



Technology Entrepreneurship: An Academic Perspective

Ndagi Abdulmalik ^{1*}, Salihu Abdulwaheed Adelabu ², Agbaje Fausiat Olajumoke ³

¹Department of Business Administration, Faculty of Management and Social Sciences, Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria

^{2,3}Department of Management & Accounting, Faculty of Management and Social Sciences, Lead City University, Ibadan, Oyo State, Nigeria

* Corresponding Author: **Ndagi Abdulmalik**

Article Info

ISSN (online): 2583-8261

Volume: 04

Issue: 06

November – December 2025

Received: 03-09-2025

Accepted: 05-10-2025

Published: 27-10-2025

Page No: 22-25

Abstract

Technology entrepreneurship integrates principles of innovation, strategic management, and entrepreneurial behavior to drive economic growth and societal development. This paper explores the theoretical and conceptual frameworks underpinning technology entrepreneurship, drawing from established academic theories such as Schumpeter's Innovation Theory, Resource-Based View, Dynamic Capabilities Theory, and others. It also presents a conceptual framework illustrating the relationships between key components like technological innovation, entrepreneurial orientation, resources, market environment, institutional support, and networking. The analysis provides a structured foundation for understanding how technology-based ventures can leverage innovations for sustainable development and success.

DOI: <https://doi.org/10.54660/IJSSER.2025.4.6.22-25>

Keywords: Technology Entrepreneurship, Academic

1. Introduction

Entrepreneurship is widely recognized as a key driver of economic growth, innovation, and societal progress. It involves the identification of business opportunities, the mobilization of resources, and the creation of enterprises to exploit these opportunities (Hisrich, Peters, & Shepherd, 2017) ^[10]. Entrepreneurs play a pivotal role in shaping markets, creating employment opportunities, and addressing societal challenges through innovation and strategic risk-taking (Kuratko, 2016) ^[12]. This paper provides an academic overview of entrepreneurship, focusing on its general objectives, types, and key characteristics.

1.1. General Objectives of Entrepreneurship

The objectives of entrepreneurship encompass economic, social, and individual goals:

1. Economic Objectives:

- Promote innovation and technological advancement (Schumpeter, 1934) ^[17].
- Generate employment opportunities.
- Contribute to GDP growth.
- Encourage competition and market efficiency.
- Facilitate wealth creation and distribution.

2. Social Objectives:

- Address societal challenges via social enterprises (Dees, 2001) ^[6].
- Improve living standards and reduce poverty.
- Promote corporate social responsibility (CSR).
- Foster community development.

3. Individual Objectives:

- Enable personal financial independence.
- Provide avenues for self-fulfillment.
- Develop leadership and risk-taking skills.
- Offer autonomy and career flexibility.

1.2. Types of Entrepreneurship

Entrepreneurship can be classified into various types based on business objectives and the level of innovation (Burns, 2016) ^[5]:

1. **Technology Entrepreneurship:** The process through which individuals or small groups exploit scientific and technical knowledge to create new products, services, or ventures
2. **Corporate Entrepreneurship:** Is the process of attempting to identify, encourage, and assist entrepreneurship within an established company to create new products or services that become new sources of revenue and leverage the parent company's assets and market position.
3. **Intrapreneurship:** Is used to describe entrepreneurial behaviour inside established mid-sized and large organizations.
4. **Small Business Entrepreneurship:** Focuses on local markets with small-scale businesses.
5. **Scalable Startup Entrepreneurship:** Involves high-growth, innovative ventures aiming to capture large markets.
6. **Serial Entrepreneurship:** Refers to the practice of an individual repeatedly starting, managing, and exiting multiple businesses over time.
7. **Large Company Entrepreneurship:** Occurs within established firms introducing new products or services.
8. **Social Entrepreneurship:** Prioritizes solving societal issues while maintaining financial viability
9. **Innovative Entrepreneurship:** Characterized by the creation of new products, services, or processes.
10. **Imitative Entrepreneurship:** Involves adopting successful models or products from other regions.
11. **Agro-value chain Entrepreneurship:** This are Agricultural/Agro-business value-chain based entrepreneurship
12. **Educational Entrepreneurship:** This is educational development enterprises. (Bornstein & Davis, 2010) ^[4].

1.3. Characteristics of Entrepreneurship

Entrepreneurship is defined by several key characteristics (Kuratko, 2016) ^[12]:

1. **Innovation:** Developing new ideas, products, or services.
2. **Risk-taking Ability:** Operating under uncertainty and accepting risks.
3. **Proactiveness:** Anticipating and acting on future market trends.
4. **Decision-Making Skills:** Making strategic business decisions.

5. **Resilience and Persistence:** Overcoming obstacles and adapting to change.
6. **Vision and Leadership:** Having a clear vision and leading teams.
7. **Resourcefulness:** Efficiently mobilizing and utilizing resources.

2. Background and Definition of Technology Entrepreneurship

Technology entrepreneurship has emerged as a vital driver of economic growth, innovation, and societal advancement in the contemporary world. It combines the principles of entrepreneurship with technological innovations to create, develop, and commercialize new products, services, or processes. This paper explores the concept, characteristics, objectives, benefits, critical success factors, challenges, and notable global examples of technology entrepreneurship. Several scholars have provided academic definitions of technology entrepreneurship:

Bailetti (2012) ^[1] defines technology entrepreneurship as “an investment in a project that assembles and deploys specialized individuals and heterogeneous assets that are intricately related to advances in scientific and technological knowledge” (Bailetti, 2012, p. 5) ^[1].

Phan, Siegel & Wright (2009) ^[14] describe it as “the process through which individuals or small groups exploit scientific and technical knowledge to create new products, services, or ventures” (Phan *et al.*, 2009) ^[14].

Zahra & Nambisan (2012) ^[20] emphasize that technology entrepreneurship is distinct due to its focus on commercialization of innovative technologies within dynamic business ecosystems.

2.1. Theoretical and Conceptual Frameworks of Technology Entrepreneurship

Technology entrepreneurship is an interdisciplinary domain combining principles of technology, innovation, and entrepreneurship. It emphasizes the development, commercialization, and utilization of technological innovations to create economic and social value. This paper presents the theoretical and conceptual frameworks underpinning technology entrepreneurship, supported by relevant academic references.

2.2. Theoretical Framework of Technology Entrepreneurship

The theoretical framework of technology entrepreneurship draws from multiple established theories across the fields of economics, strategy, and innovation management. It provides foundational perspectives that guide the understanding of how technology-based ventures emerge and succeed.

1. **Schumpeter's Theory of Innovation:** Schumpeter (1934) ^[17] introduced the concept of 'creative destruction,' emphasizing entrepreneurs as key agents who disrupt markets through technological innovations, thereby fostering economic progress.
2. **Resource-Based View (RBV):** According to Barney (1991) ^[2], a firm's internal resources, such as intellectual property, R&D capabilities, and technological expertise, are critical sources of competitive advantage. Technology entrepreneurs leverage these resources for sustainable growth.
3. **Dynamic Capabilities Theory:** Teece, Pisano, and

Shuen (1997) ^[18] argue that firms need dynamic capabilities to continuously adapt and reconfigure resources in response to rapid technological changes.

4. **Entrepreneurial Orientation (EO):** Lumpkin and Dess (1996) ^[13] highlight that entrepreneurial orientation—defined by innovativeness, risk-taking, and proactiveness—drives entrepreneurial ventures to pursue and commercialize technological opportunities.
5. **Innovation Diffusion Theory:** Rogers (1962) ^[15] explains how technological innovations spread within societies and markets. Understanding adoption patterns helps entrepreneurs accelerate technology acceptance.
6. **Triple Helix Model:** Etzkowitz and Leydesdorff (2000) ^[8] emphasize the collaboration among universities, industries, and governments in fostering technological entrepreneurship through knowledge transfer and supportive policies.
7. **Network Theory:** Granovetter (1973) ^[9] posits that social and professional networks play a pivotal role in providing access to critical resources, funding, and partnerships, essential for technology entrepreneurs.

2.3. Conceptual Framework of Technology Entrepreneurship

The conceptual framework of technology entrepreneurship systematically illustrates the relationships among key variables and processes influencing the success of technology-based ventures. It includes the following core components:

1. **Technological Innovation:** Central to technology entrepreneurship, it involves the creation and application of new technologies that offer competitive advantages.
2. **Entrepreneurial Orientation:** The entrepreneur's mindset, characterized by innovativeness, risk-taking, and proactiveness, drives opportunity recognition and venture growth.
3. **Resources and Capabilities:** Includes financial capital, human expertise, intellectual property, and R&D competencies essential for developing and scaling innovations.
4. **Market Environment:** Encompasses external factors like market demand, competition, and customer needs influencing the adoption of technological solutions.
5. **Institutional Support:** Refers to policies, legal frameworks, research institutions, and incubators facilitating entrepreneurial activities.
6. **Networking and Collaboration:** Highlights the role of strategic alliances with universities, industries, and investors in ensuring resource access and market entry. The framework suggests that technological innovation is driven by entrepreneurial orientation and enabled by resources, supported by institutional factors and networks, all interacting within the market environment.

2.4. Objectives of Technology Entrepreneurship

The primary objectives are:

1. To foster innovation and commercialization of technological advancements.
2. To drive economic growth and job creation.
3. To provide solutions to societal challenges through

technology.

4. To build competitive advantages in global markets.
5. To enhance knowledge transfer from research institutions to industry (Phan *et al.*, 2009; Shane, 2004) ^[14, 16].

2.5. Characteristics of Technology Entrepreneurship

1. The key characteristics include:
2. Innovation-Driven
3. Technological Competence
4. High Risk & Uncertainty
5. Scalability
6. Market Orientation
7. Interdisciplinary Collaboration
8. Intellectual Property Focus
9. Strong Leadership & Vision (Bailetti, 2012; Zahra & Nambisan, 2012) ^[1, 20]

2.6. Benefits of Technology Entrepreneurship to Society

Technology entrepreneurship contributes to society in the following ways:

1. Economic Growth & Job Creation (Bailetti, 2012) ^[1]
2. Technological Advancement (Zahra & Nambisan, 2012) ^[20]
3. Improved Quality of Life
4. Development of Knowledge Economy (Phan *et al.*, 2009) ^[14]
5. Global Competitiveness (Shane, 2004) ^[16]
6. Social Inclusion & Empowerment
7. Environmental Sustainability

2.7. Critical Success Factors of Technology Entrepreneurship

The success of technology entrepreneurs depends on:

1. Technological Expertise (Bailetti, 2012) ^[1]
2. Market Orientation & Customer Focus (Zahra & Nambisan, 2012) ^[20]
3. Access to Financial Resources (Shane, 2004) ^[16]
4. Intellectual Property Management (Phan *et al.*, 2009) ^[14]
5. Leadership and Vision (Beckman *et al.*, 2012) ^[3]
6. Strategic Alliances and Networking (Zahra & Nambisan, 2012) ^[20]
7. Adaptability & Continuous Learning (Phan *et al.*, 2009) ^[14]
8. Effective Business Model Design (Bailetti, 2012) ^[1]

2.8. Challenges of Technology Entrepreneurship

Technology entrepreneurs face numerous challenges:

1. Rapid Technological Change (Zahra & Nambisan, 2012) ^[20]
2. High Capital Requirements (Shane, 2004) ^[16]
3. Intellectual Property Protection Issues (Phan *et al.*, 2009) ^[14]
4. Market Uncertainty & Customer Adoption (Bailetti, 2012) ^[1]
5. Talent Acquisition & Retention (Bailetti, 2012) ^[1]
6. Regulatory and Legal Barriers (Phan *et al.*, 2009) ^[14]
7. Difficulty in Scaling Operations
8. Strong Competition & Market Saturation
9. Cybersecurity Risks

2.9. Global Examples of Technology Entrepreneurs

S/N	Entrepreneur	Country	Company	Contribution
1	Bill Gates	USA	Microsoft	Personal Computing Software
2	Steve Jobs	USA	Apple Inc.	Smart Phone Innovation & Consumer electronic
3	Elon Musk	South Africa/USA	Tesla, SpaceX	Electric Vehicles & space Exploration
4	Mark Zuckerberg	USA	Meta (Facebook)	Social networking platforms
5	Jack Ma	China	Alibaba Group	E-commerce & digital payment innovation
6	Satya Nadella	India/USA	Microsoft	Cloud computing, AI transformation
7	Pony Ma	China	Tencent	Social media, online gaming, fintech in China

3. Conclusion

Technology entrepreneurship plays a critical role in driving innovation, economic growth, and societal development. While it presents significant challenges, its benefits to society and its potential for transformative impact cannot be overstated. Understanding the characteristics, success factors, and obstacles of technology entrepreneurship is essential for aspiring entrepreneurs, policymakers, and scholars alike.

4. References

- Bailetti T. Technology entrepreneurship: overview, definition, and distinctive aspects. *Technology Innovation Management Review*. 2012;2(2):5-12.
- Barney J. Firm resources and sustained competitive advantage. *Journal of Management*. 1991;17(1):99-120.
- Beckman CM, Eisenhardt KM, Kotha S, Meyer A, Rajagopalan N. Technology entrepreneurship. *Strategic Entrepreneurship Journal*. 2012;6(2):89-93.
- Bornstein D, Davis S. *Social entrepreneurship: what everyone needs to know*. Oxford: Oxford University Press; 2010.
- Burns P. *Entrepreneurship and small business*. 4th ed. London: Palgrave Macmillan; 2016.
- Dees JG. The meaning of social entrepreneurship [Internet]. 2001 [cited 2025 Nov 3]. Available from: https://centers.fuqua.duke.edu/case/wpcontent/uploads/sites/7/2015/03/Article_Deas_Meaning_of_Social_Entrepreneurship_2001.pdf
- Clark D. *Alibaba: the house that Jack Ma built*. New York: Harper Business; 2016.
- Etzkowitz H, Leydesdorff L. The dynamics of innovation: from National Systems and 'Mode 2' to a Triple Helix of university-industry-government relations. *Research Policy*. 2000;29(2):109-23.
- Granovetter M. The strength of weak ties. *American Journal of Sociology*. 1973;78(6):1360-80.
- Hisrich RD, Peters MP, Shepherd DA. *Entrepreneurship*. 10th ed. New York: McGraw-Hill Education; 2017.
- Isaacson W. *Steve Jobs*. New York: Simon & Schuster; 2011.
- Kuratko DF. *Entrepreneurship: theory, process, and practice*. 10th ed. Boston: Cengage Learning; 2016.
- Lumpkin GT, Dess GG. Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*. 1996;21(1):135-72.
- Phan PH, Siegel DS, Wright M. New developments in technology management education: background issues, program initiatives, and a research agenda. *Academy of Management Learning & Education*. 2009;8(3):324-43.
- Rogers EM. *Diffusion of innovations*. New York: Free Press; 1962.
- Shane S. *Academic entrepreneurship: university spinoffs and wealth creation*. Cheltenham: Edward Elgar Publishing; 2004.
- Schumpeter JA. *The theory of economic development*. Cambridge: Harvard University Press; 1934.
- Teece DJ, Pisano G, Shuen A. Dynamic capabilities and strategic management. *Strategic Management Journal*. 1997;18(7):509-33.
- Vance A. *Elon Musk: Tesla, SpaceX, and the quest for a fantastic future*. New York: Harper Collins; 2015.
- Zahra SA, Nambisan S. Entrepreneurship and strategic thinking in business ecosystems. *Business Horizons*. 2012;55(3):219-29.

How to Cite This Article

Ndagi A, Salihu AA, Agbaje FO. Technology entrepreneurship: An academic perspective. *Int J Soc Sci Except Res*. 2025;4(6):22-25. doi:10.54660/IJSSER.2025.4.6.22-25.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.