Chapter 2
The Negative Effects of Carbon Emission on FDI:
A Comparative Analysis Between E7 and G7 Countries

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ABSTRACT

This study aims to understand the negative impacts of carbon emission on the foreign direct investments. For this purpose, a comparative analysis is performed for both E7 and G7 countries. In the analysis process, Pedroni panel cointegration (PPC), Kao panel cointegration (KPC), and Dumitrescu Hurlin panel causality (DHPC) analyses are taken into consideration. The findings indicate that carbon emission has a negative influence on foreign direct investments for both country groups. Nonetheless, this relationship is stronger for G7 economies. It is also identified that there is no causality relationship between these variables. It is recommended that the countries should generate appropriate policies to minimize carbon emission problem. Within this context, new tax can be implemented for the companies that lead to high carbon emission. Additionally, governments can give incentives to the projects that aim to decrease carbon emission. In this scope, decreasing tax ratio and providing a technical support can be given as examples.

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INTRODUCTION

Carbon dioxide emission means the release of carbon gas into the atmosphere. The high rate of this gas in the atmosphere causes some problems (Zheng et al., 2020). The biggest negativity created by this situation is environmental pollution. Carbon emission causes pollution of both air and water. These mentioned issues also lead to increase diseases in the country. This situation causes both loss of labor and increased treatment costs. As a result, the country's economy will be negatively affected by this situation. Another problem caused by carbon dioxide emission is the increase in the temperature of the world (Soltani et al., 2020). Many living species die as a result of the global warming problem.

It is possible to mention many factors that cause carbon dioxide emission. Fossil fuel consumption is one of the most important issues in this process. Especially, as a result of the consumption of coal, a significant amount of carbon gas is released into the atmosphere. As the consumption of coal is also cheaper compared to other energy sources, it is very difficult to prevent this problem. Another factor that causes increased carbon emissions is the uncontrolled population growth (Yao et al., 2020). In many countries around the world, the population is growing at a significant rate. As a result of this increasing population, more carbon gas is released into the atmosphere in order to meet the heating need. Increasing industrial production is another important issue in this context. Especially in recent years, industrialization has increased significantly (Wen and Wang, 2020). As the raw material of the industry, energy is also used more, and it is seen that the carbon emission problem also increases.

Due to these problems, there has been a serious increase in awareness, especially in recent years, towards reducing carbon emissions. Symposiums attended by many different countries were held and it was stated that the carbon emission problem should be reduced. In this framework, many countries have also developed strategies to reduce carbon dioxide emissions. In this context, the popularity of renewable energy use has increased significantly. A significant majority of countries aimed to prevent carbon emission problems by turning to environmentally friendly alternatives such as wind and solar energy (Qiao et al., 2020). In addition to the mentioned issue, electrically powered cars are another application that contributes to the solution of this problem. It can be easier to prevent air pollution by using such vehicles.

This issue has become an image for the countries as a result of the increase in global awareness on carbon emission. In this context, countries with high carbon emissions are criticized by many different individuals and institutions (Sesso et al., 2020). This loss of image causes countries to have some problems. In this process, one of the most prominent problems concerns the tourism sector. The reason for this is that tourists are reluctant to visit the country with high carbon emissions. This situation causes countries to experience significant loss of income. Another important issue in this process is related to financial issues. International financial institutions may be nervous about lending to companies in a country with high carbon emissions (Franco-Luesma et al., 2020; Pan et al., 2020). This can lead to a significant decrease in investments in the country.

Foreign direct investments are also thought to be affected by the carbon emission problem. As mentioned before, the country with high carbon emission has a problem of environmental pollution. As a result, the country faces both social and economic problems. As foreign investors invest in huge amounts, they take into account many different factors when entering the market in a country. In this context, the high carbon emission problem may also affect the investment decisions of foreign investors. In other words, foreign investors may be reluctant to invest in countries with emission problems. Consequently, the amount of investment in the country decreases (Buckley et al., 2020). Because of this situation, the unemployment rate in the country increases and economic growth decreases.