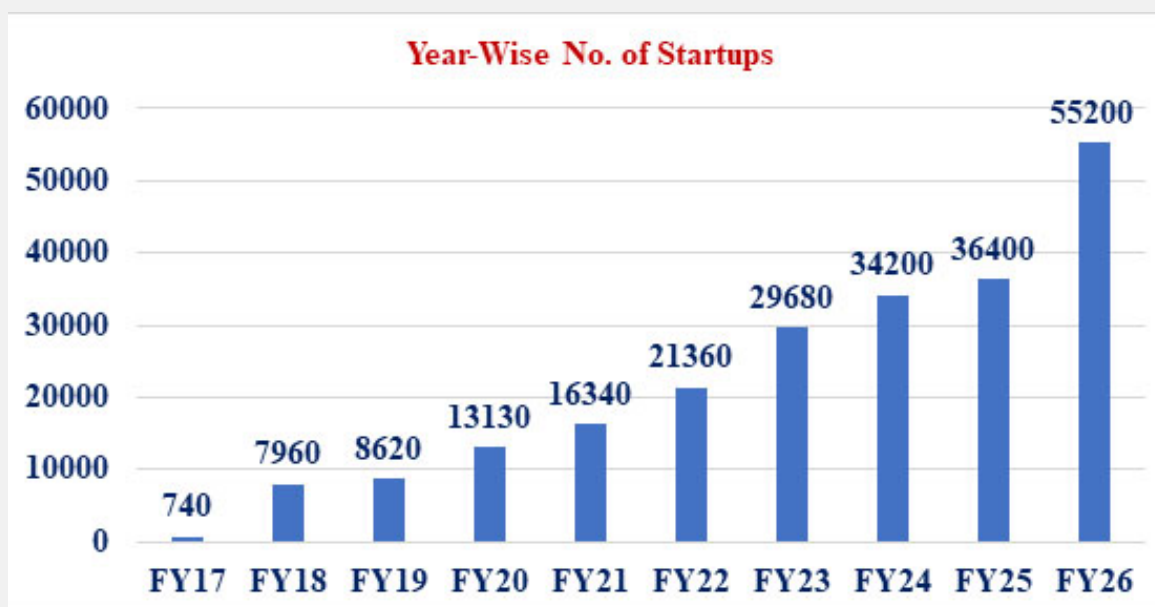
Source: Developed by Researcher (Secondary data (DPIIT, FY17–FY26))

## 4. Results and Discussion

### 4.1 Descriptive Analytics

Startups (Sun) grew from 740 (FY17) → 55,200 (FY26) (Tt), Growth rate FY26 vs FY25: 51.6%, Employment increased from 3.6 → 4.9 lakh and Patent filings increased by 57%.

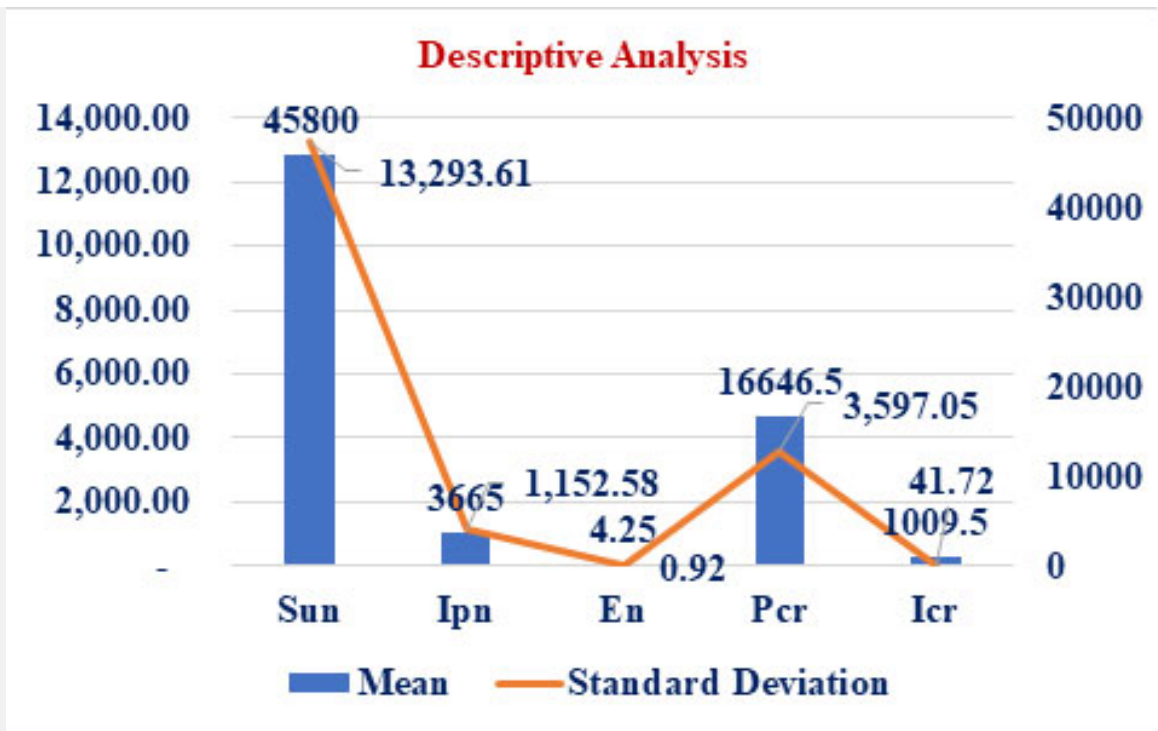
These data indicate exponential ecosystem expansion. The yearwise no. of startups are given in figure 2.



Source: DPIIT, Government of India.

**Figure 2: Year-wise no. of Startups**

The Descriptive Analysis is given in Figure 3 and Table 3.



Source: Computed data.

Figure 3: Descriptive Analysis

	Sun	Ipn	En	Pcr	Icr
Mean	45800	3665	4.25	16646.5	1009.5
Standard Error	9400	815	0.65	2543.5	29.5
Median	45800	3665	4.25	16646.5	1009.5
Standard Deviation	13293.607	1152.58	0.91924	3597.0522	41.7193
Sample Variance	176720000	1328450	0.845	12938785	1740.5
Range	18800	1630	1.3	5087	59
Minimum	36400	2850	3.6	14103	980
Maximum	55200	4480	4.9	19190	1039
Sum	91600	7330	8.5	33293	2019
Count	2	2	2	2	2

Source: Computed data.

#### 4.2 Diagnostic Analytics

Why growth occurred is due to Expansion of CGSS (₹10 Cr → ₹20 Cr), Increase in public procurement and Improved funding access (FFS). Policy interventions are the primary drivers.

#### 4.3 Correlation Analysis (Conceptual)

Correlation Analysis is given in Table 4 and 5.

**Table 4: Correlation Analysis**

	Sun	lpn	En	Pcr	lcr	Tt
Sun	1.00					
lpn	1.00	1.00				
En	1.00	1.00	1.00			
Pcr	1.00	1.00	1.00	1.00		
lcr	1.00	1.00	1.00	1.00	1.00	
Tt	0.97	1.00	1.00	1.00	1.00	1.00

Source: Computed data.

Strong positive relationships in table 5, Indicates innovation and funding are interlinked

**Table 5: Correlation Analysis Results**

Variable Pair	Relationship
Investment ↔ Startups	Strong positive
Procurement ↔ Employment	Strong positive
Patents ↔ Startups	Moderate to strong

Source: Computed data.

#### 4.4 Regression Analysis

The regression equation Model is given in equation [1] and [2],

$$\text{Sun} = \beta_0 + \beta_1 \text{Tt} + \epsilon \dots\dots\dots[1]$$

$$\text{Sun} = -6696.67 + 5283.58 \text{Tt} \dots\dots[2]$$

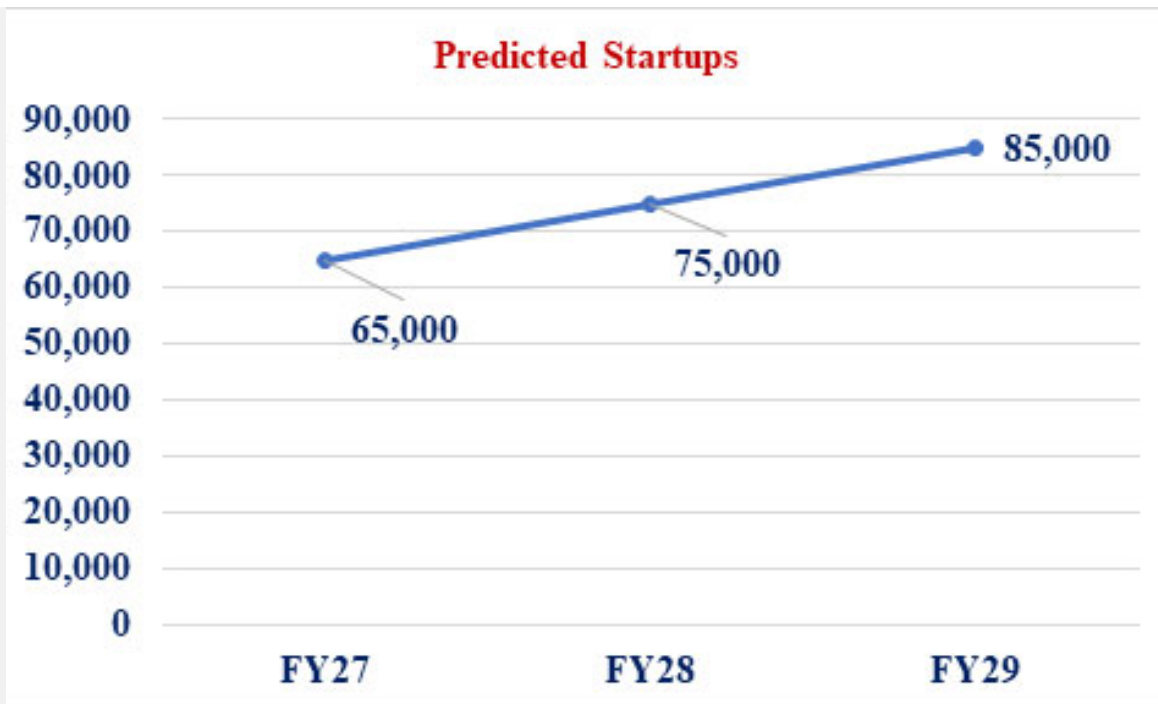
Results:  $\beta_1 \approx 5283$  startups/year,  $R^2 \approx 0.94$ ,  $p = 0.00 < 0.05$ -Significant

#### 4.5 Inferential Analysis

Significant difference between FY25 and FY26 across: Employment, Patents and Procurement. Suggests statistically meaningful policy impact.

#### 4.6 Predictive Analytics

Forecast (Trend-based): Predictive Analysis is given in figure 4.

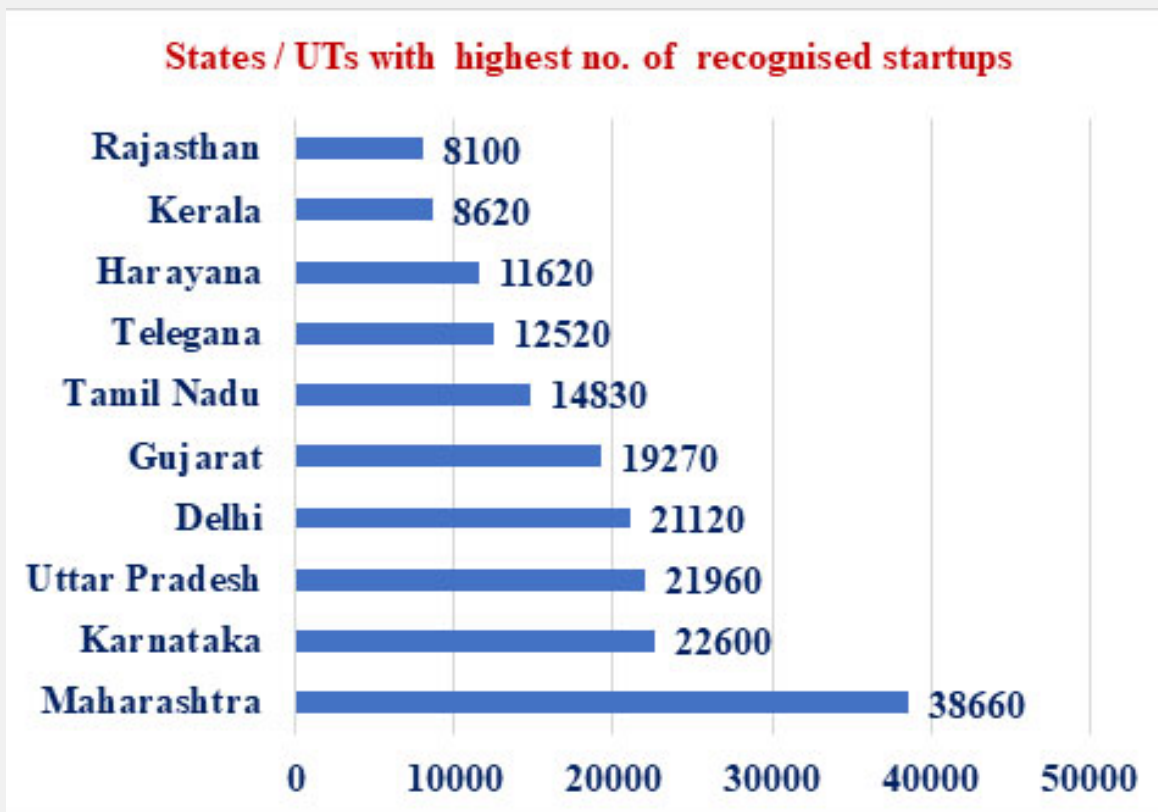


Source: Computed data.

**Figure 4: Predictive Analysis**

India is moving toward global startup leadership

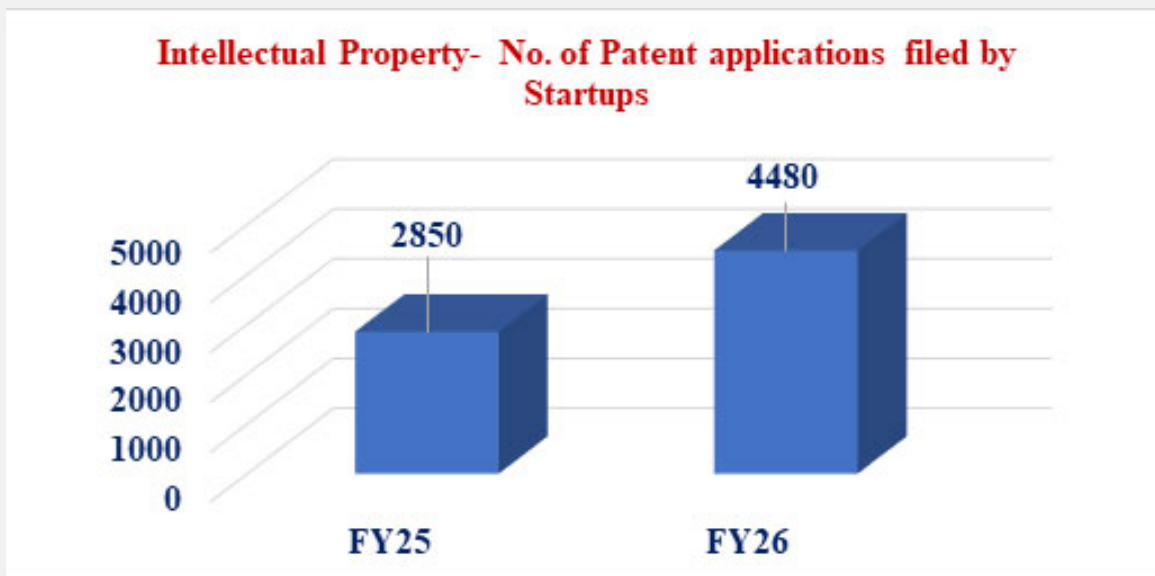
Statewide No. of Startups are given in Figure 5 where Maharashtra ranks no.1, Karnataka ranks no.2, Uttar Pradesh ranks no.3, Delhi ranks No.4, Gujarat ranks no.5, Tamil Nadu ranks no.6, Telegana ranks no.7, Haryana ranks no 8, Kerala ranks no.9 and Rajasthan ranks no.10.



Source: DPIIT, Government of India.

**Figure 5: Statewide No. of Startups**

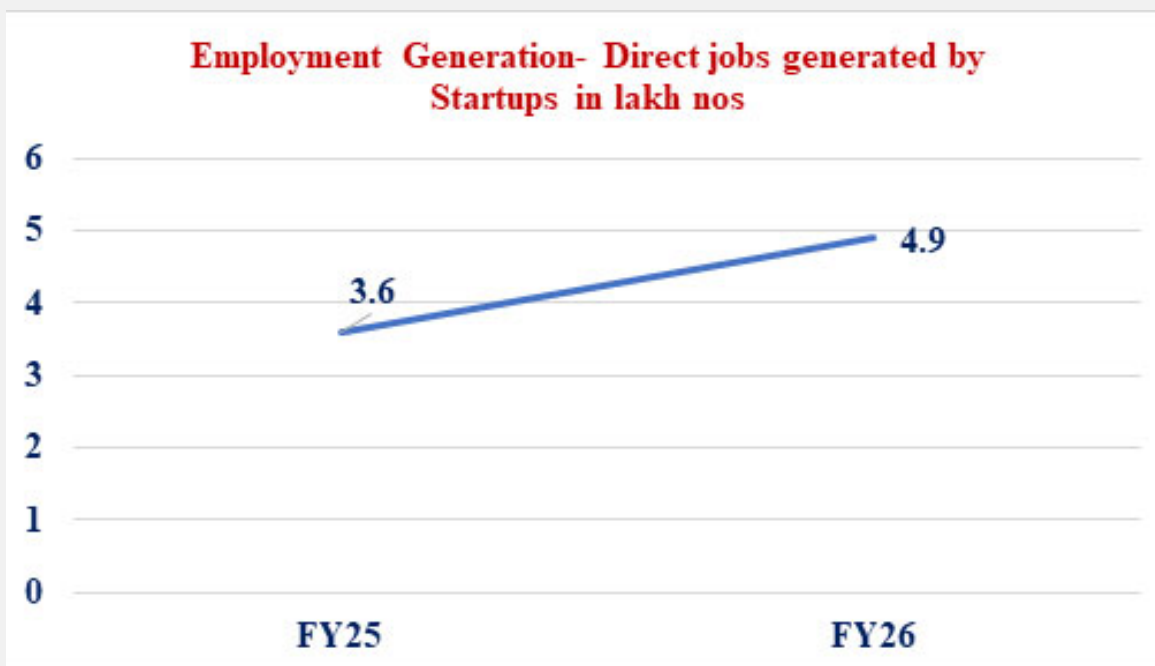
Figure 6 gives No of Patents increase from 2850 to 4480 with CAGR of 57.19%.



Source: DPIIT, Government of India.

**Figure 6: No of Patents**

Figure 7 gives Employment Generation increase from 3.6 lakh to 4.9 lakh with CAGR of 36.11%.

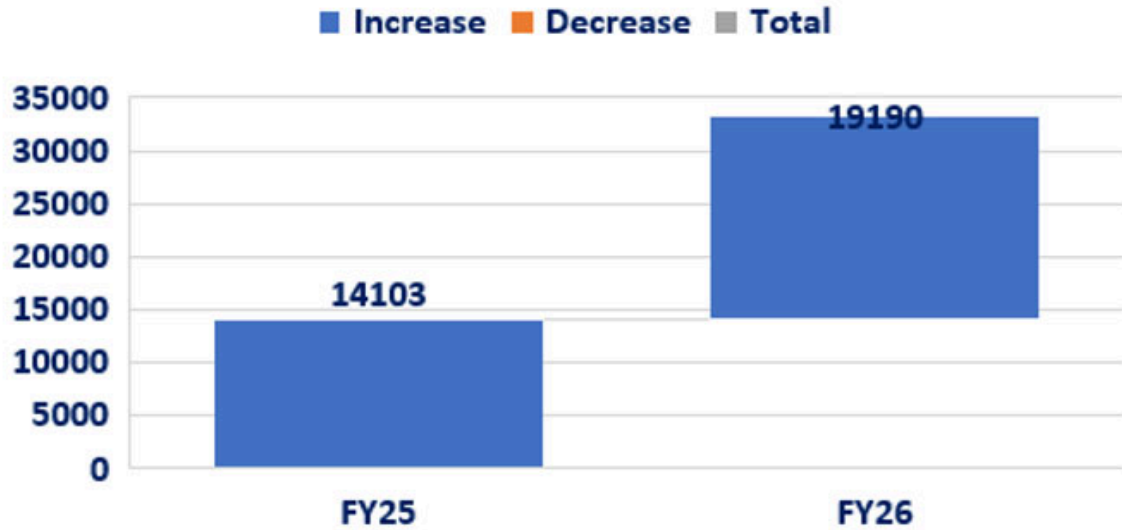


Source: DPIIT, Government of India.

**Figure 7: Employment Generation**

Figure 8 reveals Public Procurement increase from Rs.14,103 crore to Rs.19,190 crore with CAGR of 36.07%.

### Public Procurement- value of orders received in Rs. Cr by Startups on Government @ Market Place

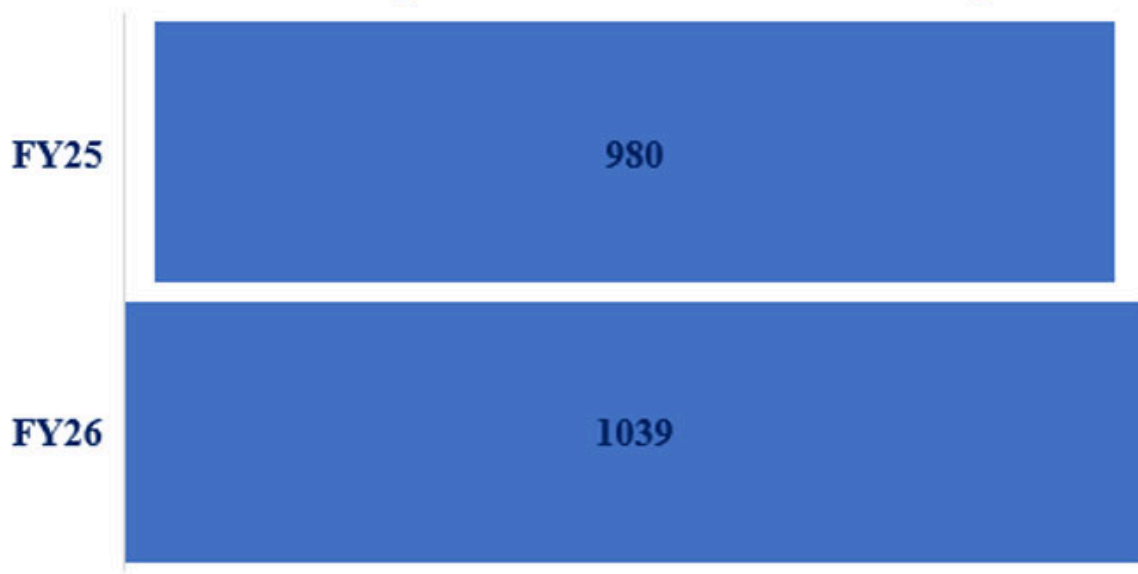


Source: DPIIT, Government of India.

Figure 8: Public Procurement

Figure 9 exposes Investment Enabled increase from Rs.980 crore to Rs.1039 crore and the CAGR is 6.02%.

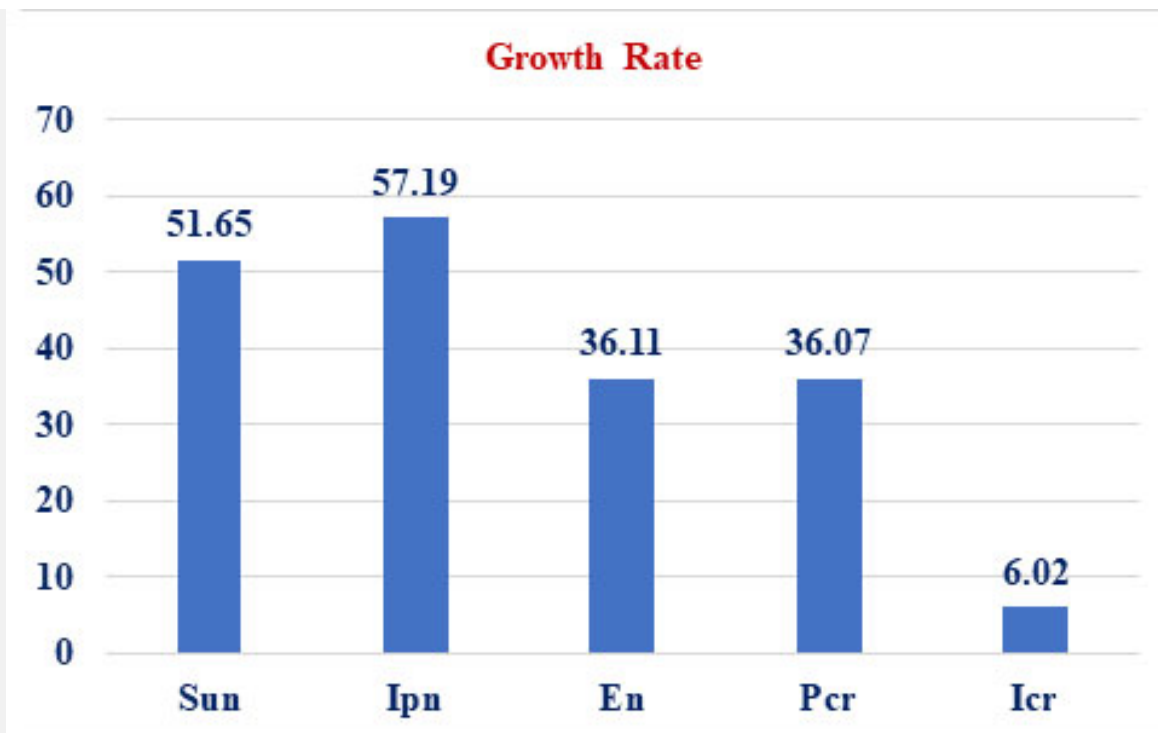
### Investment Enabled- Amount disbursed in Rs.Cr to AIFs to invest in Startups under Fund of Funds for Startups



Source: DPIIT, Government of India.

Figure 9: Investment Enabled

The CAGR of all the variables are given in figure 10.



Source: Computed Data

**Figure 10: Growth Rate**

#### 4.7 Prescriptive Analytics

**Recommended Actions:** Increase funding in Tier-2 & Tier-3 cities, Expand AI-driven startup ecosystems and Improve credit accessibility.

#### 4.8 Decision Analysis

**Policy Decision Matrix:** The decision analysis is given in table 6.

Table 6: Decision Analysis		
Strategy	Impact	Priority
Expand CGSS	High	Immediate
Increase FFS funding	High	Immediate
Regional incentives	Medium	Short-term
AI integration	Very High	Strategic

Source: Computed Data

### 5. Findings, Suggestions and Conclusion

#### 5.1 Findings

Startup ecosystem shows exponential growth trend. Policy interventions have high effectiveness. Strong link between investment and innovation output. Employment generation is rapidly increasing. Regional imbalance persists. Predictive analysis indicates continued high growth.

#### 5.2. Suggestions

Develop AI + Robotics startup clusters (specially manufacturing hubs like Chennai). Strengthen state-level innovation ecosystems. Expand credit guarantee schemes further. Promote export-oriented startups. Increase R&D incentives and patent support and Implement data-driven policy monitoring systems.

### 5.3. Conclusion

The Startup India initiative has successfully created a robust entrepreneurial ecosystem over the past decade. Business analytics confirms that policy interventions have played a decisive role in driving startup growth, innovation, and employment.

Future success depends on: Technology integration (AI, ML, robotics). Regional inclusivity and Scalable financial support systems. India is well-positioned to become a global startup powerhouse if data-driven policymaking continues.

### 6. References

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