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Analysis Factors Affecting of Iran Import Demand with Emphasis on the Exchange Rate and Oil Revenues

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ABSTRACT

Experience in many countries indicates the presence in the global markets and taking advantage of the advantages of foreign trade, Paving the way for economic development for many developing countries in recent decades. Because of the availability of foreign exchange from export of crude oil export monopoly of the government and the bulk of foreign trade monopolies by the state and its affiliate, the country's foreign trade in accordance with the requirements of time, growth and underdeveloped. Exacerbate these problems and their potential to reduce foreign exchange earnings from the export of oil in the future, increased attention should be responsible for the country's foreign trade sector. So in this thesis import demand function using vector regression approach for the period 1978-2011 were analyzed.

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INTRODUCTION

Currency is one of the key factors of a small open economy and the rest of the world. Relationship between domestic prices and prices in the global market and makes an impact on policies, strategies, mechanisms daily, the political, social and cultural development is considered. Exchange rate on prices of goods and services in the domestic market and the price of imported capital goods imported and made into effect. Fluctuations in exchange rates and official release occur, changes and fluctuations in consumer and wholesale price indices are calculated on the basis of inflation are effective. To overcome the problems of inflation in a monetary economy, Internal and external balance of the economy with economic growth, Coordination between monetary policy, fiscal, and exchange and to consider the effect of price changes and exchange rate on the domestic economy and international relations is necessary. The estimated import demand of commodities is one of the main concerns and issues of political and economic decision-makers in all fields, especially in the strategic decisions of national, regional and global. Also choose the right strategy to import requires consideration of factors influencing it [2].

One of the most fundamental relationships between variables in the import demand function, the macro economy. Manufacturing in the current global economy Import plays an important role in determining the economic development strategy.

Imports as a factor affecting the GDP and is considered one of the main items of the balance of payments is important. Hence, any change in the volume of imports on domestic production and ultimately affect the growth and development of the country. But in the economy, people have to find ways to rationalize import to the global village, imported adopt appropriate policies. Therefore, it is necessary to identify the factors affecting it to the fluctuations and changes in the ratio of imports to changes in explanatory variables are clear. In analyzing the macro-economic issues, review the import demand function, is of particular importance in understanding the effectiveness and efficiency of the pattern of macroeconomic and trade policies of the country. Also, given that Iran's strategic position in the region is sensitive, According to the criteria outlined in the revolution and after the war years as the basic principles and values such as independence and self-sufficiency and independence from foreign countries and it has been suggested. It is important to identify factors affecting import demand.

Yosefi in 1998, the paper examines the determinants of total imports of Iran is covered by the convergence techniques. In this study, using statistical data for a period of 18 years from 1970 to 1987to answer the question: How items and major groups in the change in the volume of imported products, industrial products, domestic

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and imported capacity to react. In this study, due to the unavailability of other variables, such as foreign exchange reserves, gold and foreign aid, etc., foreign exchange receipts from exports of oil imported is considered as an approximation of capacity. In the model calculation, the volume of imports from each group of items imported products as a function of the index of industrial production and capacity of particular import and import capacity has been used as a policy variable. The results show that the variables the GDP and be imported, have the greatest effect on imports, the relative price effect is relatively weak [7].

Kayani and Hasanvand (1999), in the long-run equilibrium relationship between the variables of Iran import demand function based on traditional econometric techniques using time series during the period covered 1959-1993, the result would be a long stretch in maximum relative price compared to other variables and thus increase the relative price of imports leads to a dramatic reduction in throughput.

Parvin and Yousefi (2010), The demand for imports in the period 1969-1993 using iterative three-stage least squares method, concluded: Substitution relationship between factors of production in terms of numerical quantities are small and weak to import two factors, labor and capital are substitutes. The substitution relationship between factors of production are calculated by stating the fact that the economy is dominated by oil revenues, and the elasticity of substitution among products affected by a severe economic crisis [3].

Tofighi and Mehrabian (2002), Iran's demand for imports in the period 1959-1999, were examined. In this paper, the effects of economic shocks on import demand over time and the changes in import demand, the forecast error variance decomposition method is studied. The results showed that petroleum revenues and non-oil GDP, positive effect on relative prices have a negative effect on import demand [4].

Ranjini *et al* (2012), Import demand function for Nigeria over the period 2005-1980 using the build-examined. Their results indicate that real GDP has the greatest impact on import demand function [2].

Chen (2008), the long-term import demand in Taiwan for the period 2003-1989 as the distribution method (ADRL) estimate. The results of their study showed that between imports and its determinants (real domestic income and relative prices) is a long-term relationship [1].

Quirk (1993), The study aimed to estimate the total import demand function for Bangladesh economy using data from 1980 to 2008, using the distributive (ADRL) has been done. Thus the estimated long-run relationship between imports, relative prices and economic activity confirms. Meanwhile, the long stretch of economic growth (92/0) positive relative price elasticity in the long term (-0/29) negative. In this paper we build on the basis of the theoretical issues and tasks at home and abroad, to analyze the factors affecting import demand with emphasis on exchange rate and oil revenues pay for it [10].

Purposes of Conducting Research:

Analysis of factors affecting demand for imported of Iran oil, with emphasis on exchange rates and revenues, and enjoying the econometric methods. With this study will determine the impact on import demand for of Iran oil revenues and the exchange rate will be.

The correlation between GDP and import demand. The correlation between relative prices and import demand.

MATERIALS AND METHODS

General form of regression equation is the basis for the study is as follows, taken from Adnan and Mashkoor model for import demand in Bangladesh and adding key variables economy (oil revenues and the exchange rate) is the [9].

IMP = f (GDP, PR, RO, EX)

The main variables used in the model are:

IMP = Imports of Iran goods and services (billions of dollars)

GDP = GDP of Iran non-oil at constant 1376 prices (million dollars)

PR = PM / PD relative price

PM = import price index

PD = Domestic price index

RO = oil revenues in constant 1376 prices (million dollars)

EX = official exchange rate in Iran

To better measure the elasticity is estimated to be logarithmic:

$$LIMP = \alpha_0 + \alpha_1 LGDP + \alpha_2 LRO + \alpha_3 LEX + \alpha_4 LPR$$

Data are from the National Accounts time series of the Central Bank, the Statistical Center of Iran, Islamic Republic of Iran Customs Administration collected.

To calculate oil revenues, revenue from crude oil is considered.

Since the use of oil revenues makes the sharp line between oil revenues and GDP is so instead of GDP, non-oil GDP variable is used.

Variable soaring price relative to import prices to domestic prices: Here is the Consumer Price Index "CPI" is considered as domestic prices have, And import price index is calculated as the ratio of imports to the volume of imports gained.

RESULTS AND DISCUSSION

In this paper, a method to estimate the Auto Regression model with massive lag (ARDL) was used. Results in the short term, long term, error correction and analysis of variance were analyzed. Dynamic estimation results (short-term) shows that all model variables except the dummy variable are significant, the coefficient of determination equal to 39/58 93/0 and F statistic that indicates the explanatory power of the model. The pathology tests to establish all the classical assumptions (lack of autocorrelation, the corollary correct sentences residual normality and homogeneity of variance) for the model confirms. Computing t-statistics equal to 37/7 sets, because the absolute value of this statistic, the critical value by Banerjee, Dolado and Master (-43/4) is, therefore, reject the null hypothesis that there is no relationship long run and we have long run relationship.

The estimation results of the model run, the GDP variable is significant and has a positive coefficient, in other words, a 1 percent increase in GDP of 57/2% increase in import demand.

Variable oil revenues, has a significant and positive coefficient indicates that a one percent increase 56/0 that oil revenues increased 56 percent, imports will follow .

Exchange rate, the relevant coefficient is significant and shows a negative impact on the country's net import demand, In other words, the elasticity of import demand with respect to this variable is 56/0 percent. Variable ratio of import prices to domestic prices is significant and has a negative sign, i.e., a one percent increase in relative prices, import demand 25/0 percent rate decrease. Significant intercept, which indicates that the intercept is studied. To consider the impact of the Revolution in 1978 and 1979 to 1988 and the impact of the oil shocks, the dummy variable was not significant, but the order was deleted from the model.

Results of the error correction model suggests that if we move from one period to the next period, 75 percent of the variation in the function of its long-term path template variable in the next period correct result. Thus, movement toward balance occurs relatively quickly. Structural stability test results showed that the 95% confidence interval graphs have been cut, so the null hypothesis that there is a lack of accepted structural stability to be rejected.

Table 1: The long time estimated result.

Probability level	T-statistics	Coefficient	The variable name
0.000	8.503	2.57	LGDP
0.015	2.62	0.564	LRO
0.000	-5.162	-0.56	LEX
0.011	-2.77	-0.25	LPR
0.000	6.495	-23.06	C
LIMP = -23.06 + 2.57 LGDP - 0.564 LRO -0.561 LEX -0.247 LPR			

Conclusion:

- An average of 5 years (short term), 81 percent of the fluctuations, caused by the demand of imports, 12 percent of the GDP volatility, 7.0 percent of oil revenues by 2 percent due to exchange rate 4% due to the ratio of imports to domestic prices professionalism.
- An average of 10 years (medium term); 74% of the variation is due to the demand of imports, 17 percent of the GDP volatility, 009/0 percent affected by oil revenues, 2% due to exchange rate from 6% higher than the domestic prices of imported extrusion.
- An average of 20 years (long-term), 72 percent of the fluctuations, caused by the demand of imports, 20 percent of the volatility of the GDP, 1% of oil revenues by 2% due to the exchange rate, 7 percent of the ratio of imports to domestic prices professionalism. Overall ANOVA results indicate that in the short term, medium term and long term share volatility variable import demand the greatest influence of Iran.

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