The Evaluation of the Impact of Income Tax on Economic Growth and Development in the Islamic Republic of Iran during 1971-2006

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ABSTRACT: The main objective of this study is to evaluate the effect of income tax on economic growth and the development in the Islamic Republic of Iran between 1971-2006. In the present study the hypothesis such as advanced statistical methods like linear regression, VAR and ECM methods were used. Co-integration tests for long-term equilibrium relationship between the variables were used. To determine the option lag length for the model Schwarz Bayesian Criterion (SBC) have been used and the length of intervals in rows 2 and number 71.71521* were obtained. Long-term results of the co-integration test, the first long-term relationship, a long-term equilibrium current pay and exogenous variables. A relationship is a long-term. Payment of development and external variables. Stimulation response functions were obtained. We can get conclusion that most of the effect were on the income tax: their tax revenue (IRFs), current payments, payment of construction, general index (the price of consumer goods and services), and the economic growth rate leaves.

Key Words: Taxation, Economic Growth, Economic Development, GDP Growth

INTRODUCTION

The advent of the industrial revolution and the emergence of imbalances caused by excess productions to consumptions and vice versa, the role of paper money and the creation of, structural inflation direct and continuous involvement of governments in economic plan to balance the growth and of economic development which most of economists postulate that as a need is inevitable. Tax calculated based on the notion of program, income and national wealth, greater fiscal policy as a tool to balance the macroeconomic level, the funds, in a way that would create the conditions for economic growth and development coordinator [1].

Economic growth is defined as steady and quantities increase in the production or per capita income through association with an increase in the labor force, consumption, investment and trading volume. Economic development contains qualitative changes in economic request, the type of him products, motivation and organization of production. And often Determinant factors of economic growth are determined by economic development, factors such as changes in technology and infrastructure. In fact, economic development includes growth and lack of growth. An economy may grow without poverty, unemployment, and social inequality to be developed, and (an economic may keep its rising trend. Despite lake of modern technology of productions, infrastructure changes and poverty). While economic development is always accompanied by economic growth [2]. The present study sought to examine the relationship between tax revenue and economic development in the Islamic Republic of Iran economic growth that has undeniable influence on improve welfare of society and more physical and human capital, implementing new production techniques and contribute new knowledge to the field which is the base for of the growth process. Taxes, because of it's the effect on the return of investment in physical and human can influence or decision making on the economy and, ultimately, on the growth rate. During the twentieth century, most developed countries have dramatically increased the level of taxes (taxes ranging from 5 - 10 percent of GDP in early previous century to 20 - 30 percent of GDP at the moment have raised). State exercise taxes as a tool to guide through the impact of the activities of enterprises which can play a key role in the industrial development policy. With the proper administration of the tax system a government can be developed to achieve the goal of development [3]. Economic growth is as a small increase in the production of goods and services on time, and the measure is the change in "gross national product" [4]. The government can balance economic growth, and be involved in economic planning continuously and directly. Taxation, as an instrument of fiscal policy can has a significant role to play, is to balance the macro level and to create right conditions for economic growth and development coordinator.

We can say governments with tax administration (a form of revenue for governments) and its equitable distribution of this income among individuals will lead the country towards economic development. [4]. Hence can it be concluded that the relationship between taxes and economic growth are significant? Or not?

Review of Literature:

Taxation as a tool to guide the state through indirect impact on the firm's economic activity could play a key role in the industrial development policy. Government can formulate a proper tax system on how to achieve the goal of development will affect. Economic growth as a small increase in the production of goods and services on time, the criteria for measuring the change in GDP [4]. The government can balance economic growth, and continued to be involved in economic planning. Taxation as a tool to adjust fiscal policy to balance the macro level could have a significant role to play, and to create the appropriate environment and economic development coordinator [1]. That said, governments of tax (a form of income for our state) fair distribution of income among individuals are pushing the country towards economic development [4]. Hence it can be concluded that there is no significant relationship between taxes and economic growth.

Ghorbani [5], reviewed the relationship between taxes and economic development in the country during the years 1971 – 1991 and based on the information, it is concluded that the reaction of direct tax has more changes on GDP.

Kmyjany and Fahim [6] research was on per capita income as an effecting factor to the ability of paying taxes of people. They concluded that higher levels of per capita income, mainly a higher level of savings, lower rates of illiteracy and a reasonable level of development would facilitate the total state of tax collection.

Martin and Fardmanesh [7] the relation between income tax rates and economic growth in the 76 countries studied. Their research results showed that the ratio of tax revenue between GDP on the one hand and rate of economic growth on the other hand, is a negative relationship.

Brgns and Stysrdin[8] article (taxation and development)studied financial data of 82 developing countries and showed a weak but meaningful correlation (at the 5% level) between the tax ratio and the income tax of the countries and the gap between the actual tax system, and tax code have been reduced; there for thus tax rates reduced.

Research Hypotheses

1-There is a meaningful correlation between income tax and financial situation of the state (current payments).

2-There is a meaningful correlation between income tax and financial situation of the government (paid for construction).

3-There is a meaningful correlation between the tax income and the index of total (the price of consumer goods and services).

4-there is a meaningful correlation between the incomes tax the labor and employment indicators (literacy rate).

5-there is significant relationship between the income tax and index of growth rate of economy.

MATERIALS AND METHODS

Linear regression model was linearly with the method VAR and ECM's.

$$\gamma_\tau = \alpha_1\gamma_{\tau-1} + \alpha_2\gamma_{\tau-2} + \alpha_3\gamma_{\tau-3} + \alpha_4\gamma_{\tau-4} + \alpha_5\gamma_{\tau-5} + \alpha_6 D_0 + \alpha_7 D_1 + \alpha_8\gamma_{\tau-\rho} + \cup_\tau$$

This study is based on empirical analysis which focuses on seven variables. We used variables include ding : "Y" represents the dependent variables, α_1 payment, α_2 payment of construction, α_3 Index (the price of consumer goods and services), α_4 literacy rate and α_5 conomic growth rate, and D represents the virtual variables during 8 years of the war and during the years without war. Time series data from 1971 to 2006 is considered.

Current payments: includes all government current expenditures during the fiscal period.

Development expenditures: include all payments for civil (construction) works were done during a fiscal period. Total Index (the price of consumer goods and services): includes the cost of all goods and services used during a fiscal period. Literacy rate: the proportion of literate people to the entire population. Economic growth is including differences income tax a year with the next year. All these tests were performed by the software "Eviews". This study performed in Islamic Republic of Iran during the years 1971 to 2006.

The data in this study is based on library research library and information is collected from articles, books, publications and a variety of economic issues have been examined.

RESULTS

Analysis of Models: VAR: One of the main stages of the estimation of VAR model is to choose the optimal pulsate degree of this model. Therefore the Schwartz Bayesian criteria, Kayyk, Hanan Queen and the likelihood ratio statistic are used. Schwartz, Hanan Quick, HQ SC and AIC values is minimal in comparison to the others two

pulsate therefor. In this model, the optimal pulsate one has been chosen. It should be noted that the choice of optimal pulsate Schwarz criterion is used in this model. Because this criterion is based on the principle of Community Mvnys, offered fewer pulsate and eventually offered a parsimonious model .in the second pulsate AIC, SC and HQ showed the above results, Schwartz and Hanan Quick Heal is minimal compared to other values. Thus, in this model, the optimal pulsate will be chosen. It should be noted to choose the number of the optimal model pulsate the Schwarz criterion has been used, because this criterion is based on the Morris Broadband, offers fewer pulsate and eventually a parsimonious model provides.

Co-integration Test: The first step, to estimate a vector error correction model, is adjusting for the length difference of the variables in the model. As regards that the number of pulsate model (VECM) of the difference variables pulsate is linked with the number of variables in the model, (VAR) while we know the number of these patterns pulsate, the number of pulsate, subtracting variables in the model (VECM) is obtained. Since to the optimal pulsate in the model (VAR) is two, pulsate difference variables in the model (VECM) will be one. In fact, the vector error correction model for inflation rate was obtain according to a long-term relationship, and zero pulsate in subtracting variables and as regards the intercept in short-term and long-term relationship.

The results show that the hypothesis of no long-run relationship between the variables is rejected because of base statistics effects, 321.80 is more than critical value at the significance level of 5%, 96.58 95.75 and also hit a maximum Eigen value of 127.87 is more than the critical value at a significance level 5 % . The H0 hypothesis is rejected based on the lack of a long-term relationship. The table shows the results of a long-term relationship maximum hypothesis is rejected at a significance level of 5%. There is also the assumption of a maximum of two long-term relationship can be rejected at the significance level of the effect test, But the statistic test for the hypothesis that the maximum long-term relationship, especially in the maximum level of 5% cannot be ruled. There is also the assumption of a maximum of three long-term relationships that cannot be ruled out, because the value of statistics effect and the maximum Eigen value are less than the figure of significance level %5. Based on this test, special effects and boast three equations for the equilibrium does not rule out. Given that fact the maximum and effect test of three long-term relationship cannot be rejected [As regards that in the level of %5 we cannot reflects the existence of three long – term relationship according to Eigen test. Three long – term is the base of our choice (for research).]

Result of Vector Error Correction Model Estimation: The first long-term relationship is a long-term equilibrium relationship between income tax and the second is exogenous variables and the relationship between current pay and exogenous variables. A third relationship is a long-term development expenditures and exogenous variables. The three estimated long-run vectors can be written as follows:

LY= -753.1318 LA1-171.8130 LA2-2.537196 LA3 -0.015120LA4+1.639705LA5
LA1= -703.0645 LY+181.5988 LA2-2.540927 LA3 +0.057419LA4+0.753770 LA5
LA2= -714.3893 LY-661.9893LA1-2.124084 LA3 +0.022720 LA4+1.050904 LA5

To estimate long-term relationships should be considered to identify these relationships. A Long-term relationship between a variable is linear combination between them. Which is not exclusive to individual .The software is .6. Eviews, long-term relationship estimated automatically based on the variables are normalized to finally obtain a unique relationship. A long-term relationship in the vector (3) based on income tax logarithmic variables (LY) is normalized and long-term relationship in the vector (4) based on logarithm of the current payment variable (LA1) and development expenditures LA2)) is normalized. In the Obtained long-term relationships, net of vector error correction model for each of the explanatory variables on the dependent variable will be analyzed separately and the linear relationship between variables in terms of long-term relationships, are repelled by the estimated model be neutralized.

Impulse response functions for the reaction (IRFs): Excitation functions of the reaction, shows the dynamic behavior of the system variables over time when the momentum into the size of a standard deviation. In this section, Pvyass responses of model variables to measure momentum on a SD A5, A4, A3, A2, A1, Y based on Chvlsky the analysis, are given for 10 cycles as follows:

In Figure 1 time as the annual is, on the horizontal axis in the chart and the changes percentage on the vertical axis a jerk to one extent of standard deviation income tax on itself has the most effective, the most positive effect on the last period .But on the course of the next periods, this effect is lesser. Also this momentum is more. Over the over the current payment on the final period on the other hand .this jerk has the most positive effect on development payment. And the most negative effect on the second period. Then it has positive effect on general index (price of goods and expendable service), which its most positive effect is on the last period. Besides it has a positive effect on the literacy rate which its most effect is on last period. Finally, it has the most negative effect on economic growth rate in the eighth period and the most positive effect in the last period and the most positive effect in the last period. So we can conclude that most of the effect on income tax is: their tax revenue, current payments, payment of construction, general index (the price of consumer goods and services), economic growth rate and finally the economic the growth rate.
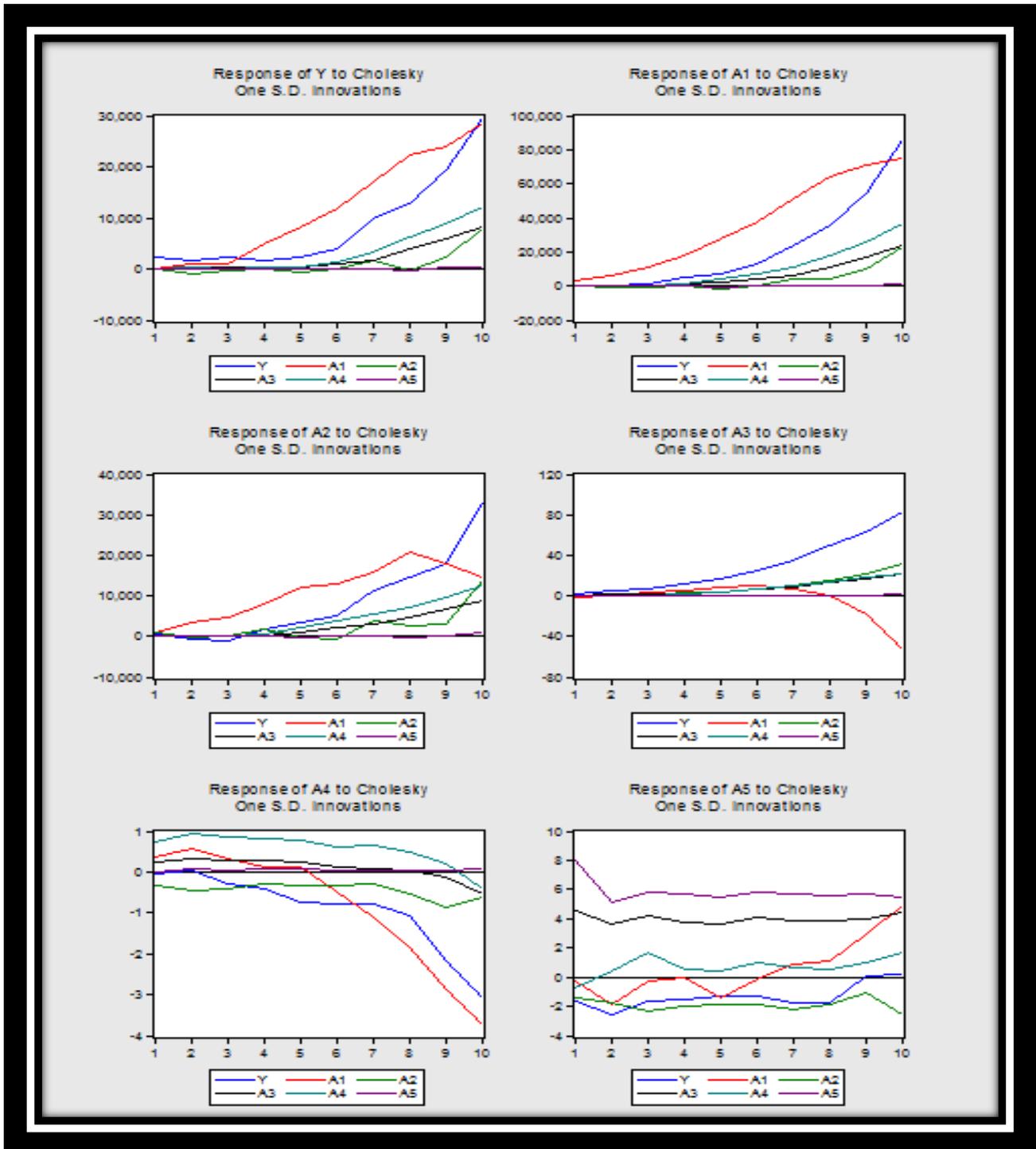
Figure 1. Response function reaction diagram

Test of research Hypotheses

Between the current income tax payments, HO assumption is rejected and there is a positive and meaningful correlation.

Between tax revenue and development expenditures, HO assumption is rejected and there is a meaningful and positive correlation.

Between the total amount of tax revenue (the price of consumer goods and services), HO assumption is rejected and there is a positive correlation.

Between the amount of income tax and labor and employment indicators (literacy rate), HO assumption is accepted and there is no significant relationship.

Between the growth rate of income tax, HO assumption is accepted and there is no significant relationship.

Based on these results we can conclude that the most significant effect on Iran's economy over the current pay taxes is: current payment, pay for construction, general index (price of consumer goods and services), economic growth rate and finally the economic growth rate.

Table 1. Statistical tests to select the optimal lag for the VAR model

Lag	Log L	LR	FPE	AIC	SC	HQ
0	-1484.718	NA	4.88e+30	87.6893	87.95868	87.78118
1	-1208.624	438.503	73.56611	73.56611	75.45162	74.20912
2	-1081.631	156.8742*	68.21356*	68.21356*	71.71521*	69.40772

Table 2. Co-integration test is based on testing the effects of test

The null hypothesis	Statistics of Test	The critical value at the 5% level
There is no co-integration relationship	321.80	95.75
There is co-integration relationship	193.93	69.81
There are two co-integration relations	96.38	47.85
There are three co-integration relations	49.75	29.79

Table 3. Co-integration test based on maximal Eigen value test

The null hypothesis	The maximum Eigen value test statistics	The critical value at the 5% level
There is no co-integration relationship	127.87	40.07
There is co-integration relationship	97.54	33.87
There are two co-integration relations	46.62	27.58
There are three co-integration relations	28.86	21.13

Table 4. Long-term coefficients in the VAR model

Item	Y	A1	A2	A3	A4	A5
LY	1	0	0	-265.4111 (9.96997)	39.96779 (17.4834)	59.74278 (29.9096)
LA1	0	1	0.914386 (0.10340)	10.07895 (1.24379)	-1.558991 (0.42310)	100.6130 (23.7665)
LA2	0	0	1	-30.35133 (7.16719)	24.69000 (12.5684)	10.83809 (21.5013)

Table 5. Short-term adjustment coefficients in the VAR model

Independent variables	D(Y)	D(A1)	D(A2)	D(A3)	D(A4)	D(A5)
Ecm(LY-LY)-1	0.000000 (.00000) [NA]	753.1318 (504.648) [1.49239]	171.8130 (209.451) [0.82030]	2.537196 (0.33854) [7.49452]	0.015120 (0.16086) [0.09400]	-1.639705 (1.64240) [-0.99836]
Ecm(LA1-LA1)-1	703.0645 (399.762) [-1.75871]	0.000000 (0.00000) [NA]	-181.5988 (161.720) [-1.12292]	2.540927 (0.29307) [8.67009]	-0.057419 (0.15086) [-0.38061]	-0.753770 (1.71247) [-0.44016]
Ecm(LA2-LA2)-1	-714.3893 (365.935) [-1.95223]	661.9893 (356.617) [1.85630]	0.0000 (0.0000) [NA]	2.124084 (0.39507) [5.37649]	0.022720 (0.15942) [0.14251]	-1.050904 (1.62839) [-0.64537]

DISCUSSION

Taxes as a tool to indirect guide through the impact on economic activities of enterprises can play a key role in economic development policy. Government With the proper administration of the tax system government can influence on how to achieve the goal of development. The challenges and problems associated with tax revenues collected should be solved and the traditional and semi-traditional tax collection should be changed with industrial one .traditional and Perhaps the reason for this is that we look at tax as a way to make money for government and we do not notice to its effects on economic development and the achievement of sustainable development. If the tax is paid on time and in place by the government definitely it wills significant effects on economic growth and prosperity [9].

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