

A Study on Innovation and Entrepreneurship in Emerging Markets in India

Dr. Ganesh Lande

Associate Professor, Dr D Y Patil School of Management, Pune

Dr. S. B. Sawant

Director, Abhijit Kadam Institute of Management and Social Sciences, Solapur

Bharati Vidyapeeth (Deemed to be University), Pune

Abstract

Innovation and entrepreneurship have become critical engines of economic growth and structural transformation in emerging markets, particularly in developing economies like India. Over the past two decades, India has witnessed significant entrepreneurial expansion driven by technological advancements, supportive policy reforms, a strong demographic dividend, and improved access to finance. This study explores the role of innovation and entrepreneurship in India's emerging markets, with a focus on their contributions to economic development, employment generation, and global competitiveness. Based on secondary data from government reports, global entrepreneurship databases, and academic literature, the study employs a descriptive and analytical approach. The findings indicate that innovation-driven entrepreneurship has enhanced productivity, fostered inclusive growth, and strengthened India's position in the global start-up ecosystem. However, challenges such as regulatory complexity, limited access to capital, and skill gaps persist. The study highlights the need for better policy alignment, institutional support, and robust innovation ecosystems to sustain long-term entrepreneurial growth.

Keywords: *Innovation, Entrepreneurship, Emerging Markets, Start-ups, MSMEs, India, Economic Development*

Submitted: March 15, 2026

Revised: April 25, 2026

Accepted: May 10, 2026

Published: May 20, 2026

DOI: [10.5281/zenodo.20576368](https://doi.org/10.5281/zenodo.20576368)



1. Introduction

Innovation and entrepreneurship are widely acknowledged as key drivers of economic growth, structural transformation, and competitiveness in emerging economies, particularly in India. Over the past two decades, India has experienced a significant rise in entrepreneurial activity, supported by digital transformation, favourable government initiatives, and a growing start-up ecosystem. Programs such as Start-up India have fostered innovation, encouraged risk-taking, and facilitated access to funding and mentorship, thereby strengthening the overall business environment. The expansion of internet connectivity and mobile technology has also enabled new business models and market access, especially in sectors like fintech, e-commerce, and Edtech. These developments reflect the increasing importance of innovation-led entrepreneurship in enhancing productivity, generating employment, and promoting inclusive economic development in emerging markets (Acs et al., 2018). The innovation-driven entrepreneurship contributes significantly to economic resilience and global competitiveness by enabling firms to adapt to dynamic market conditions and technological disruptions. In India, the rapid growth of start-ups and small enterprises has positioned the country as one of the leading entrepreneurial hubs globally. However, challenges such as regulatory complexity, limited access to capital, and skill mismatches continue to constrain the growth potential of entrepreneurial ventures. (Stam, 2015).

2. Background of Study

The background of innovation and entrepreneurship in India is deeply rooted in the country's transition from a controlled economy to a liberalized and market-oriented system following the economic reforms of 1991. These reforms reduced regulatory barriers, encouraged private sector participation, and opened avenues for foreign investment, thereby creating a fertile ground for entrepreneurial ventures. Over time, the integration of information and communication technologies,

expansion of higher education, and emergence of knowledge-based industries have significantly strengthened the innovation landscape. The rise of start-up ecosystems in cities such as Bangalore, Mumbai, and Delhi reflects the growing importance of innovation-driven enterprises in shaping India's economic trajectory. Additionally, institutional frameworks and policy interventions have played a crucial role in fostering innovation capabilities and entrepreneurial intent among individuals (NASSCOM, 2022). In recent years, India's entrepreneurial ecosystem has evolved rapidly due to increased digitalization, venture capital inflows, and supportive government initiatives such as Digital India and Atal Innovation Mission. These initiatives have facilitated innovation, skill development, and incubation support, particularly for technology-driven start-ups. Despite these advancements, structural challenges such as inadequate infrastructure, regulatory complexities, and limited access to early-stage funding persist, especially in rural and semi-urban areas (OECD, 2023).

3. Scope and Significance of Study

The innovation encompasses a comprehensive ecosystem for entrepreneurship within emerging markets. It focuses on analysing how innovation-driven enterprises contribute to economic development, employment generation, and competitiveness across sectors such as technology, manufacturing, and services (Global Entrepreneurship Monitor, 2023). The study primarily relies on secondary data sources, including government publications, global entrepreneurship reports, and scholarly research, to assess trends, patterns, and structural dynamics shaping the entrepreneurial ecosystem. The geographical scope is limited to India, while the conceptual scope includes key dimensions such as innovation capacity, institutional support, access to finance, and entrepreneurial performance. It is particularly relevant for policymakers, researchers, and practitioners seeking to design effective strategies that promote inclusive growth, technological advancement, and job creation. The findings of the study can support the development of innovation-led frameworks that enhance global competitiveness and resilience in the face of economic uncertainties. The study also highlights the importance of strengthening institutional mechanisms, improving access to capital, and addressing skill gaps to ensure long-term sustainability of entrepreneurial ventures.

4. Objectives of the Study

- To examine the role of innovation in promoting entrepreneurship in India's emerging markets
- To analyze the contribution of entrepreneurial innovation to economic development and employment generation
- To identify key challenges faced by innovative entrepreneurs in India
- To suggest policy measures for strengthening innovation-driven entrepreneurship in emerging markets

5. Literature Review

The literature on innovation and entrepreneurship in emerging markets highlights their critical role in accelerating economic development and enhancing global competitiveness, particularly in India. Empirical studies emphasize that innovation-driven enterprises contribute significantly to productivity growth, technological advancement, and job creation in developing economies (World Economic Forum, 2022). The Indian entrepreneurial ecosystem has evolved rapidly due to the expansion of digital infrastructure, increasing venture capital investments, and proactive policy support. Research indicates that innovation capabilities, access to knowledge networks, and institutional frameworks are key determinants influencing entrepreneurial success in emerging markets. The integration of technology into business models has enabled start-ups to scale rapidly and compete in global markets, thereby strengthening India's position as a leading start-up hub (Ahlstrom & Ding, 2014).

From a structural perspective, the literature also identifies several challenges that constrain the growth of innovation and entrepreneurship in India's emerging markets. These include regulatory complexities, limited access to early-stage financing, skill gaps, and infrastructural limitations, particularly in rural and semi-urban regions. Studies suggest that while government initiatives and incubation programs have improved the entrepreneurial climate, gaps remain in terms of policy implementation and institutional coordination. Additionally, the role of entrepreneurial ecosystems

comprising universities, research institutions, investors, and government agencies is crucial in fostering innovation and sustaining long-term growth. Scholars argue that strengthening these ecosystems through collaborative frameworks and targeted policy interventions is essential for enhancing innovation outcomes and ensuring inclusive development in emerging economies (Spigel, 2017).

6. Research Gap

There are still several gaps in the literature, even though it covers innovation and entrepreneurship in India in detail. First, most studies focus on either innovation or entrepreneurship in isolation, with limited integration of both concepts in the emerging markets. Second, there is a lack of comprehensive empirical studies that synthesize secondary data to assess the overall impact of innovation-driven entrepreneurship on India's economic development. Third, Not much attention has been paid to policy implications and ecosystem-level challenges affecting entrepreneurs in emerging markets. This study seeks to address these gaps by providing an integrated analysis of innovation and entrepreneurship in India.

7. Research Methodology

Based on secondary data, this study uses an analytical and descriptive research design. Data were collected from: Government publications (e.g., Ministry of Commerce, DPIIT), International databases (World Bank, Global Entrepreneurship Monitor), Scholarly journals and books. The data were collected and analysed using qualitative content analysis and descriptive statistical techniques. This methodology enables a comprehensive understanding of trends and patterns in innovation and entrepreneurship in India.

• Hypothesis Testing - Statistical Tools

The study uses **descriptive statistical tools** for hypothesis testing due to the nature of the research design and the use of secondary data. The primary statistical tools used include: Percentage analysis and Trend analysis in Tabular analysis. Descriptive statistics are appropriate for this study as they help summarize large datasets, identify patterns, and explain relationships between innovation, entrepreneurship, and economic outcomes without employing inferential techniques. The hypotheses are tested by observing consistent trends and directional relationships among significant variables such as start-up growth, patent filings, TEA rates, employment generation, and sectoral distribution.

8. Data Analysis

The data analysis is based on secondary data collected from reliable national and international sources such as the Global Entrepreneurship Monitor (GEM), Department for Promotion of Industry and Internal Trade (DPIIT), NASSCOM, World Bank reports, and published academic literature. The purpose of the analysis is to examine trends in innovation and entrepreneurship in India's emerging markets using descriptive tables and conceptual charts.

Table 1: Growth of Recognized Start-ups in India (2016–2023)

Year	Number of Recognized Start-ups	Key Policy Initiatives
2016	452	Launch of Start-up India
2018	12,000	Tax Exemptions, Incubation Support
2020	38,000	Fund of Funds, Digital India
2021	61,000	Atmanirbhar Bharat Mission
2023	100,000+	Start-up India 2.0

Source: DPIIT, Government of India

The table indicates a substantial rise in the number of start-ups over the years, particularly after the implementation of supportive government policies. This reflects a positive entrepreneurial climate in India's emerging markets.

Table 2: Sector-wise Distribution of Innovative Start-ups in India

Sector	Share (%)
Information Technology & Software	32
E-commerce & Retail	16
FinTech	14
Healthcare & Biotechnology	11
EdTech	9
Others (AgriTech, CleanTech, etc.)	18

Source: Start-up India and NASSCOM Reports, 2024-25

The data show that technology-driven sectors dominate India's start-up ecosystem, highlighting the importance of digital innovation in entrepreneurial growth.

Based on the available data and the evolving dynamics of India's start-up and investment environment during **2024–2025**, the sectoral distribution highlights where investor confidence and capital concentration are currently strongest within the technology start-up ecosystem:

- **Information Technology & Software (32%)**: This sector continues to dominate the funding landscape, supported by strong growth in B2B SaaS solutions, cloud-based platforms, AI-driven applications, and digital infrastructure services that cater to both domestic and global markets.
- **E-commerce & Retail (16%)**: After a period of correction, this segment has shown a strong revival in 2024–2025. Growth is being propelled by quick-commerce models and direct-to-consumer (D2C) brands, with a strategic focus on expanding into tier-II and tier-III cities.
- **FinTech (14%)**: FinTech remains one of the most resilient and well-funded sectors, with investments concentrated in digital payments, lending platforms, and wealth management solutions, reflecting sustained demand for financial digitization.
- **Healthcare & Biotechnology (11%)**: This sector is witnessing accelerated momentum, driven by innovations in telemedicine, AI-enabled diagnostics, digital health platforms, and pharmaceutical technology solutions.
- **EdTech (9%)**: Although overall funding has declined compared to earlier peak years, the sector is undergoing structural transformation, shifting toward hybrid learning models, enterprise-focused solutions, and skill-oriented education platforms.
- **Others (18%)**: This category encompasses emerging and future-oriented sectors such as AgriTech, CleanTech, DeepTech, and Climate Tech. These areas are increasingly attracting patient, long-term investments due to their strategic importance and sustainability potential.

Chart 1: Early-Stage Entrepreneurial Activity (TEA) Rate in India

Year	TEA Rate (%)
2015	10.6
2017	11.7
2019	14.0
2021	15.3
2023	16.8

The increasing TEA rate reflects growing entrepreneurial participation, driven by innovation opportunities, improved access to resources, and favourable market conditions.

Chart 2: Innovation Performance Indicators in India

Indicator	2015	2018	2021	2023
Patent Filings (in thousands)	42	50	62	70
R&D Expenditure (% of GDP)	0.62	0.67	0.70	0.75

The chart suggests steady improvement in innovation outputs and inputs; however, India's R&D expenditure remains relatively low compared to other major emerging economies.

9. Discussion and Analysis

- **Examining the role of innovation in promoting entrepreneurship in India's emerging markets.**

Data: Secondary data from DPIIT and GEM indicate a sharp increase in recognized start-ups from 452 in 2016 to over 100,000 by 2023. Simultaneously, patent filings increased from approximately 42,000 in 2015 to nearly 70,000 in 2023. The Early-Stage Entrepreneurial Activity (TEA) rate also rose steadily from 10.6% in 2015 to 16.8% in 2023.

Interpretation: The growth in patent filings and TEA rates suggests that innovation capabilities such as new technologies, digital platforms, and product/process improvements are enabling more individuals to start new ventures. Policy initiatives like Start-up India and Digital India have reduced entry barriers by providing incubation, funding access, and regulatory support, thereby linking innovation inputs directly to entrepreneurial outcomes.

The data clearly demonstrate that innovation acts as a catalyst for entrepreneurship in India's emerging markets by lowering start-up costs, enhancing opportunity recognition, and encouraging new venture creation.

- **Analysing the contribution of entrepreneurial innovation to economic development and employment generation.**

Data: According to NASSCOM and DPIIT reports, Indian start-ups and MSMEs have generated millions of direct and indirect jobs over the last decade, particularly in IT, fintech, healthcare, e-commerce, and edtech sectors. Innovation-driven enterprises have also contributed to export growth, digital inclusion, and productivity enhancement. India's start-up ecosystem has positioned the country as one of the top global start-up hubs.

Interpretation: Innovative business models and technology adoption have enabled firms to scale rapidly, access global markets, and improve efficiency. Employment generation is not limited to urban centers; emerging markets and tier-II and tier-III cities have also benefited through job creation and skill development. This indicates that entrepreneurial innovation contributes both to macroeconomic growth and inclusive development.

The data confirm that entrepreneurial innovation significantly contributes to economic development and employment generation in India.

- **Identifying key challenges faced by innovative entrepreneurs in India.**

Data: Secondary studies and policy reports highlight persistent challenges such as limited access to early-stage finance, complex regulatory procedures, infrastructure constraints, and skill shortages. India's R&D expenditure remains below 1% of GDP, which is lower than many other emerging economies. These constraints are more severe in rural and semi-urban emerging markets.

Interpretation: While policy support exists, implementation gaps and uneven access to resources restrict the growth and scalability of innovative ventures. Skill mismatches and limited exposure to advanced technologies further reduce innovation performance. These challenges explain why many start-ups struggle beyond initial stages despite favourable market conditions.

The data-driven evidence identifies structural, financial, and institutional challenges faced by innovative entrepreneurs.

- **Suggesting policy measures for strengthening innovation-driven entrepreneurship in emerging markets.**

Data: Analysis of government initiatives and global best practices suggests that countries with higher R&D investment, simplified regulations, strong incubation networks, and effective skill development systems exhibit stronger innovation-driven entrepreneurship. Indian data also show better start-up survival rates in regions with active incubators and funding access.

Interpretation: Targeted policy interventions such as increasing R&D expenditure, expanding venture capital access, strengthening incubation and mentorship in emerging markets, and aligning education with innovation needs can significantly enhance entrepreneurial outcomes. Decentralized support systems can reduce regional disparities in entrepreneurial growth.

Based on the data and interpretation, the study proposes concrete policy measures to strengthen innovation-driven entrepreneurship.

- **Hypothesis Testing:**

Hypothesis 1 (H1)

H1: Innovation has a significant positive influence on entrepreneurial growth in India's emerging markets.

Null Hypothesis (H0₁): Innovation does not have a significant influence on entrepreneurial growth in India's emerging markets.

The hypothesis is tested using:

- **Table 1:** Growth of Recognized Start-ups in India (2016–2023)
- **Chart 1:** Early-Stage Entrepreneurial Activity (TEA) Rate in India
- **Chart 2:** Patent filings as an innovation indicator

Indicator	2016	2019	2021	2023
Recognized Start-ups	452	30,000	61,000	100,000+
TEA Rate (%)	10.6	14.0	15.3	16.8
Patent Filings (in thousands)	42	62	65	70

(Source: DPIIT, GEM, World Bank)

For **Hypothesis 1**, trend analysis was applied to innovation indicators (patent filings) and entrepreneurial growth indicators (start-up registrations and TEA rates). The statistical analysis shows a continuous upward movement in all variables over the study period. The positive direction and consistency of trends indicate a strong association between innovation and entrepreneurial growth.

Descriptive Statistical Interpretation (H1)

The descriptive statistics show a **parallel and continuous increase** in innovation indicators (patent filings) and entrepreneurial growth indicators (start-up registrations and TEA rate). As innovation outputs rise over time, entrepreneurial participation and start-up formation also increase proportionately. This positive trend relationship indicates that innovation facilitates opportunity recognition, lowers entry barriers, and encourages new venture creation in emerging markets.

Conclusion for Hypothesis 1: Based on the consistent upward trends observed in the same dataset, the **null hypothesis (H0₁) is rejected**, and the **alternative hypothesis (H1) is accepted**. Hence, innovation has a significant positive influence on entrepreneurial growth in India's emerging markets.

Hypothesis 2 (H2)

H2: Innovation-driven entrepreneurship significantly contributes to economic development and employment generation in India.

Null Hypothesis (H0₂): Innovation-driven entrepreneurship does not significantly contribute to economic development and employment generation in India.

The hypothesis is tested using:

- **Table 2:** Sector-wise Distribution of Innovative Start-ups
- Start-up employment trends discussed in Data Analysis
- MSME contribution indicators

Indicator	2016	2019	2021	2023
Start-up Employment (million)	0.42	1.2	2.0	3.5
MSME Contribution to GDP (%)	28	29	30	30+
Share of Technology-driven Start-ups (%)	32	34	36	38

(Source: DPIIT, NASSCOM, Ministry of MSME)

For **Hypothesis 2**, percentage and trend analysis were applied to employment data, MSME contribution to GDP, and the share of technology-driven start-ups. The analysis reveals steady

increases across all indicators, suggesting that innovation-driven entrepreneurship contributes positively to employment generation and economic development.

Descriptive Statistical Interpretation (H2)

The descriptive data indicate a **steady increase in employment generation** alongside a rising contribution of MSMEs to GDP. The growing dominance of technology-based start-ups (as shown in the sector-wise distribution table) demonstrates that innovation-driven enterprises enhance productivity, scalability, and value creation. These trends confirm the economic relevance of innovative entrepreneurship in emerging markets.

Conclusion for Hypothesis 2: Since the same dataset shows simultaneous growth in employment, GDP contribution, and innovation-led enterprises, the **null hypothesis (H0₂) is rejected**, and the **alternative hypothesis (H2) is accepted**. Therefore, innovation-driven entrepreneurship significantly contributes to economic development and employment generation in India. Since the observed trends consistently support the alternative hypotheses, the null hypotheses were rejected in both cases.

10. Findings of the Study

- Innovation-driven entrepreneurship has contributed significantly to economic growth and employment generation in India.
- Government initiatives have played an essential role in fostering entrepreneurial ecosystems.
- Entrepreneurs in emerging markets rely heavily on frugal and adaptive innovation strategies.
- Access to finance, regulatory complexity, and skill shortages remain major challenges.

11. Conclusion

Innovation and entrepreneurship are central to India's growth trajectory as an emerging market economy. The study demonstrates that innovation-led entrepreneurship has enhanced productivity, competitiveness, and inclusivity in India. The maintaining this momentum expects addressing structural challenges through policy reforms, investment in education and R&D, and strengthening institutional support. By fostering a conducive environment for innovation and entrepreneurship, India can strengthen its standing as a centre of innovation worldwide.

References

- Acs, Z. J., Szerb, L., & Autio, E. (2018). Global entrepreneurship and development index 2018. Springer. <https://doi.org/10.1007/978-3-319-63844-7>
- Ahlstrom, D., & Ding, Z. (2014). Entrepreneurship in China: An overview. *International Small Business Journal*, 32(6), 610–618. <https://doi.org/10.1177/0266242613518413>
- Global Entrepreneurship Monitor. (2023). Global report 2022/2023. <https://www.gemconsortium.org/report>
- NASSCOM. (2022). Indian tech start-up ecosystem report 2022. <https://nasscom.in>
- OECD. (2023). Entrepreneurship at a glance 2023. https://doi.org/10.1787/entrepreneur_aag-2023-en
- Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, 41(1), 49–72. <https://doi.org/10.1111/etap.12167>
- Stam, E. (2015). Entrepreneurial ecosystems and regional policy: A sympathetic critique. *European Planning Studies*, 23(9), 1759–1769. <https://doi.org/10.1080/09654313.2015.1061484>
- World Economic Forum. (2022). Global competitiveness report special edition 2022. <https://www.weforum.org/reports>