

Chapter 6

ICT Penetration and Entrepreneurial Activity: An Empirical Analysis for High Income Countries

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ABSTRACT

Entrepreneurial activity is a critical factor for performance of firms and economies. Therefore, firms and governments try to create an entrepreneurial environment given positive economic and social gains of entrepreneurship. Furthermore, governments stimulate the entrepreneurial activities through financial and legal incentives. This study investigates the mutual interaction between ICT penetration and entrepreneurial activity in 13 high income countries for the 2002-2018 period by a panel causality test which considers the cross-sectional dependence and heterogeneity. The results of panel level causality analysis reveal a bidirectional causal interaction between ICT penetration and entrepreneurial activity. However, the results of country level causality analysis uncover that interaction between ICT penetration and entrepreneurial activity differs among higher income countries depending on country specific characteristics.

INTRODUCTION

The economic and social benefits of the entrepreneurship make the entrepreneurship a vital factor for firms and the whole economies. Entrepreneurs can foster the growth of whole economy and firms and provide new employment opportunities by developing the innovation, products, and services and increase the productivity of the economies and firms, encourage the firms to be more competitive by the increased competition, and accelerate the structural change in the economy (Kritikos, 2014, Franco, 2020). However, the innovation and increased competition resulting from entrepreneurship can lead some firms to

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be closed and in turn increase the unemployed and the economic costs of unsuccessful entrepreneurs are sometimes borne by taxpayers (Kritikos, 2014, Neumann, 2021).

The influence of entrepreneurship on economic growth and employment has been extensively researched, but the influence of entrepreneurship on innovation, competitiveness, and social welfare has been explored by relatively few researchers (Neumann, 2021). The related empirical literature has suggested that the findings about influence of entrepreneurship on economic growth and employment for different countries and regions are consistent with the wave-pattern theory to a great extent (Matejovsky et al., 2014; Delfmann and Koster; 2016, Dvouletý, 2017). However, the relatively few empirical studies about the influence of entrepreneurship on innovation and competitiveness has remained inconclusive (Amorós et al., 2012, Albuлесcu & Draghici, 2016).

Similarly, social and environmental effects of entrepreneurship have been empirically explored by few scholars. In this context, Lee and Rodríguez-Pose (2021) revealed that entrepreneurship in tradeables decreased the poverty and raised the incomes for non-entrepreneurs in the US cities. Dzingirai (2021) found that entrepreneurship made a contribution to poverty reduction in agricultural communities of Lower Gweru in Zimbabwe. Sall (2022) also uncovered that entrepreneurship decreased the poverty in Africa. On the other hand, Ben Youssef et al. (2018) and Dhahri & Omri (2018) discovered a negative environmental effect of entrepreneurship.

The entrepreneurial orientation also can positively affect the firm performance through innovative, proactive, risk-taking, autonomy, and competitive aggressiveness (Putniņš & Sauka, 2020). In this context, Ardhi et al. (2021) analyzed the impact of entrepreneurial orientation dimensions on 80 business performance in micro, small, and medium enterprises from Special Region of Yogyakarta and uncovered that dimensions of proactive, autonomy, and competitive aggressiveness positively influenced the business performance. Hina et al. (2021) also reached the conclusion that five dimensions of entrepreneurial orientation had a significant influence on firm performance through a sample of 50 respondents from software houses of Pakistan.

Many researchers have researched the critical factors underlying entrepreneurship considering the extensive social and economic gains of the entrepreneurship. In this regard, many demographic and individual factors, economic factors, cultural factors, social and psychological factors, technological factors, legal factors, and political factors have been suggested as the determinants of entrepreneurship (Kastrati, 2015; Cepel et al., 2019; Ahadi & Kasraie, 2020; Martínez-Rodríguez et al., 2020; Kurjono et al., 2020; Méndez-Picazo et al., 2021). However, the interaction between ICTs (information and communications technologies) and entrepreneurship has not been explored sufficiently although ICTs and entrepreneurship have potential to influence each other. Therefore, this paper centers on the interaction between ICT penetration and entrepreneurial activity.

ICTs comprise “hardware, software, networks, and media for collection, storage, processing, transmission, and presentation of information. (World Bank, 2002)”. ICTs can foster the entrepreneurial activity through the following direct and indirect channels:

- ICTs ease the entrepreneurs to access the knowledge, new business ideas, funding opportunities, and new markets (Giudice & Straub, 2011; Niles & Hanson, 2003)
- ICTs enables the entrepreneurs to sell their products and services through online markets and reach the potential customers (Chen et al., 2015).
- ICTs enable entrepreneurs to participate to the training and collaboration activities and technology transfer at national and global levels (Viju, 2010)

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