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Innovation, Entrepreneurship, and Economic Growth: A Proposed Framework

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Abstract: Business and governmental development strategies have made innovation and entrepreneurship part of their fundamental tenets in recent decades, especially after the 2007-2008 global financial crisis. It has grown in significance as the capacity to invent new products or services has become a more common descriptor of a successful business. However, the literature showed a gap in developing a framework that integrates innovation management (IM), entrepreneurship development (ED), and economic growth (EG). Academics have offered scattered perspectives on innovation and entrepreneurship from an ecosystem perspective. This paper adopts an exploratory analysis of 50 articles and books indexed in Scopus, the Web of Science, Google Scholar, and other renowned databases from 1990-2022 to propose a comprehensive framework that connects creative business ideas with entrepreneurial development and accelerated EG. Firms that succeed in turning novel concepts into commercially viable goods, services, processes, or technology are regarded as innovative entrepreneurs.

Keywords: Entrepreneurship Development, Economic Development, Innovation Management, Proposed Framework.

INTRODUCTION

Constant improvements in digital technology have triggered a historic shift in how people live and work. Examples include the proliferation of digital ride-hailing platforms that rapidly grab market share from incumbent transportation providers and the emergence of entirely new industries, such as crewless aerial vehicles based on digitized hardware that did not exist until recently. The rapidity and pervasiveness of this shift and its worldwide influence have prompted business owners, inventors, and government agencies worldwide to evaluate and act on the consequences of this shift on competition, value creation, and Society at large [1].

In today's digital age, innovation and entrepreneurship refer to activities where digital technology is used for conventional business models. The revolutionary developments brought about by digital transformation are beneficial to both fields. Digital technologies, according to the literature [2, 3, 4, 5, 6], dissolve traditional boundaries and shift the agency of innovation and entrepreneurship processes and outcomes, potentially rendering existing theories obsolete and necessitating investigation of these intersections as novel phenomena. The premise is that digital technologies are not merely another technological transition but fundamentally different from their analog predecessors [7, 8] that can continually develop and overthrow established behaviors [9, 10, 11]. As an innovative practice, Business Process Reengineering (BPR) continues beyond the implementation stage.

Although most sources see BRR implementation as the last stage of BPR management, companies should keep it that way because modern businesses function in a volatile and ever-changing environment. Keeping the feedback loop open is crucial for the success of the reengineering effort. The established framework offers SMEs a paradigm for reengineering preparation and transformation into an ongoing activity rather than a one-off attempt [12]. The global impact of digital technologies on economic and social activities is something that not even visionaries like the founder of Amazon (Jeff Bezos), the founders of Google (Sergey Brin and Larry Page), or the co-founder of Apple

(Steve Jobs) could have foreseen. Put another way, digital technologies may be viewed as external facilitators that stimulate and encourage processes or enable results in innovation and entrepreneurship [13]. Products [14], product or service platforms [15], infrastructure tools or systems [16], and digital applications, components, or media content are just a few examples of the functions and manifestations digital technologies may take on [4].

The literature review on innovation management (IM), entrepreneurship development (ED), and economic growth (EG) discussed in the forthcoming section demonstrates a scarcity of studies that provide an integrative framework for innovation and development from an ecosystem perspective. This study aims to close this literature gap by adopting a qualitative exploratory research design using a literature review of relevant studies to develop an initial and integrated framework to achieve sustainable development. It has systematically analyzed 50 articles and books indexed in Scopus, the Web of Science, Google Scholar, and other renowned databases from 1990-2022.

2. LITERATURE REVIEW

Innovation management (IM) refers to practices standardizing how innovative ideas, processes, and goods are developed and introduced into the market [17]. Furthermore, this process benefits small, medium, and big business performance. When a firm aims to gain a competitive edge via IM, the process must be effectively implemented by formulating strategies and establishing an adequate administrative framework to back up the innovation [18]. There has been a slew of qualitative research on IM in recent years. According to Morente and Ferras [19], a conceptual framework for IM was developed, focusing on the role of brokers in the process.

Other topics studied by researchers in this area include how organizational culture affects IM, the impact of strategic knowledge management on innovation [20, 21, 22, 23], the social processes that take place during the implementation of radical organizational innovation [14], and the determination of the necessary organizational methods for generating innovation within an enterprise [24]. In today's fast-paced Society, people are finding less and less time and space to create changes that will stay [25]. As a result, governments, communities, regulators, and lawmakers should develop new guidelines to aid individuals and businesses in implementing sustainable marketing innovation. They should invest in consumer education and assistance programs to help consumers change their social values and intervene with companies to help influence consumer choices in a way that benefits Society.

2.1. Innovation Management and Entrepreneurial Development

IM refers to strategic planning, organizing, and controlling efforts to introduce new ideas, products, services, processes, or technologies that create value and drive organizational growth. It involves managing the entire innovation lifecycle, from idea generation and development to implementation and commercialization. Effective IM requires a structured approach to foster creativity, manage risk, allocate resources, and ensure that innovative ideas align with the organization's goals and market needs [26].

A body of research looks at the probable Granger causation between IM and ED, and these findings may be summed up in four distinct ways. The supply-leading hypothesis advocates claim that entrepreneurs create new products and processes. Economic theory suggests that business owners who risk capital on R&D and innovation are more likely to get a positive return on their money. These business owners have a knack for determining which companies will provide the best return on investment. Entrepreneurs who advocate for changes drive most of the venture capital business in many industrialized economies. According to the proponents of the demand-following theory, entrepreneurship is caused by innovation via the Granger causality chain. They justify this by saying that new advances, particularly technical ones, have led to new forms of company organization. These advancements have produced new "open innovation" platforms and made it easier to enter new markets [27, 28].

The latter has further strengthened the increased availability of information, expertise, market intelligence, and other resources, all of which have contributed to a rise in entrepreneurial endeavors. Investments like Uber's online user-friendly platform connecting taxi drivers have allowed every driver to try their hand at entrepreneurship. Small Business Innovation Research (SBIR) and other government initiatives in the United States are shown to have positive knock-on effects [29,30]. The SBIR program has facilitated the rise of new startup companies and commercialization endeavors by giving small enterprises access to research, development, and innovation funding.

Another study lends credence to an innovation-entrepreneurship nexus feedback theory, which holds that one another -causes the dissemination of innovations and entrepreneurship. The idea is that when business owners spend money on modern technologies, such advancements improve the availability and quality of previously available goods and services while lowering entry barriers. For example, these factors encourage new business owners to enter the field by examining the connection between

entrepreneurship and innovation [31]. Fourth, the neutrality hypothesis states that innovation and entrepreneurialism do not cause one another. One economic justification is that some nations have poor or nonexistent entrepreneurial and innovation ecosystems. Over-regulation, hostile business practices, rent-seeking conduct, poor expenditures in R&D, and a lengthy procedure to register patents and company licenses/permits may all impede innovation and entrepreneurial activity. These factors are apparent in nations like these [15].

2.2. Innovation's Role in Driving Economic Growth

Much writing has been done regarding the relationship between IM and economic expansion (EG). Four theoretical theories explain this relationship. The first school supports the supply-side theory that innovation fosters economic growth. The proponents of this school of thought contend that introducing new products and services and creating innovative business models and processes can result from developing novel ideas, such as those generated through R&D and other types of innovation.

The second view holds that increased prosperity is a direct source of recent technological advancements, known as the "demand-following" theory. It is argued that prosperous nations put more resources into R&D to preserve their economic competitiveness in the global market as they grow. Third, the feedback hypothesis proposes that technological progress and economic expansion mutually cause and reinforce one another [32].

Intriguingly, depending on the factors and samples employed, researchers found evidence for all three theories. The fourth school of thinking presents a neutrality hypothesis, contending that technological progress and economic expansion are not Granger-caused because many of these economies might be in their formative stages of invention. As a result, innovation has little or no impact on economic development. Traditional factors of production undoubtedly account for much of the growth in these economies [33, 34].

2.3 Entrepreneurship's Role in Driving Economic Growth

ED equips individuals with the skills, knowledge, mindset, and resources to start, manage, and grow new ventures. It encompasses activities such as identifying opportunities, creating business models, securing funding, managing operations, and navigating the challenges of entrepreneurship. ED aims to foster an entrepreneurial culture, encourage innovation, and support the growth of startups and small businesses [35].

A supply-leading theory explains the Granger causality between ED and EG and suggests that entrepreneurial Granger generates economic expansion. The financial justification is that business owners take risks and invest in the R&D that leads to the introduction of brand-new goods and services, as well as enhanced versions of existing ones and innovative new ways of doing business [36, 37]. Many believe entrepreneurs directly result from economic progress (the "Granger cause" view).

This line of thinking is premised on the idea that governments can better invest in fostering entrepreneurship as an economy develops by putting fiscal and non-fiscal incentives, new institutions, and a more favorable regulatory framework for business creation. Strengthening business support infrastructure boosts entrepreneurial efforts and innovative ideas. Nguyen and Nguyen [38] and Pan et al. [39] conducted two studies that provide credence to this theory. There is also the feedback hypothesis, which states that entrepreneurial activity and economic expansion mutually cause and reinforce one another via the process of Granger causation. For instance, fostering an entrepreneurial mindset may boost the economy, and a flourishing economy can inspire more risk-taking and new business creation [40, 41].

3. METHODOLOGY

The relevant previous research has been surveyed to formulate a proposed research framework for the factors that impact innovation, entrepreneurship, and economic growth (IEEG). The study conducted an exploratory analysis of factors that affect the IEEG models presented in the literature. It has systematically analyzed 46 articles and books from Scopus, the Web of Science, Google Scholar, and other renowned databases from 1990-2022 to develop a comprehensive IEEG framework. Table I provides a summary of the adopted search protocol.

Table 1: A Summary of the Search Protocol

Items	**Details**
Selected database	Scopus, Web of Science, Google Scholar, and other renowned databases.
Criteria of publication	Articles published in peer-reviewed journals or conferences and books.

Language	Articles or books published in English.
Duration of search	From 1990-2022.
Fields of search	Title, abstract, and keywords.
Keywords for search	Innovation management, entrepreneurship development, economic growth, model, and framework.
Criteria for inclusion	The article or book should contain " innovation management, entrepreneurship development, economic growth, model, and framework."
Criteria for exclusion	Lack of the entire text, repetition, and publishing in a language other than English. Articles or books without "innovation management, entrepreneurship development, economic growth, model, and framework."

4. RESULTS

The study created a comprehensive framework emphasizing the interplay between the three pillars of IM, ED, and EG. The proposal involves a framework that integrates the three pillars within which each step is interconnected and contributes to creating a thriving ecosystem that fosters innovation, supports entrepreneurial endeavors, and promotes holistic and sustainable development. Figure I shows the IEEG multi-faceted framework that combines the following phases:

1. Strategic Alignment: Mazzucato [42].
   - Identify Economic Goals: Specify specific objectives for economic growth, such as increasing employment, increasing GDP, and diversifying exports.
   - Align Innovation and Entrepreneurship: Make sure that initiatives in innovation and entrepreneurship are closely related to accomplishing these economic objectives.
2. Innovation Ecosystem Mapping: Etzkowitz and Leydesdorff [43].
   - List the various stakeholders, such as the government, academics, businesses, startups, investors, and support groups.
   - Establish platforms for cross-sector collaboration and information sharing.
   - Provide training programs for enhancing IM, business development, and soft skills.
3. Incubation, Acceleration, and Funding: Shane and Venkataraman [46].
   - Establish programs that offer mentorship, resources, and a network to companies as part of incubation and acceleration efforts.
   - Create channels for entrepreneurs to obtain government funding, angel investments, and venture capital.
4. Research and Innovation Collaboration: Porter [47].
   - Partnerships between business and academia should be encouraged to advance cooperative research, technological transfer, and commercialization.
   - Promote the creation of innovation clusters to encourage knowledge exchange and cooperation.
5. Market Access and Scaling: Svatos [48].
   - Market validation: Assist companies in proving the viability of their goods through test markets and pilot programs.
   - Support startups to enter worldwide markets and value chains through export assistance.
6. Impact Measurement and Feedback Loop: Organization for Economic Cooperation and Development (OECD) [49].
   - Track measures for job creation, economic growth, the uptake of new technologies, and social effects.
   - Establish methods for gathering stakeholder feedback to adjust tactics continuously.
7. Sustainability and Long-Term Vision: Lundvall [50].
   - Maintaining long-term innovation and entrepreneurial endeavors requires policy continuity and financing support.
   - Evolving Strategies: Modify the framework following shifting economic conditions and new technological developments.

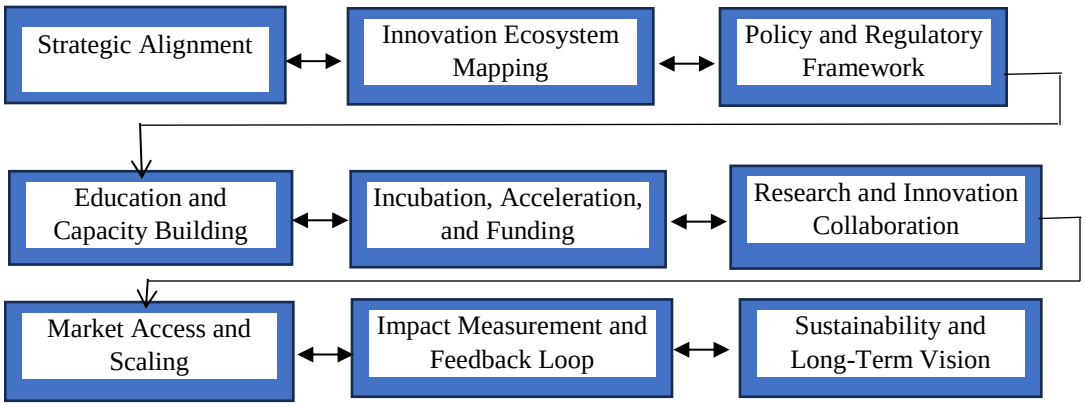

Figure 1: A Proposed IEEG Framework

8. Policy and Regulatory Framework: World Intellectual Property Organization (WIPO) [44].
   - Innovation-friendly Policies: Create regulations supporting R&D spending, technology transfer, and innovation-driven business ventures.
   - Startup Regulations: Simplify the regulatory procedures for launching and expanding firms.
9. Education and Capacity Building: Acs and Audretsch [45].
   - Integrate entrepreneurial education at all levels, emphasizing creativity, problem-solving, and risk-taking.

CONCLUSIONS AND IMPLICATIONS

This paper seeks to generate many conversations to advance our understanding of the connectivity of IEED factors presented in a comprehensive IEED framework. It reflects the latest research and empirical findings on issues, policies, and practices of IM and ED in the digital economy of the 21st century at the individual, organizational, industry, national, and international levels. The proposed framework fosters an ecosystem for creativity, growth, and sustainable development practices.

The framework can be adaptable to an organization's specific needs and customized based on the country's geographic region and the company's industry, culture, and goals. Regular assessment and refinement of the framework will contribute to its effectiveness in driving innovation and entrepreneurship within a broader economic context. The framework shall not only guide managers in business firms willing to innovate, but it would also help the managers and policymakers in the public sector to incorporate innovative and entrepreneurial development strategies while designing a framework to drive economic development.

REFERENCES

[1] ACCC. **Digital platforms inquiry: Final report. Canberra: Australian Competition and Consumer Commission (ACCC),** 2019.

[2] Al-Shammari, M., and Marhoon, Z. (2022). **Human Resource Management Practices and Technological Innovation: An Empirical Study in an Emerging Market Economy**, *International Journal of Work Innovation*, Vol. 3, No. 2, pp. 151-165.

[3] Al-Shammari, M., and Waleed, R. (2018). **Entrepreneurial Intentions of Private University Students in the Kingdom of Bahrain**, *International Journal of Innovation Science*, Vol. 10, No. 1, pp. 43-57.

[4] Elisabeth S.C. Berger, Frederik von Briel, Per Davidsson, and Andreas Kuckertza, **Digital or not- The future of entrepreneurship and innovation**, *Journal of Business Research*, 2021, (125) 436–442.

[5] **Jasimuddin, S. M., Mishra, N. and Almuraqab, N.. Modeling the factors influencing the acceptance of digital technologies in e-government services: A PLS-SEM Approach**, *Production Planning, and Control*, 2017, Vol. 28, No. 16, pp. 1307–1317.

[6] Nambisan, S. **Digital entrepreneurship: Towards a digital technology perspective of entrepreneurship. Entrepreneurship Theory and Practice**, 2017, Vol. 41, No. 6, 1029–1056.

[7] Gu, W. and Wang, J. **Research on index construction of sustainable entrepreneurship and its impact on economic growth**, *Journal of Business Research*, 2022, Vol. 142, pp. 266-276.

[8] Wang, C. and Fu, B. **Under the five-in-one model, a study on the efficiency of allocation and its influencing factors on innovation and entrepreneurship education resources in Chinese universities.** *The International Journal of Management Education*, Vol. 21, No. 1, 100755, 2023.

[9] Yusof, N., Kamal, E. M, Eric, C.W. Loub, E. C. W., Kamaruddeen, A. M. **Effects of innovation capability on radical and incremental innovations and business performance relationships**, *Journal of Engineering and Technology Management*, 2023, Vol. 67, p. 101726.

[10] Naeini, A. B., Zamani, M., Daim, T. U., Sharma, M., and Yalcin, H, **Conceptual structure and perspectives on "innovation management**, *A bibliometric review*.

Journal of Technological Forecasting and Social Change, Vol. 185, 122052.

[11] Sebastian M. Pfotenhauer, Alexander Wentland, Luise Ruge, **Understanding regional innovation cultures: Narratives, directionality, and conservative innovation in Bavaria,** *Research Policy*, 2022, Vol. 52, No. 3, 104704.

[12] A. Aziz, W, **Business Process Reengineering Impact on SMEs Operations: evidence from GCC region.** *International Journal of Services and Operations Management*, 2019, Vol. 33, No. 4, pp. 545-562.

[13] Von Briel, F., Davidsson, P., and Recker, J. **Digital technologies as external enablers of new venture creation in the IT hardware sector**, *Entrepreneurship Theory and Practice*, 2018, Vol. 42, No. 1, pp. 47–69.

[14] Keränen, O. Lehtimäki, T., Komulainen, H., and Ulkuniemi, P., **Changing the market for sustainable innovation**, *Industrial Marketing Management*, 2022, Vol. 108, pp. 108-121.

[15] Pattinson, S., Nicholson, J. N., Ehret, M., Velu, C. and Ryan, P., **Innovation ecosystems in B2B contexts: Owning the space**, *Industrial Marketing Management Journal*, 2023, Vol. 108, pp. 1–9.

[16] Aldrich, H. E. **The democratization of entrepreneurship? Hackers, maker spaces, and crowdfunding**, 2014, *Annual Meeting of the Academy of Management.*

[17] Jasimuddin, S.M. **Knowledge Management- An Interdisciplinary Perspective**, 2012, *World Scientific Publishing Company*.

[18] Melendez, K., D'avila, A., Melgar, A., **Literature review of the measurement in innovation management.** *J. Technol. Manag. Innov.*, 2019, Vol. 14 No. 2, pp. 81–87.

[19] Morente, F., Ferr'as, X., **Innovation management from the inside: an approach from attention and everyday praxis**, *Intangible Capital*, Vol. 13, No. 3, 640.

[20] Shahzada Adeel, Ana Dias Daniel, Anabela Botelho, **The effect of entrepreneurship education on the determinants of entrepreneurial behavior among higher education students: A multi-group analysis**, 2023, *Journal of Innovation and Knowledge*, Vol. 8, No. 1, 100324.

[21] Frank, H., **Principles for innovation management in family firms: an analysis of long-term successful good practices with a practitioner validation of the principles,** *J. Fam. Bus. Manag.*, 2019, Vol. 9, No. 3, pp. 319–348.

[22] Marques, C.S., Leal, C., Marques, C.P., Cardoso, A.R., **Strategic knowledge management, innovation, and performance: a qualitative study of the footwear industry.** *J. Knowl. Econ.*, 2016, Vol. 7, No. 3, pp. 659–675.

[23] Nakshabandi, M. A. and Jasimuddin, S. M. **The linkage between open innovation, absorptive capacity, and managerial ties: A cross-country perspective**, *Journal of Innovation and Knowledge,* 2022, 7(2), April–June, 100167.

[24] Nakshabandi, M. and Jasimuddin, S. M., **Knowledge-oriented leadership and open innovation: Role of knowledge management capability in France-based Multinationals,** *International Business Review*, 2018, Vol. 27, No.3, pp. 701-713.

[25] Tidd, J., Bessant, J., and Pavitt, K., **Managing Innovation: Integrating Technological, Market and Organizational Change**. John Wiley & Sons, 2005.

[26] Jasimuddin, S. M. and Nakshabandi, M., **Linkage between knowledge infrastructure capability and open inbound innovation: The intervening role of absorptive capacity,** *Production Planning, and Control*, 2019, Vol. 30, No. 10-12, pp. 893-906,

[27] A. Aziz, W., **Marketing Sustainability, Resilience, and Innovation Capacity: Lessons from the Online Retail Industry,** *Sustainability and Resilience Conference: Design Innovation (SRC).* IEEE Xplore®, 2022, pp. 462-471.

[28] Zhang, X. Chu, Z., Ren, L. and Xing, J., **Open innovation and sustainable competitive advantage: The role of organizational learning,** *Technological Forecasting and Social Change*, 2023, Vol. 186, Part A, 122114.

[29] Xia, H., Ye, P., Jasimuddin, S. M. and Zhang, Z.J, *Evolution of Digital Transformation in Traditional Enterprises: Evidence from a Textile Company in China: Digital Transformation in Traditional Enterprises.* **Technology Analysis and Strategic Management**, 2022, pp. 1-12.

[30] Pradhan, R. P., Arvin, M. B., and Bahmani, S., **Are innovation and financial development causative factors in economic growth? Evidence from a panel Granger causality test,** *Technological Forecasting and Social Change,* 2018, Vol. 132, pp. 130–142.

[31] Pradhan, R. P., Arvin, M. B., Hall, J. H., and Nair, M., **Innovation, financial development, and economic growth in Eurozone countries,** *Applied Economics Letters*, 2016, 23(16), 1141–1144.

[32] Capello, R., and Lenzi, C., **Relevance, and utility of European Union research, technological development, and innovation policies for smart growth,** *Environment and Planning C: Government and Policy*, 2016, Vol. 34, No. 1, pp. 52–72.

[33] Kun-Huang Huarng, Jos´e Manuel Guaita-Martínez and Tiffany Hui- Kuang Yu, **Challenges and opportunities of new research methods in innovation, entrepreneurship, and knowledge.** *Journal of Business Research*, 2021, Vol. 134, pp. 101–103.

[34] Kuratko, D. F., *Entrepreneurship: Theory, Process, Practice.* Cengage Learning, 2009.

[35] Pradhan, R. P., Arvin, M. B., Bahmani, S., and Bennett, S. E., **The Innovation-growth Link in OECD Countries: Could other macroeconomic variables matter?** *Technology in Society*, 2017, Vol. 51, pp. 113–123.

[36] Sedera, D., Tan, and Xu, D. (2022), **Digital business transformation in innovation and entrepreneurship**, *Information & Management Journal*, Vol. 59, 103620.

[37] Urbano, D., and Aparicio, S., **Entrepreneurship capital types and economic growth: International**

evidence, Technological Forecasting, and Social Change, 2016, Vol. 102, pp. 34–44.

[38] Nguyen, Q. D., and Nguyen, H. T., **Entrepreneurship education and entrepreneurial intention: The mediating role of entrepreneurial capacity,** *The International Journal of Management Education*, 2023, Vol. 21, No. 1, 100730.

[39] Pan, X, Lia, J., Shen, Z. and Song, M., Life cycle identification of China's regional innovation systems based on entropy weight disturbing attribute model. Habitat International, 2023, No. 131, 102725.

[40] Huggins, R., and Thomson, P., **Entrepreneurship, innovation, and regional growth: A network theory. Small Business Economics**, 2015, Vol. 45, No. 1, pp. 103–128.

[41] Wennekers, S., and Thurik, R., **Linking entrepreneurship and economic growth**, *Small Business Economics*, 2016, Vol. 13, No. 1, pp. 27–55.

[42] Mazzucato, M., *The Value of Everything: Making and Taking in the Global Economy*. Penguin Books, 2018.

[43] Etzkowitz, H., and Leydesdorff, L., **The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix ofUniversity–Industry– Government Relations,** *Research Policy*, 2000, Vol. 29, No. 2, pp. 109-123.

[44] **World Intellectual Property Organization (WIPO),** *World Intellectual Property Report 2013: Intellectual Property and Economic Growth*, 2013.

[45] Acs, Z. J., and Audretsch, D. B., **Entrepreneurship and Innovation: The Growth Link**, *Small Business Economics*, 2010, 24(3), 3-10.

[46] Shane, S., and Venkataraman, S., **The Promise of Entrepreneurship as a Field of Research**, *Academy of Management Review*, 2000, Vol. 25, No. 1, pp. 217-226.

[47] Porter, M. E., **The Competitive Advantage of Nations.** *Harvard Business Review*, 1990, Vol. 68, No. 2, pp. 73-93.

[48] Svatos, J., **Global Value Chains and the Role of Innovation for Sustainable Development**, *Journal of Innovation Economics and Management*, 2019, Vol. 32, pp. 63-80.

[49] **Organization for Economic Cooperation and Development (OECD)**, Measuring Innovation: A New Perspective, 2010.

[50] Lundvall, B. A., *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*, Pinter Publishers, 1992.