Electricity is one of the most important sources for economic and social development of a country. The growth in energy consumption is basically linked with the growth in economy. Energy demand increases due to different reasons, including higher Gross Domestic Product (GDP) growth, higher per capita consumption, the population growth and rapid development of industrial & commercial sectors.

In this study, the monthly electricity consumption for the period of January 1990 through December 2011 in Pakistan is analysed using functional time series (FTS) technique. Electricity consumption model reveals a significant trend due to socio-economic factors. The monthly behavior of forecast values reveals that the electricity consumption is more for summer season and this demand will be increased in future. Forecast model and the forecast values show that the electricity consumption is increasing with the passage of time. The growing energy consumption in the country may be due to economic growth, urbanization process in the region, population growth and industrialization.
References


Index Terms

Computer Science

Applied Sciences

Keywords

Functional Time Series, Functional Data, Electricity Consumption, Principal Component, forecast