

Effect factors on meat imports to Iran

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Abstract: Foreign trade has always been an issue as important in the economies of the world that Iran was no exception. The import of meat in foreign countries to study the factors affecting the balance paid. Changes in short- and long-term study of factors affecting meat imports from Iran, with its pattern of regression with distributed lags (ARDL) Examined Information and statistical data base needed groceries and Agriculture Organization (FAO) and World Customs Organization and Central Bank of Iran, for the period 2008-1986 has been collected the results showed that changes. The results showed that the adjusted rate changes that support the policies of the Government in the short term and long term is the most important factor affecting the importation of meat.

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Introduction

Today, trade in agricultural products due to the strategic nature of some of these products has become increasingly important with the growth of world trade (Kamijani, 2001). In recent decades, enjoying the benefits of foreign trade and in international markets as one of many of the factors affecting the economic development of developing countries (Akbarian, 2002).

Iran's exports of agricultural products the country imports relatively little comment, but in some cases affect the country's foreign trade. So much of the agricultural trade is that imports of agricultural products is considered strategic Hence the policy of self sufficiency in the production efficiency of the analysis Current methods of providing market information and in identifying are factors affecting agricultural crops. (Kamijani, 2001).

One of the most fundamental relationships between macroeconomic variables in the import demand function is Import demand in developing countries, the changes are fairly extensive.

The import demand is a function of several factors Coefficient of elasticity of the respective importance of these factors can be realized (Akbari and Bakhshodeh, 2002).

Khan (2001), In the latter case, the imbalance by adding a variable delay (with a continuous dependent variable) was investigated. Karen (1996), the overall import demand in the United States estimate that over the past two decades. Based on his results showed that import demand is a function of relative prices and real income.

Mohammadi (1999), Iran's pattern of demand for grain imports (rice, wheat, barley, corn), providing for the separation of the different countries examined He

uses the almost ideal demand system, concluded that demand for grain imports, especially wheat, barley and corn, according to the internal But much depends on the level and pattern of demand on rice prices have followed a process of and more a function of domestic price level is the product.

Parizan and Esmail (1988), Factors affecting demand for imports of animal products in their review Their results showed that imports of all products in response to changes in tariff rates, the price of oil revenue and domestic production is not the same.

Because of the importance of imports and the import of meat products in developing countries including India are influenced by government policy intervention. This study sought to analyze factors affecting the importation of any product focusing on the role of national government policies in 1996-2008.

Research

In order to support government policies can be adjusted Rate (APR) that the total effect of policies that include (Bojnec, 1996). Direct and indirect effect of trade policy, price and exchange rate policies of major countries that has been spent.

Adjusted benchmark rate of protection is calculated as follows:

$$APRJ = (P_j^d * / P_j^b - 1) * 100 \quad (1)$$

Which $P_j^d *$ is defined as follows:

$$P_j^d * = P_j^d / AER = P_j^d / (NER * USCPI / CPI) \quad (2)$$

In the above:

P_j^d : domestic product prices to nominal exchange rate of \$ J, which has become America.

P_j^b : price of product j in the reference country (America) dollars (border price)

P_j^{d*} : price of domestic product adjusted for exchange rate

NER: Nominal exchange rate (which is equal to the market exchange rate)

AER: exchange rate adjusted

CPI: consumer price index for domestic

USCPI: America's consumer price index (the reference)

In this study factors affecting the demand for imports of meat to follow linear function of the import demand function in this capacity for reflection Behavior of domestic demand for beef imports were:

$$\text{LN}M_{IT} = \alpha_0 + \beta_1 \text{LN}(P_{IT}^C) + \beta_2 \text{LN}(R_{IT}) + \beta_3 \text{LN}(T_{IT}) + \beta_4 \text{LN}(Q_{IT}) + \mu_{IT} \quad (3)$$

Which In M_{IT} the value of imports of the product in T (Rials) P^C price index is the relative value of the share prices of imports on domestic prices has been? T levels of tariffs applied to product per year, Q the amount of production (per ton), R in foreign exchange revenues from oil exports. μ is the random error is to assume a normal distribution and random. It also includes a zero mean and constant variance. In the above equation, T represents the year and I can show the goods.

Given the above model of import demand for red meat can be written as:

$$\text{LN} M_{IT}^T = \alpha_0 + \beta_1 \text{LN}(PC_{IT}) + \beta_2 \text{LN}(R_{IT}) + \beta_3 \text{LN}(T_{IT}) + \beta_4 \text{LN}(Q_{IT}) + \beta_5 \text{LN}(APR_{IT}) \quad (4)$$

In Top PC and the expected negative effect of T and Q and R have a positive effect on imports?

In addition to economic variables affecting imports, non-economic variables, including laws and regulations with a variety of restrictions on imports also effective.

It is noteworthy that in addition to tariff barriers, nontariff barriers, there is also some of the convention. In the case of agricultural products in most cases the tariff equivalent of non-tariff barriers are the negative parts. Thus, import tariffs for the negative effect of trade taxes on import growth; provide (Khalilian, 2003).

In order to evaluate the short-term and long-term relationships between the dependent variable and other explanatory variables of the model approach ARDL (distributive model to explain the delay) was used.

The main advantage of using the ARDL approach is that regardless of whether the explanatory variables are stationary in levels ($I_{(0)}$) or be a difference between the static ($I_{(1)}$) can also reposition the relationship between variables achieved they will be efficient and non-diagonal (Seddighi, 2000).

ARDL model was used in this study and data required for the period from 2008 to 1996 from various sources including the Food and Agriculture Organization statistical database (FAO) and World Customs Organization and the various central banks have been collected.

Model (P, q1, q2, ..., qk) ARDL model based on this study can be written as follows:

$$\alpha(L, P) M_T = \alpha_0 + \sum \beta_i(L, P) X_{IT} + U_T, \quad I = 1, 2, \dots, K \quad (5)$$

Where 0 α intercept M_t import demand, and L is the lag factor is defined as follows:

$$L^j M_t = M_{t-j}$$

The independent variables used in the vector X_t is the import demand function. So we have:

$$\alpha(L, P) = L - \alpha_1 L^1 - \dots - \alpha_p L^p, \quad \beta_i(L, q) = \beta_{i0} + \beta_{i1} L + \beta_{i2} L^2 + \dots + \beta_{iq} L^{iq} \quad (6)$$

X_{it} $\cdot$ I the independent variable is based on the ARDL model the dynamics of the demand for imports of meat can be calculated as follows:

$$\text{LN}M_T = \alpha_0 + \sum \beta_i M_{t-1} + \sum \varepsilon_i \text{LN}P_{i(t-1)}^C + \sum \gamma_i \text{LN}R_{i(t-1)} + \sum \mu_i \text{LN}T_{i(t-1)} + \sum \theta_i \text{LN}Q_{i(t-1)} + \sum \phi_i \text{LN}APR_{i(t-1)} + \varepsilon_0 \text{LN}P_{it}^C + \gamma_0 \text{LN}R_{it} + \mu_0 \text{LN}T_{it} + \theta_0 \text{LN}Q_{it} + \phi_0 \text{LN}APR_{it} + U_{it} \quad (7)$$

In this equation, s, g, f, n, m, k, respectively, optimized for continuous variables APR, ϕ , T, R, P^C , M_t is. To estimate long-term relationship between variables of a two-step approach we want to use the following syntax. Despite the long-term relationship between variables in the first test will be reviewed. If the sum of the estimated coefficients in this interval is smaller than a dependent variable, a dynamic model of long-term trend is toward equilibrium. Therefore, to test the convergence hypothesis under test should be performed (Noforesti, 1999):

$$H_0: \sum \beta_i - 1 \geq 0 \quad H_1: \sum \beta_i - 1 < 0 \quad (8)$$

T statistic for testing the quantity required is calculated as follows:

$$t = \frac{\sum_{i=1}^q \beta_i - 1}{\sum_{i=1}^q \sigma \beta_i}$$

If the critical value provided by Neberji, slightly smaller than the desired confidence level in computing the t statistic is, H0 is rejected and A long-term equilibrium relationship between variables in the model there. The long-term relationships between the variables in the model will apply.

$$M_t = M_{t-1} = \dots = M_{t-p} \quad X_{i,t} = X_{i,t-1} = \dots = X_{i,t-q}$$

In the words of the last q variable i is related to the interruption of long-term relationship between variables can be expressed as follows.

$$M_t = \alpha + \sum \beta_i X_i + V_i, \quad \alpha = \text{-----} \quad (10)$$

$$\beta_i = \frac{B_i(1,q)}{\sum \beta_i} = \text{-----}, \quad V_i = \text{-----} \quad (11)$$

According to the above long-term relationship between red meat import demand function can be demonstrated as follows:

$$\ln M_t = \delta_0 + \delta_1 \ln P_t^c + \delta_2 \ln R_t + \delta_3 \ln T_t + \delta_4 \ln Q_t + \delta_5 \ln APR_t + N_{2t} \quad (12)$$

$$\Delta m_t = \Delta \alpha_0 - \sum \alpha_j \Delta M_{t-j} + \sum \beta_{i0} \Delta x_{it} - \sum \sum \beta_{i,t-j} \Delta x_{i,t-j} - \alpha(1,P) ECT_{t-1} + U_t \quad (13)$$

In this regard, the first difference operator Δ and β_{ij} , $t-j$, α_j , $t-j$ estimated coefficients of equation (5) are. (1, P) α is the coefficient of error correction that can measure the speed of adjustment. Correction of error (ECT_{t-1}) is as follows.

$$ECT = E_{x_t} - \alpha - \sum \beta_i X_{it} \quad (14)$$

Results

ARDL model considering the dynamics of import demand for red meat in relation (4) the dynamics of the ARDL (1, 1, 2, 2, 0, 2) demand for imports of meat, the criterion Schwarz - Beizin Up to 2 interval was

estimated taking into account, the results are shown in Table 1.

Table 1. Results from estimating the dynamic model ARDL (1, 1, 2, 2, 0, 2)

variable	coefficient	Standard error	T ₀
C	-160.8154	104.9043	-1.53
Log (-1)	0.573**	0.256	2.23
Log P ^c	2.546***	0.304	8.36
Log P ^c (-1)	-1.05	0.628	-1.68
Log r	0.007	0.254	0.028
Log R (-1)	1.107***	0.371	2.97
Log R (-2)	-1.034	0.506	-2.04
Log T	1.064	0.253	4.20
Log T (-1)	-0.865	0.220	-3.92
Log T (-2)	0.354**	0.144	2.45
Log Q	5.014	6.824	0.73
Log APR	94.246***	15.755	5.98
Log APR (-1)	-85.738***	22.309	-3.84
Log APR (-2)	13.687	12.049	1.13
F = 38.11 (0.000)		R ² = 0.98	

Source: research findings. * And ** and *** significance at 10 and 5 and 1 percent.

Using dynamic ARDL model coefficients in Table 1, long-term correlation between variables was tested. Due to the number equation (9) statistics were calculated for (4 -) and the quantity provided critical Benerji-dolado meters in 90% (45 / 3 -) and the larger the absolute value calculation for the absolute beginning of the crisis, the null hypothesis balk and a result of long-term equilibrium relationship between variables, the model is accepted.

The results of the estimation model based on long-term relationship(10) are shown in Table 2

Table 2. Estimating the long-term results of the ARDL (1, 1, 2, 2, 0, 2)

coefficient	variable	Standard error	T ₀
-376.78	C	276.869	-1.36
3.490***	Log p ^c	1.340	2.60
0.188	Log R	1.557	0.12
1.294	Log T	0.967	1.33
11.749	Log Q	16.32	0.71
52.00**	Log APR	24.726	2.10

Source: research findings. * And ** and *** significant at respectively 10 and 5 and 1 percent

If red meat. The significance of the estimated coefficients can be mentioned meat imports to the state. This too makes the intervention price and other factors do not show their true import of meat. The convergence of a series of economic variables provides the basis of error correction models. Error correction model of

short-term fluctuations in the values of variables in relation to long term.

Meat import demand related to the equation error correction model based on equation (13) was estimated and the results in Table 3 are given.

Table 3. Results of the estimated error correction model

Variable	coefficient	Standard error	T ₀
dC	-160.815	104.904	-1.533
dLog p ^c	2.546***	0.304	8.36
dLog R	0.007	0.254	0.028
dLog R ₁	1.034**	0.506	2.044
dLog T	1.064***	0.253	4.204
dLog T ₁	-0.354***	0.144	-2.459
Log Q	5.014	6.824	0.734
dLog APR	94.246***	15.755	5.981
dLog APR ₁	-13.687	12.049	-1.533
ECT(-1)	-0.426	0.256	-1.66
R² = 0.97		DW = 1.78	

Source: research findings. * And ** and *** significant at respectively 10 and 5 and 1 percent

Table 3, the coefficients of all the coefficients in the relative price of exports in foreign exchange earnings by subtracting first-order variables, second difference, Difference between first and second first order difference value and tariff rates have been significantly modified to support. The results indicate that the coefficient of error correction (ECTt-1) was significant and expected sign (negative) value represents the ratio 0.42 and show that 0.42 percent balances the value of the dependent variable import after a period of red meat is gone. What the above results can be summarized as follows.

- Adjusted rates that actually support the policies of government intervention during the study period is What short and long term have a significant positive effect, so we can say Policy actions the government has a direct impact on the value of imports of meat.
- Tariff rates in the short term in first order by subtracting the expected negative and significant impact on the value of imports But in the long term no significant effect on import demand.
- Revenue from oil exports in the short term in first order by subtracting the expected positive impact on import demand is significant but no significant long term impact.
- The relative price level in the short and long-term significant at 1%, no significant relationship with import demand.

Suggestions

According to the results of government policies on imports of meat is a very influential factor. Hence the

dominant role of the state monopoly on imports of beef into product without In these circumstances, domestic suppliers because they cannot make decisions based on market mechanisms Suffer losses and reduced production in the long run, higher prices, consumer losses and social welfare is reduced. Since the aim of policies towards trade liberalization policies so Adjustment policies should be implemented in meat imports.

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