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Analysis of factors affecting the investment of Iran tractor manufacturing company using ARDL approach

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ABSTRACT
Since one of the main bases of economic development is based on developing investment in the private sector, it is necessary to consider the involving variables. The amount of companies' investment is influenced by external and internal factors. In the current study, we have mentioned 5 factors of changes in the inflation rate, exchange rates, the interest rates (bank's interest), the amount of the investment in the Research & Development sector, and GDP as some of the significant and influential factors on the investment of the companies. Also, the current research investigates the effect of these factors on the Iran Tractor Manufacturing Companies as one of the accepted companies in the Stock Exchange of Tehran as a case study, using the regression analysis method along with Autagressive-Distributed Lag (ARDL), and analyzed the research results. The obtained results showed that there is a significant and positive relationship between the investment volume in the Research and Development sector, and GDP and the volume of the investment in Iran Tractor Manufacturing companies. Also, there is a significant and negative relationship between the changes in the inflation rate, exchange rate, and the amount of investment of Iran Tractor Manufacturing Companies.
Key Words: Research and Development, Investment, Tractor Manufacturing Company, ARDL

Introduction

Nowadays, research and development is the key to compete and achieve the modern technologies of the world. Technology and advances in technology can change the nature of the production process and the quality of their products in different countries and lead to an improvement in the competitiveness of goods and increase their export. If we divide the required infrastructure to produce a product into three categories: hardware, software, and human resources, the experience of different countries show that what is the international determining factor is software and human resources factors (Bady, 2005).

In today's industry, the most significant factor of the software and human ware can be summarized in research and development. The task of research and development in economic agencies is to supply the required knowledge for effective, important, and better decision making to produce and trade with the minimum cost and the maximum benefit. In general, the role of research and development is to provide

the required knowledge of all the decision-makers in all sectors to take fast, effective, and beneficial decisions. Investing in research and development drives an economic agency in terms of technology. Then, an agency archives a competitive advantage in comparison with the rivals, and its exports increase (Murphy & Bauer Muell, 2004).

Global estimation indicates that in the recent decade, the contribution of the research credits to the GDP has been 2.5% to 3% in the developed countries, indicating their attention to the research while in Iran, this ratio has fluctuated between 0.02% to 0.05 over this period (Asghar Mobarak, 2008).

Economic growth as one of the main purposes of developing countries has a significant position in the economic literature. First of all, the continuity of the development and growth process in the economy requires attention in their causing factors. Disregarding their thought school, most economists emphasize the formation of capital and investment as the most significant factor in determining the growth and development of the economy. Although capital is the necessary condition for economic development, it is not enough condition. Also, the lagging description cannot be summarized in the capital formation, however, the capital formation has been called the central core, and the investment has been called the driving factor of the economic growth. Therefore, investment debate is one of the most fundamental and inseparable parts of the economy so that in the view of some economists, the growth and development of lack of capital is one of the main causes of many countries in the vicious circle of poverty.

According to the general view, investment means spending available money to reach more monies in the future; that is to say, investment means delaying the current consumption to achieve the possibility of more consumption in the future (Sharp, 2002).

Due to playing a dual role in the economy, studying investment is important. One the one hand, it is a big part of the total expenses and therefore, its change will have a considerable impact on the demand, and on the other hand, it plays a significant role in the supply and production; because investment represents an increase in the capital inventory (Kordbache, 2006).

Theories related to the level of investment explains the reasons to select and study the effect of the income growth rate in the level of investment of the companies in the best way. Analysis of the investment and being familiar with the investment theories can improve the management and increase the wealth of the investors as much as possible, and realize the conscious decision making. Taking a decision about the investment faces expectations, delays, and risks, addressing all of them simultaneously is not easily possible for the economists (Denis, 1994).

Carlson and Hernandes (2000) in a common study, studied the effects of some factors in the capital flow. They concluded that some political variables such as unproductive index (Dollar currency difference of domestic credits between two years, divided by the difference in dollar value of reserves in the same two years) increase the short term debts, and exchange rate regime, investment controls, and some of the real variables such as GDP and the difference between the domestic rate and the international rate affect the capital flow. Exchange rate stability leads to confidence in the domestic economic environment, and as a result, the investors can easily make decisions about the investment in the present and future. Therefore, the changes in the exchange rate lead to a lack of confidence about the future and the change in the domestic property value. In the economic literature, there are various theories related to the effect of inflation uncertainty in investment growth such that there are various predictions in this relation. Therefore, theoretically, there is no consensus on the effect of uncertainty on investment growth.

Considering this fact that the investment is a determining factor in the production growth, and on the other hand, there is no consensus about the effect of inflation uncertainty in the investment such that Hartmann (1922) and Ebel (1983) believe that the high inflation uncertainty has a positive impact on the investment while other studies including Benanke (1983), Pindick and Diksit (1984) argue that uncertainty has a negative impact on the investment, studying the effect of inflation uncertainty in the investment is of high importance.

Many factors affect the investment, however, their effects are not equal all the time and places. The influential factors in investment can be mentioned as follows:

- Interest rate
- GDP

- Inflation rate
- Exchange rate
- R&D accumulation volume

By understanding the effective factors in the investment and applying it to reach the optimal level of investment, managers of the companies can obtain the ultimate efficiency (Wordy, 2006). The value of a company depends on the profitability of that company's investments. Therefore, to maximize the wealth of shareholders, managers should recognize the factors affecting the level of investment, interact between shareholders' expectations, and the company's favorable investment opportunities, so as not to miss profitable investment opportunities and satisfy shareholders (Fuzzy, 2000).

Undoubtedly, the safe economic space is a key factor in private investment (Kanpur & Dhonte, 1997). Improving economic security by reducing uncertainty increases return on investment. An institutional framework that earns the trust of depositors and investors and ensures the physical and legal security of individuals and capital, has a significant impact on investment and private sector activity (Hall and Jones, 1999).

Since years ago, about 95% of the domestic market share in the range of 47 to 110 hp is owned by Iran Tractor Manufacturing Company. The tractor production line in Kurdistan province maintains the mentioned share in more production range with an annual capacity of 3500 units. In relation to foreign markets, the goal of achieving an 8% share of Vaniran markets in Venezuela has been exploited and the establishment of other assembly lines in various countries such as Tajikistan is planned. Iran Tractor Manufacturing Company in 2005 succeeded in obtaining a certificate of commitment to excellence. Iran Tractor Manufacturing Company located in Tabriz was established in 1966 to manufacture 65-horsepower single-differential and double-differential tractors and 45-horsepower tractors. In this company, in 1975, with the success of the Industrial Development and Renovation Organization of Iran and the Planning and Budget Organization, the plan to replace the Messi and Ferguson tractors and the Perkins engine was carried out under the British license and produced and marketed the first MF tractors in four models. In general, it can be said that investment is one of the most significant components of the total demand which plays a determining role in the economic fluctuations and economic growth of a country. Therefore, understanding the investment behavior has been considered by many economists and economic policymakers. Accordingly, since long ago, the theorists have tried to provide a model to explain the investment behavior and identify the most significant factors affecting it. Therefore, investment and influential factors on it have been considered significantly. As developing economies struggle in the economy with risky factors more than other economies due to various reasons, in the general and accepted definition of investment, a gap between present capital and desirable capital can be mentioned that investment can cover his gap. Wang in 2007 studied the determiners of investment in the research and development activities at the national level and for 26 member countries of OECD over 1996-2006. Although many studies have been conducted on the factors affecting the amount of investment, there is no considerable study conducted on the effect of research and development on the investment amount. Dolati (2007), in a study on "The effect of real exchange rate uncertainty on private sector investment (case study: Iran)" has examined the relationship between real exchange rate uncertainty and private sector investment in Iran during the period 1962-2002. The results show that the effect of real exchange rate uncertainty on private sector investment in the short and long term is negative. Also, the study of the effect of other variables included in the model shows that GDP and import of capital goods have a positive and significant effect. Also, real exchange rates and public sector investment have had a significant negative impact on private sector investment. The results of the co-integration test also indicate the existence of a long-term relationship between the variables and the coefficient related to the error correction, including the relatively high adjustment speed towards the long-term equilibrium.

Due to the nonstationary time series in the macro economy and inefficiency of the traditional methods in the estimation and economic models, and also, since there is a doubt in the econometrics in comparison with the traditional methods in the models' estimation, in the current research, modern methods in econometrics including ARDL has been used to answer this question that although many studies have

been conducted on the factors affecting the investment amount in Iran, there is no significant research on the effect of research and development on the investment amount.

Research Method

The current research is an applied study with an emphasis on the relationship between time series and regression analysis and is causal in terms of method. The statistical population includes all the data and information related to the investment amount of Iran Tractor Manufacturing Company, collected through the website of the Tractor Manufacturing Company of Iran, the website of the central bank of Iran, and the Codal website, and also using the nonstationary time series data and the website of the subsidiaries companies. The scope of this research is the information related to the company and the information about macroeconomic variables during the years 1989 to 2010.

Data Collection Tools

The data related to the amount of investment of Iran Tractor Manufacturing Company has been used as long as it has been placed on the stock exchange site by the mentioned company and the information related to the previous years has been collected through a quantitative questionnaire through the company itself.

Variables Stationary

In the current research, to achieve the certainty about the stationary and non-stationary of the data related to the variables, due to the structural failures in variables, EViews, and also, Augmented Dickey-Fuller Test Statistic were used.

Methods and Data Analysis Tools

Econometrics and the analysis of the obtained data have been done through ARDL.

Results

Stationary

Augmented Dickey-Fuller Test, and Dickey-Fuller Stationarity and non-stationary test have been used. However, due to the structural failure in the data, exchange rate, in particular, Eviews has been used, the results of which are as follows:

Table 1. ADF at the level of the variable (Source: research findings)

Variable	Critical quantity	Test-statistics
LInv	-3 .644963	6 .802243
LR&D	-3 .020686	1 .587030
LInflation	-3 .12363	7 .614375
LExf	-3 .12363	-0 .454489
LINTEREST	-3 .12363	-2 .178599
LGDP	-3 .644963	-0 .097482

As Table (1) presents, all the variables are non-stationary except for the accumulation volume of capital and inflation.

Table 2. Dickey-Fuller unit root test on the first-order difference of the variables

Variable	Critical quantity	Test-statistics
D(R&D)	-3 .020686	-6 .228201
D(Exf)	-3 .020686	-4 .516729
D(INTEREST)	-3 .020686	-5 .846062
D(GDP)	-3 .020686	-3 .870840

Resource (research findings)

The results of the Dickey-Fuller unit root test on the first-order difference of the variables show that the non-stationary variables have become stationary by differentiation. In other words, these variables are a sum of one (1) I, and inflation and investment accumulation volume is (0) I (Table 2).

Tests of Residual Serial Correlation

Lagrange Multiplier Test

LM statistics can be applied for models with and without the values of lagged dependent variables. LM statistics is applied to test the following hypothesis:

Null hypothesis: the disturbance sentences are serially uncorrelated with p degree.

Opposite hypothesis: the disturbance sentences are serially correlated with p degree.

P=1 has been considered for annual data; p=2 has been considered for semi-seasonal data; p=4 has been considered for seasonal data; p=12 has been considered for monthly data.

LM statistics have been obtained 2.045 to identify whether there is a correlation or not, and the minimum significance level has been obtained 0.153. Considering that the null hypothesis is based on the lack of correlation, it is not rejected and is confirmed.

Ramsey test to specify the wrong consequential form

Ramsey test is used to test the following hypothesis:

Null hypothesis: the equation has been specified as correct.

Opposite hypothesis: the equation has been specified wrong.

LM statistics is 0.072 to identify the correct or incorrect consequential form, and the minimum significance level of these statistics has been obtained 0.788. Considering that hypothesis zero is based on the correct consequential form, it is accepted and confirmed.

Normality test

This statistic has been used to test the following hypothesis:

Zero hypothesis: residual sentences have a normal distribution.

Opposite hypothesis: residual sentences do not have a normal distribution.

LM statistics is 0.056 to identify the normal distribution of the residual sentences and the minimum level of significance of these statistics has been obtained 0.972. Considering the error level of 0.05 and its comparison with the minimum significant level, the null hypothesis based on the normal distribution of the residual sentences has been confirmed.

Heteroscedasticity test

Thi statistics has been used for the following hypothesis:

Null hypothesis: the residual sentences of variance are homogenous.

Opposite hypothesis: the residual sentences of variance are heterogeneous.

LM statistics is 0.138 to identify the homogeneity or heterogeneity of the variance, and the minimum significance level has been obtained zero. Considering the 5% error level and its comparison with the minimum significance level, the null hypothesis based on the variance homogeneity is rejected and the opposite hypothesis is confirmed (variance of heterogeneity).

Estimation of the Dynamic Model and Long-term relationship and Error Correction Model

The abovementioned specified model is estimated using ARDL. The maximum lag of the model is considered one and Microfit 4 software (0,0,0,0,0,1), according to the Schwarz-Bayesian criterion for lag one is selected as the best estimation model. This estimated model is presented below. It must be noted that to obtain the mentioned model, DUMMY data has been used as the exchange rate unification since 2002.

Table 3. Dynamic model related to investment (Researcher calculations)

Variable	Coefficient	Standard deviation	t-statistics	Probability
LInv(-1)	.71622	.062486	11 .4621	.000
Interest	- .014677	.0069327	-2 .1171	.054
Lexf	-.023344	.010531	-2 .2168	.045
LInf	-.15644	.035177	-4 .4473	.001
Lrandd	.31311	.059033	5 .3039	.000
Lgdp	1 .0256	.23224	4 .4162	.001
INPT	-11 .4027	2 .2871	-4 .9858	.000
DUMMY	-.12211	.044439	-4 .7479	.017
DW-Statistic= 2.5109		R-BAR-Squared=.99801		R-Squared=.99870

As can be seen in Table (3), the estimated model has a high value of R-Squared, and the difference between R-Squared and R-BAR-Squared has been less, indicating the high explanatory of the independent variables. Furthermore, the Durbin-Watson test statistics value is higher than 1.9, and the model is accepted. also, the estimated model supplies the classic hypotheses related to the disturbance sentence (lack of self-correlation, etc.). The estimated signs are as the expected theoretical values.

In the presented model, the signs of the dependent variables are negative except for the research and development and positive GDP variables; this is in line with the research literature.

Before discussing the results obtained from model estimation, it is necessary to check the existence or absence of a long-term equilibrium relationship between the model variables. In this regard, the test of the null hypothesis (unit root) is performed in the absence of a long-term "cointegration" relationship, because the dynamic model estimated in the self-recursive method with distributive lags tends to long-run equilibrium before the sum of the coefficients of the dependent variable at different lags are less than one:

$$H_1 : \sum_{i=1}^{m} B_i - 1 < 0 \qquad H_0 : \sum_{i=1}^{m} B_i - 1 \geq 0$$

(1)

To perform this test, sum of the coefficient of the lagged dependent variable must be divided by a fraction and its standard deviation:

$$t = \frac{\sum_{i=1}^{m} B_i - 1}{\sum_{i=1}^{m} S_{B_i}}$$

(2)

The computational statistic is -4.5456. Because this number is greater in absolute than the critical value of the Benarge, Dolado, and Masters, the assumption that there is no cointegration between the model variables (H_0) is rejected.

$$t = \frac{(.71622)-1}{.062486} = -4.5456$$

(3)

Table 4. The long-term relationship (Source: researcher findings)

Variable	Coefficient	Standard deviation	t-statistics	Probability
Interest	- .051720	0 .028019	-1 .8459	.088
Lexf	-0 .82261	0 .043183	-1 .9050	.079
LInf	-0 .55129	0 .13078	-4 .2154	.001
Lrandd	0 .50125	0 .302723	1 .6568	.003
Lgdp	1 .2101	0 .560439	2 .1592	.000
INPT	-40 .1815	-5 .8329	-6 .8887	.000
Dummy	-.43031	.12896	-3 .3368	.005

The results of the error correction model provided by Microfit software are shown in Table 5. As can be seen, the model coefficients are quite significant and their sign is in line with expectations.

Estimation of the ECM has been presented in the following Table.

Table 5. Error Correction Model

Variable	Coefficient	Standard deviation	t-statistics	Probability
dinterest	-.014677	.0069327	-2 .1171	.054
dLexf	-0 .023344	.01053	-2 .2168	.045
dLInf	0 .1564	.035177	-4 .4473	.001
dLrandd	.31311	.059033	5 .3039	.000
dLgdp	1 .0256	.23224	4 .4162	.001
dinpt	-11 .4027	2.2871	-4 .9858	.000
dDUMMY	-.12211	.044439	-2 .7479	.017
ecm(-1)	-.28378	.062486	-4 .5415	.001
DW– STATISTIC=2.5109		R – Bar – squared=.88412		R – Squared=.92468

What is important in the ECM equation is the ECM (-1) coefficient that indicates the adjustment speed of the imbalance process. The estimation coefficient of ECM (-1) is almost 28%; that is to say, in every period, 28% of the imbalance investment of Tractor Manufacturing Companies is solved.

Testing Hypotheses

According to the specified model and the obtained long relationship, the following research hypotheses can be studied.

1- There is a significant relationship between the volume of investment in the Research and Development sector and the amount of investment in Iran Tractor Manufacturing Companies.

According to the mentioned model, it can be concluded that considering the significant and positive coefficient, if the other conditions and economic factors are fixed, it is expected that a 1% increase in research and development, will increase the amount of investment in Tractor Manufacturing Companies by 50%. There is a direct relationship between the volume of the research and development and the amount of the investment of Tractor Manufacturing Companies. Also, many of the experimental studies emphasize it. Therefore, as expected, one of the factors affecting the investment amount of tractor manufacturing companies is the volume of the research and development of this company. In this study, a significant coefficient of 0.99 is confirmed.

2- There is a significant relationship between the interest rate and the amount of investment of Iran Tractor Manufacturing Company.

Considering the mentioned model, it can be concluded that if the other conditions and economic factors are fixed, a 1 % increase in the interest rate will result in the 0.51% decrease in the amount of investment of Iran Tractor Manufacturing Company. As a result, the first hypothesis based on the significant relationship between the interest rate and the amount of investment of Iran Tractor

Manufacturing Company has been confirmed, and this relationship is in the negative direction with the amount of investment of Iran Tractor Manufacturing Company.

3- There is a significant relationship between the GDP and the amount of investment of Iran Tractor Manufacturing Company.

Considering the mentioned model, it can be concluded that according to the significant and positive relationship of this coefficient, if other conditions and economic factors are fixed, it is expected that one percent increase in the GDP in the short term, will result in 1.2101& increase in the amount of investment of Tractor Manufacturing company. There is a direct relationship between the GDP and the amount of investment of the Tractor Manufacturing company. Therefore, as expected, one of the influential factors in the amount of investment of Tractor Manufacturing Company is the volume of research and development of this company. In the current study, it reached a significant coefficient of 0.99.

4- There is a significant relationship between the exchange rate and the amount of investment of the Tractor Manufacturing Company of Iran.

According to the mentioned model, it can be concluded that a one percent increase in the exchange rate results in a -0.82 decrease in the amount of investment in Iran Tractor Manufacturing Company. As a result, the third hypothesis based on the significant relationship between the amount of investment of Iran Tractor Manufacturing Company and the exchange rate has been confirmed, and this relationship is in a negative direction with the amount of investment of Iran Tractor Manufacturing Company.

5- There is a significant relationship between the inflation rate and the amount of investment of Iran Tractor Manufacturing Company.

According to the model, it can be concluded that a one percent increase in the inflation will result in the -0.55 percent in the amount of investment of Iran Tractor Manufacturing Company. As a result, the third hypothesis based on the significant relationship between the amount of investment of Iran Tractor Manufacturing Company and the inflation rate has been confirmed, and this relationship is in the negative direction with the amount of investment of Iran Tractor Manufacturing Company.

Conclusion

The current study aims to analyze the factors affecting the investment of Iran Tractor Manufacturing Company using the ARDL approach; also, a short-term dynamic equation of (1,0,0,0,0,0) ARDL has been estimated using Microfit software through the Schwarz-Bayesian criterion to determine the length of the lags. The results show that there is a significant relationship between the volume of investment in the Research & Development sector and the amount of investment in Iran Tractor Manufacturing Company. Considering having a significant and positive coefficient, if other economic factors and conditions are fixed, it is expected that a one percent increase in the Research and Development will result in a 0.501% increase in the amount of investment in the Tractor Manufacturing Company. There is a direct relationship between the volume of Research and Development and the amount of investment of Tractor Manufacturing Company. This finding is in line with the results of the study conducted by Graham Franken and Burger (200) in studying the effect of research and development costs in the investment of the economic agency. After presenting and estimation of the econometrics model, they showed a direct relationship between the costs of the research and development and the investment of the economic agency. According to the results, it can be concluded that a 1% increase in the interest rate, will result in a -0.55129% decrease in the amount of investment in Iran Tractor Manufacturing Company. As a result, the first hypothesis based on the significant relationship between the interest rate and the amount of investment of Iran Tractor Manufacturing Company has been confirmed. Also, this relationship is in the negative direction with the amount of investment in Iran Tractor Manufacturing Company. These findings are in line with the study conducted by Khavari et al (2004). They showed that determining the real interest rate cap will result in a reduction in investment and production, and consequently, reducing the profitability of the economic agency. Furthermore, Bidabad (2004) indicated that a reduction in the interest rate of bank facilities will result in an improvement in the trade balance, volume of liquidity, and investment. However, in a study conducted by Samadi (1999), they showed that leaving the real interest rate cap in Iran can increase saving and investment, and eventually, resulting in economic growth, which

is not in line with the findings of the current study. It might because of the spatial and temporal realm, and the effective conditions on the statistical population and sample. Also, considering the significant and positive coefficient, it is expected that by increasing the GDP in the short term by one percent, the amount of investment of Tractor Manufacturing company will increase by 1.21%. There is a direct relationship between the volume of the GDP and the amount of the investment of Tractor Manufacturing Company. Therefore, as can be expected, the volume of research and development is one of the effective factors in the amount of investment of the Tractor Manufacturing company. In the current study, a significant coefficient of 0.99 was confirmed. Investment neoclassical theory is based on this idea that the GDP rate has a positive impact on private investment (Wai & Wang, 1982). Also, it is expected that the rapid economic growth leads to an increase in people's profitability expectations and therefore, increasing the investment (Duncan et al, 1999).

Findings of the current research showed that there is a significant relationship between the exchange rate and the amount of investment of Iran Tractor Manufacturing company; 1% increase in the exchange rate leads to the decrease in the amount of investment of Iran Tractor Manufacturing Company by -.82. The result of the third hypothesis based on the significant relationship between the amount of the investment of Iran Tractor Manufacturing Company and the exchange rate has been confirmed and this relationship has a negative direction with the amount of investment of Iran Tractor Manufacturing Company. This finding is in line with the findings of the study conducted by Dolati (2007) entitled "the effect of real exchange rate uncertainty in the investment of private sector (case study: Iran), that studied the relationship between the real exchange rate uncertainty and the investment of private sector in the period of 1961- 2002. The results of the estimation indicated the negative effect of exchange rate uncertainty in the investment of the private sector in the long and short term. Furthermore, this study is in line with the findings of a research conducted by Serven (2003) and Naxi (2001) that investigated the relationship between the real exchange rate uncertainty and the investment of the private sector experimentally in the developing countries. The results of these researchers showed the negative effect of real exchange rate uncertainty in the investment of the private sector. Finally, according to the results, it can be said that there is a significant relationship between the inflation rate and the amount of investment of Iran Tractor Manufacturing company; one percent increase in inflation causes a reduction of -0.55 in the amount of investment of Iran Tractor Manufacturing company. The result of the third hypothesis based on the significant relationship between the amount of investment of Iran Tractor Manufacturing Company and the inflation rate has been confirmed. This result is in the negative direction with the amount of the investment of Iran Tractor Manufacturing Company.

This finding is in line with the studies conducted by Bernanke (1983) and Dikset (1984) that argued the negative effect of inflation rate uncertainty in the investment. However, Hartmann (1972) and Ebel (1983) believe that high inflation uncertainty has a positive effect on the investment which is not in line with the findings of the current research. Its reason might be the spatial and temporal realm of the research and the effective conditions in the statistical population and sample. Therefore, investigating the effect of inflation uncertainty on investment is of high significance.

Recommendations

According to the obtained results, the following recommendations are presented as follows:

- The results indicate that the investment of Iran Tractor Manufacturing Company has a positive effect on research and development; therefore, it is suggested that the company increase its volume of investment in the research and development sector reasonably.
- According to the obtained results, the managers of the Tractor Manufacturing Company are suggested to pay particular attention when there are changes and fluctuations at the time of the increase in the inflation rate, drastic fluctuation in the exchange rate, and changes in the interest rate in the form of facilities, and have significant control on their investments.
- The central bank of Iran is suggested to increase the bank interest rate as an order.

- Considering that the inflation resulted by the imported goods has a direct effect in the increase of the domestic inflation of the country, therefore, serious efforts should be made to further reduce dependence on imports and move towards an oil-free economy that will reduce inflation.
- Comparison of annual exchange rate data shows that between 1993 and 1995 are the most unstable years in the market exchange rate, the main reason for which can be sought in changing the policies and regulations of the Central Bank. For example, the implementation of foreign exchange regulations and rules without the necessary planning and forecasting and by trial and error, given that it is one of the main causes of exchange rate fluctuations, should be avoided.
- Considering that inflation from imported goods has a direct effect on increasing domestic inflation, so in order to reduce as much as possible dependence on imports and move towards an oil-free economy that will reduce inflation, serious actions must be taken.
- Comparing the annual exchange rate data shows that between 1993 and 1995 has been the most unstable years in the exchange rate market, the reason of which is the changes in the regulation and policies of the central bank.
- According to the advances in the econometrics area, the same cases can be analyzed using VAR (simultaneous equations). In new research, qualitative factors can be analyzed.

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