

Chapter 24

The Relationship Between Commodity Prices and Selected Macroeconomic Variables in Turkey: Evidence From Fourier Cointegration Test

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ABSTRACT

This chapter determines whether there is a long-run relationship among oil, copper, natural gas, export figures and import figures, and BIST 100. Within this context, the study employs monthly periods from January 2006 to June 2019. ADF, Fourier ADF, and Banerjee Cointegration Test were applied. Banerjee Cointegration Test revealed that copper, oil, and natural gas and import figures move together in the long run but the existence of the long-run relationship between the selected inputs and export figures and BIST 100 has not been found. This evidence can be interpreted as the change in oil, copper, and natural gas may influence the amount of Turkish import figures.

INTRODUCTION

The notable of oil, copper and natural gas in the all developed and developing countries has received immense attention among researchers, politicians and business environments. Three of them are accepted as important inputs which can influence on the cost of production, household's welfare and even change economic structure. The sight of economics and politicians for commodity prices depends on countries' sectoral compositions, their economic development, and commodity importing or exporting

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that's why the effects of the change in commodity prices on the economics activities is associated with the country's specifics situations. Researchers have interested in the relationship between commodity prices and the fundamentals consisting of inflation, the economic growth, industrial production indexes, trade balance, and government expenditures, etc. As we will understand, the literature is not able to achieve a consensus pertaining to the relationship between commodities and the economic activities; owing to this condition, it can be stated that studies, which investigate the effects of change in oil, copper, natural gas prices on export, imports and stock prices are very significant. In this context, the main purpose of this study is to give a policy recommendation to policymakers and investors. For this purpose, monthly data for the period between January 2006- June 2019 was evaluated by Banerjee Cointegration Test analysis. According to the results of the analysis, it will be possible to give some recommendation to these countries regarding this concept.

This study is composed of four sections. After introduction part, the second section reviews the literature. In this part, different studies related to this issue will be examined. Furthermore, third part contains research and methodology and the fourth part emphasized data. Moreover, in the fifth part, analysis results will be highlighted and eventually the final part summarizes results and emphasizes recommendation.

LITERATURE REVIEW

The studies which analyzing the effects of the change in oil, natural gas and copper prices on export, import and stock prices has been taken huge interest by researchers and there are a great number of studies in the literature. Some of these studies are presented on table 1.

For oil-exporting countries, many studies concluded that an increasing oil price is one of the important determinants affecting the current account. For example, Huntington (2015) conducted a study to inspect the effects of change in oil prices on the current account and the results achieved from regression analysis showed that an increase in oil prices is the main cause of current account surplus. As for oil-importing countries, the change in oil prices has been carefully observed by policymakers and businessman because many researchers and economics confirm that oil is an irreplaceable input, especially for oil-importing country. An increase in oil prices unequivocally leads to the depression of the economy since the increase in oil prices causes the higher cost of productions which leads to higher inflation and hence the deterioration of trade balance experiences because of lower net exports. Many studies reached the detrimental impacts of oil prices on the economics activities of oil-importing countries (Hamilton, 1983, Brown and Yücel, 1999; Burbidge and Harrison, 1984; Finn, 2000). Briefly, majority of studies emphasized that oil price shocks have a detrimental impact on economic activities. On the one hand, the current account in oil-importing countries became very sensitive to change in oil prices and many studies found results parallel to this event. For example, Bitzis et. al. (2008) conducted a study to test the relationship between oil prices and the current account in Greece. As a result of cointegration analysis, it was affirmed that oil price appears to be strong factors impacting the current account deficit. Also, Turkey is important in oil-importing countries and its economic structures are very associated with oil prices. The response of the current account to change oil prices has been very interesting topics and generally many studies by using different econometric methodology highlighted that higher oil prices raises the current account deficit for oil-importing countries (Demirbaş et. al, 2006; Karabulut and Danişoğlu, 2006; Kayhan 2018; Beşel, 2017). In addition to these,, Altınbas (2013) underlined that oil price does

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