

An assessment on the impact of the three memorandum policies on health outcomes of the Greek population

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INTRODUCTION

- The ultimate goal of every effective and sustainable healthcare system should be the optimization of the value of pharmaceutical spending, in order to increase the level of population’s health outcomes and quality of life.
- During the previous decades until 2010, the Greek healthcare system was fragmented and characterized by a lack of efficient, effective and equitable healthcare policies.
- The cost-containment policies imposed under the three Economic Adjustment agreements (known as the 2010, 2012, 2015 “memorandums”) signed among the Greek government, the European Commission, the European Central Bank and the IMF (International Monetary Fund) on the onset of the economic crisis in Greece, were focused mainly on reducing costs, without taking into account the impact of these reforms on the population’s health and the society’s welfare.

OBJECTIVE

- To investigate the social inefficiencies stemming from the regulatory framework of the Greek health system, with an emphasis on the effects of the policy reforms during the economic crisis on health outcomes.

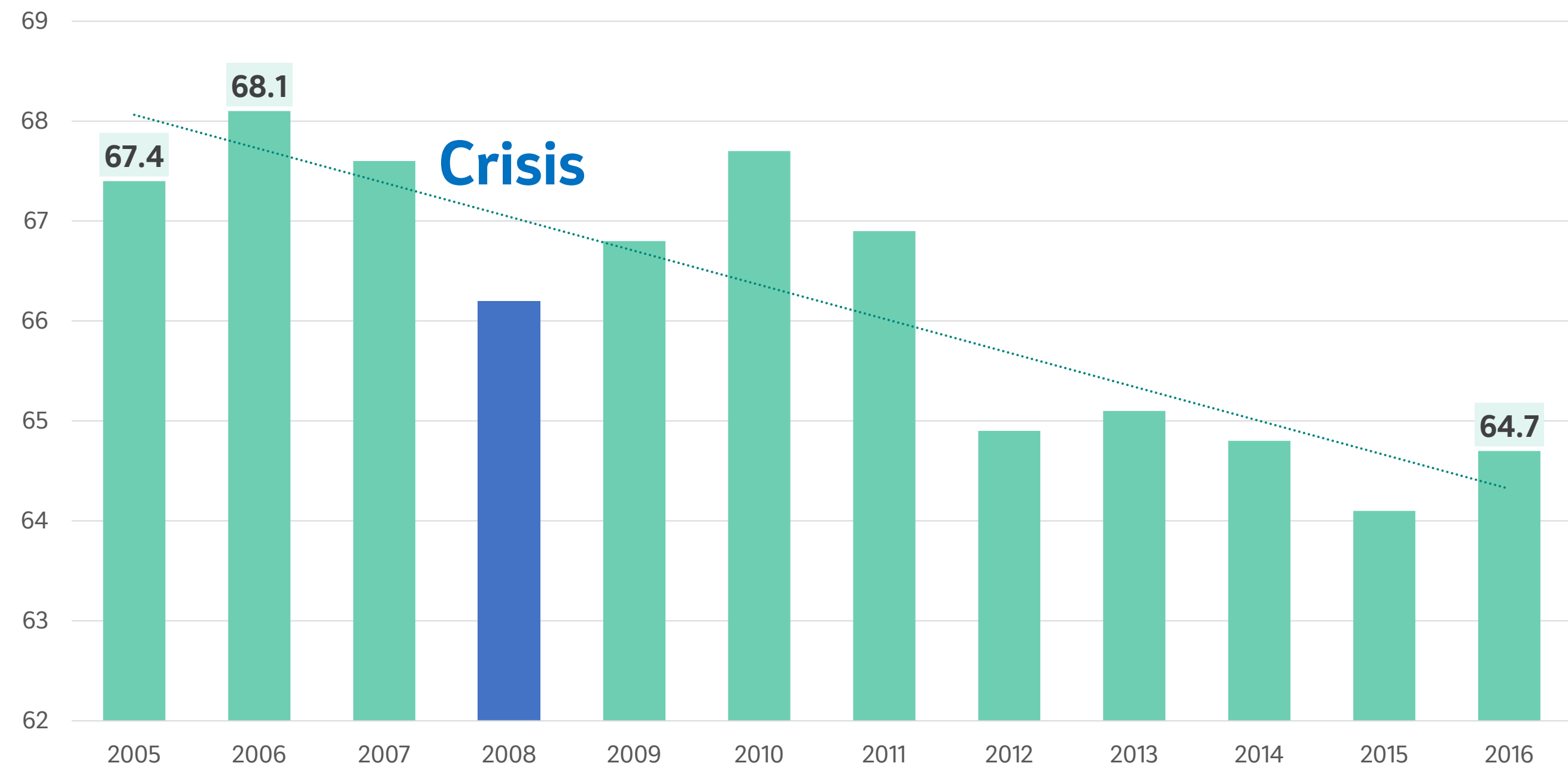
METHODOLOGY

- Dynamic econometric models based on time series analysis were used over the period 1970-2018 drawing on the human capital and health production theory.
- Autoregressive Distributive Lag (ARDL) models are specified to estimate the short- and long-term relationships while testing for stationarity and auto-correlations in the included economic, environmental, employment, health expenditure and health outcome variables.

RESULTS

- The implementation of the three memorandum policies in Greece within the period 2006-2015, led to the decrease of public health expenditure by -42%, which coincided with a loss in healthy life years by 3.4 years¹. (Figure 1)

Figure 1. Healthy life years expectancy at birth in Greece (2005-2016)

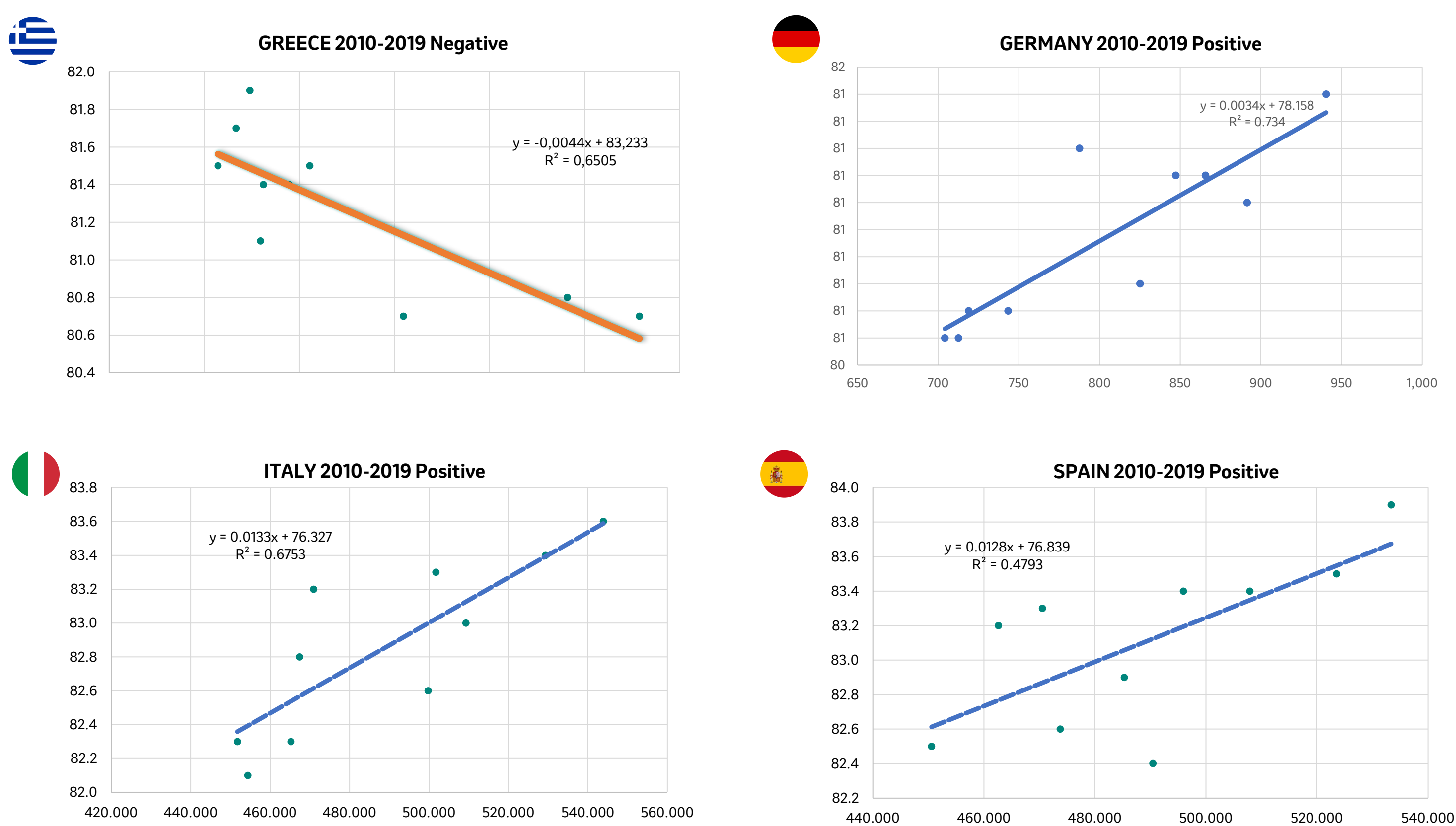


- Furthermore, a reversed trend was observed lately in the infant mortality rates, with the 3-year average rate increasing from 3.1 per 1,000 live births in 2007-2009 to 3.9 in 2015-2017².
- The study distinguished further the pre-crisis (1970-2008) and crisis (2009-2018) periods, using econometric models.
- The estimated elasticity of pharmaceutical expenditure on life expectancy during the pre-crisis (1970-2008) period was found positive $e = 0.029$ ($p < 0.001$), while the corresponding elasticity

for the crisis period (2009-2018) was found negative $e = -0.031$ ($p < 0.001$). Similar positive and negative coefficients results were for both short- and long-term analysis.

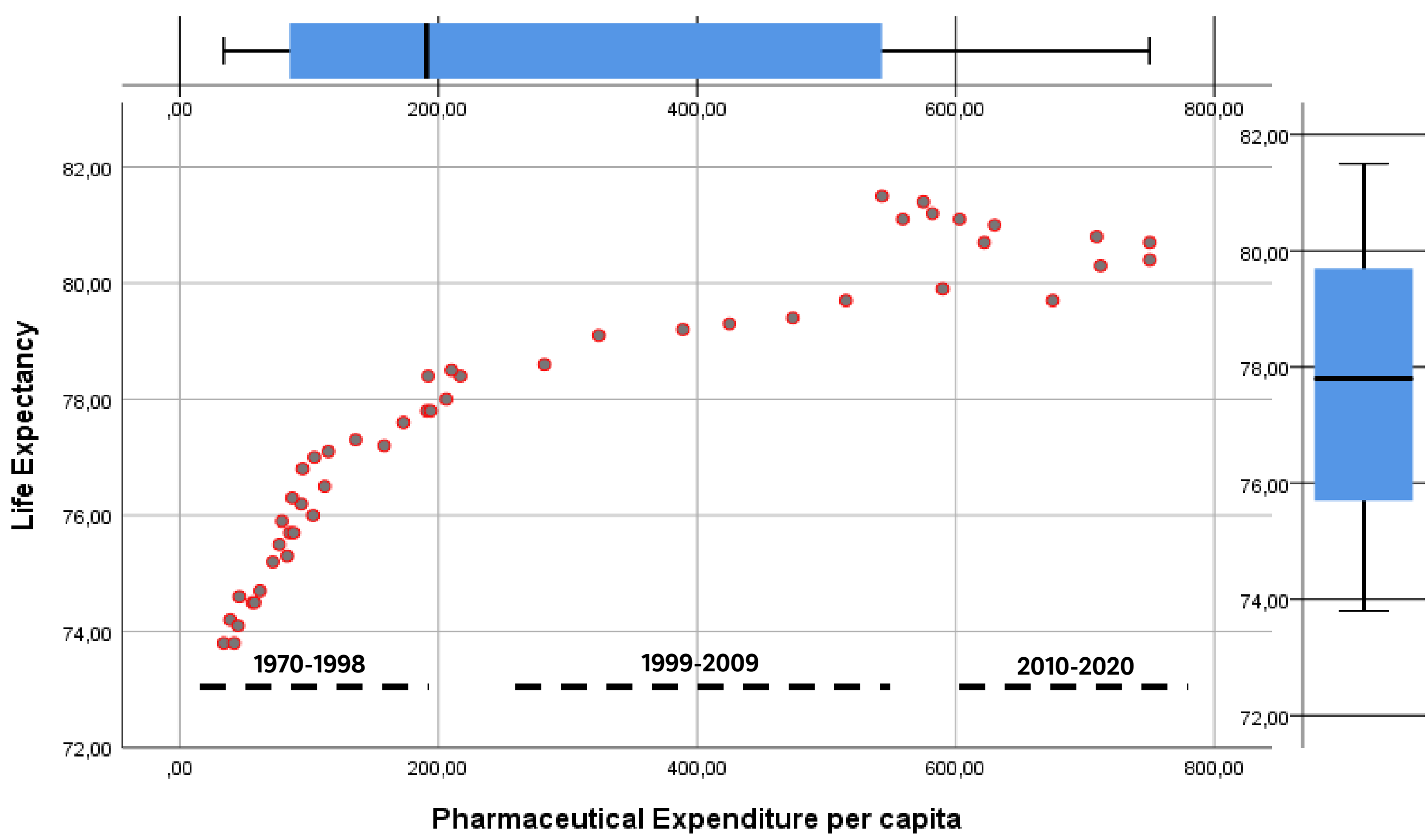
- Greece is the only country that presents a negative relationship between life expectancy and pharmaceutical expenditure among selected EU countries between 2010 - 2019. (Figure 2)
- This effect is further highlighted in Figure 3, which portrays the “backwards trend” of the life expectancy curve, upon the introduction of pharmaceutical expenditure reductions in Greece between 2010-2020.

Figure 2. Relationship between life expectancy and pharmaceutical expenditure



- This reverses the positive correlation observed between pharmaceutical expenditure per capita and life expectancy, which was observed in Greece since the 1970 and until 2010. (Figure 3)

Figure 3. Evolution of Life Expectancy and Pharmaceutical Expenditure per capita in Greece (1970-2020) and the backwards trend (2010-2020)



CONCLUSION

- During the crisis years, the health status of the population in Greece was impacted severely, recording a loss of 3.4 healthy life years and a reverse trend in infant mortality rates.
- Partly due to the reforms during the period of 2010-2019, focused on cost-containment measures, a backwards turning trend was portrayed between life expectancy and pharmaceutical expenditure in Greece, presenting a unique case when compared to other selected European countries.

References

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