ICT Investments on Economic Sectors With International Comparative Advantage and the Diffusion of Prosperity

Ioannis Papadopoulos
Metropolitan College, Greece

Apostolos Syropoulos
https://orcid.org/0000-0002-9625-1482
Greek Molecular Computing Group, Greece

INTRODUCTION

It is well documented in the scientific literature that countries facing economic crises, or the years following that difficult period, need extensive investments (domestic or foreign) in various economic sectors in order to re-gain their international competitiveness and to trigger long-term and viable economic development. Such investments are critical factors to increase nation's GDP, further reduce unemployment rate, increase purchasing power and spread the benefits of economic prosperity across all levels of society. A crucial aspect is to examine to what extend information and computer technologies (ICTs), as they incorporated in this investment process, can accelerate and leverage the positive impact in the economic circuits and provide an added value in the economy. Certainly, such investments would be highly effective to take place in economic sectors that appear international comparative advantage in conjunction with relative interventions in public sector.

It has been long investigated and empirically proved worldwide that adoption of information technologies from private and public sector can provide immediate, direct and indirect benefits in short and medium-long term basis. As a demonstration of this we will examine the case of Greece, a country that faced an unprecedented economic crisis for the western world standards, and we will explain how adoption of information technologies can be realized in both the private and the public sector, so as having a positive multiplying effect in economy with positive results for the whole society. Through this analysis, we shall underline the importance of ICT investments on economic sectors with comparative advantage in Greece that potentially can accelerate the current economic development trend and provide solutions that will create income and opportunities for all, especially for the new generation.

BACKGROUND: ECONOMIC CRISIS IN GREECE (2009-2017)

Before analyzing the main topic of this article, it is fundamental to briefly mention the background of Greece in terms of the economic crisis. Greece has been chosen as a unique example of a western world country that has been suffered an economic crisis of such magnitude. Economic crisis triggers negative social phenomena across all levels of economic function. Indicatively, the country under crisis suffers reduced GDP (Gross Domestic Product - the total amount of values produced in economy in a year)

that is usually translated into potential personnel reductions (or in the best case there are no new hirings), decreased salaries and pensions and reduced budget of public investments (new roads, hospitals, schools, etc.), amongst others. Accordingly, in the private sector, firms face reduced demand for their products, difficulties in borrowing money from banks, increased tax payments and other negative facts that lead them to reduce personnel, reduce their program of investments and holding money because of the uncertainty prevailing in economy.

The figures that follow clearly depict the impact of the crisis on the fundamental economic figures of Greece. These figures indicate the economic tunnel that Greece has been through for almost a decade with major implications in society and in economy.

Figure 1 shows the Greek GDP over the last 40 years. The Greek economy, achieved a historical economic progress from 1974 onwards, which violently halted in 2009 signaling the collapse of the economic process. Greece, from 2009 until 2016, lost almost 25% of its income.

Figure 1. The evolution of the Greek Greek GDP over the last 40. Source: World Bank, Gross Domestic Product for Greece [MKTGDPGRA646NWDB], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MKTGDPGRA646NWDB, June 13, 2019.
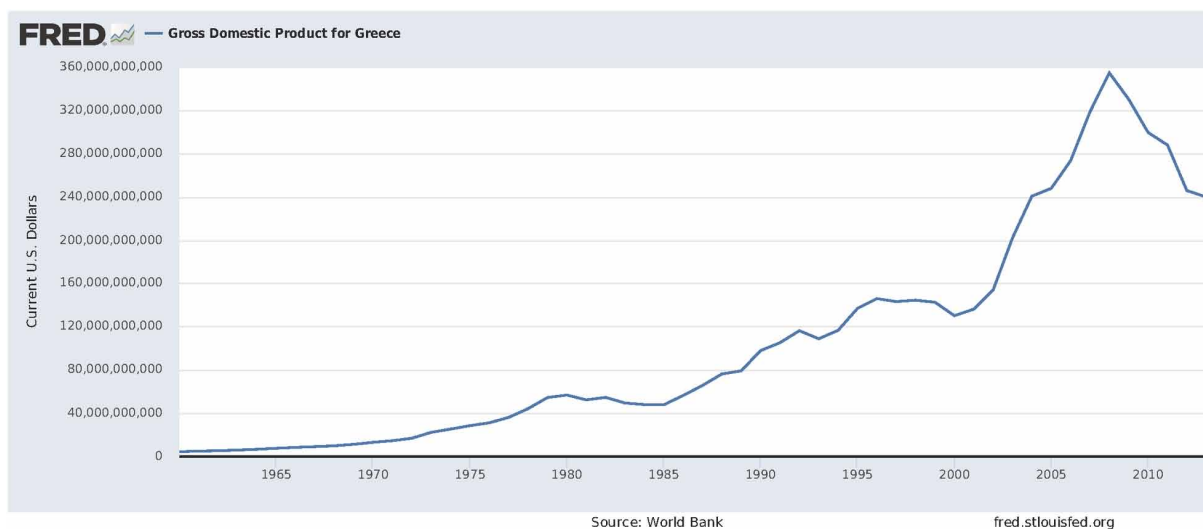

Figure 2 shows the same negative situation in terms of income per capita, indicating the worsening of the life-conditions for the Greek citizens.

During the same period, one of the most negative implications in such a difficult economic environment was the sky-rocketing of unemployment rate, which touched the level of 28% in 2013. This is clearly shown in figure 3.

The previous figures illustrate the unprecedented magnitude of the economic crisis in Greece and its dramatic impact on society. Those figures show the recessional background of the Greek economy and the same time the starting point for the future challenges and prospects lie ahead and that will be analyzed over the next chapters. The dimensions of the crisis in Greek economy are not in the scope of this article [the interested reader should consult (Papadopoulos & Syropoulos, 2018) for more details].

Related Content

Sentiment Analysis of the Consumer Review Text Based on BERT-BiLSTM in a Social Media Environment
Xueli Zhou (2023). *International Journal of Information Technologies and Systems Approach (pp. 1-16).*
www.irma-international.org/article/sentiment-analysis-of-the-consumer-review-text-based-on-bert-bilstm-in-a-social-media-environment/325618

Creating Believable and Effective AI Agents for Games and Simulations: Reviews and Case Study
Iskander Umarovand Maxim Mozgovoy (2014). *Contemporary Advancements in Information Technology Development in Dynamic Environments (pp. 33-57).*
www.irma-international.org/chapter/creating-believable-and-effective-ai-agents-for-games-and-simulations/111604

A Systematic Review on Author Identification Methods
Sunil Digamberrao Kaleand Rajesh Shardanand Prasad (2017). *International Journal of Rough Sets and Data Analysis (pp. 81-91).*
www.irma-international.org/article/a-systematic-review-on-author-identification-methods/178164

Forensic Acquisition Methods for Cloud Computing Environments
Diane Barrett (2021). *Encyclopedia of Information Science and Technology, Fifth Edition (pp. 462-472).*
www.irma-international.org/chapter/forensic-acquisition-methods-for-cloud-computing-environments/260206

Design and Implementation of an Intelligent Moving Target Robot System for Shooting Training
Junming Zhaoand Qiang Wang (2023). *International Journal of Information Technologies and Systems Approach (pp. 1-19).*
www.irma-international.org/article/design-and-implementation-of-an-intelligent-moving-target-robot-system-for-shooting-training/320512