


Abstract

This study attempts to forecast Pakistan's annual imports and exports. Foreign commerce is vital to the economic development of any emerging nation. We forecasted the pattern of Pakistan's imports and exports between 1960 and 2021 in this thesis. We also estimated the values of imports and exports of Pakistan for the years 2022 to 2030 using a variety of time series analytic techniques. Firstly, we used the Box-Jenkin's method, which comprises a variety of model selection criteria. We started by checking if the data was stationary. We investigated stationarity using the graphical, unit root, and correlogram tests. Then, we used the ACF and PACF curves to find the most appropriate models for Pakistan's trade flows. We investigated to see if the ARIMA (2, 2, 1) model for imports and the ARIMA (9, 1, 8) model for exports is the optimal model for forecasting, and whether or not we have to switch to a different method. Initially, the residual plots were reviewed by ACF plots, and normalized graphs. We looked at the model's accuracy and found that it was satisfactory. To check for heteroscedasticity, we employed the ARCH-LM and ACF tests. The findings revealed that heteroscedasticity exists solely in the export series. Consequently, we were able to estimate the forecasted values for the import series using the ARIMA approach. Due to the volatility of the data, we utilized the ARCH family to forecast the exports. Observing the PACF squared residual plots revealed that ARCH (1) is the forecasting model that best fits the data. EViews (10) and SPSS were used for all types of statistical analysis. Pakistan's imports will reach 120.2859 billion US dollars in 2030, according to ARIMA modeling-based forecasts. The ARCH method was used to make forecasts about the export series, and those experts predict that Pakistan's exports will reach 34.42550 billion dollars in the 2030 year. We discovered that the imports and exports flow, which is already rising, is anticipated to increase substantially over the next few years. This study's findings caution that a negative trade balance would have unfavorable effects on both the supply and demand sides of the economy, and recommended that the federal and provincial governments of Pakistan take corrective action to boost exports.  (Ctrl) ▾