INCUBATED VS NON-INCUBATED STARTUPS: A CONCEPTUAL REVIEW OF PERFORMANCE, POLICY FRAMEWORKS, AND RESEARCH GAPS IN SEMI-URBAN INDIA

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Abstract :

Entrepreneurship and startup development have emerged as major drivers of economic growth, employment generation, and innovation in emerging economies such as India. Business incubation is widely promoted as an institutional mechanism to support early-stage ventures through mentoring, infrastructure, funding facilitation, and networking opportunities. Despite substantial public and private investment in incubation initiatives, systematic evidence regarding their effectiveness in semi-urban regions remains limited. This paper presents a comprehensive conceptual and systematic review of global and Indian literature on incubated and non-incubated startups, with specific attention to semi-urban contexts such as Vidarbha in Maharashtra. Drawing upon academic studies, policy documents, and ecosystem reports, the paper analyzes startup performance, incubation models, and institutional support systems. The review indicates that incubation enhances access to resources, networks, and legitimacy; however, outcomes are strongly shaped by regional ecosystem conditions. Significant research gaps are identified, including the lack of longitudinal, comparative, and region-specific investigations. The paper concludes with policy, managerial, and research implications for strengthening inclusive and sustainable startup ecosystems in semi-urban India.

Keywords : Business incubation, Startups, Entrepreneurship, Policy frameworks, Semi-urban India, Vidarbha, Innovation

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Introduction :

Entrepreneurship has become a central component of economic development strategies across the world. In developing economies, new ventures play a crucial role in generating employment, promoting innovation, and enhancing competitiveness. In India, the startup ecosystem has expanded rapidly over the last decade, supported by national initiatives such as Startup India and the Atal Innovation Mission (Government of India, 2016; Atal Innovation Mission [AIM], 2021).

Startups are increasingly viewed as engines of regional development, particularly in areas with limited industrialization. However, new ventures face significant challenges, including financial constraints, managerial inexperience, technological limitations, and weak market linkages. To address these challenges, policymakers and academic institutions have promoted business incubation as a structured support mechanism.

Business incubators provide early-stage ventures with physical infrastructure, mentoring, training, professional services, and access to investors. It is widely assumed that such support enhances startup survival and growth. Nevertheless, empirical evidence on the effectiveness of incubation remains mixed, and most studies focus on metropolitan regions or technology-intensive clusters (Bruneel et al., 2012; Hausberg & Korreck, 2020).

Semi-urban regions such as Vidarbha in Maharashtra present a distinct entrepreneurial environment. These regions are characterized by limited access to venture capital, weaker innovation networks, and modest institutional capacity. At the same time, they offer substantial potential in agriculture-based industries, manufacturing, renewable energy, and services. Understanding whether incubation improves startup outcomes in such contexts is therefore critical.

This paper aims to review and synthesize existing literature on incubated and non-incubated startups, with particular emphasis on semi-urban India. The objectives of the study are:

1. To examine conceptual foundations of entrepreneurship and incubation.
2. To analyze empirical evidence on incubation and startup performance.
3. To review Indian policy frameworks supporting incubation.
4. To identify research gaps relevant to semi-urban regions.
5. To propose directions for future research and policy.

Conceptual Background :

Entrepreneurship and Startups :

Entrepreneurship involves the identification of opportunities, mobilization of resources, and acceptance of risk to create value (Shane, 2003). It contributes to economic growth by fostering innovation, productivity, and competition (Audretsch & Thurik, 2001).

Startups represent a specific form of entrepreneurial activity characterized by scalability, innovation, and uncertainty. Unlike traditional micro and small enterprises, startups often pursue experimental business models and aim for rapid growth (Isenberg, 2010). They rely heavily on digital technologies, intellectual property, and knowledge-based resources (OECD, 2017).

In the Indian context, startups operate across diverse sectors, including information

technology, agri-business, healthcare, education, logistics, and renewable energy. Their success depends on both internal capabilities and external ecosystem support.

Business Incubation and Incubators :

Business incubation refers to a structured process designed to support startups during their early and vulnerable stages (Smilor, 1987). Incubators provide a combination of tangible and intangible resources, including office space, mentoring, training, legal assistance, and networking opportunities (Grimaldi & Grandi, 2005).

Incubators may be classified into several types:

- **University-based incubators**, focused on technology commercialization.
- **Government-supported incubators**, aimed at regional development.
- **Corporate incubators**, linked to strategic innovation.
- **Private incubators**, driven by financial returns.

Accelerators are related support mechanisms characterized by fixed-duration programs, cohort-based learning, and intensive mentorship (Cohen & Hochberg, 2014). While incubators emphasize long-term development, accelerators focus on rapid scaling and investor readiness.

Funding, Networks, and Innovation :

Access to finance is one of the most critical determinants of startup success. Early-stage ventures often rely on bootstrapping, family support, and informal credit. Incubated firms benefit from improved access to angel investors, venture capital, and government grants (Hallen et al., 2020).

Networks and social capital facilitate knowledge exchange, partnerships, and market entry (Hansen et al., 2000). Incubators function as intermediaries that connect startups with universities, investors, suppliers, and customers.

Innovation—technological, organizational, or social—remains central to competitiveness. University-affiliated incubators, in particular, promote knowledge spillovers and collaborative research (Rothaermel & Thursby, 2005).

Review of Literature :

Evolution of Incubation Research :

Early studies emphasized the role of incubators in reducing startup failure through shared infrastructure and managerial assistance (Campbell et al., 1985; Smilor, 1987). These models focused primarily on cost reduction and basic support services.

Later research adopted more analytical approaches. Hackett and Dilts (2004)

conceptualized incubators as selection and development systems that create value by nurturing promising ventures and discontinuing weak ones. This perspective shifted attention toward measurable outcomes such as survival, graduation, and growth.

Incubator Typologies and Operational Models :

Grimaldi and Grandi (2005) highlighted the heterogeneity of incubators in terms of governance, objectives, and service intensity. Mian (1996) emphasized the importance of university-industry linkages in technology-based incubators.

Bøllingtoft and Ulhøi (2005) introduced the concept of networked incubators, viewing them as ecosystem orchestrators rather than mere service providers. Hansen et al. (2000) similarly stressed the role of strong external networks in enhancing incubator effectiveness.

Hausberg and Korreck (2020) documented increasing diversity and hybridization of incubation and acceleration models, highlighting the absence of a unified theoretical framework.

Accelerators and Hybrid Support Systems :

Accelerators have gained prominence as mechanisms for rapid venture development. Cohen and Hochberg (2014) described accelerators as time-bound programs emphasizing mentorship and investor access.

Hallen et al. (2020) demonstrated that accelerators accelerate learning and fundraising through mentor feedback and peer interactions. However, outcomes depend on program design and selection processes.

Systematic reviews indicate convergence between incubators and accelerators, leading to hybrid models (Leitão et al., 2022; Sohail et al., 2023).

Incubation and Startup Performance :

Empirical studies generally report higher survival rates, employment growth, and funding access for incubated startups (Mian, 1996; Bruneel et al., 2012). Incubated firms often demonstrate better governance and professional management practices.

However, Hackett and Dilts (2008) cautioned that selection bias complicates causal inference, as incubators may admit ventures with higher initial potential. Bruneel et al. (2012) also found that incubation benefits vary across firm life cycles.

Over time, performance differences between incubated and non-incubated firms may narrow, suggesting that incubation advantages are strongest during early stages.

Mediating Role of Finance, Networks, and Innovation :

Access to finance and network embeddedness mediate incubation outcomes (Cohen et al., 2019). Mentorship quality and peer learning contribute to organizational development (Hallen et al., 2020).

University-based incubators facilitate knowledge transfer and innovation, although absorptive capacity remains a key moderating factor (Rothaermel & Thursby, 2005).

Indian Policy Frameworks :

Public policy has played a decisive role in shaping the Indian incubation ecosystem. Startup India aims to simplify regulations, provide tax incentives, and enhance funding access (Government of India, 2016).

The Atal Innovation Mission established Atal Incubation Centres and introduced standardized performance indicators (AIM, 2021, 2022). These frameworks emphasize governance, sustainability, and outcome measurement.

Despite these initiatives, empirical evaluations remain limited, particularly in semi-urban regions (Sanyal & Mukherjee, 2019; NITI Aayog, 2020).

Limitations and Research Gaps :

The literature reveals persistent challenges:

- Selection and survivorship bias.
- Dominance of metropolitan-focused studies.
- Lack of longitudinal data.
- Inconsistent performance indicators.

Semi-urban regions such as Vidarbha remain underrepresented, highlighting the need for region-specific research.

Comparison between Incubated and Non-Incubated Startups :

1. **Mentorship :** Incubated startups receive systematic, continuous, and professionally guided mentorship from experienced entrepreneurs, industry experts, academic scholars, and business consultants. This mentoring helps them in business planning, market analysis, legal compliance, financial management, and strategic decision-making. In contrast, non-incubated startups mainly depend on informal guidance obtained from friends, family members, local entrepreneurs, or personal experiences, which may be limited in scope and quality.
2. **Funding Access :** Incubated startups generally enjoy easier access to institutional funding sources such as government grants, seed funds, angel investors, venture capitalists, and banking institutions. Incubators often facilitate investor meetings, pitch sessions, and funding competitions, which improve the chances of capital

acquisition. On the other hand, non-incubated startups largely rely on personal savings, family loans, informal credit, or small-scale borrowing, which restricts their financial capacity and limits large-scale expansion.

3. **Networks :** Incubated startups benefit from well-developed and organized networks that include universities, research institutions, corporate partners, suppliers, customers, policymakers, and financial institutions. These networks provide opportunities for collaboration, knowledge sharing, and market access. In comparison, non-incubated startups usually operate within narrow local or personal networks, which reduces their exposure to wider business opportunities and strategic partnerships.
4. **Credibility :** Incubated startups gain high institutional legitimacy and professional recognition due to their association with reputed incubators, universities, government agencies, and innovation programs. This association enhances their reputation among investors, customers, and business partners. In contrast, non-incubated startups have to build their credibility gradually through consistent product quality, customer satisfaction, and market performance, which requires more time and effort.
5. **Growth Potential :** Incubated startups generally possess higher growth potential because they receive comprehensive support in terms of finance, infrastructure, mentorship, and market access. This enables them to scale their operations, adopt new technologies, and enter competitive markets more effectively. However, their success still depends on ecosystem maturity and managerial capability. In contrast, non-incubated startups are often constrained by limited resources, inadequate technical support, and weak market linkages, which slows their growth and restricts long-term sustainability.

The comparison suggests that incubation enhances early-stage capabilities, particularly in resource-scarce environments. However, benefits depend on ecosystem maturity and managerial quality.

Research Gaps and Future Research Agenda :

Future studies should prioritize:

1. Comparative analysis of incubated and non-incubated startups in semi-urban regions.
2. Longitudinal designs tracking firm performance over time.
3. Mixed-method approaches combining surveys, interviews, and case studies.
4. Development of region-specific performance indicators.
5. Examination of sector-specific incubation outcomes.

Special focus on regions such as Vidarbha can improve policy relevance and inclusiveness.

Policy and Managerial Implications :

Policymakers should avoid uniform incubation models and adopt region-sensitive frameworks. Strengthening industry-academia linkages and post-incubation support is essential.

Incubator managers should emphasize mentor quality, outcome monitoring, and ecosystem integration. Entrepreneurs can use these insights to evaluate incubation participation and align growth strategies.

Conclusion :

This paper provides a comprehensive review of literature on incubated and non-incubated startups with reference to semi-urban India. The findings indicate that incubation enhances access to resources, networks, and legitimacy, but its effectiveness is strongly context-dependent.

Despite expanding policy support, empirical evidence from non-metropolitan regions remains limited. Addressing this gap through systematic, region-specific research is essential for developing inclusive and sustainable entrepreneurial ecosystems.

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