

Role of Innovation Hubs in Strengthening Startup Ecosystem In Developing Countries

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Abstract:

Innovation hubs play a pivotal role in strengthening startup ecosystems in developing countries by fostering innovation, collaboration, and entrepreneurial growth. They serve as platforms that connect startups with mentors, investors, academic institutions, industry experts, and government agencies while providing incubation, acceleration, infrastructure, skill development, and access to funding. These services help address common challenges faced by startups, including limited access to finance, inadequate technical expertise, weak market linkages, and policy constraints. Innovation hubs also promote knowledge exchange, technology transfer, and the commercialization of research, thereby enhancing innovation and business sustainability. Their contributions extend beyond startup development by generating employment, supporting digital transformation, and fostering inclusive entrepreneurship through initiatives targeting women, rural innovators, and social enterprises. Despite their growing significance, challenges such as funding sustainability, regional disparities, and inadequate policy support continue to limit their effectiveness. Strengthening institutional capacity, fostering public-private partnerships, and implementing supportive policy frameworks are essential to maximizing the impact of innovation hubs and building resilient, inclusive, and sustainable startup ecosystems in developing countries.

Keywords: Innovation Hubs, Startup Ecosystem, Developing Countries, Entrepreneurship, Business Incubation, Economic Development, Technology Commercialization, Inclusive Innovation

Introduction

Innovation hubs have emerged as powerful catalysts in transforming the startup landscape of developing countries.

In an era driven by technology, digital transformation, and knowledge-based economies, these hubs serve as dynamic

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spaces where entrepreneurs, researchers, investors, and policymakers collaborate to convert ideas into viable businesses. They provide not only physical infrastructure but also mentorship, networking opportunities, technical guidance, and access to funding—critical elements that many early-stage startups in developing nations often lack. In developing countries, structural challenges such as limited capital access, weak industry–academia linkages, skill gaps, and regulatory barriers can restrict entrepreneurial growth. Innovation hubs help bridge these gaps by fostering an enabling environment that nurtures creativity, reduces business risks, and accelerates commercialization of ideas. By supporting startups in sectors such as fintech, aggrotech, health tech, and renewable energy, these hubs contribute to economic diversification, job creation, and sustainable development. Moreover, innovation hubs encourage inclusive growth by empowering youth, women, and marginalized communities to participate in entrepreneurial activities. They strengthen collaboration between public and private sectors and enhance the overall competitiveness of national economies. As a result, innovation hubs are not merely support centres but strategic pillars in building resilient and sustainable startup ecosystems in developing countries.

Ecosystem

The term ecosystem originates from ecology and refers to a system in which

living organisms interact with each other and with their physical environment in a structured and interdependent manner. In the context of economics and entrepreneurship, an ecosystem represents a dynamic network of interconnected actors, institutions, policies, resources, and cultural elements that collectively influence the creation, growth, and sustainability of enterprises.

A startup ecosystem specifically refers to the collaborative environment composed of entrepreneurs, investors, government bodies, academic institutions, support organizations, mentors, and markets that interact to foster innovation and business development. The effectiveness of such an ecosystem depends on the strength of relationships, access to resources, regulatory support, and the presence of knowledge-sharing mechanisms.

Innovation Hubs

Innovation hubs are structured platforms or institutional spaces designed to stimulate creativity, technological advancement, and entrepreneurial activity. They function as collaborative environments where startups, researchers, industry experts, investors, and policymakers converge to transform innovative ideas into commercially viable solutions.

Review of Literature.

James F. Moore (1993) was among the earliest scholars to introduce the idea of a *business ecosystem*, defining it as an

economic community supported by interacting organizations and individuals that co-evolve capabilities around innovation. His work laid the foundation for understanding how interconnected actors influence entrepreneurial growth.

Daniel Isenberg (2010) defined an *entrepreneurial ecosystem* as a set of interdependent actors and factors—such as leadership, culture, capital markets, human resources, and policy—that coordinate in a way that enables productive entrepreneurship within a particular territory. His framework emphasized the importance of systemic support rather than isolated interventions.

Erik Stam (2015) described entrepreneurial ecosystems as interdependent networks of actors and institutions that are geographically bounded and collectively enable innovative entrepreneurship. Stam highlighted the role of institutions, formal regulations, and informal cultural norms in shaping startup success.

Boyd Cohen (2006) focused on sustainable entrepreneurial ecosystems and argued that innovation-driven entrepreneurship thrives when local governments, universities, and private organizations actively collaborate. His work connects ecosystem development with sustainable economic growth.

Regarding innovation hubs specifically, Henry Chesbrough (2003) introduced the concept of *open innovation*, explaining that firms and

entrepreneurs benefit from collaborative environments where knowledge flows across organizational boundaries. Innovation hubs operationalize this concept by providing shared spaces and networks that facilitate knowledge exchange.

AnnaLee Saxenian (1994), in her study of regional innovation systems, demonstrated how collaborative regional networks enhance technological entrepreneurship. Although her work focused on advanced economies, the insights are applicable to developing countries where innovation hubs attempt to replicate similar collaborative dynamics.

Research Gap

While innovation hubs are widely recognized as important components of startup ecosystems, most existing studies focus on developed economies. There is limited research examining how innovation hubs function within the unique economic and institutional conditions of developing countries. Additionally, insufficient attention has been given to evaluating whether innovation hubs effectively address the structural challenges faced by startups. This study attempts to fill this gap by analysing their role and impact in the context of developing nations.

Objectives of the Study

To analyse how innovation hubs help startup access funding and investment opportunity

1. To examine the role of innovation hubs on start up growth and business performance
2. To evaluate how innovation hops contribute to employment generation and economic development

Research Design

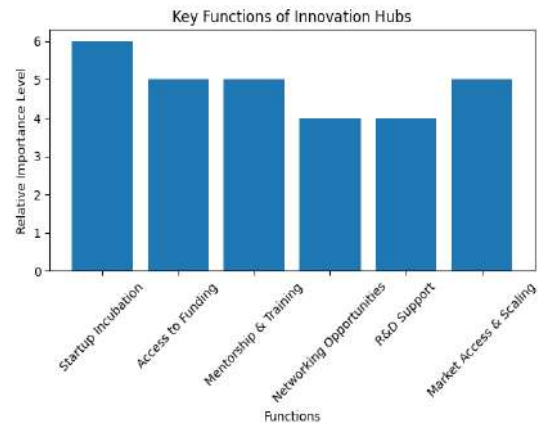
This study adopts a descriptive and analytical research design to examine the role of innovation hubs in strengthening startup ecosystems in developing countries. The descriptive approach enables a conceptual understanding of innovation hubs and entrepreneurial ecosystems, while the analytical approach facilitates evaluation of their structural and functional contributions.

Methods of Data Collection

This study is based entirely on secondary data. The required information was collected from credible and authoritative sources relevant to innovation hubs and startup ecosystems.

- Peer-reviewed academic journals on entrepreneurship, innovation, and economic development
- Books and scholarly publications related to entrepreneurial ecosystems
- Government policy documents and official reports
- Publications from international organizations and development agencies.

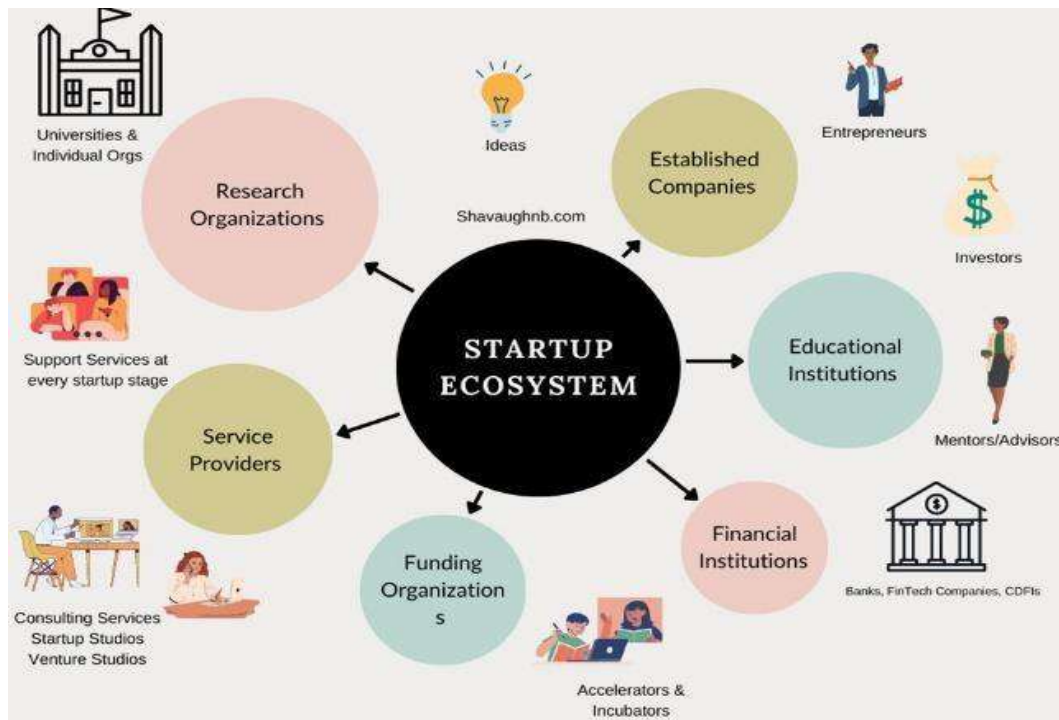
Functions of Innovation Hubs



Innovation hubs perform several important functions that strengthen the startup ecosystem and promote economic development. One of their primary functions is startup incubation, where they provide workspace, infrastructure, and early-stage support to transform ideas into viable businesses. They also facilitate access to funding by connecting startups with investors, venture capitalists, angel networks, and government grant programs. Another key function is mentorship and training, offering guidance from industry experts to improve business planning, financial management, and strategic decision-making. Innovation hubs create networking opportunities by organizing events, workshops, and collaborations that link entrepreneurs with industry partners and stakeholders. Additionally, they support research and development (R&D) by providing technical resources, laboratories, and innovation support services. Finally, they assist startups in market access and scaling, helping them expand into new

markets, build customer networks, and nurture innovation, enhance develop sustainable growth strategies. competitiveness, and drive long-term Overall, innovation hubs act as economic growth comprehensive support systems that

Role of Innovation Hubs in Startup Development



Innovation hubs play a transformative role in shaping the growth and sustainability of startups, particularly in developing countries where entrepreneurial ecosystems are still evolving. These hubs function as structured platforms that provide physical infrastructure, technical support, mentoring services, and access to professional networks. By offering shared workspaces, incubation programs, and acceleration services, innovation hubs reduce operational costs and lower entry barriers for early-stage entrepreneurs.

One of the primary contributions of innovation hubs is capacity building. Many startups fail due to lack of managerial expertise, poor financial planning, and limited market understanding. Innovation hubs address these issues by organizing training programs, workshops, and mentoring sessions that enhance entrepreneurial skills. This structured guidance increases the probability of startup survival and scalability. Furthermore, innovation hubs create collaborative environments where startups can interact with investors, industry experts, researchers, and

policymakers. This ecosystem-based approach encourages knowledge exchange, idea validation, and product refinement. The networking opportunities provided by innovation hubs enable startups to access strategic partnerships and funding sources that would otherwise be difficult to obtain. Innovation hubs also promote innovation culture by supporting research-based entrepreneurship and technological development. They

encourage experimentation, prototyping, and problem-solving tailored to local and regional needs. As a result, startups are better positioned to introduce innovative products and services that address market gaps. Thus, analysing the role of innovation hubs provides insight into how these institutions strengthen startup capabilities, reduce business risks, and contribute to long-term entrepreneurial sustainability.

Impact of innovation hubs on economic development and employment generation



Innovation hubs play a vital role in generating employment and promoting economic development by creating supportive environments for startups, entrepreneurs, researchers, and investors to collaborate. These hubs directly create jobs when new enterprises are established and expanded, particularly in high-skill

sectors such as technology, research, marketing, and management. As startups grow, they require more employees, which increases job opportunities within the region. In addition to direct employment, innovation hubs also stimulate indirect and induced jobs by increasing demand for support services

such as legal, accounting, logistics, and local businesses like transport and hospitality. Furthermore, innovation hubs contribute to human capital development by offering training programs, mentorship, and networking opportunities that enhance skills and entrepreneurial capabilities. They attract investment from venture capitalists, government agencies, and private investors, leading to greater capital

inflows and business expansion. By encouraging innovation, technological advancement, and economic diversification, these hubs improve productivity and global competitiveness. Overall, innovation hubs act as catalysts for sustainable economic growth by fostering job creation, strengthening local industries, and building a resilient and innovation-driven economy

Strengthening Startup Financing through Innovation Ecosystems



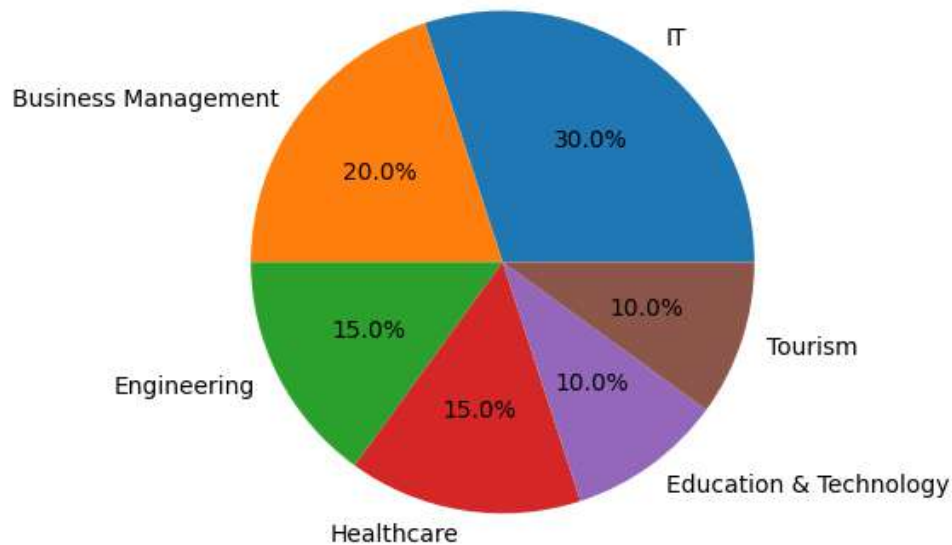
Innovation hubs play a crucial role in helping startups access funding and investment opportunities by connecting entrepreneurs with investors, venture capitalists, angel networks, and financial institutions. These hubs organize pitch events, demo days, and networking sessions where startups can present their business ideas directly to potential investors. They also provide mentorship and guidance on preparing business plans, financial projections, and investor presentations, which improves startups'

chances of securing funding. Many innovation hubs have partnerships with government agencies and private organizations that offer grants, seed funding, and incubation support. In addition, being part of a recognized innovation hub increases a startup's credibility, making investors more confident about investing. Through these structured support systems and strong networks, innovation hubs reduce funding barriers and create easier pathways for

startups to attract capital and grow sustainably.

Sector-Wise Distribution of Funding and Investment Opportunities

Sectoral Distribution of Startup Funding & Investment Opportunities



The distribution of funding and investment opportunities across different sectors shows that Information Technology (IT) receives the highest share, approximately 30%, due to its scalability, rapid innovation cycles, and strong global demand. Business Management-related startups account for around 20%, as they provide essential solutions such as analytics, financial services, and operational management tools that attract steady investor interest. Engineering and Healthcare sectors each receive nearly 15% of funding, reflecting their strong growth potential and long-

term impact, although they often require higher capital investment and longer development periods. Education and Technology (EdTech) captures about 10% of investment, driven by increasing demand for digital learning platforms and skill development solutions. Similarly, Tourism secures around 10%, as investment in this sector depends largely on market conditions and consumer trends. Overall, the variation in funding allocation across sectors is influenced by factors such as scalability, risk level, capital intensity, regulatory requirements, and expected return on investment.

Findings

1. Innovation hubs act as central support systems within startup ecosystems by providing incubation, mentorship, networking, and access to funding.
2. IT sector receives the highest funding (30%), indicating strong investor confidence due to scalability and quick returns.
3. Business Management startups attract significant investment (20%), showing demand for operational and financial solutions.
4. Engineering and Healthcare sectors (15% each) receive moderate funding due to high capital requirements and longer development cycles.
5. Education & Technology (10%) is growing but still receives comparatively lower investment despite rising digital learning demand.
6. Tourism sector (10%) funding is influenced by economic conditions and seasonal market trends.
7. Funding allocation across sectors is largely influenced by risk level, scalability, regulatory environment, and return on investment expectations.

Suggestions

1. Governments and innovation hubs should provide targeted grants and subsidies for underfunded sectors like Education and Tourism.
2. Encourage sector-specific incubators and accelerators to improve funding

access for Engineering and Healthcare startups.

3. Promote public-private partnerships to reduce financial risks in capital-intensive sectors.
4. Strengthen investor awareness programs to highlight long-term benefits of investing in social impact sectors.
5. Develop simplified regulatory frameworks to attract more investment into Healthcare and Education sectors.
6. Foster cross-sector collaboration (e.g., IT + Healthcare, IT + Tourism) to increase innovation and funding opportunities.

Conclusion

Innovation hubs play a pivotal role in strengthening startup ecosystems in developing countries by acting as institutional bridges that connect entrepreneurs with essential resources, networks, and support systems. The study reveals that innovation hubs not only provide infrastructure and mentorship but also facilitate knowledge exchange, collaboration, and access to finance, thereby enhancing startup survival and growth. By fostering partnerships among government, academia, investors, and industry, these hubs contribute to economic diversification, job creation, and inclusive development. However, their long-term effectiveness depends on sustainable funding models, consistent policy support, and deeper integration within national innovation frameworks.

Overall, innovation hubs emerge as strategic enablers of entrepreneurial development and serve as critical pillars in building resilient and competitive startup ecosystems in developing countries. They act as bridges between entrepreneurs, investors, academic institutions, and government bodies, creating an environment where innovation can thrive. While sectors such as IT and Business Management attract higher investment due to scalability and quicker returns, other important sectors like Engineering, Healthcare, Education, and Tourism also contribute significantly to long-term economic and social development. Therefore, balanced funding strategies, supportive policies, and inclusive investment approaches are essential to ensure sustainable and diversified economic growth.

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