Chapter 93

Innovation, Macroeconomic Effects, and Environmental Degradation:
The Case of Mediterranean Countries

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ABSTRACT

All over the world, rising population, diminishing natural resources, and the necessity of sustainable growth pointed out the importance of innovation. In the growth strategies, the ability to innovate, as knowledge capital, is one of the most important determinants of sustainable development for all developing countries as their aim is to generate added value, higher development, and a sustainable environment. The aim of this study is to present the importance of innovation for sustainable growth performance in the 13 Mediterranean countries. In the chapter, the role of innovation in macroeconomic performance and sustainable environment in the aforementioned countries will be analyzed. This chapter not only provides an analysis of the relationship between the innovation, macroeconomic factors, and environmental degradation but also policy suggestions to put forth to have more innovative technologies, sustainable growth performance, and environment conservation.

INTRODUCTION

As the most important target of all developing countries, economic growth is dependent on many factors such as the level of saving, increases in the stock of productive inputs, and technical improvements. By providing new technologies, alternative solutions to chronic problems such as health or environmental

degradation, innovation contributes to increase productivity, creates new jobs, improve global competitiveness, and improve quality of living standards and helps sustainability both in consumption and production as well as the environment (Neffati, 2018:3483).

In recent years, the rising population, diminishing natural resources, and the necessity of sustainable growth indicated the need for innovation. In the long term growth strategies, the ability to innovate, as knowledge capital, will be one of the most important determinants of sustainable development for all developing countries (LeBel, 2008:334-335). Farhadi and Ismail (2011) found significant positive impacts of information and communication technologies on economic growth for newly industrialized countries in Asia for the 1990-2007 period. This finding implies that in order to accelerate their economic growth performance, emerging countries need to initiate specific policies to facilitate investment in innovation.

Similar to the rest of the world, innovation has a great impact on economic growth in the Mediterranean region, too. In the 1990s and 2000s, the Mediterranean countries showed slower economic growth than other middle-income countries. While the annual average per capita growth rate was 2.7% in the 2000-2009 period in these countries, all middle-income countries' average was 5% (Countinho, 2012:1-2). Below, in Table-1, annual growth rates of the Mediterranean countries are shown for the 2009-2018 period. In most of the countries, the negative impact of the Global Financial Crisis can be seen in the first half of the 2010s. Turkey is exceptional for that period as it showed a remarkable growth performance. Furthermore, in the second half of the 2010s, unsatisfactory macroeconomic performance of the Mediterranean countries brought low growth rates, weak production, and higher unemployment rates. The relatively poor growth and employment performance of these countries can be linked to their poor business environment, lack of productivity, lack of investments for infrastructure and technological transfers.

Table 1. Growth Rate (% annual) of the Mediterranean Countries

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Turkey	-4.7	8.4	11.1	4.8	8.5	5.1	6	3.1	7.4	2.8
France	-2.8	1.9	2.1	0.3	0.5	0.9	1.1	1	2.2	1.7
Italy	-5.2	1.7	0.7	-2.9	-1.8	0	0.7	1.3	1.7	0.7
Spain	-3.7	0.1	-0.8	-2.9	-1.4	1.3	3.8	3	2.9	2.3
Greece	-4.3	-5.4	-9.1	-7.3	-3.2	0.7	-0.4	-0.1	1.5	1.9
Cyprus	-2	2	0.4	-3.4	-6.5	-1.8	3.3	6.7	4.3	4
Albania	3.3	3.7	2.5	1.4	1	1.7	2.2	3.3	3.8	4.1
Bosnia	-3	0.7	0.9	-0.7	2.3	1.1	3	3.1	2.1	3.6
Croatia	-7.3	-1.5	-0.3	-2.2	-0.5	-0.1	2.4	3.4	3.1	2.6
Algeria	1.6	3.6	2.9	3.4	2.8	3.8	3.7	3.2	1.3	1.4
Tunisia	3	3.5	-1.9	3.9	2.8	2.9	1.1	1.2	1.8	2.4
Egypt	4.6	5.1	1.7	2.2	2.1	2.9	4.3	4.3	4.1	5.3
Israel	0.9	5.6	4.7	2.2	4.1	3.7	2.2	3.9	3.5	3.4

Source: World Bank Data (2019)

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