

## A Decision Making on Current Account Deficit Problem of Turkey

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### ABSTRACT

Decision making is the mental process that results in the selection of the most appropriate from the available choices. Excessive and complicated variables can make it impossible to make a decision or even make a wrong decision. Mathematical methods are widely used to overcome this problem and to make the most appropriate decision for the purpose.

The main goal of countries that want to increase the prosperity of their citizens is economic growth. Economic growth and prosperity have led to an increase in energy consumption worldwide. The inadequacy of domestic resources, especially energy resources, has made it imperative to be covered by imports from abroad. According to the data obtained from TURKSTAT, Turkey imported approximately 37.8 billion dollars of energy in 2015 and 27.1 billion dollars in 2016. The current account deficit for the year 2016 was 32.6 billion dollars. As can be easily seen from these numbers, the most important element of Turkey's current account deficit (CAD) is energy import. Although Turkey is a rich country in terms of renewable energy resources (solar energy, wind energy, hydropower, geothermal energy and bioenergy), which is an alternative to the energy obtained from fossil fuels, Turkey is meeting the increasing demand for energy through imports. This plays a major role not only in the country's economy being over-sensitive to the changes in the prices of imported energy resources (oil, natural gas, etc.), but also in increasing the CAD. In this study, the potential of renewable energy resources in Turkey and their effect on current account deficit will be examined and the answer of the question "Which renewable energy resource should be invested or prioritized in order to reduce CAD?" will be investigated with mathematical modeling method.

**Keywords:** Decision making, Renewable energy, Current Account Deficit

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