Chapter 15
Innovation Dynamics in European Countries Post COVID-19

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ABSTRACT

The globalization, the rapid advancement of information technologies, the development of artificial intelligence, and the impacts of the COVID-19 pandemic necessitate that countries adopt a proactive stance towards innovation. The research methodology is both qualitative and quantitative. The qualitative aspect involves a theoretical analysis that examines the dynamics of innovation. The quantitative

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aspect includes an empirical analysis that employed a cluster analysis to categorize countries based on their innovation dynamics, followed by mean comparison analysis to identify factors associated with superior innovation performance. The sample, derived from the European Innovation Scoreboard 2023, encompasses 36 European countries. The findings reveal three clusters of countries and indicate that the most robust innovation dynamics are linked to several framework conditions: Human resources, Attractive research systems; Investments: Finance and support, Firm investments, Linkages and Impacts, particularly on employment and economic effects.

INTRODUCTION

In the era of globalisation, characterised by the pervasive presence of information technologies, the exponential development of artificial intelligence, and the profound impact of the COVID-19 pandemic had a dramatic impact on society, innovation has become a pivotal driver of progress. Nations are confronted with the challenge of remaining current and competitive, fostering dynamism in the innovation process. Innovation is essential for nations seeking to thrive and secure competitive advantages in an increasingly interconnected world. The speed of transactions and the unpredictability and uncertainty of market changes demand continuous adaptation and the pursuit of innovative solutions capable of addressing emerging needs and challenges across various sectors of society and the economy (OECD, 2023).

In this new era of innovation, Schot & Steinmueller (2018) and Hekkert et al. (2020) argue that policymakers should prioritise the promotion of a "third generation transformative innovation policy", which integrates societal challenges and redirects the focus of innovation systems. The concern with innovation systems can be traced back to the seminal work of Lundvall (1992), who has continually expanded his framework to incorporate emerging economic issues. Lundvall's recent studies have emphasised the importance of transformative policies (Lundvall, 2022a; Lundvall, 2022b) and have explored the impacts of the COVID-19 crisis on innovation systems (Lundvall, 2023). These evolving perspectives highlight the need for policy frameworks that are adaptive and capable of addressing both technological advancements and pressing societal needs.

The concern with innovation systems is largely due to the studies of Lundvall (1992), who has subsequently integrated the different issues that are emerging in the economy into his different studies: transformative policies (Lundvall, 2022a; Lundvall, 2022b) and the COVID-19 Crisis (Lundvall, 2023). Furthermore, Schot & Steinmueller (2018) and Hekkert et al. (2020) consider that in this new era of innovation, policymakers should promote a "third generation transformative in-