



An empirical analysis of Karnataka's Startup Ecosystem and the impact of Mission Startup on entrepreneurial development

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Abstract

This study focuses at how Karnataka's entrepreneurial ecosystem in particular, the "Mission Startup" initiative helps to promote economic growth and innovation. With more than 3,036 startups in 2023, Karnataka is the third-largest startup hotspot in India, making a substantial contribution to both technological innovation and jobs. The study identifies some vital essentials that contribute to startup success, such as government assistance, skilled labor, and capital availability. While formal options like government grants (1.39%) are still underutilized, data analysis shows a preference for personal funding sources like friends and family (18.32%) and own capital (22.36%). Financial limitations, market competitiveness, and regulatory barriers are still issues, especially for companies in their early stages. In order to maintain growth, the report highlights the necessity of improved public-private partnerships, skill development, and focused assistance for female entrepreneurs. According to the findings, enabling technology, creativity, and adaptability are essential for startup success. Fostering global partnerships, giving quality investments first priority, and streamlining finance access are some of the recommendations. This study addresses obstacles to inclusive entrepreneurship development while highlighting Karnataka's potential as a global startup leader.

Keywords: Karnataka Startups, Mission Startup, entrepreneurial ecosystem, funding challenges, innovation, entrepreneurship

Introduction

Startups around the world are expanding rapidly, with the US in the forefront. About 7.1% of startups globally are in the fintech industry, and more than 69% of these enterprises started out as home-based ventures. Furthermore, 60% of business owners are putting their faith in artificial intelligence. India is now experiencing economic boom. Since the introduction of liberal policies and initiatives for entrepreneurs, the Indian government has demonstrated a growing desire to boost the GDP rate of growth from the ground up. "Startup India," "Make in India," MUDRA, and so forth. The nation has seen an increase in entrepreneurs recently as an outcome of a surge in creative ideas. New businesses can dominate the market by embracing innovation. As a result, the analysis was performed out due to the fact that improvisation and organic growth are both important components of entrepreneurial development. Startup India: An unprecedented global uproar is being heard everywhere. These days, it's impossible to avoid reading or hearing about India's status as the next great startup country! The best way to build a strong economy is via skills. Entrepreneurs look for assistance when establishing new businesses. These services can be further separated into three groups: managerial, financial, and technical assistance. Organizations such as MPFC, SIDBI, and MSME are available to assist startups; some of these private supporters are referred to as venture capitalists and angle investors. On January 26, 2015, Shri. Damodhardas Narendra Modi, Hon. Prime Minister of India made the excited announcement of "Standup India-Startup India." The goal of this program is to encourage entrepreneurs to launch their own businesses and support already-existing ones.

India's first startup policy was introduced by the Karnataka government, which included programs like the Startup Booster Kit that offered infrastructural help, prototype development financing, patent assistance, and more. Also, it created co-working places such as the 'Startup Warehouse' to promote creativity. Bengaluru is noteworthy for being the only Indian startup ecosystem to rank in the top 20 worldwide.

Literature Review

The 2010–2020 period was designated India's Decade of Innovation, emphasizing the role of startups in driving economic growth and improving quality of life through affordable, accessible services (Dr. K. Vijaya Venkateshwari & L. A. Khaya). Government initiatives have made it easier for young entrepreneurs to launch businesses, despite ongoing challenges like limited finance, innovation barriers, regulatory delays, and talent shortages (Sonkar Nidhi). To support startups, the government must simplify regulations, speed up registration, prevent fraud, and ensure timely distribution of assistance (Anshika Mishra & Rahul Pal). Entrepreneurial ecosystems vary across states, with Karnataka standing out due to its mature infrastructure, supportive policies, and numerous incubators and accelerators (Nambiar & Dr. P. Balasubramanian). Given that over 94% of startups fail within the first year, often due to funding shortages, access to capital remains critical for turning ideas into viable businesses (Prem Chand Gupta). Creating a supportive environment is essential to nurture entrepreneurial intentions and foster successful ventures (Dr. Yashasvi Rajpara & Dr. Komal Mistry).

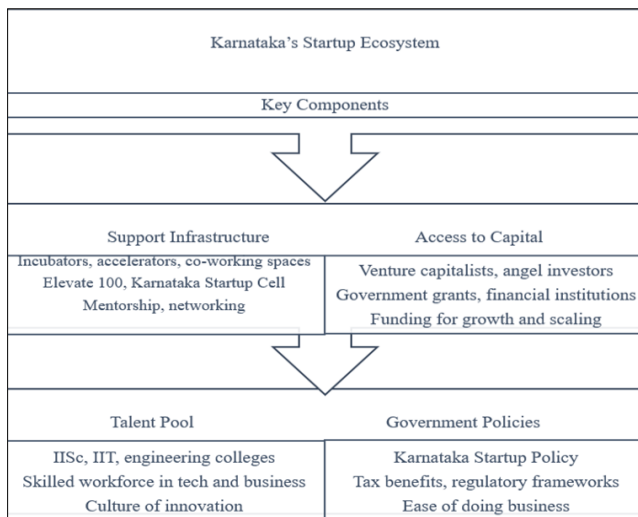
Research Objectives

- To determine the essential elements of Karnataka's startup ecosystem.
- To evaluate "Mission Startup's" effects on Karnataka's entrepreneurship ecosystem.

Research Methodology

This study uses a descriptive research design to explore the key factors influencing the growth and challenges of startups in Karnataka, gathering primary data from 260 purposively sampled stakeholders including founders, investors, incubator managers, and policymakers via a structured questionnaire with both closed and open-ended questions. Secondary data were sourced from books, research papers, magazines, websites, and government reports to complement primary insights. Data analysis involved descriptive and inferential statistics using SPSS to ensure accuracy. While the diverse sample represents various industries and startup stages, limitations include potential response bias due to self-reporting and limited generalizability beyond Karnataka.

Essential Elements of Karnataka's Startup Ecosystem



Source: Primary Data

Karnataka, with Bengaluru known as the "Silicon Valley of India," is a leading startup hub supported by key elements that drive its growth and sustainability. The state offers a strong support infrastructure, including accelerators, co-working spaces, incubation centers, and government programs like Elevate 100 and the Karnataka Startup Cell, which provide mentorship, funding, and policy support. Access to capital through venture capitalists, angel investors, and government funding enables startups to scale and compete globally. Karnataka's skilled workforce, bolstered by premier institutions like IISc and IITs, fosters innovation and entrepreneurship. Additionally, the state's startup-friendly policies, such as the Karnataka Startup Policy, facilitate ease of doing business, tax benefits, and simplified legal processes, creating a conducive

1. "Mission Startup's" effects on Karnataka's Entrepreneurship Ecosystem.

Karnataka has emerged as a leading startup hub in India, supported by proactive government initiatives, a skilled workforce, and a strong support ecosystem. A key program,

"Mission Startup," fosters innovation, provides funding through grants and venture capital, and builds infrastructure with incubation centers and accelerators to help startups overcome early challenges. The initiative promotes technological advancement via R&D partnerships and cutting-edge technologies like AI and blockchain, while driving job creation in sectors such as biotech, fintech, e-commerce, and IT. Additionally, it has improved the business environment by streamlining registration, reducing administrative barriers, and offering tax incentives. Despite these successes, challenges remain, including the need to better reach rural entrepreneurs, simplify regulations further, and ensure sustained funding. Expanding the program's scope to include a more diverse range of startups is essential for inclusive growth.

Conceptual Framework

1. Conceptual Model Representation

Independent Variables (Enablers):	Mediating Factors:	Dependent Variable (Outcome):
<ul style="list-style-type: none"> • Government support, • Skilled workforce • Capital availability • Technology & innovation 	<ul style="list-style-type: none"> • Market competitiveness • Regulatory environment • Financial constraints 	<ul style="list-style-type: none"> • Entrepreneurial success and economic growth in Karnataka

2. Key Constructs and Relationships

This conceptual framework integrates key factors influencing startup success, categorized into enablers, barriers, and strategic interventions to promote sustainable entrepreneurship in Karnataka.

<p>A. Enablers of Startup Success</p> <ul style="list-style-type: none"> • Government Support & Policy Framework • Mission Startup initiative • Grants and financial incentives • Public-private partnerships • Availability of Skilled Workforce • Access to trained professionals • Entrepreneurial education and skill development programs • Access to Capital & Funding Mechanisms • Venture capital and angel investors • Personal financing (own capital, family & friends) • Bank loans and alternative financing • Technological Innovation & Digital Infrastructure • Research and development (R&D) • Emerging technologies (AI, IoT, Blockchain) • Startup incubators and accelerators 	<p>B. Challenges in the Entrepreneurial Ecosystem</p> <ul style="list-style-type: none"> • Financial Barriers • Low utilization of formal funding (grants: 1.39%) • Dependence on personal funding sources (own capital: 22.36%, family & friends: 18.32%) • Market Competition & Scalability Issues • High industry saturation • Limited international market access • Regulatory and Policy Constraints • Bureaucratic hurdles • Compliance complexities for early-stage startups 	<p>C. Strategic Interventions for Sustainable Growth</p> <ul style="list-style-type: none"> • Enhancing Public-Private Partnerships • Strengthening collaboration between government, academia, and private sector • Infrastructure and policy reforms • Fostering Inclusive Entrepreneurship • Targeted support for female entrepreneurs • Diversity and inclusion initiatives • Globalization & Investment Prioritization • International partnerships and knowledge exchange • Quality investment strategies • Improving Access to Finance • Streamlined financial assistance programs • Awareness and accessibility of government grant
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Source: Primary Data

Data Analysis and Interpretation

1. Categories of Business

Type of business	No. of Respondents & (%)	x2 value
Manufacturing	13 (5.00)	116.25 @ 5%
Service	117 (45.00)	
Merchandising	32 (12.00)	

Trading	78 (30.00)	Significance
Hybrid	20 (8.00)	
Total	260 (00.00)	

2. Chi-square table

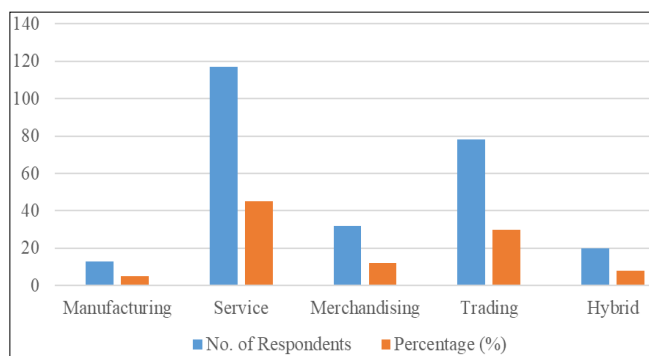
Calculated value	Significance Level	Degree of freedom	Table Value
116.25	5%	5-1=4	9.488

Source: Primary data

3. Chi-square Analysis

The calculated value being 116.25 higher than the Table Value = 9.488 @ 5% level of significance with df = 4 failed to accept H₀ and accepts H₁. Therefore, it was concluded here that there exists significant variation in the data.

4. Categories of Business



5. Inference

The most representation, based to the data, is found in the service sector (45%), which is followed by trading (30%), merchandising (12%), hybrid (8%), and manufacturing (5%). There is a statistically significant correlation between respondent distribution and business kinds, as indicated by

the chi-square value of 116.25 at a 5% significance level, which is higher than the critical value. The null hypothesis is thus disproved, indicating that the observed company type distribution is not the result of chance but rather represents notable sectoral disparities.

5.1 Classification of respondent's sector wise

Type of sector	No. of Respondents	%	x2 value
Agriculture	30	11.53	98.4066 @ 5% Level of Significance
Advertising	22	8.46	
Automotive	17	6.53	
Business Consulting	31	11.92	
Data Analytics	8	3.07	
Education	19	7.30	
Fashion	18	6.92	
E-Commerce	27	10.38	
Lifestyle	14	5.38	
Healthcare	10	3.84	
Logistics	21	8.07	
Digital Marketing	19	7.30	
Information Technology	9	3.46	
Others	15	5.84	
Total	260	100	

Source: Primary data

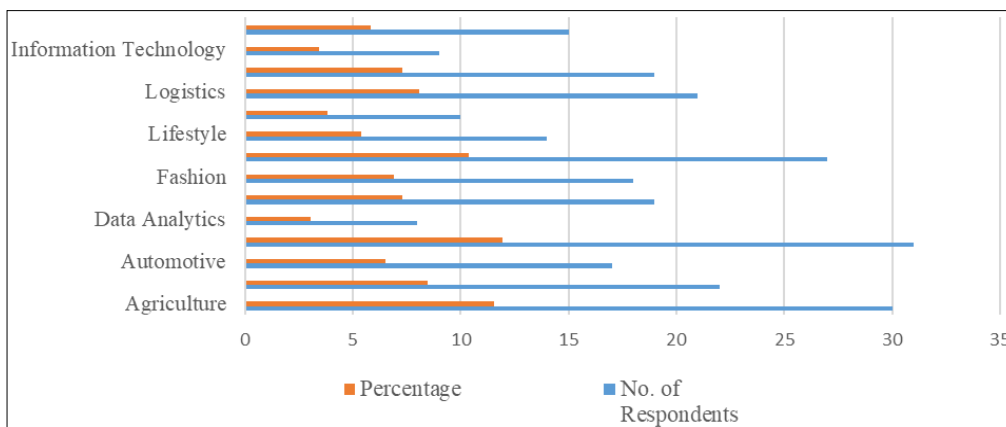
5.2 Chi-square table

Calculated value	Significance Level	Degree of freedom	Table Value
98.4066	5%	26	38.885

5.3 Chi-square Analysis

At a 5% significance level (df = 26), the computed value of 98.4066 was more than the critical value of 38.885, which resulted in the rejection of H₀ and the acceptance of H₁. This suggests that the data has a great deal of variability.

5.4 Classification of startups Sector Wise



5.5 Inference

The most represented sectors, according to the data, are e-commerce (10.38%), business consultancy (11.92%), and agricultural (11.53%), while the least represented industries are data analytics (3.07%) and healthcare (3.84%). A statistically significant correlation between sectors and respondent distribution is indicated by the chi-square value of 98.4066 at a 5% significance level, which is higher than the crucial value. The null hypothesis is thereby rejected demonstrating that the observed sectoral distribution is not random represents notable differences between sectors.

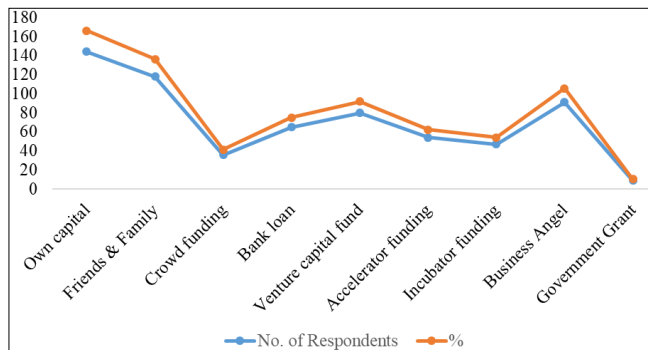
6. Grouping of startups based on the source of capital.

Source of capital	No. of Respondents	%	Rank
Own capital	144	22.36	1
Friends & Family	118	18.32	2
Crowd funding	36	5.59	8
Bank loan	65	10.09	5
Venture capital fund	80	12.04	4
Accelerator funding	54	8.38	6
Incubator funding	47	7.29	7
Business Angel	91	14.54	3
Government Grant	09	1.39	9

Total	644	100	
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Source: Primary data. Note: Startup entrepreneurs were asked to express multiple opinions

6.1 Grouping of startups based on the source of capital.



6.2 Inference

Conferring to the research, the most popular funding source is one's own capital (22.36%), which is followed by friends and family (18.32%) and business angels (14.54%). Government grants (1.39%) and crowdsourcing (5.59%) are less popular choices. This demonstrates a preference for unofficial and personal funding over official or institutional assistance. According to the rating, which shows a distinct preference hierarchy, entrepreneurs chose easily available and adaptable funding sources over formal, competitive options like grants and venture capital.

Findings

- In 2022, Karnataka ranked third in India for startups with 2,568, growing to 3,036 in 2023—an 18.2% increase.
- Female entrepreneurs increased from 10–11% to 14% in recent years.
- The startup ecosystem employs between 160,000 and 170,000 people, adding about 40,000 new jobs recently.
- Bengaluru ranks among the top five fastest-growing startup cities globally and top 20 worldwide (2019 Startup Genome Project).
- Karnataka startups have secured significant domestic and international funding, with the top 15 deals accounting for nearly 40% of total deal value.
- Both government and corporations are increasingly collaborating with startups, recognizing their innovative potential to enhance public service delivery across sectors.

Suggestions

- Strengthen Government-Business Partnerships: Enhance collaboration between government, corporations, and startups, especially via specialized public-private partnerships in tech, healthcare, and education to provide resources, capital, and mentorship.
- Promote Female Entrepreneurship: Implement targeted programs like skill-building workshops, mentorship networks, and dedicated funding to accelerate the growth of female entrepreneurs in Karnataka.
- Boost Employment and Skill Development: Encourage startups to form industry-academia partnerships and focus on workforce skill enhancement to meet evolving ecosystem demands, sustaining job creation momentum.

- Enhance International Recognition and Innovation: Attract foreign investors, host global startup events, and support cutting-edge technologies (e.g., blockchain, AI, clean energy) to strengthen Karnataka's global startup standing.
- Focus on Quality over Quantity: Prioritize innovation and scalability in early-stage startups; investors should emphasize long-term potential to ensure sustainable ecosystem growth.
- Improve Access to Finance: Simplify capital access for tech-driven and early-stage startups through tax incentives, government funding, and programs that attract domestic and international investors.

Conclusion

This initiative provides significant benefits to startups across various aspects. A recent study highlights that over 94% of new businesses nose-dive contained by their initial year of operation, with a deficiency of funding being one of the furthest common contributing factors. Capital is often described as the lifeblood of any business. The journey from concept to a revenue-generating business requires a constant supply of resources, and capital serves as the essential fuel for this process. Self-funding or bootstrapping is often regarded as a preferable initial funding option due to its advantages. When businesspersons invest their private money, they are more committed and invested in the success of the business, which later becomes an attractive point for potential investors. However, this approach is most suitable when the initial capital requirements are relatively low.

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