



## Sustainable and inclusive economic growth through innovation and entrepreneurship

Shallu\*

Faculty of Commerce, University School for Graduate Studies, Chaudhary Devi Lal University, Sirsa, Haryana, India

### Abstract

This study explores the ways in which innovation and entrepreneurship can be used to drive an inclusive and sustainable economic development. This paper is structured around four key themes: the importance of innovation and its role in economic growth; the role of entrepreneurship in promoting inclusive development and generating employment opportunities; key policies that support innovation-driven entrepreneurship and the strategies required to build a sustainable and inclusive entrepreneurial ecosystem. The study employed a combined mixed-method design, consisting of a quantitative survey of 200 stakeholders and qualitative interviews and case studies. The descriptive statistics, correlation, regression and ANOVA were used to analyze the quantitative data and the thematic and content analysis were used in analyzing the qualitative data. The results showed that innovation and entrepreneurship positively contribute to economic growth ( $r = 0.842$ ,  $p < 0.01$ ) as well as to inclusive development and employment ( $\beta = 0.214$ ,  $R^2 = 0.689$ ,  $p < 0.001$ ). The ANOVA results revealed that stakeholders' perceptions of policy show a statistically significant difference ( $F = 4.362$ ,  $p = 0.001$ ). The thematic analysis revealed several key strategies, including sustainable practices, inclusive financing, capacity building and policy support. The findings support all the hypotheses, emphasizing that innovation, entrepreneurship and inclusive policies should be utilized together to achieve resilient, sustainable and equitable economic growth.

**Keywords:** Innovation, entrepreneurship, sustainable economic growth, policy, inclusive economic growth

### Introduction

Achieving sustainable and inclusive economic development has become a key objective for countries seeking long-term prosperity, social equality and environmental sustainability. Over the last several decades, innovation and entrepreneurship were considered to be major drivers that do not only promote economic growth and development in the realm of economy but also the creation of jobs, technological progress and even social growth. Entrepreneurial projects play a significant role in addressing the urgent needs and demands of society by introducing innovative products, services and business models that promote inclusive opportunities for diverse population groups, including marginalized communities. (Rahman & Hakim, 2024; Rahmawati, 2025) <sup>[11, 12]</sup>.

Competitiveness and productivity are driven by innovation, which enables businesses to adapt to rapid changes in the market environment, improving resource allocation efficiency and enhance value creation. At the same time, entrepreneurship promotes taking risks, sharing knowledge and commercializing novel ideas which helps in making the economy dynamic. (Cabeza-García *et al.*, 2019; Hysa *et al.*, 2020) <sup>[2, 8]</sup>. Entrepreneurship and innovation are particularly important in attaining sustainable growth because they align the economic growth with the environmental and social responsibility. Governments, policymakers and academic institutions are increasingly focusing on developing an environment that fosters creativity, promotes startups and improves access to finance and technological expertise to ensure a more equitable distribution of economic benefits. (Daou *et al.*, 2020; Lashitew *et al.*, 2020; Sajjad *et al.*, 2020; Stoica *et al.*, 2020; Urbano *et al.*, 2020) <sup>[3, 9, 13, 15, 16]</sup>.

Since innovation and entrepreneurship have a critical role to play in crafting a robust economy, the study is focused on uncovering the avenues to realizing the sustainability and inclusive growth by examining the mechanisms, effect and enabling factors. Prior research has emphasized the

importance of innovation-driven entrepreneurship in fostering economic development, enhancing social inclusion, and promoting sustainability outcomes. (Arner *et al.*, 2019; Cabeza-García *et al.*, 2019; Dhahri & Omri, 2018) <sup>[1, 2, 4]</sup>. Therefore, the present study is aimed at determining the strategies that can be applied to promote entrepreneurship, innovative business practices and ensure the equitable distribution of economic benefits across society.

### Literature Review

(Santa-Maria *et al.*, 2022) <sup>[14]</sup> identified key practices involved in circular business model innovation, including – life cycle perspective, the use of sustainability-related tools, the development of sustainable value propositions, the creation of a sustainability-oriented strategy and culture and effective stakeholder coordination within the business ecosystem. The study also highlighted several practices supporting long-term business transformation, short and medium-loop innovations and long-loop innovations. Furthermore, it complements recent research on dynamic capabilities for sustainability-oriented innovation by proposing a set of 33 skills, processes and activities that help organizations successfully innovate their business models toward a circular economy.

(Liu *et al.*, 2022) <sup>[10]</sup> examined the impact of the digital economy on green total factor productivity (GTFP) in China using panel data from 286 cities between 2011 and 2019. Using methods such as the Direction Distance Function (DDF), Global Malmquist–Luenberger (GML) index, Tobit and quantile regression models, the study found that the digital economy significantly enhances GTFP, although regional disparities exist. The findings also suggest that industrial structure upgrading acts as an important transmission mechanism through which the digital economy promotes green economic growth.

(Dinh *et al.*, 2022) <sup>[5]</sup> examined the interrelationship between social entrepreneurship, commercial entrepreneurship and sustainability. The findings suggest that despite differences in their underlying drivers and goals, both social and commercial entrepreneurship can contribute to sustainable development by strengthening social capital. Based on conceptual analysis and initial research that was carried out in Vietnam regarding entrepreneurship in the biggest megacities and in the distant areas (countryside), the study also highlighted diverse entrepreneurial practices across the regions.

(Edwards, 2021) <sup>[6]</sup> examined the paradox of firm growth from economic, organizational and ecological perspectives. The study proposes a firm-level strategy typology that reconceptualizes business growth as a developmental process focused on social-ecological flourishing. It also highlights three key strategic principles - multidexterity, resilience thinking and inclusive balance - that support the development and implementation of sustainable business strategies.

(Fernandes *et al.*, 2021) <sup>[7]</sup> analyzed how sustainable technology transfer and innovation contribute to green growth and its impact on economic growth. Using OECD country-level data from 32 countries between 1990 and 2013, the study employed dynamic panel models to analyze long-term relationships. The findings indicate that sustainable technology transfer and innovation significantly promote green growth, which in turn positively influences economic growth.

## Research Methodology

### 1. Research Objectives

The study is guided by the following objectives:

1. To examine the role of innovation in driving sustainable economic growth.
2. To analyze how entrepreneurship contributes to inclusive development and job creation.
3. To identify key factors and policies that foster innovation-driven entrepreneurship.
4. To explore strategies for integrating sustainability and inclusivity into entrepreneurial ecosystems.

### 2. Hypotheses

Based on the objectives, the study proposes the following hypotheses:

**H1:** Innovation has a significant positive impact on sustainable economic growth.

**H2:** Entrepreneurship significantly contributes to inclusive development and employment generation.

**H3:** Supportive policies and key enabling factors enhance innovation-driven entrepreneurship.

**H4:** Integrating sustainability and inclusivity into entrepreneurial ecosystems strengthens economic resilience and equitable growth.

### 3. Research Design

This study adopts a mixed-methods research design, combining both quantitative and qualitative approaches.

- The quantitative component involves measuring relationships between innovation, entrepreneurship and economic growth using structured survey data and secondary economic indicators.
- The qualitative component provides in-depth insights into policies, strategies and ecosystem factors through interviews and case studies of innovative and inclusive entrepreneurial ventures.

## 4. Data Sampling

The purposive and stratified sampling strategy is used to gain a representation of the main stakeholders in the field of innovation and entrepreneurship:

- **Population:** Entrepreneurs, startup founders, policymakers and experts in economic development and innovation.
- **Sample Size:** 200 respondents, including:
  - Entrepreneurs and startup founders (50–60%)
  - Government officials and policy makers (20–25%)
  - Academicians and researchers in innovation and economic development (15–20%)

## 5. Data Collection Methods

### Primary Data:

- Structured questionnaires administered to entrepreneurs and experts to quantify innovation practices, entrepreneurship outcomes and perceptions of inclusivity.
- Semi-structured interviews with policymakers and key industry leaders to gain qualitative insights into enabling policies, ecosystem challenges and strategies for sustainability.

### Secondary Data:

- Economic indicators, innovation indices and entrepreneurship reports from government databases and relevant academic publications.
- Policy documents and case studies on entrepreneurship, innovation and sustainable economic development.

## 6. Data Analysis Tools

### Quantitative Data Analysis:

- **Descriptive Statistics:** To summarize trends, means and frequencies in responses.
- **Inferential Statistics:**
  - **Correlation analysis** to examine relationship among innovation, entrepreneurship and economic growth.
  - **Regression analysis** to test the hypotheses and measure the impact of innovation and entrepreneurship on sustainable growth.
  - **ANOVA** to compare perspectives across different stakeholder groups.

### Qualitative Data Analysis:

- **Thematic Analysis:** To identify key themes from interviews regarding policies, strategies and ecosystem enablers.
- **Content Analysis:** For reviewing secondary data and case studies to support findings. (Tools: NVivo or manual coding techniques)

## 7. Ethical Considerations

- Confidentiality and anonymity of responses strictly maintained.
- Data used exclusively for research purposes.

## Data Analysis & Interpretation

This section involves the discussion and the analysis of the information that was obtained by conducting a survey among the respondents both qualitatively and quantitatively. The discussion is structured based on the objectives and hypotheses of the research.

**1. Objective 1: To examine the role of innovation in driving sustainable economic growth**  
**Descriptive Statistics**

The responses on innovations in the organization (e.g., the use of new technologies, investment in R&D, product/process innovation) were summarized.

**Table 1:** Descriptive Statistics on Innovation Practices (N=200)

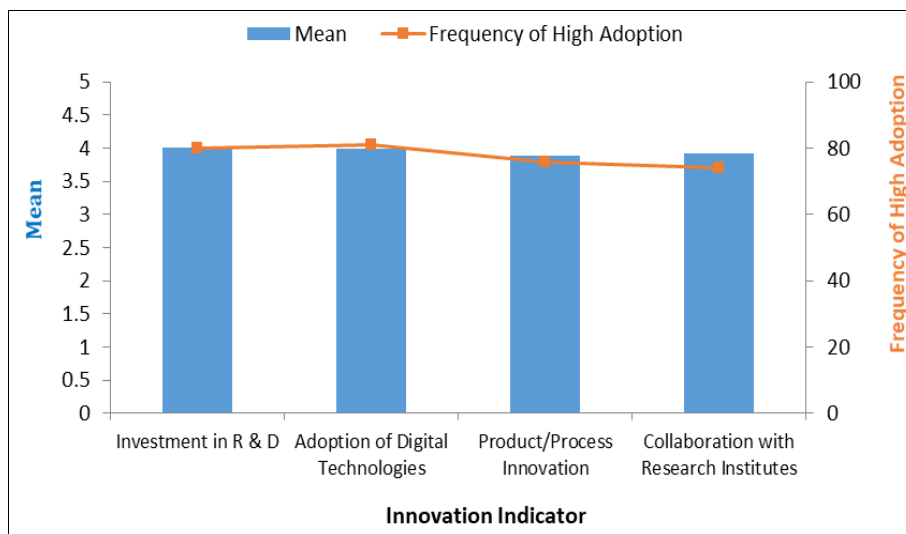
Innovation Indicator	Mean Score (1-5)	Std. Deviation	Frequency of High Adoption (%)
Investment in R&D	4.015	0.823	80
Adoption of Digital Technologies	3.995	0.817	81
Product/Process Innovation	3.885	0.796	76
Collaboration with Research Institutes	3.915	0.831	74

(Source: calculated on the basis of responses to question no.'s 9 to 12)

\* Frequency of high adoption covers responses to agree and strongly agree.

The findings reveal that companies that have more extensive use of innovation invest more in research and development and digital

technologies This supports H1, which proposes that innovation is positively correlated with sustainable economic growth.



**Fig 1:** Descriptive Statistics on Innovation Practices

**Correlation Analysis**

**Table 2:** Correlation between Innovation and Economic Growth Indicators

Variables	Economic Growth Index	Innovation Index
Innovation Index	1.000	0.842**
Economic Growth Index	0.842**	1.000

(Source: calculated on the basis of responses to question no.'s 13 and 14)

\*\*p < 0.01

It has a high positive correlation ( $r = 0.842$ ,  $p < 0.01$ ), which is significant showing that higher level of innovation correlates with higher level of economic growth and hence the first hypothesis is supported.

**2. Objective 2: To analyze how entrepreneurship contributes to inclusive development and job creation**

**Regression Analysis**

**Table 3:** Regression of Entrepreneurship on Inclusive Development & Employment

Predictor	Beta ( $\beta$ )	Std. Error	t-value	p-value
Entrepreneurship Index	0.214	0.059	3.659	$p < 0.001$
Startups contribution	0.189	0.053	3.572	$p < 0.001$
Innovation and creativity	0.210	0.057	3.705	$p < 0.001$
Regional Economic Development	0.243	0.065	3.765	$p < 0.001$
Access to Finance	0.195	0.055	3.524	$p < 0.001$
Social Inclusion and Economic Empowerment	0.228	0.060	3.775	$p < 0.001$
$R^2 = 0.689$		Adjusted $R^2 = 0.678$ $F = 69.71$ , $p < 0.001$		

(Source: calculated on the basis of responses to question no.'s 15 to 20)

The regression results indicate that Entrepreneurship has a positive influence on inclusive development and job

creation ( $\beta = 0.214$ ). The model explains 68.9 percent of the variance in inclusive development outcomes, indicating

strong explanatory power. Therefore, H2 is accepted, indicating that entrepreneurship is a significant factor that contributes to economic growth, as well as enables social inclusivity and employment. All predictors are statistically significant ( $p < 0.001$ ).

### 3. Objective 3: To identify key factors and policies that foster innovation-driven entrepreneurship

#### ANOVA Analysis across Stakeholder Groups

**Table 4:** ANOVA for Perceptions of Policy Effectiveness

Source of Variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	18.742	5	3.748	4.362	0.001
Within Groups	1023.588	1194	0.857		
Total	1042.330	1199			

(Source: calculated on the basis of responses to question no.'s 21 to 26)

The results of the ANOVA analysis indicate a significant difference in the perceptions of policy effectiveness among entrepreneurs, policymakers and academicians ( $p < 0.001$ ). Policies relating to financial support, tax incentives and supportive regulatory environment are perceived differently across these groups. These findings support Hypothesis H3, suggesting that enabling policies and institutional support play a significant role in promoting innovation-driven entrepreneurship.

### 4. Objective 4: To explore strategies for integrating sustainability and inclusivity into entrepreneurial ecosystems

**Qualitative Analysis (Thematic Analysis):** Key themes identified through interviews with policymakers and entrepreneurial leaders included:

- Sustainable Business Practices:** Adoption of green technologies and circular economy principles.
- Inclusive Financing Models:** Micro-financing, venture capital for underserved communities.
- Capacity Building & Mentorship:** Training programs for skill development in marginalized groups.
- Policy & Regulatory Support:** Simplified startup regulations, tax incentives for inclusive ventures.

**Content Analysis of Case Studies:** Several startups were identified that integrate social inclusion and environmental sustainability into their business models, indicating that inclusive entrepreneurship strategies can strengthen economic resilience. These findings support Hypothesis H4, demonstrating that sustainable and inclusive entrepreneurial ecosystems enhance overall economic and social outcomes.

### 5. Summary of Findings

- Innovation significantly drives sustainable economic growth (H1 supported).
- Entrepreneurship contributes positively to job creation and inclusive development (H2 supported).
- Policies and enabling factors play a critical role in promoting innovation-driven entrepreneurship (H3 supported).
- Strategies integrating sustainability and inclusivity in entrepreneurial ecosystems are effective in achieving equitable economic outcomes (H4 supported).

The results demonstrate that a combination of entrepreneurship, innovation, supportive policies and

inclusive strategies is a key to achieving sustainable and inclusive economic growth.

### Conclusion

This study highlights that innovation and entrepreneurship are key drivers of sustainable and inclusive economic development. The findings show that innovative practices - such as R&D investment and the adoption of digital technologies significantly contribute to economic growth, supporting the proposed hypothesis. Entrepreneurship also demonstrates a strong positive relationship with inclusive development and job creation ( $\beta = 0.214$ ,  $R^2 = 0.689$ ,  $p < 0.001$ ). Furthermore, the ANOVA results ( $F = 4.362$ ,  $p = 0.001$ ) indicate significant differences in stakeholders' perceptions of policy effectiveness, emphasizing the importance of targeted policy interventions. Qualitative insights further highlight the need to integrate sustainability and inclusivity into entrepreneurial ecosystems through green business practices, inclusive financing and capacity building. Overall, the findings suggest that a balanced combination of innovation, entrepreneurship and supportive policies can enhance economic resilience and promote equitable growth, offering valuable insights for policymakers, entrepreneurs and researchers.

### References

- Arner DW, Buckley RP, Zetzsche DA, Veidt R. Sustainability, FinTech and financial inclusion (European Banking Institute Working Paper Series No. 2019/41; University of Luxembourg Law Working Paper No. 006-2019; UNSW Law Research Paper No. 19-63; University of Hong Kong Faculty of Law Research Paper No. 2019/038). SSRN, 2019. <https://doi.org/10.2139/ssrn.3387359>
- Cabeza-García L, Del Brio EB, Oscanoa-Victorio ML. Female financial inclusion and its impacts on inclusive economic development. *Women's Studies International Forum*, 2019, 77. <https://doi.org/10.1016/j.wsif.2019.102300>
- Daou A, Mallat C, Chammas G, Cerantola N, Kayed S, Saliba NA. The Ecocanvas as a business model canvas for a circular economy. *Journal of Cleaner Production*, 2020;258:120938. <https://doi.org/10.1016/j.clepro.2020.120938>
- Dahri S, Omri A. Entrepreneurship contribution to the three pillars of sustainable development: What does the evidence really say? *World Development*, Elsevier, 2018;106(84504):64–77. <https://doi.org/10.1016/j.worlddev.2018.01.008>
- Dinh BHA, Le DMD, Nguyen THY, Nguyen TH, Nguyen HT. Sustainable development of social entrepreneurship: Evidence from Vietnam. *International Journal of Entrepreneurship and Small Business*, 2022;45(1):62–76. <https://doi.org/10.1504/IJESB.2022.120182>
- Edwards MG. The growth paradox, sustainable development and business strategy. *Business Strategy and the Environment*, 2021;30(7):3079–3094. <https://doi.org/10.1002/bse.2790>
- Fernandes CI, Veiga PM, Ferreira JJM, Hughes M. Green growth versus economic growth: Do sustainable technology transfer and innovations lead to an imperfect choice? *Business Strategy and the Environment*, 2021;30(4):2021–2037. <https://doi.org/10.1002/bse.2730>

8. Hysa E, Kruja A, Rehman NU, Laurenti R. Circular Economy Innovation and Environmental Sustainability Impact on Economic Growth: An Integrated Model for Sustainable Development. *Sustainability*,2020;12(12):4831. <https://doi.org/10.3390/su12124831>
9. Lashitew AA, Bals L, van Tulder R. Inclusive Business at the Base of the Pyramid: The Role of Embeddedness for Enabling Social Innovations. *Journal of Business Ethics*,2020;162(2):421–448. <https://doi.org/10.1007/s10551-018-3995-y>
10. Liu Y, Yang Y, Li H, Zhong K. Digital Economy Development, Industrial Structure Upgrading and Green Total Factor Productivity: Empirical Evidence from China's Cities. *International Journal of Environmental Research and Public Health*, 2022, 19(4). <https://doi.org/10.3390/ijerph19042414>
11. Rahman I, Hakim LM. Development of Creative Economy Based on Local Wisdom in the Era of Digital Transformation Through Inclusive Education and Village Community Empowerment in Bantul Regency, Yogyakarta. *BASKARA : Journal of Business and Entrepreneurship*,2024;6(2):213–224. <https://doi.org/10.54268/baskara.v6i2.21629>
12. Rahmawati D. The Critical Role of Entrepreneurship and Innovation in Enhancing Community Economic Development and Growth. *International Journal of Economics, Management and Accounting (IJEMA)*,2025;2(12):977–986. <https://doi.org/10.47353/ijema.v2i12.282>
13. Sajjad M, Kaleem N, Chani MI, Ahmed M. Worldwide role of women entrepreneurs in economic development. *Asia Pacific Journal of Innovation and Entrepreneurship*,2020;14(2):151–160. <https://doi.org/10.1108/apjie-06-2019-0041>
14. Santa-Maria T, Vermeulen WJV, Baumgartner RJ. How do incumbent firms innovate their business models for the circular economy? Identifying micro-foundations of dynamic capabilities. *Business Strategy and the Environment*,2022;31(4):1308–1333. <https://doi.org/10.1002/bse.2956>
15. Stoica O, Roman A, Rusu VD. The Nexus between Entrepreneurship and Economic Growth: A Comparative Analysis on Groups of Countries. *Sustainability (Switzerland)*, 2020, 12(3). <https://doi.org/10.3390/su12031186>
16. Urbano D, Audretsch D, Aparicio S, Noguera M. Does entrepreneurial activity matter for economic growth in developing countries? The role of the institutional environment. *International Entrepreneurship and Management Journal*,2020;16(3):1065–1099. <https://doi.org/10.1007/s11365-019-00621-5>