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## **MEASUREMENT OF THE EFFECT OF MONETARY POLICIES AND VARIABLES ON DEVELOPMENT OF NON-PETROLEUM EXPORTS IN IRAN**

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### **ABSTRACT**

Development of non-petroleum export besides decrease of vulnerability of national economic system, results in increase of internal production and occupation level, improvement of national products quality and improvement of payments balance status. On the strength of enjoying these effects, setting targets for a 10.7%-growth in export of non-petroleum products during the fourth development program was considered in work order. Optimum selection and composition of economic policies basket for realization of this target encounter challenges. Economic policies including different types of monetary and financial policies follow the aims such as acceleration of economic growth, creation of perfect occupation, stability of common prices level and creation of balance in payments, but their cumulative effects on economic macro-variables especially exports is ambiguous and unknown. Therefore investigation of the effect of these policies on export of non-petroleum products and measurement of the existing relations can provide a proper frame for policy making improvement. This research studied the relationship between non-petroleum products export offering, the given bank loans interest rate weight average, real foreign currency rate, petroleum incomes and inflation rate with use of time series analyses approach. The results show that there is a long-term relationship between non-petroleum exports offering and the given bank loans interest rate weight average, petroleum incomes and inflation rate. Also the negative sensitiveness of non-petroleum exports offering to the given bank loans interest rate weight average (attraction of -1.19) and inflation rate (attraction of -0.26) in VECM Model was proved. On the other hand investigation of causality relationship shows existence of a bilateral causal relationship between petroleum incomes and non-petroleum exports offering and unilateral causal relationship from non-petroleum exports offering to real foreign currency rate. Undoubtedly, enjoying the native literature of resistive economics on the strength of optimum policy making for control of inflation rate and bank loan interest rate can have a considerable role in extension of non-petroleum exports and internal products supporting in the current sensitive conditions.

**Keywords:** Monetary Policies, Economic Macro-Variables, Development Of Non-Petroleum Exports, Time Series Analysis, Iran

### **INTRODUCTION**

Incomes arising from petroleum and its products have always been instable. Dependence of the Iran's economy to the incomes arising from petroleum products sale and the limited amount of petroleum resources, caused that in the recent years the politicians have turned toward multi-product economy in exports. Realization of this target requires recognition of the existing opportunities in non-petroleum exports and its operational making (Abrishami, et al. 2009). Development of non-petroleum exports besides increase of foreign currency incomes and improvement of payments balance can have a considerable role on occupation in the state. For growth and development of non-petroleum exports in long term adoption of basic and fundamental policies should be taken into consideration by the planners. (Mahdavi Adeli et al, 2009). On this strength in article 33 of the second chapter of the fourth development program instrument, consideration of the target of realization of 52863 million dollars of non-petroleum exports and achievement of the average growth of 10.7% during this program was considered as the

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government's work order. Non-petroleum exports realization percentages during the four development programs after victory of the revolution have been 66%, 58%, 92% and 149% respectively, and only in the fourth development program performance has been more than the considered aims. During the fourth development program, the highest percentage of realization of non-petroleum exports with consideration of gas liquids is related to the year 2008 with 201% and the least percentage is related to the year 2005 with 129%. On the other hand the highest percentage of non-petroleum exports realization without consideration of gas liquids is related to the year 2009 (166.4%) and the least percentage is related to the year 2005 (129%). The key point is probably selection of optimum financial and monetary policies and their coordination with commercial strategic policies for realization of this aim that has been mentioned in clause K of article 33 of the fourth program instrument. The relationship between monetary and financial policies and commercial strategies is related to the way of effectiveness of these policies on production system, exported goods price and imported goods price (economic studies office of the ministry of commerce, 2004). In the opinion of a great number of knowledgeable persons, the most important components arising from the mentioned political packages are inflation and foreign currency rate, which have considerable effect on exports especially non-petroleum exports. In other words, the role of price effecting factors on non-petroleum products is a function of the two variables of foreign currency rate and inflation rate (Shakeri, 2004).

On the other hand, in different researches, economic growth and development have been introduced as a factor effective on exports. With due attention to this fact that petroleum incomes are considered as basic and determining factors in economic growth and development of Iran, investigation of the role and state of relationship of this variable with non-petroleum exports can be very important.

The loans given by banks are considered as the main part forming fixed capital and circulating capital in all economic productive sectors of Iran including agriculture, industry and services. Giving loans with proper interests to productive sections always has been one of the main existing challenges between policy makers and producers. Having financial resources with suitable interest rate is the main factor in development of productive capacity, creation of privilege and the ability of competence and therefore creation of exporting capacity. In addition to the propounded cases, a lot of researches have been done in relation to the variables and the monetary and financial policies effecting non-petroleum exports. Gougerdchian and Naeini's research (2011) showed that the effect of the shock tolerated by the variables of consumption, investment, inflation, interest rate and especially monetary policies indicator on the state commercial cycles indicator was started approximately from the second period and its effect is gradually adjusted until the end of the period persistently and without fluctuations, while the effect of the shock tolerated by commercial cycle indicator variable from commercial cycle started from the fifth period and adjusted at the end of the period. Alijani et al (2010) evaluated the effect of economic policies on agricultural and industrial exports of Iran. The results showed that monetary policy has a significant positive effect on industrial and agricultural exports in short term, while interest rate changes and governmental expenses have significant inverse and direct effects on industrial and agricultural exports respectively. Commercial policies have direct effect on industrial and agricultural exports in long term. Taherifard (2005) with use of time series analysis, evaluated the relationship between non-petroleum exports and the real rate of foreign currency. The results of this research showed that there is a significant positive relationship between non-petroleum exports and real rate of foreign currency and adoption of a suitable policy in relation to foreign currency rate towards adjustment of the real rate of foreign currency because of the demand for non-petroleum exports can have a considerable role in increase of future's capacity of production and achievement of economic growth. Khalafalla and Web (2004) in their research evaluated the relationship of non-petroleum exports and economic growth in Malaysia during the years 1965 to 1996. The results showed that during the years 1965 to 1980 economic growth caused increase of export of industrial products and raw materials but in the years of 1981 to 1996 increase of exports caused economic growth of this country.

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Generally we can say that the current research with a view to the structural specifications of the Iran's economy and enjoying former studies, has paid attention to evaluation of the effects of weight average of the given bank loans interest rate to productive sectors, real rate of foreign currencies, real petroleum incomes and inflation rate on value of non-petroleum exports of Iran with use of time series. On this strength determination of statistical specifications of the mentioned variables, investigation of the relationship of these variables in long term, measurement of sensitiveness, and reaction of non-petroleum exports offering to each of the mentioned variables and investigation of the causal relations between them are some of the major aims of this research.

### MATERIALS AND METHODS

With a view to the aims of the current research in the first step determination of statistical specification of the studied variables with use of useful single root test was considered. The used general strategy is application of two single root tests with assumption of different zeros and totaling of the results of these two tests for determination of accumulation grade of the studied variables. Single root test is first performed with assumption of having a single root for the studied time series, Phillips- Perron. With a view to Perron's criticism of DF single root test method, when there is structural fracture in time series, using Phillips- Perron single root test under the conditions, when the economic system encounters intense shocks is necessary. Existence of structural fracture and application of this test with a view to the economic transformations of Iran in the beginning of the revolution and with a view to the economic, political and social changes and the considerable changes occurred in the state economic macro-variables, can be defended. In Iran's economic conditions, the results of single root tests such as DF are doubtful and for full confidence of non-fixed nature of the variables, Phillips- Perron test was used. If the studied variable is shown with  $y$  with setting the following formula:

$$(1) \quad \Delta y_t = \alpha + \beta t + \delta y_{t-1} + \sum_{i=1}^p \theta_i \Delta y_{t-i} + \varepsilon_t$$

Phillips and Perron (1998) for testing single root for serial correlation control proposed non-parameter method. PP method performs DF test with adjusted  $t$  proportion, in such a way that serial correlation does not affect asymptotic distribution of  $t$  statistic. PP statistic is as follows:

$$(2) \quad \hat{t} = t_\alpha \left( \frac{\gamma_0}{f_0} \right)^{0.5} - \frac{T (f_0 - \gamma_0)(se(\hat{\alpha}))}{2f_0^{0.5}s}$$

In which  $\hat{\alpha}$  is the estimated coefficient AR(1) and  $t_\alpha$  is the same proportion of  $t$  for a.  $se(\hat{\alpha})$  is

standard error and  $s$  is regression standard error. Amount of  $\gamma_0$  is determination of compatibility from errors variance and  $f_0$  is estimation of perspective density of error amounts in zero frequency.

The second used single root test with the assumption of zero for static nature of the studied series, is KPSS approach. The statistics of this test is the relationship of sample variance to long-term variance that this sample variance is proportionately partial total of scaled series. For performance of the test the following equation has been provided:

$$(3) \quad y_t = \alpha + \beta t + d \sum_{i=1}^t u_i + \varepsilon_t$$

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In which  $U_i$  is static covariance and has short-term memory with zero average and  $d \in \{0,1\}$ . Statistic of this test is as follows:

$$(4) \quad w = \frac{T^{-2} \sum_{t=1}^T S_t^2}{\hat{\sigma}^2}$$

After determination of the statistical specification of the studied variable, for evaluation of existence of long-term relations Johansen Cointegration test was used. The mentioned model, which is a conversion of self-explanation pattern, can be defined as follows:

$$(5) \quad \Delta Y_t = \sum_{i=1}^{k-1} \Gamma_i \Delta P_{t-i} + \Pi_k P_{t-k} + \Phi D_t + \mu + e_t$$

In the above table,  $\Pi_k$  is matrix of long-term relations and in case of existence of  $r$  of long-term relationship or  $r$  of static linear composition of  $Y$  variable we can define the said matrix as product of multiplication of two matrixes with the same order with long-term relations and adjustment parameters. For Investigation of the said matrix order, two tests of Trace and Eigenvalue are used. Existence of higher amounts of the said calculation statistic of critical amounts shows existence of long-term relations. With a view to the specification of the studied variables, VEC (p) model was used for investigation of effectiveness of each of the variables on non-petroleum products exports offering. With assumption of retract variables of  $Y_t$  with  $n$  dimensions, we have:

$$(6) \quad \Delta Y_t = \sum_{i=1}^{p-1} \Gamma_i \Delta Y_{t-i} + \alpha \beta' Y_{t-1} + \varepsilon_t$$

In which  $\Gamma_i$ ,  $\alpha$  and  $\beta$  are matrixes of  $n \times n$ ,  $n \times r$  and  $n \times r$  and  $0 < r < n$ . On the other hand  $\Pi = \alpha \beta'$  and when  $\Pi$  is not of complete order ( $0 < r < n$ )  $r$  cumulative vectors or  $r$  static linear combinations from  $Y_t$  will exist. (Johansen and Juselius 2, 1990:1992)

For investigation of Granger Causality test between the two explanatory variables of  $X$  and  $Y$ , setting the following bilateral regression formulas was proposed:

$$(7) \quad \begin{aligned} \Delta Y_t &= \mu_1 + \sum_{i=1}^p \beta_1 \Delta Y_{t-i} + \sum_{i=1}^p \beta_2 \Delta X_{t-i} + \varepsilon_{1t} \\ \Delta X_t &= \mu_2 + \sum_{i=1}^p \beta_3 \Delta X_{t-i} + \sum_{i=1}^p \beta_4 \Delta Y_{t-i} + \varepsilon_{2t} \end{aligned}$$

In which  $\Delta$  is difference obtainer,  $\mu_1$  and  $\mu_2$  are y-intercept  $\beta_2$  and  $\beta_4$  are estimated coefficients, which are tested and the pauses used in the model are shown with  $P$ .

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The time period studied in this research is related to the years 1985- 2008 and the information required by the central bank of the Islamic Republic of Iran and commercial development organization, were gathered.

**Conclusions and discussion:**

For precise determination of the statistical specification of the studied variables, the method of using two single root tests with assumption of non-difference was considered. The first used test was assumption of zero for existence of single root is Phillips-Perron (pp) approach. The results arising from this test have been presented in the following table.

**Table 1- the results of PP test for the studied variables:**

Variable	Test type	Test level	<u>Calculative</u>	<u>Critical statistic amount</u>	
			<u>statistic amount</u>	Five Percent	One Percent
			Five Percent		
IR	With y-Intercept	In data level	-1/72	-2.99	-3.75
		First order difference	-4/03	-3	-3.77
	With y-Intercept and process	In data level	-0.72	-3.62	-4.42
		First order difference	-6.59	-3.63	-4.44
ER	With y-Intercept	In data level	-0.99	-2.99	-3.75
		First order difference	-4.62	-3	-3.77
	With y-Intercept and process	In data level	-2.26	-3.62	-4.42
		First order difference	-4.62	-3.63	-4.44
PI	With y-Intercept	In data level	-0.69	-2.99	-3.75
		First order difference	-6.53	-3	-3.77
	With y-Intercept and process	In data level	-2.01	-3.62	-4.42
		First order difference	-10.94	-3.63	-4.44
INF	With y-Intercept	In data level	-3.03	-2.99	-3.75
		First order difference	-7.68	-3	-3.77
	With y-Intercept and process	In data level	-3.23	-3.62	-4.42
		First order difference	-7.5	-3.63	-4.44
NPE	With y-Intercept	In data level	-3.35	-2.99	-3.75
		First order difference	-5.34	-3	-3.77
	With y-Intercept and process	In data level	-2.99	-3.62	-4.42
		First order difference	-5.98	-3.63	-4.44

In relation to each of the studied variables, pp test is performed on the basis of two types of modeling with y-intercept with y-intercept and process. The amount of calculative statistic in every state with

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critical amounts in the levels of 5 and 1% were compared and on the basis of accumulation of all results for one variable, its cumulative grade was determined. With a view to the results we can claim that on the basis of pp test all the above-mentioned variables are I(1).

In KPSS single root test, assumption of zero, non-existence of single root or static nature of time series is studied.

**Table 2- The results of KPSS test for the studied variables :**

Variable	Test type	Test level	Calculative statistic amount Five Percent	Critical statistic amount	
				Five Percent	One Percent
IR	With y-Intercept	In data level	0.24	0.46	0.74
		First order difference	0.4	0.46	0.74
	With y-Intercept and process	In data level	0.18	0.15	0.22
		First order difference	0.14	0.15	0.22
ER	With y-Intercept	In data level	0.63	0.46	0.74
		First order difference	0.07	0.46	0.74
	With y-Intercept and process	In data level	0.17	0.15	0.22
		First order difference	0.06	0.15	0.22
PI	With y-Intercept	In data level	0.67	0.46	0.74
		First order difference	0.1	0.46	0.74
	With y-Intercept and process	In data level	0.15	0.15	0.22
		First order difference	0.09	0.15	0.22
INF	With y-Intercept	In data level	0.48	0.46	0.74
		First order difference	0.09	0.46	0.74
	With y-Intercept and process	In data level	0.2	0.15	0.22
		First order difference	0.08	0.15	0.22
NPE	With y-Intercept	In data level	0.89	0.46	0.74
		First order difference	0.33	0.46	0.74
	With y-Intercept and process	In data level	0.2	0.15	0.22
		First order difference	0.07	0.15	0.22

Reference: research findings

On the basis of the considered procedure in PP test and with a view to calculative statistical procedure in different states of test level, decision was made in relation to the statistical specification of the studies variables in KPSS test. Totaling of the results of this test emphasize on I(1) in all studies time series. As it is shown in the following table with due attention to the cumulative grade determined by the two single root tests with assumption of non-difference, general conclusion in relation to the statistical specification of the studied variables was performed.

**Table 3- Comparison of the results of the two single root tests and general conclusion:**

Variable	PP test	KPSS test	General conclusion
IR	I(1)	I(1)	I(1)
ER	I(1)	I(1)	I(1)
PI	I(1)	I(1)	I(1)
INF	I(1)	I(1)	I(1)
NPE	I(1)	I(1)	I(1)

Reference: research findings



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Existence of cumulative grade for all the above-mentioned time series, the necessity of application of long-term relation distinction test for determination of different retract variables interaction nature on non-petroleum exports value ( $NPE_t$ ) is cleared. On this strength with use of Johansen test, existence of a long-term relationship between different variables and value of non-petroleum exports were considered.

**Table 4- The results of Johansen test:**

Test description H.	Trace statistic	Probability value	Max-Eigen Statistic	Probability value
IR <sub>t</sub> , NPE <sub>t</sub>	r = 0 <sup>**</sup> 43.26	0.0001 0.39	36.74 6.52	0.0001 0.39
	r ≤ 1 6.52			
ER <sub>t</sub> , NPE <sub>t</sub>	r = 0 12.79	0.12 0.29	11.68 1.11	0.12 0.29
	r ≤ 1 1.1			
PI, NPE <sub>t</sub>	r = 0 <sup>**</sup> 22.7	0.003 0.06	19.03 3.67	0.008 0.06
	r ≤ 1 3.67			
INF <sub>t</sub> , NPE <sub>t</sub>	r = 0 <sup>*</sup> 17.74	0.02 0.14	15.55 2.18	0.03 0.14
	r ≤ 1 2.18			

\*significant in the level of 5%

\*\* significant in the level of 1%

Reference: research findings

The results of Johansen test showed that there is a long-term relationship between average weight variables of bank interest rate ( $IR_t$ ) and value of non-petroleum exports ( $NPE_t$ ) in the statistical level of 1%. Also with a view to the mentioned statistical amounts, existence of a long-term relationship between the variables of petroleum income ( $PI_t$ ) and value of non-petroleum exports ( $NPE_t$ ) in the statistical level of 1% was proved. On the other hand the results of Trace and Max statistics show existence of a long-term relationship in the statistical level of 5% between the variables of inflation rate ( $INF_t$ ) and non-petroleum exports value ( $NPE_t$ ).

With a view to existence of a long-term relationship between the variables of  $-NPE_tIR_t$ ,  $NPE_tPI_t$  and  $INF_t-NPE_t$ , fitting of vector error correction model (VECM) and interpretation of the results of error correction part for determination of the amount of effectiveness of each of the variables of average weight of bank interest rate ( $IR_t$ ), petroleum incomes ( $PI_t$ ) and inflation rate ( $INF_t$ ) on non-petroleum products export ( $NPE_t$ ) were taken into consideration.

**Table 5- The results of VECM fitting:**

Description	IR <sub>t</sub>	PI <sub>t</sub>	INF <sub>t</sub>
Variable coefficient	-1.19 [-2.7]	<b>0/87</b> <b>[21/44]</b>	<b>-0.26</b> <b>[-3/24]</b>
y-intercept	4.32	<b>-0.35</b>	<b>-9/49</b>
Adjustment coefficient	-0.23 [-2.61]	<b>-0/29</b> <b>[-2/53]</b>	<b>-0.02</b> <b>[-2/02]</b>

Reference: research findings

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The results showed that 1% increase in bank interest rate weight average ( $IR_t$ ) results in 1.19% decrease in non-petroleum products export. Therefore NP<sub>Et</sub>, has the highest sensitiveness to IR<sub>t</sub> among the studied variables. The significant and inverse effect of bank interest rate weight average on non-petroleum exports value indicates the importance of the policies adopted by the central bank in relation to determination of interest rate of the loans given to different economic sectors (agriculture, industry and services) in florescence and growth of non-petroleum exports. The amount of variable coefficient of petroleum incomes (PI) was 0.87, therefore 1% increase in petroleum incomes results in 87% increase in non-petroleum incomes. Petroleum incomes is a symbol of the state economic growth and development, therefore increase of petroleum incomes with a view to its side effects on the other economic sectors results in products development and growth and their exports increase. The other studied variable is inflation rate (INF<sub>t</sub>), amount of the variable coefficient showed that 1% increase in this variable results in 0.26% increase in non-petroleum exports. Although effectiveness of this variable on non-petroleum products is less than the two other variables, but the significant negative effect of inflation on non-petroleum exports has been proved. It is evident that inflation with increase of products expense and decrease of purchase power of the community transfers the negative symptoms to production system and results in decrease of the productive power and therefore increase of exports. Amount of the error correction sentence coefficient or adjustment coefficient in VECM for NP<sub>Et</sub>IR<sub>t</sub> was estimated in the sum of Rls. -0.23, which shows that in each year 23% of imbalance in non-petroleum exports value is adjusted with a view to the explanatory variable of bank interest rate weight average.

The coefficient related to error correction sentence in VECM for NP<sub>Et</sub>PI<sub>t</sub> is significant and its sign is negative as it was expected. The coefficient is 0.29 and indicates the slow speed of non-petroleum exports value adjustment in lieu of changes in petroleum incomes. In other words, only 29% of deviations in non-petroleum exports value of the long terms will be eliminated after expiry of a period. Therefore elimination of the occurred imbalance in non-petroleum exports takes more than 3 years. The adjustment coefficient of VEC<sub>m</sub> for INF<sub>t</sub>-NP<sub>Et</sub> is -/0.02 that indicates the very slow adjustment of non-petroleum exports value with a view to this explanatory variable. The amounts of variable coefficient and adjustments in the three estimated models show reaction and sensitiveness of non-petroleum exports value to the studied explanatory variables and attention of managers and economic policy makers to stability of these variables for improvement and extension of non-petroleum exports. In the next step direction of causality of the studied variables and value of non-petroleum exports are studied.

**Table 6- the results of Granger Causality Test:**

Assumption of zero	F statistic	Probability level
IR <sub>t</sub> of Granger Causality is not NP <sub>Et</sub>	7/88	0/005
NP <sub>Et</sub> of Granger Causality is not IR <sub>t</sub>	5/1	0/02
ER <sub>t</sub> of Granger Causality is not NP <sub>Et</sub>	0/65	0/53
NP <sub>Et</sub> of Granger Causality is not ER <sub>t</sub>	5/46	0/01
PI <sub>t</sub> of Granger Causality is not NP <sub>Et</sub>	4/05	0/05
NP <sub>Et</sub> of Granger Causality is not PI <sub>t</sub>	15/16	0/0009
INF <sub>t</sub> of Granger Causality is not NP <sub>Et</sub>	2/73	0/09
NP <sub>Et</sub> of Granger Causality is not INF <sub>t</sub>	2/66	0/09

*Reference: the research findings*

Study of causality relation between the two variables of bank interest rate weight average ( $IR_t$ ) and non-petroleum exports value (NP<sub>Et</sub>) indicates existence of a bilateral causal relationship between the two variables. If the causal relation from IR<sub>t</sub> to NP<sub>Et</sub> and the causal relation of NP<sub>Et</sub> to IR<sub>t</sub> are significant in



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the level of 1%, bilateral amenability of these variables by each other indicates suitable capacity of policy making for planners. In relation to the two variables of exchange rate (ERT) and non-petroleum exports value (NPE<sub>t</sub>) using Granger causality test showed that as expected there is only unilateral causal relation from NPE<sub>t</sub> to ERT in the statistical level of 1%. Study of existence of a causal relationship between the two variables of petroleum incomes (PI<sub>t</sub>) and non-petroleum exports value (NPE<sub>t</sub>) shows that there is a bilateral causal relationship between them and existence of causal relationship in the statistical level of 1% in both sides was proved. The last studied variables were the variables of inflation rate (INF<sub>t</sub>) and non-petroleum exports value (NPE<sub>t</sub>). As it was observed in the above table, there is a causal relation from INF<sub>t</sub> to NPE<sub>t</sub> in the statistical level of 10% and a causal relation from NPE<sub>t</sub> to INF<sub>t</sub> is observed in the same statistical level. The results of causal test confirm the authenticity of the results obtained in long-term relations by Johansen test.

### **Totaling and Suggestions:**

With a view to existence of a long-term relationship between real petroleum incomes and real non-petroleum exports value and direct and positive effect of petroleum incomes on non-petroleum exports value we can conclude that economic growth results in simulation of production in different economic sectors and therefore production and export capacity of the state will increase. Also existence of a bilateral causal relationship between the two variables indicates increasing each other and change of the two variables with the same direction. Preparation of a ground for effective and targeted spending of petroleum incomes on the strength of promotion of productive power, creation of privilege and creation of job opportunities is one of the permanent demands of the state economic elites. It is evident that this demand cannot be realized without using collective rationality and presentation of middle-term and long-term strategic techniques and plans. On the other hand negative effect and high sensitiveness of non-petroleum exports to the given loans interest rate weight average indicates the suitable capacity of using this monetary tool on the strength of giving inflorescence to internal production and extension of production based on exports. As it is emphasized several times, development of Islamic and without usury banking is the key for achievement of a great number of aims and ideals in the domain of financial security for goods and services products and exports.

The results of this research show that there is a long-term relationship between inflation rate and non-petroleum exports value and the effect of inflation on non-petroleum exports offering is negative. This finding is in conformity with many researches such as that conducted by Alijani, et al. and shows that adoption of expansive monetary and financial policies in the recent years has not been resulted in leading of cash volume to investment and increase of goods and services offering. On this strength it is necessary that besides a review of the existing methods, effective leading of cash volume is considered as one of the basic priorities of the state bank system. As it is mentioned in the strategic instrument of non-petroleum exports, the government is obliged to realize its continual growth through increasing the efficiencies of itself and private sector, creation of capacity for production based on exports, realization of goods and services competitive power in internal and foreign markets and creation of a mechanism suitable for elimination of non-petroleum exports development. Undoubtedly one of the most important steps of the government in this itinerary is control of inflation and cash volume. On the other hand irrational and unjust embargoes by the west, which resulted in inflation besides existence of two-digit inflation in the state is considered as a treat for non-petroleum exports. In these conditions, the necessity of paying attention to the guidance of the holy leader in relation to resistive economics and presentation of techniques for adjustment and deactivation of the effects of these threats is felt more than before.

### **REFERENCES**

- Allen NJ and Barres BA (2005).** Signaling between Glia and Neurons: Focus on Synaptic Plasticity, *Current Opinion in Neurobiology* **15** 542-548.
- Aschner M, Sonnewald U and Tan KH (2002).** Astrocyte modulation of neurotoxic injury. *Brain Pathology* **2**(4) 475-81.

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**Barres BA (2008).** The Mystery and Magic of Glia: A Perspective on Their Roles in Health and Disease, *Neuron* **60** 430-440.

**Abrishami, H. Gorji, A. Ahrari, M and Najafian, F. (2009).** The effects of globalization on non-petroleum exports of Iran, *Pajouheshnameh Bazargani (Commercial Research) Quarterly*, No. **51**, Pages 1-24

**Economic Studies Office of the Ministry of Commerce (2004).** Coordination between financial-monetary policies with commercial strategic policies.

**Iran Commercial Development Organization (2007).** Managerial Summary of the strategic instrument of non-petroleum exports development of the Islamic Republic of Iran.

**Shakeri, e. (2004).** The determining factors of the non-petroleum exports of Iran. *Pajouheshhaye Eghtesadi Iran (Iran Economic Researches) Quarterly*, No. **21**, pages 23-50.

**Taherifard, A (2005).** the role of foreign currency in development of non-petroleum exports in Iran's economy, *Barname and Boudje (Plan and Budget) Magazine*, No. **89**, pages 47-70.

**Alijani, F., Homayounifar, M., Karbasi, A and Mozaffari, M. (2010).** The effect of economic policies on agricultural and industrial exports of Iran, *Pajouheshhaye Eghtesadi (Economic Researches) Quarterly*, 10<sup>th</sup> year, No. **4**, Pages 1-17.

**Gougerdchian, A. and S. Naeini (2011).** The role of monetary and credit policies in the state commercial cycles management, *Tahghighat Eghtesadi Rahe Andishe (Rahe Andishe Economic Researches) Quarterly*, pages **61-90**.

**Essay of the fourth economic, social and cultural development program of the Islamic Republic of Iran.**

**Mahdavi Adeli, M.H. Norouzi, R and Motahari, Mohebollah. (2009).** The role of direct foreign investment on non-petroleum exports in Iran's economy. *Danesh Va Tosee (Science and Development) Magazine*, No. **27**, pages 161-181.

**Engle R.F. and Granger C.W.J. (1987).** Cointegration and Error-Correction: Representation, Estimation and Testing, *Econometrica*, **55**: 251-76.

**Johansen, S. (1992).** Cointegration in partial systems and the efficiency of single-equation analysis, *Journal of Econometrics*, **52**: 389-402.

**Johansen, S. and Juselius, K. (1990).** Maximum likelihood estimation and inference on cointegration-with application to the demand for money, *Oxford Bulletin of Economics and Statistics*, **52**: 169-210.

**Johansen, S. and Juselius, K. (1992).** Testing structural hypotheses in a multivariate cointegration analysis of the PPP and UIP for UK, *Journal of Econometrics*, **53**: 211-244.

**Johansen, S. and Juselius, K. (1994).** Identification of the long-run and the short-run structure: an application to the ISLM model, *Journal of Econometrics*, **63**: 7–36.

**Khalafalla, K. and Web, A. J. (2004).** Exports and Economic Growth under Structural Change: A Co integration Analysis of Evidence from Malaysia, *Applied Economics*, Vol. **29**: 213-223.

**Johansen, S. and Juselius, K. (1994).** Identification of the long-run and the short-run structure: an application to the ISLM model. *J. Econometrics* **63**: 7–36.

**Phillips, P. C. B. and Perron, P. (1988).** Testing for a Unit Root in Time Series Regression, *Biometrika*, Vol. **75**:335-346.