# Chapter 2

# DRIVERS OF REGIONAL ECONOMIC GROWTH: A PANEL DATA ANALYSIS FOR EUROPEAN NUTS 2 REGIONS

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## 1. INTRODUCTION

Economic growth refers to the increasing sizes of economies for macroeconomic variables such as gross domestic product (GDP), employment and inflation. It is driven most strongly by macroeconomic stability, physical and human capital, trade and financial openness as economic determinants. Increase in population, innovation, natural resources, geography, climate, institutions is among other factors.

GDP is used to measure economic activity and it represents the value of all productions in an economy (Tselios et al., 2019). Gross fixed capital formation, which is the foremost constituent of domestic investment, is a significant method that could increase the economic growth rate (Meyer et al., 2019). Unemployment affects economic activity as well the social structure of societies. The main purpose of every policymaker is to reach high economic growth and to decrease unemployment (Sahoo et al., 2019). Patent applications present strategic options on firms and it is contingent on the future growth of the market (Kulatilaka et al., 1998). The rise of regional technological innovation is an important way to increase the capacity of regional sustainable development (Su et al., 2018).

The fourth industrial revolution also has some effects on sustainable development over innovation. It transforms modern production with robotization and digitalization. In this context, artificial intelligence and the internet of things become more effective on investment and production. Due to these changes, investment and production in regions take the main source of prosperity and creation of employment (Vasin et al., 2018).

Acceleration of economic activity in the World is one of the important issues in literature. Global growth became fragile since the global crisis of 2008. Rising trade barriers, government debt, technology tensions, uncertainties, the slow-

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