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Saffron Export and agricultural value added in Iran

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ABSTRACT

In recent years, appropriate increase of production and production for saffron export has led to seeking new export markets in Iran. The purpose of this study is to determine the relationship between Saffron export and agricultural value added in Iran. The theoretical framework was designed based on this assumption that the total production in the economy is divided into two sections: production for inside and production for export. The data were collected from 1990 to 2007 and were analyzed using Auto Regressive Distributed Lag (ARDL) model. The result of the analyses showed that there was significant relationship between Saffron export and agricultural value added. Together the independent variables explained 91% of the variance in the dependent variables. The remaining 9% was due to unidentified variables. In relation to that, we can conclude that explanatory power is high for the equation. It showed that one percent change in Saffron export rate lead to 35% in agricultural value added growth. Therefore Saffron export is regarded as an important factor in Iran's agricultural value added.

Key Words: Saffron Export, Agricultural Value Added, non oil export, Iran.

INTRODUCTION

Develop commercial relationships and increased exports to Iran which depends on oil reserves finitude, is an unavoidable necessity. The importance of exports be doubled circumstances that the formation is highly emerging phenomenon of globalization of economy and trade between the countries' borders to and in the near future countries will be able to hardly kept their side of the and developments on the sidelines watching the world will be doubled. Expected to cause Iran also has a way to keep pace with the development of world trade and be ready for competition and entry to international business scene and active participation and productive with the global economy. The main characteristics of this wave included: Increasing exports and increasing foreign investments in these wave Developing countries were able to use the comparative advantage of cheap labor and rate increasing industrial exports and reduce its tariffs on the imports. Moreover these gradually disappeared controls related to the repatriation of capital from high-income countries foreign capital stock came to22 percent of GDP in developing countries until 1998 due to the developments was followed globalization of domestic, This phenomenon was considered. In the last three decades export has been more importantly, this engine of economic growth South East Asia Plummer [1]. Exports are increasing the economic growth, through increased productivity of production factors. Evaluation of Nehra and Dharshwar [2] showed that in 83 developing countries, export growth has led to increasing interest around the factors of production. Among the products exported have benefited from the importance of agricultural products, for many years the economists are ignored diversity in agriculture and its effect on long-term growth rate, but the rapid growth of agricultural products could increase the long-run growth rate [3]. Saffron's herbal of race gladiola that great value because have Color, aroma and special properties anti-cancer and anti- tumor or, in the pharmaceutical industry [4]. Saffron the world's largest manufacturers are countries Iran, Greece, Morocco, Kashmir, Spain and Italy but the reputation and quality Iranian saffron belongs as the source and origin of the [5].

Production of saffron in Iran, has advantages including require less water, possible utilization for 5 to 7 years in a row and turn the product of long-term survival, easy transport and no need for heavy machinery for agriculture, create productive employment, considerable exchange and increased food consumption, industrial and pharmaceutical. It has been caused to acreage and in which increasing production. Production of saffron in Iran is product intended for export and it is export orientation as continuous ascending because in Iran saffron production and export have had increasing from 173 and 82 ton in 1999 to 235 and 201 ton in 2005 and in this period the share of export in domestic product has reached from 47.4 to 85.5 percent.

Table 1. The share of saffron export in agricultural export and non oil export

Period	The share of saffron export in agricultural export	The share of saffron export in non oil export	Percent change	
			In agricultural export	In non oil export
1989-1993	0.4	0.3	-	-
1995-1999	1.4	0.6	236	120
2000-2004	2.6	1	89	50

Source: the Islamic Republic of Iran Customs Administration and Iran's Foreign Trade Statistics Yearbook (Different years)

Table 2. Production and cultivation progress and countries share of Saffron (Ton- Hectare)

Country	2001-2002		2003-2004		2004-2005		2005-2006	
	Product	Cultivation	Product	Cultivation	Product	Cultivation	Product	Cultivation
Iran	185	51500	220	56500	230	57416	220	57416
Greece	7	1750	3	750	3	800	4	900
	3	2500	1	800	1	800	1	800
	3	1000	2	650	2	950	3	950
	1	500	-	-	-	-	-	-
	1	125	1	125	1	120	0.5	50
	4	4000	3	3000	3	3000	2	2000
	204	61375	230	61825	240	62716	229.5	61316

Source: Azizi Maryam (2004) Novin saffron site and exports of goods and services office

Tables 1, 2 shows position of Iran and the main countries for saffron global production during 2001 to 2006. Production rate and Global cultivation of saffron have increased from 204 ton and 61.4 thousand hectare in 2001-2002 respectively to 230 ton and 61.8 thousand hectare in 2003-2004 and same trend has been continued in 2004-2005 year but in 2005-2006 year, it has decreased as low. During study, Production rate and cultivation of Iran's saffron has increased from 185 ton and 51.5 thousand hectare in 2001-2002 year to 220 ton and 56.5 thousand hectare in 2003-2004 year and same trend has been continued in 2004-2005 year but in 2005-2006 year, production rate has decreased to 220 ton and cultivation has not been changed. More important point is that what is the cultivation level achieved production of saffron? In the other hand, what is the function of the unit production in manufacturer countries? According to a study carried out in Morocco, The average performance varies between 2 to 2.5 Kilograms. In Italy, the average performance has been between 10 to 16 Kilograms per hectare, in Spain, it is between 6 to 29 Kilograms per hectare, in Greece, it is between 4 to 7 Kilograms per hectare and in India, it is between 2 to 7 Kilograms per hectare. In addition, in Greece it is expected to achieve in first year 3 Kilograms per hectare, in second year 10 Kilograms per hectare, in third and fourth year 15 Kilograms per hectare and fifth and sixth year 10 Kilograms per hectare. However in Iran, performance per unit area is lower than these values. Saffron is made in Asia, Europe and North Africa. In Asia, it is produced in Iran, India, China and recently Afghanistan and in Europe, it is produced in Spain and Greece and in North Africa, it is produced in Morocco. During this survey, Iran has had much of global saffron production rate and cultivation continuously. Iran's share of global saffron production rate and cultivation has increased from 90.69 and 83.91 percent in 2001-2002 to 95.65 and 91.39 percent in 2003-2004 and this trend has been continued during two recent Crop years. Therefore during this survey, Iran has had much of saffron global production as dominant firm and it has had high comparative advantage in production of saffron. After Iran, Greece has had saffron global production only 3.43 percent in 2001-2002 and Greece's share of saffron global production is decreasing.

The present research explores from macro perspective an alternative way in which the saffron export growth in agricultural sector could be explored employing time series data. Following Feder [6], the total production is comprises two sectors; one producing for an export market and the other producing for the domestic market. For that purpose, we use the bounds testing (or ARDL) approach to co-integration proposed by Pesaran et al. [7] to test the saffron export growth using data over the period 1961–2007. The ARDL approach to co-integration has some econometric advantages which are outlined briefly in the following section. Finally, we apply it taking as a benchmark Feder [6] study in order to sort out whether the results reported there reflect a spurious correlation or a genuine relationship between saffron export and gross domestic product and the variables in question. This contributes to a new methodology in the agricultural value added literature. Next section starts with discussing the model and the methodology. Then in next Section we describe the empirical results of unit root tests, the F test, ARDL co-integration analysis, Diagnostic and stability tests and Dynamic forecasts for dependent variable and next Section summarizes the results and conclusions.

MATERIALS AND METHODS

Model: Generally, two approaches to model the instability (specially, exports instability) are considered: First approach is to model it as an index. Mir-Shojaei's [8] approach is an example of this approach for The Organization of the Petroleum Exporting Countries (OPEC) members. Second approach is to model the instability variable in a production function. In this sense, Feder's [8] traditional approach has been the base for many studies. In his approach, he works on the relationship between exports and economic growth. Few studies usually tried to regulate Feder's model and adjust it with their own findings. Here, in our study we use the second approach and based on Feder's approach we follow the endogenous growth theory and consider human capital in agricultural sector (the number of employed workforce with a university degree) and we will survey the effects of oil exports on agricultural value added. Feder divides the total production in economy in two parts: production for domestic market and production for exports. Moreover the production of non-export sector depends on export capacity too:

$$Y = X + N \ , \ X = G(K_x, L_x, M_x) \ , \ N = F(K_n, L_n, M_n, X) \qquad (1)$$

Where L_x and L_n are workforce employed in the relevant section and K_x and K_n are Capital reserves in the relevant section. If will be applied first and second order derivative, in this case based on the Pareto optimum condition following equality is established in terms of productivity divided by inputs L and K:

$$GK / FK = GL / FL \qquad (2)$$

Considering the saving resulting from the high ratio of export production we can assume the following function than the above:

$$GK / FK = GL / FL = 1+d \quad d > 0 \qquad (3)$$

By employing Bruno [9] statistical state solution assumption, Feder [6] sets the marginal sector products of labor equals to the average labor product for the economy as a whole. Then one would arrive at the fairly conventional growth equation by substitute $N_L = \Psi(Q/L)$ and $dK = I$:

$$\frac{dQ}{Q} = \alpha\frac{I}{Q} + \beta\frac{dL}{L} + \theta\frac{dM}{Q} + \lambda\frac{dX}{Q} \qquad (4)$$

The logarithm equation corresponding to Eq. (4) and breakdown of the factors agricultural sector gives:

$$LA_t = \alpha_0 + \alpha_1 LIS_t + \alpha_2 LHS_t + \alpha_3 LXO_t + \alpha_4 LXS_t + DU_t + e_t \qquad (5)$$

Where: LA_t is Logarithm of agricultural value added in 1997 constant prices based on million dollars, $L(IS)_t$ is Logarithm of investment in saffron export in 1997 constant prices based on million dollars, $L(HS)_t$ is Logarithm of human capital in saffron export based on thousands (the number of employed workforce with a university degree), $L(XO)_t$ is Logarithm of oil export in 1997 constant prices based on million dollars and $L(XS)_t$ is Logarithm of saffron exports in 1997 constant prices based on million dollars. Our empirical analysis in next Section is based on estimating directly long-run and short-run variants of Eq. (5). All the data in this study are obtained from *Central Bank of Iran (2004)*[1], the *Islamic Republic of Iran Customs Administration* and Iran's foreign trade statistics during the period 1961-2007.

Methodology: The ARDL co integration approach: Recently, an emerging body of work led by Pesaran and shin [10], Pesaran and Pesaran [11] and Pesaran et al. [7] has introduced an alternative co integration technique known as the Autoregressive Distributed Lag or ARDL bound test. It is argued that ARDL has a number of advantages over conventional Johansen co integration techniques. To start with, the ARDL is a more statistically significant approach for determining co integrating relationship in small samples, while the Johansen co-integration techniques still require large data samples for the purposes of validity. A further advantage of the ARDL is that while other co integration techniques require all of the regressors to be integrated of the same order, the ARDL can be applied whether the regressors are I(1) and I(0), i.e. whether the results are all unit root or all stationary or indeed, even if mixed results are obtained. This means that it avoids the pre-testing problems associated with standard co integration, which requires that variables are already classified I(1) or I(0). In this research having first applied the perron (1988) innovational and additive outlier models, it was observed that in the presence of one structural break, we could not reject the null hypothesis of a unit root in all cases, but by considering two structural breaks we found the reverse as the majority of variables under investigation became stationary. According to Pesaran and Pesaran [11], the ARDL procedure is represented by the following equation:

$$\phi(L,P)y_t = \sum_{i=1}^{k} \beta_i(L,q_i)x_{it} + \delta w_t + u_t \qquad (6)$$

Where:

$$\phi(L,P) = 1 - \phi_1 L - \phi_2 L^2 - \dots \phi_p L^p$$
$$\beta_i(L,q_i) = 1 - \beta_{i1} L - \beta_{i2} L^2 - \dots - \beta_{iqi} L^{qi}, i = 1,2,\dots,k \qquad (7)$$

Where, y_t denotes the dependent variable, X_{it} is the I dependent variables, L is a lag operator and w_t is the S*1 vector representing the deterministic variables employed, including intercept terms, dummy variables, time trends and other exogenous variables. The optimum lag length is generally determined by minimizing either the Akaike information Criterion (AIC) or the Schwarz Bayesian Criteria (SBC). Using the ARDL specific model, the long run coefficients and their asymptotic standard errors are then obtained. The long run elasticity can then be estimated as follows:

$$\hat{\theta}_i = \frac{\hat{\beta}_{i0} + \hat{\beta}_{i1} + \dots + \hat{\beta}_{qi}}{1 - \hat{\phi}_1 - \hat{\phi}_2 - \dots - \hat{\phi}_p} \qquad \forall i = 1,2,\dots,k \qquad (8)$$

The long run cointegrating vector is given by:

$$y_t - \hat{\theta}_0 - \hat{\theta}_1 x_{1t} - \hat{\theta}_2 x_{2t} - \dots - \hat{\theta}_k x_{kt} = \varepsilon_t \qquad \forall t = 1,2,\dots,n \qquad (9)$$

In this equation, the constant term is equal to:

$$\hat{\theta}_0 = \frac{\hat{\beta}_0}{1 - \hat{\phi}_1 - \hat{\phi}_2 - \dots - \hat{\phi}_p} \qquad (10)$$

We can now rearrange in term of the lagged levels and first differences of y_t, x_{1t}, x_{2t}, … , x_{kt} and w_t to obtain the short term dynamics of the ARDL as follows:

[1] *National Accounts of Iran* in 1997 constant prices

$$\Delta y_t = -\phi(1,\hat{p})EC_{t-1} + \sum_{i=1}^{k} \beta_{i0}\Delta x_{1t} + \delta \Delta w_t$$
$$-\sum_{j=1}^{p-1} \varphi^* y_{t-j} - \sum_{i=1}^{k}\sum_{j=1}^{q_{i-1}} \beta_{ij}{}^{*}\Delta x_{i,t-j} + u_t \qquad (11)$$

And finally, one can define the error correction term in the following manner:

$$EC_t = y_t - \sum_{i=1}^{k} \hat{\theta}_i x_{it} - \psi' w_t \qquad (12)$$

In equation (12) φ^*, δ' and β_{ij}^* are the short run dynamic coefficients and □(1,P) denote the speed of adjustment.

ARDL forecasting models: We use the basic framework of Stock and Watson [12,13] to generate a large number of individual ARDL model forecasts of the agricultural value added growth and TFPG, where each ARDL model includes one of N potential predictors. Define $\Delta Y_t = Y_t - Y_{t-1}$, where Y_t is the log-level of the agricultural value added growth or TFPG in a particular Iran state at time t. In addition, define:

$$y_{t+h}^h = \frac{1}{h}\sum_{j=1}^{h} \Delta y_{t+j} \qquad (13)$$

So that y_{t+h}^h is the (approximate) growth rate of the agricultural value added and TFPG from time t to t Ch, where h is the forecast horizon. Let $X_{i,t}$ denote one of the N potential predictors of state-level agricultural value added growth and TFPG growth (i=1,2,…,N). Each ARDL model takes the form:

$$y_{t+h}^h = \alpha + \sum_{j=0}^{q_1-1} \beta_j \Delta y_{t-j} + \sum_{j=0}^{q_2-1} \gamma_j x_{i,t-j} + \varepsilon_{t+h}^h \qquad (14)$$

Where, ε_{t+h}^h is an error term. We construct recursive simulated out-of-sample forecasts for y_{t+h}^h at time t for a given predictor $x_{i,t}$ (denoted by $\hat{y}_{i,t+h|t}^h$) using Eq. (14). More specifically, $\hat{y}_{i,t+h|t}^h$ is computed by plugging Δy_{t-j} (j=0,1,…,q_1-1) and $x_{i,t-j}$ (j=0,1,…,q_2-1) into Eq. (14), with the parameters set equal to their OLS estimates based on data available from the start of the sample through period t, and ε_{t+h}^h set equal to its expected value of zero. The lag lengths in Eq. (14) are selected using the SIC, data through period t, a minimum lag length of zero for q_1 and one for q_2 (to ensure that $x_{i,t}$ appears in Eq. (14), and a maximum lag length of four for q_1 and q_2. Dividing the total sample into in-sample and out of sample portions of size R and P, respectively, we use this procedure to generate a series of P-(h-1) recursive simulated out-of-sample forecasts for the ARDL model that includes $x_{i,t}$ ($\left\{\hat{y}_{i,t+h|t}^h\right\}_{t=R}^{T-h}$) . Note that the lag lengths q_1 and q_2 are selected anew when forming each out-of-sample forecast, so that the lag lengths for the ARDL forecasting model are allowed to vary through time. In our applications in next Section below, we consider 30–37 potential predictors for growth rate of the agricultural value added and TFPG. We will thus have 30–37 series of h-step-ahead individual ARDL model forecasts of growth rate of the agricultural value added and TFPG[2]. We also compute recursive simulated out-of sample forecasts for an AR model, which is given by Eq. (14) with the restriction $□_j$=0 (0,1,…,q_2-1) imposed. The series of out-of-sample forecasts are generated using a procedure analogous to that for the ARDL forecasting model described above[3]. The AR model is a popular benchmark model in much of the time series forecasting literature.

RESULTS AND DISCUSSION

[2] Apart from data revisions, the recursive forecasting procedure mimics the situation of a forecaster in real time. Because some of the potential predictors we consider are subject to revision, we are computing "simulated" recursive out-of-sample forecasts.
[3] *We select the lag length (q_1) for the AR model using the SIC and a minimum (maximum) value of zero (four) for q_1.*

Unit Root Test: For a number of variables included in the study a priori expectations might be of stationary. Prior to the testing of co-integration, we conclude a test of order of integration for each variable using Augmented Dickey Fuller (ADF) and Phillips Perron (P-P). Even though the ARDL framework does not require pre-testing variables to be done, the unit root test could convince us whether or not the ARDL model should be used. Since Yule [14], the importance of trends in statistical data has been recognized although the early work remained at best a statistical curiosity. Recent interested was intensified by innovations from Fuller [15], Dickey and Fuller [16] and Said and Dickey [17] who developed tests to identify particular forms of non-stationary. The emphasis lay on economic interpretations of relationships between data that contained unit roots and also the importance of non stationary data when attempting to avoid the problem of a spurious regression in estimation. The main thrust of the literature on unit roots concentrates on whether time series are affected by transitory or permanent shocks. This can be tested by the so-called *Augmented Dickey Fuller* (ADF) model which is set out as follows:

$$\Delta y_t = \rho y_{t-1} + \sum_{j=1}^{p-1} \gamma y_{t-j} + \mu_t + u_t \qquad (15)$$

Where y_t is a time series of T observations and $\mu_t = \mu_0 + \mu_{1t}$ are deterministic terms (if $\mu 0 \neq 0$ there is a constant, and deterministic trend when $\mu_1 \neq 0$). The ADF test statistic has a null hypothesis of a unit root process (i.e. $\rho = 0$) against the alternative of a stationary ($\rho < 0$ and $\mu_1 = 0$) or trend stationary ($\rho < 0$ and $\mu_1 \neq 0$) process. An issue often raised in the time series literature is the difficulty of differentiating between trend stationary and difference stationary processes. Deterministic trends do not always appear to be linear and shocks sometimes have permanent effects. Another major concern has been the low power of ADF tests and the inability to reject a false null of unit root, see for example De Jong *et al*. [18]. The ADF-GLS test of Elliott, Rothenborg and Stock [19] achieves improvements in power by estimating the deterministic regressors before estimating the autoregressive parameter. Noting that increasing the number of deterministic components (from no constant, to constant, to trend and constant) reduces the critical values and hence the ability to reject the null of unit root (or the power of ADF tests) Elliott *et al.* [19] have developed tests based on GLS detruding. These tests are found to have both improved power and size properties compared to the conventional OLS-based ADF tests; see Elliott *et al.* [19]. Therefore we use (ADF) and Philips – Perron tests and choose the length of optimal lag based on Schwarz Bayesian (SBC) in the following table:

Table 3: Result of unit root tests by ADF and Philips – Perron

variables	(ADF) test	Philips – Perron test	result
LA	ADF(1) = -1.38	-1.75	Non stationary
5% Critical Value	-2.94	-2.94	
DLA	ADF(0) = -3.79	-4.04	Stationary
5% Critical Value	-2.94	-2.94	
LIS	ADF(1) = -1.21	-1.54	Non stationary
5% Critical Value	-2.94	-2.94	
DLIS	ADF(0) = -4.09	-3.98	Stationary
5% Critical Value	-2.94	-2.94	
LHS	ADF(0) = -3.13	-3.21	Stationary
5% Critical Value	-2.94	-2.94	
LXO	ADF(1) = -2.01	-2.31	Non stationary
5% Critical Value	-2.94	-2.94	
DLXO	ADF(0) = -4.02	-3.64	Stationary
5% Critical Value	-2.94	-2.94	
LXS	-1.69	-1.97	Non stationary
5% Critical Value	-2.94	-2.94	
DLXS	-3.16	-3.56	Stationary
5% Critical Value	-2.94	-2.94	

Note: The optimal lag length (k) is determined by the Schwarz Information Criterion (SBC).

Table 3 shows that all variables are non stationary (except LHS) and will be stationary with once making difference. Therefore LHS variable is accumulation of degree zero (I (0)) and other variables are one accumulated degree (I (1)).

ARDL co-integration: The estimation results for the long-run relationship between Saffron Exports and agricultural value added are displayed in Tables 4. The values in brackets represent the standard errors of the parameter estimates. Later on, the associated estimated error correction regressions are obtained. One of the more important issues in applying ARDL is choosing the order of the distributed lag function. Pesaran and Smith [20] argue that the

SBC should be used in preference to order model specification criteria because it often has more parsimonious specifications: the small data sample in the current study further reinforces this point. The optimal number of lags for each of the variables is shown as ARDL (1,0,0,0,0). Table 4 shows the long-run coefficients of the variables under investigation.

Table 4. Long run coefficients using the ARDL (1,0,0,0,0) model (*Dependent Variable: LA*)

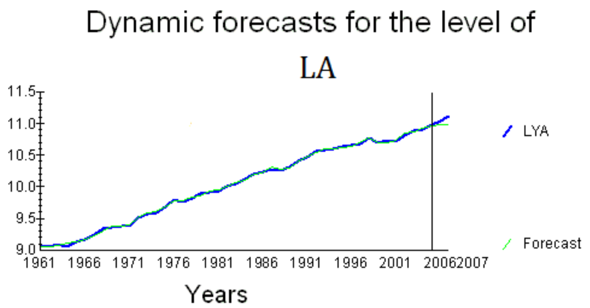
Regressor	Coefficient	t-Ratio(prob)
LIS	0.45	5. 619[003]
LHS	0.22	1. 121[024]
LXO	-0.14	-6.562[001]
LXS	0.35	7.215[000]
C	3.45	6.321[001]
DU1999	0.19	5.984[002]

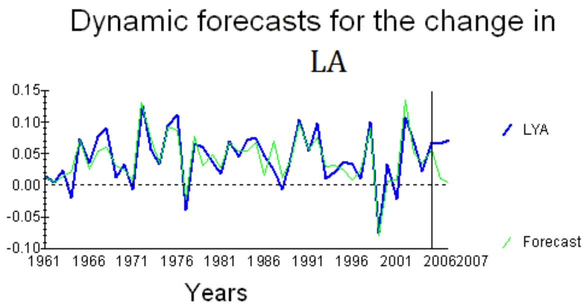
Table 5. Error Correction Model (ECM) coefficients using the ARDL (1,0,0,0,0) model

Regressor	Coefficient	t-Ratio(prob)
DLIS	0.41	6.211[002]
DLHS	0.19	3.178 [005]
DLXO	-0.12	-7.248 [000]
DLXS	0.32	8.632[000]
DC	2.01	7.454[000]
DDU1999	0.17	6.124[001]
ECM(-1)	-0.35	-7.012[000]

The empirical results reveal that in the long-run, even a one percent increase in physical capital in Saffron leads to a 0.45 percent increase in agricultural value added. While, a one percent increase in human capital in Saffron leads to a 0.22 percent rise in agricultural value added. Similarly, a one percent increase in oil exports leads to a 0.14 percent decrease agricultural value added. Moreover, empirical results in Table 4 show that a one percent increase in Saffron exports leads to 0.35 percent increase in agricultural value added. It is obvious that Saffron exports have an effect on the Iranian economy which, though statistically significant, is more so than expected.

Figures 1. Plots of the actual and forecasted values for the level of LA and change in LA





After estimating the long-term coefficients, we obtain the error correction representation of the ARDL model. Table 5 reports also the short-run coefficient estimates obtained from the ECM version of the ARDL model. The error correction term indicates the speed of the equilibrium restoring adjustment in the dynamic model. The ECM coefficient shows how quickly/slowly variables return to equilibrium and it should have a statistically significant coefficient with a negative sign. Bannerjee et al. [21] holds that a highly significant error correction term is further proof of the existence of a stable long-term relationship. Table 5 shows that the expected negative sign of the ECM is highly significant The estimated coefficient of the ECM (-1) is equal to -0.35, suggesting that deviation from the long-term Saffron value added path is corrected by 0.35 percent over the following year. This means that the adjustment takes place relatively quickly. Figure 1 represents the forecasting errors and the plots of the actual and forecast values. The graphical evidence presented in Figure 1 indicates the estimated model tracks the historical data very well.

Diagnostic tests for serial correlation, functional form, normality, hetroscedasticity, and structural stability of the model show that there is no evidence of autocorrelation and that the model passes the test for normality.

CONCLUSION

Saffron export is an important driver of agricultural value added at the macroeconomic level. There is strong empirical evidence of a positive relationship between Saffron export and agricultural value added at the microeconomic level. The methods used and the results presented in this paper provide insights into the effects Saffron export on agricultural value added. This evidence supports the results of other authors for different series and periods, which allows us to use it as a good instrument of analysis and forecasting of the economic cycle; allows us to estimate the long run agricultural value added; and moreover, shows that price policies have no positive effect on incomes resulted of non oil exports therefore, we must be perform policies that lead to encouragement and increase of Saffron production, because this way it will stimulate Saffron export in the long run. Results of this study represent very significant effect of oil incomes and their roles in changing agricultural value added in Iran (as oil exporting country). Therefore, change in share of agricultural value added depends on absorption value of this sector by incomes resulted oil shocks. It means that if the oil incomes attracted can be spend to fundamental investments and essential solution of problems in agricultural sector, it leads to value added growth in the after oil shock years. If not, after sectional increase, we will witness decrease share of Saffron export in agricultural sector. Of measurements which should be performed to contrast against negative effects of increase oil incomes in agricultural sector including to make appropriate policies to remove the dependency of agricultural sector on oil incomes, to save the overload of oil export incomes, using of oil incomes for investment and addressing infrastructure affairs in agricultural sector.

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