The Investigation of Relationship between Privatization and Economic Growth in Iran

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Abstract

Nowadays, privatization is one of the desirable ways for governments to reach reasonable economic growth. According to the acquired positive results of privatization in the western countries, IMF and World Bank suggestions, Islamic republic of Iran decided to establish its own policies under this platform. A lot of studies have been done abroad over relationship between privatization and economic growth, but it can be understood internal studies have not been enough. Different results have reached about relationship between privatization and economic growth by the researchers. Some of them have found positive relationship between these two variables and some negative. This study is different from other former studies in terms of investigating competitiveness variable and the oil revenues variable importation as a key effective dependent variable on the Iranian economic growth. We are trying to respond this important question that: is there any significant relationship between privatization and competitive situation which be affected on economic growth in Iran? We have used central bank quarterly statistics for the period of 1989q1-2007q4. Then was used Auto Regressive Distributed lag method to characterize relationship between GDP and independent variables. Results showed that: there is a positive relationship between privatization and economic growth in Iran. But competitive or openness situation of economy have not helped to economic growth and is not significant. By the way, the empirical results from the granger causality test show that there is unidirectional causality running from the gross domestic products to foreign direct investment/GDP, investment, inflation rate, privatization/GDPin model. Butit should been said that, there is the mutual causality between oil revenues and economic growth (GDP growth) in Iran. Meanwhile competitiveness variable didn't have any causality relationship with dependent variable.

Key Words: Privatization, Economic Growth, Competitiveness, ARDL approach, Engel Granger Causality Test, Iran.

Introduction

Economic growth is one of the considerable issues among economists,becauseit approximately shows social welfare of country. Nevertheless, there are numerous determinants to specify the economic growth rate and it's yet known as a one of the economics secrets.Positive economic growth rate in reach countries means upper income, greater benefit, upper employment and greater business opportunities. This economic growth could save poor countries from poverty. Aspajoyan and his associates (2008) state that, 1percent increase in per capita income inclines 1percent total income of 20% percent of the poorest population. Economic growth rate in developing countries could improve different aspect of countries problems, such as high rate of infant mortality, low lifetime, freshwater availability, weak sanitation level, public education, democracy statement and etc.After the collapse of communist economic regime in Eastern Europe the states were seeking to a solution to solve their generated problems due to budget deficit, low productivity and efficiency as whole and etc. then they realized that the system which is operating under market rules in western countries is the best spotlight for their infected economies to structural problems.Thus, the reform of governmental enterprises is binding and should be privatized as soon as possible. That iswhy privatization has become top priority for countries (Wang, Z. 1991).

The most important governments objectives for privatization implementation include: 1-promoting efficiency in governmental sector 2- decreasing financial burden of government 3- extending private ownerships 4- developing stock and capital markets 5- using new knowledge and technology opportunities by importing foreign investments (specially foreign direct investment) 6- declining monopolistic activities in economy 7- achieving upper employment and acceptable economic growth rate (gobal, 2006). All aforementioned reasons for privatization have persuaded most countries to transfer their governmental ownerships to private sectors by designing appropriate and applicable schemes in the resent years. It should be called that these countries preferences at the aim of privatization have been different of one other.Privatization could be applied by countries in different ways that include as follows: offering public shares, offering shares to specific groups, selling properties of governmental unites, decomposing the respective units to smaller components, attracting private sector participation to invest in affiliated governmental sectors, selling governmental units to the respective managers and stuffs(gobal, 2006).Considerable studies have been done over the relationship between economic growth and privatization across the globe.

The Interesting point which is clear in all researches is that, no has been yet founded any conclusive positive or negative relationship between economic growth and privatization in economic studies. Additionally, affecting competitiveness variable has been dismissed in this relationship which has been investigated by researchers. The important question we are looking for in this study is that: is there any relationship between economic growth and privatization in Iranian economy? Meanwhile, has helped competitive setting to Iranian economic growth? Additionally, the most important innovative of this survey which distinguish it from other internal studies is oil revenues variable importation as a key effective dependent variable on Iranian economy. This study employs ARDL method and causality test by using time-series quarterly data for the period of 1989:q1-2008:q4 under using MICROFIT software.It should be mentioned that, in privatization process some groups can profit and some loss so in general it's not correct to say all groups can gain. Therefore toclear theseproblems we bring some examples which are characterized in table 1 as follows:

Table1: Interest groups, threats and benefits in the privatization process

Interest groups	Potential threats/benefits
1. Government officials and their representatives	Possible loss of political support and revenue On the other side, The reforms reduce the government burden
2. Managers and employees	during the reforms and post-privatization exist the risk related to unemployment rate and income levels.
3. Influential domestic groups including political parties, religious leaders, labor unions, parliamentarians, academics, etc.	The unequal distribution of privatization benefits as well as "foreign organization" are recognized as threats.
4. Donors and multilateral agencies	Generally, multilateral agencies only benefit due to privatization process

Source: Jerome, A. 2008.

History of privatization in Iran

In general, the date of privatization in the Islamic Republic of Iran backs to the law in 1975 concerning to expansion of the transfer of state owned economic sectors to the private units. After the Islamic revolution event, Iran faced the great problem (ware with Iraq). It increased government role in planning and controlling the public sector. Officials Under the respective law decided to allocate up to 99% of the government's ownership in non-basic industries. Meanwhile during this vital process blue-collar worker as well as usual people shared. In fact Privatization strategy implementation for the first time according to the sub-article 32 of the first development plan was started in 1989 in Iran. The main objectives of privatization plan were as follows: rising firm's efficiency, decreasing governmental involvement in economic activities, optimizing the utilization of national resources and etc.

The industry sector has been the main targeted sector that Iranian governments from the beginning of this process have tried to divest its shares to private sector. So that its importance caused to be established the privatization organization as well as ratifying following laws and measures:
-the law concerning Transferring government shares to the workers.
-The Law of the Islamic Consultative Assembly (Parliament) of 1994/95.
-Provision 53 of the National Budget Laws of 1998/99 and 1999/00; and
-Paragraph F of Annex 2 to the Budget Law of 2000/01.

(Najafbagy, R. 2006& privatization organization of Iran website).The following table shows the privatization process in Iran for the period of 2006-1989:

Table2: position of Government DivestedSectors

year	Value of divesting(billion riales)
1991	266
1992	239
1993	288
1994	924
1995	516
1996	1091
1997	173
1998	762
1999	2348
2000	1722
2001	201
2002	3118
2003	9012
2004	6496
2005	764
2006	25390
2007	233609
2008	114589

Source: privatization organization of Iran website.

Theoretical Framework

Washington consensus is based on three main categories: 1- decreasing financial interventions of government in economy 2- privatization 3- free market. So it is clear how much privatization could be important.So that if it implements along with improving competitive situation appropriately can be accompanied with economic growth and advantages for any country in long term (Moshiri, S. 2010. 144).Privatization process induces firms through returning to the markets to increase their efficiency and productivity as well as decrease their costs (Heilman et al., 1995-6). The neoclassical viewemphasizesonimproving efficiency and productivity through extoling private ownership (Dinavo 1995).

Baer and Villela (1994) by comparing the lower rates of gained profits in government and private enterprises investigated economic efficiency. Privatization of services improves general welfare of society,even when government expenditures are ongoing,So that gained benefits of privatization process of services support this claim. Several theoretical and survey articles believe that privatization not only could help economy to have progress because competitiveness and deregulation are more important than privatization to access economic improvement (Bishop and Kay, 1988; Vickers and Yarrow, 1988; shlifer and vishny, 1994). This is while some of the experts encourage privatization process(Vining and Boardman; Boycko et al, 1995;World Bank, 1994; Shirley and Walsh, 2000). In a proper study which was conducted by Vickers and yarrow (1988) concluded that microeconomic reforms which change public ownership to private ownership along with healthy competition situation can come profits for firms. North (1990) by comparing ownership regulations in developing countries states that, these countries due to lake of useful ownership rules are facing tremendous problems in economic affairs so that without any reform in ownership couldn’t reach to economic prosperity.

Rowthern, et, all (1993) said that, political economics has key role in privatization and is more important than ownership and monopolistic discussions. Privatization reform could be investigated in terms of management view.

For instance Jensen and mackling (1976) believe that the principal and agent problems are coming less in private firms than governmental firms. Because private firms by designing encouraging incentives are trying to create sound coordination among both groups while it's not happen for long time due to less flexibility and up-low hierarchy framework in a governmental firm.Government presence is necessary for social life, but the intervention degree of government has been different in the economies. So that classic school introduces it at the lowest level, this is while the highest intervention of government is offered by socialists (kianpour, 2009). Thus nowadays the presence and role of government is necessary and unavoidable in any economy. But its optimum size should be determinedto help country to have competition with opponent economies. Therefore on the one hand privatization plan should be executed in a way that no dismiss the government participation as an effective factor in infrastructural investment and on the other hand promote and help to economic growth.

Review of the Empirical Literature

The most important external and internal studies which have investigated privatization issues include as follows:Khan and his cooperatives (1990, 1997) separately showed that marginal efficiency of private investment is greater than marginal efficiency of governmental investment in developing countries.Galalet, al(1992) represent that, privatization has positive impact on efficiency and government budget.The study examines the welfare consequences of privatizing 12 large firms in Chile, Malaysia, Mexico and the United Kingdom. The selected economic firms were in telecommunications (three firms), airlines (four firms) electricity (two firms), a lottery company, and a port and transport company. They compared post-divestiture performance of economic firms with the predicted performance of those firms had not divested yet in that time.The government, consumers, buyers of firms and competitors were the main targets of study to measure the impact of divested shares on their welfare. Their result show that the welfare benefits of 11 cases are on average near to 26% after divesting. Their study eventually concluded that the workers in three cases benefit from privatization significantly. Vickers and yarro(1998) concluded competitive situation improves firms performance. Meggingtonand Nash (1994) pointed out that production level of firms have increased after privatization drastically. Jerome's paper (2002) evaluated efficiency in telecommunication sector in the wake of deregulation in 1992.

It was found that reforms left profitability and high productivity in respective sector.Megginson et al (1994) examined the performance of 61 enterprises from 18 countries which had privatized during 1961 to 1990 in 6 developed and 12 industrialized countries. They claimed privatization process has not declined employment rate (so that employment rat increased 64%) as well the author presented strong evidence that the reforms have increased real sales, capital expenditure, profitability of companies.D'soza and magginson (1999) compared the pre and post privatization performance of 78 enterprisers from 25 countries. Their findings showed that the profitability of divested firms after reforms increased significantly. Although they acknowledged that, there is less operational efficiency in those cases. Bortolotti et al. (2001) studied the performance of 26 telecommunication firms over the 1984 to 1997 period. Their findings showed that output, sales efficiency all increased for companies after privatization reforms. It also has to be mentioned that this paper results proved return on sales (ROS) and operating income to sales (OISALES) are significantly while return on assets and equity change estimated insignificantly.so that the median in OISALES was about 2.74.Boubakri and Cosset (1998) examined the financial and operating performance of 79 firms in 21 developing countries that experienced full or partial privatization over the period 1980 to 1992. Their findings showed remarkable increase in profitability, operating efficiency, capital expenditure, real sales, total employment and dividends.Laporta, et, all (1997) by employing regression analyze examined 218 non-financial enterprises privatized in Mexico for the period of 1981-1988.

They remark that despite profitability level increases 40 percent, privatization has declined employment by half.Dewenter and Malatesta (1997) investigated 63 economic enterprises during the 1981 to 1993. Their results demonstrated that privatization process has improved profitability, using return on sales and productivity of privatized firms significantly. In addition they concluded that privately owned firms are significantly more efficient and profitable than governmental firms.Galal et al(1992) also showed that privatization for the three telecommunications companies has increased their capital expenditures, financial and operating performance of divested firms.Sanches and his cooperators (2000) by using panel model in 24 countries examined whether a change in title alone is enough to create the profits related to privatization.

Their results showed that change of title alone is not sufficient to generate economic profit. Finally they concluded that if change of title be accompanied with real giants could bring useful reforms. Because of importance of competitiveness variable,Diank et al (2006) at the absence of variable privatization concluded that competitive variable has positive effect on economic growth and has to be regarded as a vital factor In exogenous growth models.

In a comprehensive study was conducted by using panel data model in 117 countries which is related to Moshiri(2010) stated, competitive situation is the most key factor in order to pave privatization toward more economic growth. He added that competitive setting is more important element than privatization to reach desirable economic growth.The relationship between two economic growth and privatization variables is yet obscure. Except of above issues about the relationship between economic growth and privatization, the following examples confirmed this claim. Results of plane (1997) and Bamrnet (2000) studies refer to positive relationship between economic growth and privatization reforms. But in else-study, cock and oichida (2003) founded negative relation between these two variables. Willner study (2003) unlike the expectation shows the positive relationship between two variables in OECD countries.

Model Specification

This study uses exogenous economic growth model of Barro(1991) to estimate the relationship between dependent and independent variables. All used variables in this study separate into two controlling and fundamental variables so that an investment rate, inflation rate, ratio of foreign direct investment/gdp are controlling variables andcompetitiveness, oil revenuesand privatization variables are component of fundamental variables.

Equation Specifies as follows:

$$\mathrm{gdpg} = C + \alpha \mathrm{pri} + \beta \mathrm{inv} + \gamma \mathrm{inf} + \theta \frac{\mathrm{fdi}}{\mathrm{gdp}} + \mu \mathrm{olrg} + \pi \mathrm{opn} + \varepsilon$$

ARDL method is fantastic approach to investigate non-stationary variables of countries like Iran which it has I(1)[1]-I(2) disequilibrium. This approach also can specify optimal lags of variables automatically so that in recent years the use of ARDL approach has been more familiar among respective experts(pahlavani et all, 2005). Above variables are defined as follows:

Gdp: growth of gross domestic products(as an economic growth proxy), invg: growth of gross capital formationrate (as an investment rate proxy), inf: inflation rate, 0pn: economy openness (as a competitiveness proxy whichis estimated as $\frac{\text{Export} + \text{import}}{\text{GDP}}$ ratio), prg: ratio of annul income due divesting governmental firms shares in private firms/gdp-fdi: foreign direct investment in gdp ratio- olrg: oil revenues growth divided by gdp and finally ε defined as a residual term. It should be said oil revenues variable as a key factor which is affected Iranian economy has been added to model. MeanwhileNo exist unique definition of competitiveness variable among the international centers and economists. For example OECD believes that, competitiveness is a level of goods and services production of any country which could absorb the global demands to fulfill different levels of their demand as well as increase citizens' income in an open market over the long term period. USA competitiveness agency points out that, competitiveness involves high production through good and services creation increasingly as well responding global market criteria. World economic forum view is dominated on national economy ability in maintaining growth stability or live standards. Thus we use ratio of $\frac{\text{Export} + \text{import}}{\text{GDP}}$ to estimate competitiveness situation in our economy (Barghandan, A., 2007).

Empirical Results

At first paper investigated the long term relationship between dependent and independent variables by using pessaran-shin F-statistic (tashkini, A. 2005). This important test showed, there is a valid long term relationship between two dependent and independent variables.So the results of model estimation shown in table3as follows:

Table3: Model Estimation by ARDL Approach

Std.error	probe	t-statistic	coefficient	variable

[1]If variable will become stationary in level→ I(0)
If variable will become stationary in first deference → I(1)
If variable will become stationary in second deference → I(2)

0.2277	0.020	-2.453	-0.5587	$(inf)_{-2}$
0.1808	0.010	2.7666	0.5003	$(inv)_{-1}$
0.1904	0.216	-1.23	-0.2343	$(opn/gdp)_{-1}$
0.0004011	0.037	2.144	0.00086	$(pri/gdp)_{-1}$
0.005667	0.010	2.77	0.0157	(fdi/gdp)
0.2718	0.001	3.7888	1.03	(oilg)

Source: authors' finding

Table4: Long Run model Estimation By ARDL approach

Std.error	probe	t-statistic	coefficient	variable
0.5343	0.072	-1.89	-1.01	inf
0.4512	0.061	1.93	0.871	inv
1.6213	0.298	-1.03	-1.67	opn/gdp
0. 5227	0.191	1.32	0. 69	pri/gdp
0.6	0.157	1.45	0.87	fdi/gdp
0.50040	0.020	2.458	1.23	oilg

Source: authors' finding

The second step to assist variables of model after regressing them is that: are confirmed all classical hypothesizes (homoscedasticity, autocorrelation, multicollinarity, model specification and normality) under 5% interval confidence levels in estimated model?

After confirming all aforementioned classical hypothesizes, the results analyzed theoretically as follows. According to table1 the symptom of inflation rate variable as expected is negative. It shows when inflation rate related to two last period 1 percent increases caused to decrease growth of gross domestic products about 0.5587 percent on average reversely. Positive coefficient of investment refers that 1 percent increase in growth of investment rate concerning the former period lead to increase Iranian economic growth (growth of gross domestic products) about0.5003 percent on average directly. Openness of economy situation in compliance with table3 is not significant in model. The most important variable which was targeted to investigate is privatization variable. Its coefficient shows that, 1 percent increase in privatization process with one lag leaded to increase 0/00086 percent gross domestic products. fdi/gdp ratio variable tells us that, where its ratio in Iran economy1 percent increases caused to increase economic growth nearly 0.0157 percent on average. And eventually, oil revenues variable has positive effect on economic growth and its coefficient amount relative to other variables is too high so that 1 percent increase in oil revenues promote Iranian economic growth 1.03 percent on average. Given the long run coefficient we can say that only inflation, Investment and oil revenues in long term are significant while other variable are not justifiable statistically.

The Engel Granger Causality Results

To employ Engel granger causality test is necessary which to be stationer our variables. So the main solution for this problem is differential form of two investigated variables. Adjusted dickey fuller test used to recognize that, are variables stationer by level I(0), after first getting differential I(1) and so on? So the following table shows this process:

Table4: Adjusted Dickey Fuller Test

variable	Verified in	Include in test equation	Critical value
gdp	I(1)	none	%5
Inv	I(1)	none	%5
Opn	I(2)	none	%5
Fdi	I(2)	none	%5
Inf	I(1)	none	%5
Pri	I(1)	none	%5
oil	I(0)	Intercept& trend	%5

Source:Authors' finding

According to the above table for Engel granger causality test concluded that:

There is unidirectional causality running from the d(gross domestic products) to d2(d(foreign direct investment/GDP)),d(investment), d(inflation rate), d(privatization/GDP) variables in model. But it should be said that, there is the mutual causality between oil revenues and economic growth (GDP growth) variables in Iran. By the way, competitiveness variable {d(d(opn))} didn't have any causality relationship with dependent variable.

Conclusion

This study tried to show the possible relationship between privatization and economic growth by employing ARDL an Angel Granger approaches in Iran. According to the gained results, we can conclude that although privatization process in Iran in short run is significant but its significance is not confirmed in long run. So the official should apply their planes in a manner that consider long run events. The important point of the study is that oil revenues in both periods (short run and long run)is significant so that if this dependency continues, we think that privatization process doesn't help to Iranian economic growth.

Notes and Recommendations

1. Considerable economic dependency to oil revenues remained country in weak competitive situation.
2. Eliciting staff's active participation in the decision making processes through designing system for work force and management participation. This will lead to the enhancementofstaff's commitment since nowadays it has been proven that there is meaningfulrelationship between work force productivity and a participatory work atmosphere(Alroaia et al., 2009).
3. according to acquired results of our study, despite privatization process has tiny positive influence on economic growth, but it seems that, causality test doesn't confirm it as an effective factor which be affected on economic growth.
4. Competitiveness situation is not proper in Iran, thus respective officials must improve this vital element by looking for finding problems.
5. Paving foreign direct investment trend, joining world trade organization (WTO)[3], reforming regulations are the vital keys to improve competitiveness position in country.
6. Focusing on step to step World Bank platform and other countries experiences could help us to implement privatization schemes appropriately.

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[2](D)form shows that, variable will be stationary in first difference.

[3]World Trade Organization.

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