

# Electricity Consumption and Economic Growth: A Long-Term Co-integrated Analysis for Turkey

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## Abstract

Energy and especially electricity consumption is a variable that can be also considered as the indication of the social development as far as economic growth is concerned. Energy, as the input of the industry and other production branches, is an indication for the production increase; and also for consumption with regards to raising the living standards of the consumers. In literature with its situation, it is argued that the electricity consumption is included the mutual causality relation with the growth data in a long-term. As there are several empirical studies that support this hypothesis, in some economies, especially it may sometimes be concluded that the data of the energy utilization in the production area can negatively affect growth in the long-term. Therefore, the literature does not come to the agreed results for the relation between these two variables. In this study, the causality relations have been analyzed by dividing the electricity consumption into three categories; residential, industrial and others, based on the data of the Turkish economy. In the lights of the obtained findings, it is concluded that in long term, there is at most one long-term co-integrating vector between GDP and electricity consumed in residential and industrial areas and also two-way causality relation between GDP and electricity consumed in these sectors. In this case, electricity consumption can be considered as an indicator for both growth and social development.

**Keywords:** Economic growth, Electricity consumption, Industrial consumption, Residential consumption.

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