

Chapter 7

Does Digitalization Have a Bi-Directional Causal Relationship With the Entrepreneurship Ecosystem? Evidence From a Country-Wise Panel Data Analysis

Ajay Kumar Singh

 <https://orcid.org/0000-0003-0429-0925>

Department of Economics, School of Liberal Arts and Management, DIT University Dehradun, India

Bhim Jyoti

Department of Seed Science and Technology, College of Forestry, Veer Chandra Singh Garhwali Uttarakhand University of Horticulture and Forestry, Ranichauri, India

ABSTRACT

This chapter created entrepreneurship ecosystem development index (EEDI) and information and communication technology evolution index (ICTEI) for 58 countries during 2010 – 2020 using principal component analysis. The statistical values of EEDI and ICTEI are used to explain the comparative performance of these countries in entrepreneurship ecosystem (EE) and digitalization, respectively. Accordingly, log-linear regression model is used to assess the impact of digitalization and certain control variables on EE and vice-versa. The Granger casualty co-integration test is employed to perceive the existence of bi-directional causal relationship between digitalization and entrepreneurship ecosystem. EE and digitalization have a positive and bi-directional causal relationship and vice-versa. Hence, determinants of EE will promote digitalization. Digitalization and ICTs infrastructure may be helpful to increase EE. The findings of this chapter proposed several policy implications to increase digitalization and EE across countries.

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INTRODUCTION

Entrepreneurship is a social, economic, culture and scientific process which help to create jobs and extensive business opportunities (Sabra & Shreteh, 2021; Kim et al., 2022). While, entrepreneurship ecosystem (EE) is a system that nurture a proper path for businessmen to start new business and promote entrepreneurial activities (Singh et al., 2022b; Sharma et al., 2023). Thereupon, entrepreneurial and business activities help to increase growth of manufacturing sector, and boost the science & technological development and innovation. Entrepreneurial activities are also supportive to increase production of innovative goods and services, foreign trade, and create new markets (Singh et al., 2020a). Consequently, jobs opportunities, per capita income, economic capacity, consumption pattern, saving and investment, and demand of good services also increase due to entrepreneurial activities and EE (Sharma et al., 2023). Manufacturing firms also increases their production scale to meet the demand of goods and services in domestic and international markets (Singh & Kumar, 2022a). Accordingly, EE helps to increase industrial and commercial development, infrastructural development, innovation, and perfect competition (Ashraf & Singh, 2019). Perfect competition plays a key role to reduce monopoly and make price stability in the product market. Foreign direct investment, financial development, financial stability, money flow, science & technological development, research & development (R&D) ecosystem, technology transfer and commercialization, and innovation also increase due to appropriate EE (Adusei, 2016; Singh et al., 2019a; Singh et al., 2020a).

Moreover, entrepreneurial activities may be used to create green entrepreneurship ecosystem GEE (Singh et al., 2022b; Singh et al., 2023a,b). GEE would be positive to increase sustainability in natural resources and ecosystem services (Singh et al., 2022b; Singh et al., 2023a,b). Accordingly, environmental development is expected to be increased as GEE increases (Singh et al., 2023d). Integrated impact of GEE and EE will be positive on social, economic, science & technological and environmental development (Dahri & Omri, 2018; Singh et al., 2019a; Singh et al., 2020b; Singh et al., 2021; Singh et al., 2022b; Singh & Kumar, 2022c; Singh et al., 2023a). Economic development and EE have a positive casualty (Singh et al., 2023b; Singh et al., 2023c). EE has an association with technical and entrepreneurial skills of people, entrepreneurial training, entrepreneurial culture, entrepreneurial education, bank rate, financial availability, government policies, foreign direct investment, inflation, science & technological development, technology transfer & commercialization, innovation, R&D expenditure, intellectual property rights (IPRs) regime, infrastructural development, population growth, demand of goods and services, and geographical location (Chen, 2014; Singh et al., 2019; Singh & Jyoti, 2021; Singh et al., 2023c).

Digitalization and information & communication technologies (ICTs) infrastructure have positive implication on economic development, entrepreneurship ecosystem (EE) and entrepreneurial activities (Kim et al., 2022; Jyoti & Singh, 2023). Per capita income, business opportunities, e-commerce, e-business, online trading of goods and services, level of employment, transparency in government policies, dissemination of information, innovation in market, money flow and need of consumers and producers, labour productivity, and quality of education also increase due to adoption of digitalization and ICTs infrastructure (Novikova et al., 2022). Digitalization helps to meet the requirement of entrepreneurs and consumers as creating an online platform of business (Jio & Sun, 2021). Jio and Sun (2021) noticed that digital development is supportive to satisfy entrepreneur's information and their acquisition needs. Digitalization is also operative to increase competition, resource efficiency and quality of life (Kondratenko et al., 2022), and movement of country to be globally competitive (Aleksandrova et al., 2022). The existing empirical and theoretical literature found a positive impact of digitalization on eco-

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