The Impact of the Recent Economic Crisis in the Construction Sectors of the South-European Economies: A Comparative Study

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ABSTRACT

The scope of this paper is to investigate the performance of listed companies of the construction sector in the southern European member state of the E.U., namely Greece, Italy, Portugal and Spain, taking into consideration their economic conditions as they have been formed by the recent economic crisis. The structure of the proposed methodology is based on a non-parametric method of DEA. Initially, it is attempted to compare the listed construction companies of each country and then findings are explained in order to draw comparative conclusions of their performance on a cross country basis. By using statistical regression methods, in the second stage of investigation is attempted for possible correlation between each country’s efficiency scores and a group of key macroeconomic variables which can show the possible changes in the effects of crisis between the countries under examination.

Keywords: Economic Crisis, Financial Data, Macroeconomic Variables, Non Parametric Methods, South-European Economies

1. INTRODUCTION

The financial crisis of 2008 had a significant impact on the global economy, affirming the need for revision of the established international economic relations for approximately four decades. The crises originated in the U.S. housing market and exponentially affected the international financial system. The impact of the banking crisis was imminent also to other sectors which constitute the production system of every economy resulting to a deep blow of the real economy.

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for most European countries. A significant impact of this phase of the economic cycle was to underline the existing fiscal problems in several Member-States of the European Union (E.U.), especially those of southern Europe. The debt crisis and the increased possibility of bankruptcy as a result of the financial collapse portended significant changes in the structure of the E.U. since the viability of the euro currency zone was questioned (Chouliaras, et al 2012). However the E.U. in cooperation with the European Central Bank (ECB) and the International Monetary Fund (IMF) founded a support mechanism to prevent the effects of the crisis to other Member States and to prevent the collapse of the entire European integration. Although the undertaken rescue policies in all the southern European economies converge in their implementation process, based on a strict fiscal tightening subjected to the control of the so called Troika, there are some considerable divergences, especially for Greece and Portugal which are at the worse economic place among the other EU Member States. The consent to a memorandum of lending between Troika and the two states for their inclusion to the support mechanism defines the characteristics of the economic policy which will be tracked in the coming decades based on the rational allocation of the available resources and the effective management of the governmental costs. The new economic conditions as a result of the crisis and the memoranda influence important economic indicators which are linked to the real economy of these countries especially for their economic growth and development. Their productive sectors were harmed after the application of the suffocating terms of the memoranda which after almost four years seem to be far away from the initial expectations.

In the context of the above described existing conditions for the southern European economies this study attempts to explain the impact of the recent financial crisis by examining the effectiveness of the construction companies in the examined countries. Specifically using the nonparametric method of data envelopment analysis (DEA) we implement a model consisting only by outputs (outputs oriented) in order to examine their effectiveness for the period 2007-2012. The followed methodology consists of two main stages: In the first stage efficiency is defined and the appropriate statistical tests are applied for each country to select ratios that can be used as outputs in the proposed model DEA. From the selected ratios performed on the companies’ data of each country we choose for our model only those which are common in all countries. These common ratios will be used as the outputs in our four models of DEA, one for each country in order to be able to compare and discuss the outcomes between the four models. In the second stage of our analysis we use a Tobit model to examine other factors associated with the effectiveness of the construction companies such as the general stock market index, the interest rates, the unemployment rate, the consumer price index, the per capita GDP, the GDP of the sector, the economic sentiment and the industrial production. Also for the applications of the Tobit model we have four models in order to formulate critical conclusions for the influence of each variable on each country but also to find how significant changes there are taking into account both their common characteristics on a country level and their individual characteristics too.

The structure of this paper is as follows: in Section 2 we present the literature review on the characteristics of crisis and the current economic environment which is under consideration in our study and then we explain the methods of our analysis. In Section 3 we present the theoretical framework towards the choice of our method of two-stage analysis, but it is also explained the importance of the construction sector for these economies. In Section 4 we discuss the results of both stages and, finally, in Section 5 the concluding remarks and recommendations for future work are summarised.
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