Simultaneous Estimation for Demand and Supply function of corrugated board in Iran

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Abstract:

Corrugated board is considered as a valuable commodity for packaging at both international and domestic markets. Therefore for the development of corrugated board production industry in Iran and understanding the variation in demand for this product, its necessary to identify the consumption and production patterns as well as the most important and effective variables on its status. Based on this information its can be forecasted. In this study, the dynamic econometric model has been used to demonstrate simultaneous relationship between supply and demand. Coefficients of the model were estimated applying SLS procedure with the time series data from the duration 1961 to 2002.

The study results indicated that in the demand function, the variables including, intercept, price, GNP in previous period, Population, CPI, industrial added value (IAV), production index of large-scale industries (PILSI) and the war dummy are significantly influential at *•••• level. However, in the supply function, intercept, production quantity in previous period, inflation rate, corrugated board price- raw material price ratio in previous period, import volume in previous period, cost price in previous period and subsidy dummy variables simultaneously influence consumption and production.

Keywords: simultaneous, supply, demand, corrugated board, Iran.

Introduction:

Since corrugated board is mainly used for packaging industrial and agriculture commodities, its consumption rate depends on growth of such commodities. Therefore product possesses very important role in rapid dispatch and forwarding various products in Iran especially during imposed war by Iraq. In despite the fact that, considerable number mills in Iran are producing this type of boards, but because of stagnation on corrugated board production establishment as well as changing the trend in packaging through introduction the other kind of packaging like plastic cartons, the situation of this industry is vulnerable and fragile.

Consequently, the limitation on demand and lack of suitable growth of related industries, forced such mills to operate at lower than nominal capacity. On such ground, investigation of effective factors on production and consumption rate of corrugated board in Iran and projection of the influence of these variables in the future, can help mills to determine the production capacity and help the government in planning future establishment of new mills or concentrate on import.

The objective of this study was to investigate demand and supply of corrugated board in past years and identify the future production and consumption patterns of this commodity as well as recognition of the most important and effective variables using the simultaneous equations system this study can also derive a suitable and exact strategy for future development of this industry. It is obvious that to be able to plan the development of any industry, the demand and supply of its product must be known, and paper industry is not except.

Therefore there has been studies on demand and supply of different paper products in Iran and also around the world and some of them will be mentioned.

Saberi (1999) has investigated the import demand function of some products such as paper and paperboard and expressed that explanatory variables are: paper and paperboard import price- domestic price ratio and national income.