

# Investigating the Effects of Privatization on the Economic Growth in Developing Countries: A Fixed Effects Approach

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## Abstract

Considering that the economic adjustment policies have been proposed by international institutions for achieving a sustainable economic growth in the developing countries, the latter adopted privatization trend in economy following the application of economic adjustment policies. In this study, we investigated the effects of privatization on the economic growth of developing countries in 2000-2008. We selected a suitable model based on the past experimental studies, use of qualitative and institutional variables in economy as well as use of controlling variables for different regions. Results of estimation in different areas show that privatization in the MENA region, Latin America and Caribbean region, and sub-Saharan Africa had not significant effects on economic growth (Similar results of previous research) but for west Asia and Pacific areas, Central Asia and Western Europe, and South Asia had significant positive effects on economic growth.

**Keywords:** Privatization, Economic Growth, Developing Countries, Fixed effects

## 1. Introduction

Privatization process is an approach to gradually access to the market mechanism in which the countries with government intervention allocate a part of public and governmental ownerships to individuals and private sector. It is generally believed that the private sector has a higher motivation for activity since it seeks to maximize benefit and in such a condition, limited resources of society are allocated optimally and efficiently.

Now, if market mechanism has been a basic factor towards economic growth and prosperity of industrial advanced countries and if privatization process is considered as an effective step towards achieving a competitive society based on open market economy, it can be hoped that a certain ratio of higher economic growth and development will be achieved as the privatization process increases in the countries.

The objective of this study is to examine the impact of privatization on economic growth in development countries between 2000 and 2008. The study therefore seeks to examine whether the privatization programs implemented by most developing countries between 2000 and 2008 had a positive effect on output growth as suggested by the advocates of privatization

## 2. Theoretical Framework

Theoretical principles concerning privatization in the economy are associated with the following three theoretical principles: Property rights theory, Principal-agent theory, and Public choice theory. The main assumption of privatization theories is that the free forces of market increase the efficiency of a firm.

Property rights theory states that people should respect the allocation of resources in social and economic relations. Owners of companies should address the losses they cause to others against the profit they gain (Starr, 1988). In fact, property rights establish a claim for its personal owners concerning the properties of a private company (Hanke, 1987). It can be said that since managers of public companies have no right to claim for the company's revenues, their managerial efficiency is lower than that of private companies due to lack of any motivation (Megginson, 2005). Alchian believes that public companies are essentially inefficient because their owners (i.e., citizens) who are

scattered have no motive to supervise on the performance of managers of those companies (Alchian, 1965).

In the Public Choice Theory it is assumed that the internal motives of individuals make them seek reasonable maximization of desirability whether in the market or in the policy (Hodge, 2000; Abu Shair, 1997).

One of the characteristics of such companies is the execution of public companies' rules which is imposed on managers. This can be contradictory to the efficiency of such companies. Basically, politicians disturb the activities of public companies. They mostly encourage efficiency in those companies to gain votes (Buchanan, 1972).

As for the public choice theory, in the principal-agent theory it is also assumed that managers of both public and private companies seek to maximize the desirability of the owners of companies. But the point which makes a difference between private and public companies is that moral hazard and adverse selection are less likely in the private companies. External mechanisms (corruption control) and internal mechanisms (motivating the board of directors) are used to minimize such problems (Cuervo and Villalonga, 2000).

Shleifer (1988) believes that higher motivation of private managers towards innovation leads to higher efficiency of most private firms as compared to public firms. Agency theories show that since private firms have clear objectives, it is easier for its owners to audit managers' performance (Vickers and Yarrow, 1998; Dharwadkar et al, 2000) and that managers perform better in private companies than in public companies. Therefore, privatization theories are based on the fact that public companies are inefficient because of their high exchange costs – the costs for protection and execution of ownership and goods right.

Ultimately, it can be said that privatization is the result of expecting the betterment of firms' activities by changing mechanisms the effect on the motivation of managers through institutional differences (Laffont and Tirole, 1991).

Plane (1997) and Barnett (2000) came to the conclusion that privatization had positive and significant effects on economic growth. This is while Filipovice (2005) and Cook and Uchida (2003) drew opposite results. Besides the effects of privatization and economic growth, Barnett (2000) also investigated the relation between privatization and economic and financial modifications for 18 countries out of which 12 were developing countries. He showed that privatization was relevant to macroeconomic modifications that would be fulfilled by a higher economic growth and lower unemployment. Gupta et al. (1999) reviewed various methods of privatization in the transition economies and reported that privatization promotes economic efficiency and growth. Zinnes et al. (2001) make the same argument in their analysis of the impact of privatization on economic growth in the transition economies of Eastern Europe. They report that change of ownership is not enough to ensure the success of privatization. More important, Zinnes et al.'s (2001) report that the mere change of ownership from the public to private sector may have a negative impact on transitional economies. The study concludes that only when there is deep privatization that improved performance could be assured (Samuel adams, 2006)

In a study made by Cook and Uchida (2003) on 63 developing countries in 1988-1997, they came to a negative relation between privatization and economic growth. They showed that a strong negative relation between privatization and economic growth would be achieved if Malaysia and Singapore were set aside.

Similarly, in a study on 92 developing countries Filipovice (2005) came to a negative but insignificance relation between privatization and economic growth.

In this paper, we use a cross-country study to investigate the effects of privatization on the economic growth. For this purpose we using from 41 developing countries in the years 2000-2008.

### 3. Research Methodology

The goal of this study is to investigate the effects of privatization on the economic growth. The choice of the explanatory variable was informed by prior literature (Cook and Uchida, 2003; Plane, 1997; Barnett, 2000; Filipovic, 2005, Samuel adams, 2006).

Growth equation is defined as follows:

$$Y_t = \alpha_0 + \alpha_1 B_t + \alpha_2 Z_t + \alpha_3 PR_t + \alpha_4 D_i + \alpha_5 PR*D_i + \alpha_6 PR*OPEN + \alpha_7 PR*FDI + U_t \quad (1)$$

Where, Y is the growth rate of per capita GDP, B is a set of variables including (SEC) human capital stock (level of enrollment in high school has been considered as an index of human development), (POP) population growth rate, (INF) inflation rate, (FDI) foreign direct investment. Population growth

rate is include to control for the fact that the benefits of an economic policy may be diluted by high population growth rate (Bornschiefer et al, 1978). The ratio of FDI to GDP is included on assumption that FDI may play a significant role in generating positive spillover effects, in terms of new technologies and management skills that contribute to growth (Cook and Uchida, 2003; Samuel Adams, 2006).

PR is privatization revenues as a percentage of GDP, Z is a set of variables encompassing the conditions of investigated countries including variables such as economic openness degree (OPEN) (total imports and exports of a country in terms of a percentage of gross domestic production) and variables indicating political and qualitative factors of each economy that have an important role in economic growth and privatization process. In this study we used variables such as corruption control (CORP), government accountability index (ACCOUNT), and political stability index (POLITC) presented by Kaufmann et al (2009).

$D_i$  is a variable for controlling regional difference. (Basic group of North and West Africa and Middle East countries (MENA Region) has been taken into consideration)

#### 4. Experimental Results

To estimate the growth equation (equation 4) we use the panel data approach. Hausman test for all models estimated that estimation using fixed effects is more efficient than random effects. First, we estimate the model in its simplest form, with variables privatization(PR), foreign direct investment (FDI), indicators of human capital (HC), inflation (INF), the index of economic openness (OPEN), the rate of population growth (POP).( model No.1) then, because economic growth is a function of the growth rates of previous years we input the economic growth with one year lag (GR (-1)) into the model and also we input three variables that representing the political and institutional situation of countries (model number (2)).

in Model 3, we examine the assumption that whether or not the effects of privatization on economic growth is influenced with some variables such as degree of economic openness and foreign direct investment?

In the next step (model No. 4), we examined the role of regional differences in economic growth process. For this purpose we use five دامي variables. The results show that different regions have different average growth rates so that South Asia has the greatest difference in growth rate compared to basic region (MENA region).

In the next step (model No. 5), we sought to investigate the different effects of privatization on economic growth in different regions. For this purpose we input to the model dummy and Multiplicative variables. In the final model (model No. 6) remove the dummy variables and then estimate the model. Compared with model number (5) very interesting and different results is obtained. Estimation results show that privatization in the basic region (MENA region), Latin America and Caribbean region, and sub-Saharan Africa had not a significant impact on economic growth but for west areas and Pacific Asia, Central Asia and Western Europe, and South Asia had significant positive effects on economic growth.

Table 1: Estimates of the economic growth equation using fixed effects

<b>Explanatory variables</b>	(1)	(2)	(3)	(4)	(5)	(6)
<b>GR(-1)</b>	–	0.514 (0.000)	0.461 (0.000)	0.384 (0.000)	0.386 (0.000)	0.446 (0.000)
<b>PR</b>	5.30E-05 (0.0001)	2.54E-05 (0.010)	0.00016 (0.011)	0.0001 (0.0108)	0.0002 (0.00267)	1.44E-05 (0.905)
<b>FDI</b>	0.124 (0.2777)	0.07 (0.325)	0.215 (0.001)	0.248 (0.000)	0.239 (0.000)	0.218 (0.001)
<b>HC</b>	0.022 (0.0386)	0.023 (0.000)	0.02 (0.0001)	0.013 (0.017)	0.014 (0.015)	0.022 (0.000)
<b>INF</b>	0.0157 (0.0006)	0.001 (0.52)	0.001 (0.518)	-0.001 (0.60)	0.0009 (0.732)	0.002 (0.423)
<b>OPEN</b>	0.005 (0.0878)	0.001 (0.521)	0.001 (0.48)	-0.0005 (0.64)	-0.0007 (0.527)	0.0006 (0.682)
<b>POP</b>	-0.719 (0.004)	-0.296 (0.108)	-0.347 (0.06)	-0.671 (0.001)	-0.632 (0.002)	-0.302 (0.114)
<b>CORR</b>	–	-1.18 (0.015)	-1.418 (0.005)	-0.567 (0.21)	-0.648 (0.209)	-1.466 (0.003)
<b>POLIT</b>	–	-0.287 (0.477)	-0.197 (0.601)	0.053 (0.87)	-0.033 (0.922)	-0.072 (0.841)
<b>ACCOUNT</b>	–	0.238 (0.55)	0.367 (0.348)	-0.686 (0.105)	-0.474 (0.294)	0.359 (0.387)
<b>PR*OPEN</b>	–	–	3.32E-07 (0.68)	4.23E-07 (0.488)	-8.43E-08 (0.937)	-1.29E-07 (0.896)
<b>PR*FDI</b>	–	–	-4.06E-05 (0.003)	-4.46E-05 (0.003)	-4.07E-05 (0.005)	-3.79E-05 (0.007)
<b>WECA</b>	–	–	–	1.995 (0.000)	1.964 (0.002)	–
<b>WAP</b>	–	–	–	2.197 (0.005)	2.261 (0.009)	–
<b>SA</b>	–	–	–	3.037 (0.000)	2.71 (0.000)	–
<b>SAF</b>	–	–	–	2.669 (0.000)	2.641 (0.000)	–
<b>LAC</b>	–	–	–	1.457 (0.021)	1.425 (0.036)	–

<b>PR*WECA</b>	-	-	-	-	-4.28E-05 (0.497)	0.0001 (0.058)
<b>PR*WAP</b>	-	-	-	-	-8.67E-05 (0.206)	0.0001 (0.146)
<b>PR*SA</b>	-	-	-	-	-3.78E-05 (0.849)	0.0002 (0.027)
<b>PR*SAF</b>	-	-	-	-	-0.0003 (0.000)	-0.0001 (0.504)
<b>PR*LAC</b>	-	-	-	-	-0.0001 (0.271)	-7.59E-05 (0.603)
<b>R-squared</b>	0.18	0.49	0.52	0.557	0.562	0.532
<b>D-W</b>	0.853	2.296	2.27	2.301	2.306	2.297
<b>Prob (F)</b>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**Note:** The parentheses indicate significance level of estimated coefficients (P-values).

WECA=West Europe and Central Asia, SA=South Asia, LAC=Latin America and Caribbean,  
 WAP=West Asia and Pacific, SAF=South African

## 5. Conclusion

In this study, we sought to investigate the influence level of privatization on the economic growth, but as we explained in the review of experimental models, the results of previous studies were not consistent in the significance of privatization effects on the economic growth. In this study, we used three qualitative variables (corruption control, political stability and government accountability index) that influence on the confidence and internal security of economy for agents and lead to economic growth and establishment of a suitable environment for privatization development. In this study, we considered 41 developing countries which were not so much different in development for the years 2000-2008.

Results of OLS estimation method with consideration of quality and institutional variables (control of corruption, political stability and responsive government) and the control variables multiplicative for the different areas showed that privatization in the MENA region, Latin America and Caribbean region, and sub-Saharan Africa had not significant effects on economic growth (Similar results of previous research) but for west Asia and Pacific areas, Central Asia and Western Europe, and South Asia had significant positive effects on economic growth.

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