

Analysis the Effect of Governmental Enterprises Privatization Policy on their Performance Evaluation by Economical Value Added

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Abstract: Privatization is a process that rehabilitate the market mechanism efficiency and lead to constraint of management and ownership in some firms controlled by government and discard it to market mechanism. The aim of privatization is to enhance efficiency and improve the financial performance and return of firms. In other side, one of the purposes of financial reporting is to presentation of information about firms operation to assess their performance by users. Various methods such as Economic value added, stock return, Price to earnings ratio, earning per share and so on exist to assess the performance. So the aim of this research paper is to analysis the effect of privatization policy of government from financial point of view by utilizing the concept of EVA. Therefore, we considered one main hypothesis and two sub-hypotheses and utilized rank test statistic to test the data. Also we gathered the financial information of 40 firms that transfer to the private sector by government from time period of 1381-1389. Findings indicate that privatization has no impact on EVA and in other word, it has no significant effect on ROI of the firms. In general findings indicate that the average of EVA before and after the privatization has no significance difference.

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1. Introduction

In recent decades, governments in order to achieve promotional goals and maximizing common wealth, have created many governmental firms. But because of undesired financial - economical results from these firms during past years, lack of technical, financial and economical justification for governments to interfere in some of manufacturing processes and financial - economical limitations for governing and controlling operations, makes privatization in governmental firms inevitable. Some of goals corresponding to privatization process include: improvement in performance and productivity of manufacturing units in Micro and Macro - Economic scale, extension of competitiveness in economical operations, achieving to optimum allocation of resources, gaining private investments in order to financial support for economical operations, sustaining ownership and involvement of people in economical operations, reduction in financial responsibilities of government and rationalization of governmental contribution in national economics (Ezazi et al, 1390). Increase in volume and number of governmental firms due to Islamic Revolution because of changes in ownerships of many private firms and losses and inefficient or non - optimal allocation of resources in governmental

firms, makes government to sell transferable stocks of governmental firms or firms which continue of their operations is not necessary in governmental sector, in order to improve productivity and optimum allocation of human and physical capital of country and empowering government in policy-making and developing capabilities of cooperative or private sector, according to third National plan law of economic development (Third National Plan Law, P. 18). According to increasing trend in giving organizational firms to cooperative and private sector in recent years due to Article 44 of Constitution and Supreme Leader's Commandments about intensifying this policy, need to determine the effects of these policies on Enterprises performance as a tool of evaluation of achieving goals of these policies is critical. Nowadays value creation is one of the approaches in financial science. Other traditional approaches such as maximizing profit has been substituted by modern approaches such as maximizing the value of enterprise. Economical Value Added is one of the most comprehensive modern indexes to evaluate the performance, because all costs of business operations will be considered in that even the cost of opportunity (Rahnamaeye Rud Poshti and Kalili, 1387). There are many methods in order to evaluate managers' performance and

determine the value of enterprises, which most of them suffer from great disadvantages, and if they will be used as criterion of performance evaluation this leads to reflect unreal data about the value of enterprise in the its stock price. Due to above mentioned problems in accounting profit-based criteria and in order to resolve their defects, many attempts have been made which leads to develop new criteria for this purposes. So, many of enterprises owners always seek to find criteria to evaluate the managers' performance by them in the best way (Moharrami and Axson, 1391). According to the above mentioned issues, in this study we have used from Economical Value Added in order to evaluate the performance of business enterprises. So the goal of present study is evaluation of the effect of governmental enterprises privatization on their performance.

The Concept of Privatization

The term Privatization in Webster Dictionary is meant as " Change the ownership or control of a governmental system to a private system". In another definition from Pickup is it mentioned: " Privatization is an important aspect of economical policies and is defined as ALIENATION of governmental enterprises to private sector. " Clementee has defined privatization as a tool to improve the performance of economical operations through increasing the power of market share, in a way that at least 50% of the stocks is transferred to private sector. Privatization in a more general conceptualization is Alienation, changing management or assigning management of public sector to private sector, which this approach includes management contracts and leasing contracts (John Moose, 1992).

Also in Iran, according to the Law of Public Calculations, Governmental Firm is defined as a specific organizational unit which is established legally or it is Nationalized by Law or a Decree from Court, and it is known as a governmental enterprise and more than 50% of its capital belongs to Government. Enterprises which are established by investment of governmental firms will be considered as governmental enterprises only if 50% of their stocks belongs to Public sector. According to above mentioned issues and Third Plan of Economical, Social and Cultural Development of Islamic Republic of Iran, in order to create proper solutions to accelerate and facilitate of public involvement for " Improvement of performance and increasing efficiency of physical and human capital allocation as well as development in capabilities of co operative and private sector ", stock of transferable governmental enterprises or firms which continue of their operations is not necessary in governmental

sector, will be sold to cooperative or private sector according by Law. In summary, privatization in Iran is transferring governmental stocks in a way that their share in enterprises is 50 % at most, and privatization organization, according to Third Development Plan in 1379, is established and is responsible to implement this policy.

Privatization in Iran

After announcing transfer of governmental enterprises in First Development Plan, a new door opened for privatization in Iran. After that during Second Development Plan, enough attention was not paid to this issue, and during Third Development Plan, Privatization Organization was established in 1380. After establishment of this Organization, assignments were accelerated in more volumes, and by starting Forth Development Plan, responsible officials in the field of privatization try to do their best to achieve this goal. So the amount of assignments from the beginning of privatization during this program was maximized in 1386 (Kabolizade and Tavakkoli, 1384). Because In Iran after War, large involvement of government in Economics, involvement of governmental enterprises in unnecessary economical operations, low competitiveness of Economics in National and International level, Lack of active private sector involvement in investments, defects of capital market in order to develop private sector, improper distribution of capitals and opportunities between private and public sector, leads to low performance of Government (Ghorchian and Kord Zanganane, 1385), So it seems that assignment of enterprises will be a solution to resolve these problems and it is a critical element for economical development of country. Totally, it can be said that because of below mentioned reasons, government has decided to implement privatization policy (Abolhassani, 1389)

- Improvement of performance and productivity through reducing unnecessary costs and improve the quality of goods and services in private sector.
- Funding (Obtaining Financial Resources) through selling stocks of governmental enterprises.
- Creating the sense of competition through ownership in private sector.
- Capital Market Boom and creating public involvement.
- Develop culture of cooperation and accumulation and mobilization of savings toward production.
- Creating economical equity between Supply and Demand.

2. Study Background

By reviewing background of this study field and researches done about privatization and its effects, reveals that many researches have done in different countries in this field, which some of them are as follows: Ibrahim et al (2010) studied the potential effect of privatization on financial and operational performance of Jordan Cement Corporation, they tried to create a discussion about how privatization of governmental firms can affect financial and operational performance of these enterprises. The criteria to determine if there are significant and meaningful difference between their performance before and after assignment, were evaluated and compared. Findings of this study showed, although privatization has no significant effect on operational performance and profit of enterprise, but it leads to improvement in cash flow, reducing the debts, improvement of investment situation and reducing excess resources in these enterprises. Omran (2003) investigated the privatization in a study and evaluated the structure of ownership on assigned enterprises performance, in order to find that what type of ownership after assignment has positive effect on performance. The results of his study revealed that after privatization, productivity, operational performance and profit from stocks would improve significantly and debts and associated risks will decrease in turn. Also other findings of this study showed that assigned enterprises to specific persons and employees would have better performance in comparison to enterprises which were assigned through market. Kocenda & Svejnar in a study titled: "The effect of ownership on enterprises performance in general program of privatization", tried to evaluate the effects of different types of ownership and the centralization level of ownership after assignment of enterprise in Czech Republic. Studied variables in this study included: sale, cost of salaries and payroll, operational profit, the ratio between debt and income of stock holders. The findings of this study revealed that after assignment, private ownership will have better performance when compared with governmental ownership, in other words private ownership has better performance than governmental ownership or in some cases it has the same performance as governmental ownership. Li & Rozelle (2000) focused on a sample constituted from 168 Chinese Enterprises (Which 88 of them were privatized) and they found it seems that transferring costs will lower the performance of private enterprises in year that assignment has been made. But they also found that two years or more after privatization, private enterprises with the same data, will gain 5 to 7 percents more profit. They have concluded, the enterprises after the assignment has

finished and when they have been adapted to business environment in China, would have more advantages. Ezazi et al (1990) evaluated the effect of governmental enterprises' assignment on improving their performance and productivity in a study. Their finding showed that there are meaningful differences between productivity of governmental enterprises before and after assignment. Also their results revealed that ROIs of assigned enterprises are higher than market productivity. Abolhassani (1989) analyzed the effect of governmental enterprises privatization on economical value added of them between 1379 to 1387. The results of this study revealed that economical value added of sample enterprises before and after privatization show no significant difference. Rahnamaye Rudposhti (1986) in a study, analyzed function of economical value added and market value added in order to evaluate economical performance of enterprises, and he concluded that there are correlations between EVA and studied fiscal variables such as EPS, P and ROI, and also the correlations between MVA and ROI, ROS and RI were confirmed. These findings showed that the level of correlation between EVA and variables is more than these levels for MVA. Shaahsavaari (1985) evaluated the effect of manufacturing enterprises privatization on their ROI and fiscal performance; and its findings revealed that privatization has no significant impact on stock performance, sales performance and assets performance of private enterprises except for firm which are in automobile industry. Also the results showed that in terms of performance of value, privatization was only effective in automobile and paper products industry, and in other industries no significant effect has been seen.

Research Hypotheses

According to study literature and background, main hypothesis and complementary hypotheses are defined as below:

Main Hypothesis

There are meaningful differences between average economical value added of enterprises before and after privatization. In order to evaluate if privatization leads to improve economical value added in governmental enterprises or not, two complementary hypotheses are defined as below:

Complementary Hypothesis 1

There are meaningful differences between average rate of ROI of enterprises before and after privatization.

Complementary Hypothesis 2

There are meaningful difference between average cost of capital for enterprises before and after privatization.

2. Research Methodology

Because this study can be useful in decision making of its users, so this is a operational study. Also in terms of nature, this study is descriptive - correlation.

3. Research Variables

In this study, economical value added is used in order to evaluate performance and fiscal-financial situation of private enterprises. In this regard, the effect of privatization will be studied as independent variable from changing in fiscal variable and quantitative Economical Value Added (EVA) variable. By comparison between Economical Value Added of enterprises in three years before and after privatization, the effect of governmental enterprises privatization on their economical performance and ROI will be evaluated. Also in order to evaluate the reason of changing or not changing of economical value added, we compared ROI and rate of capital cost for the same enterprises three years before and after privatization. Economical value added determines if the operational profit for all of the invested capital and resources is enough or not (Stewart, 1991). Indeed, EVA is a criterion which consider costs of opportunity for all of the assigned resources and capitals. In other words, positive economical value added shows optimum resource

allocations, value creation in enterprise and increase of stock holders profit and wealth. But negative economical value added shows losses of resources, ineffective and improper resource allocation of enterprise and therefore decrease of stock holders profit and wealth. Stewart (1991) defined EVA as difference between cost of capital (C) and gross obtained operational profit after operation (NOPAT):

$$EVA = NOPAT - C$$

EVA = Gross operational Profit after operation - (Used and Invested capital × Cost of Capital)

$$EVA = (r - WACC) \times Capital$$

In Equation (1): r: Rate of ROI

WACC: Weighted Average Cost of Capital

$$r = \frac{NOPAT}{IC}$$

$$WACC = k_d \left(\frac{D}{D + E} \right) + k_e \left(\frac{E}{D + E} \right)$$

$$K_d = i(1-t)$$

$$K_e = R_f + \beta(R_m - R_f)$$

D: Loan Value in Rial

E: Stock Holder Income Value in Rial

K_d: Debt Capital Cost

i: Debt Effective Interest Rate

t: Tax Rate

K_e: Cost of Stock holders Capital

R_f: ROI Rate without Risk

β: Sysmatic Risk Index

R_m: Performance Rate (ROI Rate) for Market

Table 1. Descriptive statistical definitions, of these variables, such as average, median, maximum, minimum and standard deviation before and after privatization

Standard Deviation	Minimum	Maximum	Median	Average	Variable
5.45	-0/81	32	0/0412	0/94	EVA (Before Privatization)
0/57	-2.08	1.3	0/13	0/13	EVA (After Privatization)
0/32	-0/34	1.7	0/23	0/28	r (Before Privatization)
0/43	-0/45	1.8	0/2	0/17	r (After Privatization)
5.2	-0/31	1.72	0/23	-0/59	WACC (Before Privatization)
6	-2.12	1.4	0/18	0/087	WACC (After Privatization)

Table (2): Results of Main Hypothesis Evaluation

Result	Significance Level	Amount of Significance	Test Statistics Index	Average After Privatization	Average Before Privatization
Accepted Null Assumption	0/29	±1.65	-1.12	0/13	0/94

Table (3): Results of Complementary Hypothesis 1 Evaluation

Result	Significance Level	Amount of Significance	Test Statistics Index	Average After Privatization	Average Before Privatization
Accepted Null Assumption	0/27	±1.64	-1.02	0/17	0/28

Table (4): Results of Complementary Hypothesis 1 Evaluation

Result	Significance Level	Amount of Significance	Test Statistics Index	Average After Privatization	Average Before Privatization
Accepted Null Assumption	0/46	±1.64	-0/67	0/08	-0/59

Used Statistical Methodologies

In this study, due to effect of a qualitative variable (Privatization) on a quantitative variable (Economical Value Added) and also because the data are not normalized, Non-parametric statistical approach and Maan-Withney test has been used in order to compare the averages. Because of the sample size ($n > 8$), statistical distribution is the same as Z distribution. Null and opposite assumption tests are as follow:

$$\left\{ \begin{array}{l} H_0: \mu_1 = \mu_2 \\ H_1: \mu_1 \neq \mu_2 \end{array} \right.$$

If calculated Z from this statistics is more than critical value of $Z_{0.05}$ then null assumption is rejected and averages are different; and if calculated Z from this statistics is less than critical value of $Z_{0.05}$ then null assumption is confirmed and averages are the same.

Sample Population and Sample Selection

Sample population of this study consists of accepted enterprises in Tehran stock exchange. sampling methodology is judicative approach. For this purpose, assigned enterprises during 1381 to 1389 according to Governmental Act which more than 50 % of their stocks is assigned to private sector, are selected as sample population. According to above mentioned conditions, totally 50 enterprises were selected as sample population. Because data from years 1378, 1379 and 1380 are required in order to data collection, so information for these years are obtained and collected. In order to collect theoretical principals of this field, library approach is used. For this purpose, bibliography data about the project were collected by using from articles and literature available in Academic libraries. Also for calculation of study variables, document-mining approach is used. In order to collect required data, financial lists of accepted enterprises in Tehran stock exchange is used. Published information by Tehran stock exchange organization, Tadbir Pardaz and RahAvard Novin media software, and other internet resources are some of data collection tools in this project. In order to accomplish the present study, and for calculation of variables and data analyses, SPSS and Excel Softwares are used.

4. Study Findings

In order to present a general schematic from critical and important specifications of calculated variables, some of descriptive statistical definitions, of these variables, such as average, median, maximum, minimum and standard deviation before and after privatization are shown in Table (1). As it is obvious, standard deviation of EVA variable has changed significantly before and after privatization. Also the highest average belongs to EVA variable before privatization. On the other hand, WACC average before privatization is negative whereas it is positive after privatization.

Main Hypothesis Evaluation

In order to evaluate the main hypothesis, null and opposite assumption is prepared as follow:

H0: There are no significant differences between averages of Economical Value Added of enterprises before and after privatization.

H1: There are significant differences between averages of Economical Value Added of enterprises before and after privatization. Summary of results obtained from main hypothesis is shown in Table (2): Because of this fact that, $-1.645 < -1.128 < +1.645$, we can conclude that null assumption is accepted in 5% error level and 95% confidence level, and it shows that averages are similar. It means that Economical Value Added before and after privatization has no significant difference, so the main hypothesis is rejected.

Complementary Hypothesis 1 Evaluation

In order to evaluate the complementary hypothesis 1, null and opposite assumption is prepared as follow:

H0: There are no significant differences between averages of ROI for enterprises before and after privatization.

H1: There are significant differences between averages of ROI for enterprises before and after privatization.

Summary of results obtained from complementary hypothesis 1 is shown in Table (3): Because of this fact that, $-1.645 < -1.02 < +1.645$, we can conclude that null assumption is accepted in 95% confidence level. It means that ROI before and after privatization has no significant difference, so the complementary hypothesis 1 is rejected.

Complementary Hypothesis 2 Evaluation

In order to evaluate the complementary hypothesis 2, null and opposite assumption is prepared as follow:

H0: There are no significant differences between averages of Capital Cost Rate of enterprises before and after privatization.

H1: There are significant differences between averages of Capital Cost Rate of enterprises before and after privatization. Summary of results obtained from complementary hypothesis 2 is shown in Table (4): Because of this fact that, $-1.645 < -0.673 < +1.645$, we can conclude that null assumption is accepted in 95% confidence level. It means that Rate of Capital Cost before and after privatization has no significant difference, so the complementary hypothesis 2 is rejected, too. In summary, according to results from complementary hypotheses we can conclude that ROI and Rate of Capital Cost before and after privatization have no significant differences, and also Economical Value Added before and after privatization has not changed significantly, and finally after privatization no significant improvement (change) is made in enterprises performance.

5. Conclusion

Results from Complementary hypothesis 1 reveals that ROIs before and after privatization are similar. This rate, calculates capital performance (ROI) regardless of financial supply method and accounting deviations, so it can be said that privatization has no effect on performance improvement. According to results obtained from complementary hypothesis 2 and similarity between Capital Cost Rates, before and after privatization, we can conclude that privatization cannot decrease this rate too. On the other hand, findings obtained from main hypothesis of this study shows that Economical Value Added (EVAs) of enterprises before and after privatization has no significant difference. Nowadays Economical Value Added is one of the most important criterion for evaluation of performance and efficiency of enterprises. Because that one of the goals of privatization is performance improvement, so we can conclude that privatization was unable to achieve its goals. Reasons for this fact can be assignment of stocks to public and non-governmental enterprises such as Social Security Organization, Civil Servants Pension Fund (CSFP) and Mostazafan Foundation in return of governmental debts to them or decreasing supporting policies of government (foreign exchange supply and low price financial resources) for enterprises after privatization and lack of foreign investments in Iran Economics and Assigned Enterprises. Although it is not possible to comment accurately and overwhelmingly on a

macroeconomic policy such as privatization only with regard to a criterion in order to evaluate performance and efficiency of enterprises, but its results can be an critical point in order to accurate and proper implementation of this policy.

5. Recommendation

Suggestions and recommendations obtained from this study are as follow:

1. Although privatization trend in most of countries has not satisfied people, business and operational groups and social improvement officials, but in recent decades this approach has become as one of the key elements in international and economical improvements; Yet there are many challenges about privatization, for example assignments in them government gets rid of its bankrupted organizations and enterprises and transfer them to private sector. Privatization in this manner, will have a short life.
2. Privatization process in countries with developed financial markets, has been so successful. According to limitations and underdevelopment of Iranian financial markets, and specially inefficiency of stock exchange in Iran, these conditions can be considered as some of the most determinant factors in ineffectiveness of privatization process. It is recommended that more studies can be done in this regard in Iran.
3. Also it is recommended to privatization organization, according to rejection of study hypotheses, to conduct a comprehensive study in order to find main reasons of inefficiency in privatization policy, such as improvements in financial and operational variables quality.

6. Study Limitations

There are some limitations in conducting this study such as all other researches, which should be considered in interpretation and generalization of results:

1. Extracted or collected data from financial list of enterprises are not adjusted with regard to inflation. If they be adjusted, obtained results will be different.
2. One of the most serious limitations in this study is this fact that there some kind of cooperative or private movement in some of the Iranian organizations or foundations, which are not similar to any international counterpart, so all of these movements are obstacles to privatization.

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