

Chapter 67

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

DOI: 10.4018/978-1-6684-7460-0.ch067

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.

Table 1. Featured studies in the literature

Author	Scope	Method	Result
Faria et. al. (2009)	China	ARDL Model	It was emphasized that there is a positive correlation between Chinese exports and oil prices.
Du et. al. (2010)	China	VAR Model	Higher oil price leads to a decline in Chinese export performances.
Qianqian (2011)	China	VECM Model	The long-run negative relationship between oil price and Chinese exports is found.
Farzanegan and Markwardt (2009)	Iran	VAR Model	The relationship between industrial production indexes and oil prices is found as positive and strong.
Bitzis et. al. (2008)	Greece	Cointegration Analysis	It was found that oil prices seem to be an important factor impacting the current account deficit.
Huntington (2015)	91 countries	Regression	Oil is found as an important determinant affecting the current account.
Aristovnik (2007)	MENA Countries	Regression	Oil prices stimulate foreign trade balance.
Bayraktar	Fragile Five Countries	Regression	Oil prices are important determinants of current account deficit.
Altınbaş (2013)	Turkey	ARDL Model	It was showed that the increase in oil prices does not impair export
Başarır and Erçakar (2016)	Turkey	VAR Model	It was identified that there is a mutual relationship between crude oil prices and the current account.
Çulha et. al. (2016)	Turkey	Dynamic Panel	It was affirmed that the effects of oil prices on the exports appear to be very limited.
Aydın (2017)	Turkey	Regression	It was reported that change in oil prices has direct effect on the current account deficit.

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