



## **The Impact of Privatization on Economic Growth: The Case of Uzbekistan**

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### **ABSTRACT**

This paper clarifies the macroeconomic gains from privatization during the transition period in Uzbekistan. The choice of this country is due to its stable macroeconomics performance beginning from 1996 onwards, and author's related work experience at The State Committee of the Republic of Uzbekistan for Privatization. Based on the macroeconomic empirical literature on growth, we supplement the standard model of gross domestic product growth with other transition-specific variables to investigate the impact of privatization on economic growth. In so doing, we found that economic growth was significantly influenced by investment (more importantly investment to the education), and employment growth. Several other institutional components specific to the transition process, particularly the private sector and capital market development, and small-scale privatization were also found to be significant determinants of economic development in Uzbekistan.

**Keywords:** Privatization, Transition Economy, Economic Performance, Uzbekistan

**JEL Classifications:** O21, O47, P26

### **1. INTRODUCTION**

From the very beginning of transformation of the Former Soviet Union (FSU) member countries from socialistic system to capitalistic one, the privatization was identified as a main component of transition reforms (Berg and Sachs, 1992; Estrin, 1994). It was aimed to address the fundamental issues of socialistic approach (Kokaisl, 2013) to economic governance (inefficiency of state-owned enterprises [SOE] and lack of market oriented approach, innovation, etc.) (Ellman, 1989). However, lack of domestic savings, and underdeveloped institutional framework (especially regarding the capital markets) (Varivoda et al., 2010) proved inappropriateness of traditional methods of privatization (tender and public offerings) (Blanchard et al., 1997). Therefore, new methods of privatization, including manager-employee buyouts and mass privatization (the sale of firms at zero or nominal price) were developed and applied. And in this paper, we examine the impact of the privatization on economic performance of Uzbekistan during the post-independence period (1991-present).

The literature on the impact of privatization on firm performance in transition economies, as summarized by Djankov and Murrell (2002), confirms the predicted improvements in financial performance and productivity of these firms as a result of privatization. But Nellis (2003) and Stiglitz (2002), in their study of firms in Russia, found that privatization had a smaller impact on performance compared to those of Central Europe; and the authors explain it by the widespread insider ownership and underdeveloped capital markets.

Moreover, the governments of these countries are trying to privatize (more specifically, to transfer state-owned (and operated) enterprises to private owners and/or managers in order to create a viable private sector, capital markets and other institutions and processes. However, the pace of privatization has not been the same across the post-Soviet territory: Whereas some of the Central and Eastern European countries were considered to be far ahead in privatization process, Uzbekistan lagged behind their former peers from socialist camp – Czech and Slovak Republics, Hungary, Poland, Estonia and some others<sup>1</sup>.

<sup>1</sup> EBRD Transition Report, 1997. p. 90.

However, the studies noted above and other related studies looked at privatized companies in several FSU countries. And our focus is the impact of privatization in national economic performance in one of transition economies – in the case of Uzbekistan.

The choice of this country is due to its stable macroeconomics performance beginning from 1996 onwards, and author's related work experience in as a lead specialist at The State Committee of the Republic of Uzbekistan for Privatization, Demonopolization and Development of Competition for more than 4 years.

The literature on the macroeconomics of privatization at theoretical and/or empirical level is meagre, with an exception of Hansen's work (1997), who examined the choice of technology under different privatization methods and considered how these privatization schemes might generate multiple equilibria at the macro level. Also, Schipke (2001) sketches some general macroeconomic themes related to privatization, but does not undertake econometric analysis. In a paper by Bennett et al. (2002), a government's optimal privatization policy was examined, taking into account the general equilibrium interactions between firms.

Hence, the purpose of this paper is to study the relationship between the privatization and economic performance in one of transition economies, Uzbekistan, by elaborating an econometric model to identify factors, including privatization, that affected the macroeconomic performance of a country.

The work is organized as follows. In the next chapter, we briefly review the literature related to the theoretical framework and empirical studies on the impact of privatization on the economic growth in Uzbekistan. Chapter III describes key facts about privatization process in this FSU economy, and we discuss the estimation method and the variables used in Chapter IV. While Chapter V discusses shortly the estimation results, in the last chapter, we interpret our findings, and outline directions for future research. The variety of data sources and summary of the data we use is reported in the Appendixes.

## 2. LITERATURE REVIEW

Though many empirical studies to measure the effects of privatization on the privatized firms have been conducted throughout the world, a few recent studies have attempted to analyze the impact of privatization on economic growth in developing countries. Before presenting some of them, we, following Filipovic, define privatization as “a method of allocating assets and functions from public sector to the private sector” (Filipovic, 2005). Thus, the privatization makes a fundamental change of ownership that transfers it from public to private sector, and alters incentives for the respective owners and the objectives of the firm (from politically oriented to profit maximizing).

Boubakri et al. (2009), using generalized method of moments estimation techniques, studies privatization and economic growth dynamics using a panel data of 56 developed and developing countries for the period 1980-2004. As for proxies for privatization process, they measured privatization through the extent of

privatization efforts (proceeds), and the method of privatization that proxy for government commitment. They found that the method of privatization is positively related to economic growth.

Similar findings were noted by Bennett et al. (2002), who examined effects of different methods of privatization on growth in transition economies using cross-country panel growth model from 1990 to 2003. They found that only privatization by voucher system was significantly associated with (faster) economic growth.

Privatization and economic growth nexus in Iran was studied by Shahraki (2011), using auto regressive distributed lag method. His results showed positive relationship between these variables, however, openness of the economy of Iran has not helped in its economic growth.

Filipovic (2005) also analyzed the impact of privatization on economic growth using extreme bound analysis, and concludes that privatization is a potential successful policy of economic growth, as long as implemented along with other economic reforms.

Cook and Uchida (2003) applied a cross-country growth regression analysis using the extreme bounds analysis. They used data of 63 developing countries for the period from 1988 and 1997, and found that privatization has contributed negatively to economic growth. They explained this result by the lack of competition.

A study using more recent data (1990-2000) was conducted by Katsoulakos and Likoyanni who investigated the relationship between privatization and macroeconomic variables using country-level panel data of OECD countries. They also examined the link between privatization receipts, budget deficit, public debt, output growth and unemployment rate. Their estimation results indicate that there is no statistically significant relationship between gross domestic product (GDP) growth rates and the privatization proceeds of the previous period.

In Barnett's study (2000) of panel data for 10 developing countries and 8 transition economies, the impact of privatization on fiscal variables, growth, unemployment and investment was explored. He indicated that privatization is positively correlated with real GDP growth rates (increase in privatization proxy by 1% would be associated with an increase on the real GDP growth rate of 0.5% in the year of privatization, and 0.4% in the following year).

A study on countries that have undergone large-scale, well-planned privatization process (Chile, Jamaica and Mexico) was conducted by Warren (1998) though varied in approaches. In Mexico and Jamaica, for example, the chow test confirmed a positive statistical relationship between privatization and output. However, in study of Chile, he found that TFP was unaffected by privatization at macroeconomic level. Neither privatization was found to have statistical relationship with total output.

Plane (1997) carried out a study on 35 developing countries for the period 1984-1992 using probit and tobit models, and found that privatization positively affected GDP growth. According to his work, such effect was more significant for activities of a

public goods, compared to the other sectors. And he concludes that, on average, privatization reforms increased economic growth in these countries from 0.8% to 1.5% during the study period.

### 3. THEORETICAL FRAMEWORK

In this subsection we specify equations for real aggregate demand and supply; and in each privatization is an argument. Combination of these two equations provides us another expression in which real GDP depends on the privatization and a variety of other macroeconomic factors.

By convention, the empirical literature on growth uses a Cobb-Douglas production function, so do we as it simplifies our analysis noticeably. Consequently, we apply a general formulation of the determinants of real GDP, with a wide range of independent variables.

We begin by specifying a real aggregate demand ( $Y^d$ ), with the sign on the right upper-hand of a variable is that of the relevant partial derivative:

$$Y^d = f(P^-, M^+, L^+) \quad (1)$$

According to the above definition of real aggregate demand, the real price level  $P$  negatively affects it, and both privatization ( $M$ ) and employment ( $L$ ) have positive effect on the aggregate demand (as a result of privatization, the new owners of shares feel richer as they now have more assets, and it raises overall demand for goods; we also assume that firms employ more labor ( $L$ ), and consequently, more demand as long as they get their earnings).

On the other hand, real aggregate supply ( $Y^s$ ) positively depends on the price level, among other factors:

$$Y^s = f(P^+, M^+, S_p^+, S^+, K_p^+, A^+, G^+) \quad (2)$$

Where:

$P$  - is the price level;

$M$  - is the privatization;

$S_p$  - is the share of the private sector in the national income;

$S$  - is the capital market development level;

$K$  - is the private sector capital stock;

$A$  - is the human capital stock;

$G$  - is the public sector infrastructure capital stock.

The positive effect of privatization on productivity can be observed well at the microeconomic level due to better incentives compared to budget constraints of SOEs. The major contribution of the private sector is their ability to fill the gaps left under communism by biases towards high capital intensity and against the provision of services (EBRD, 1999). Thus, increase in the output of private sector raises  $Y^s$  as it is a part of national income.

Capital market development level,  $S$ , is related to more widespread and cheaper finance, reducing firms' need on internally-generated funds for further investment, in this manner raising  $Y^s$ .

The public sector infrastructure capital stock (including both physical and institutional infrastructure) is recognized to raise the growth rate as long as the infrastructure investment are efficient<sup>2</sup>. Hence, we expect at best a weak positive relationship between public sector investment and real aggregate supply.

Now, as both aggregate supply and aggregate demand are accounts of national income, we can set that  $Y^d = Y^s$ , and solve for national income,  $Y$ :

$$Y = y(P, M, L, S_p, S, K_p, A, G) \quad (3)$$

We use the equation above as the basis for model specification to evaluate the impact of privatization on the economic performance.

### 4. SOME STYLIZED FACTS ABOUT PRIVATIZATION IN UZBEKISTAN

Gradual transition to the market economy, including privatization of state-owned property since 1991 has caused important changes in functioning of economic units in Uzbekistan. In the following chapter, we attempt to analyze the history of step-by-step privatization in Uzbekistan, along with its failures and outcome.

Transition to market economy in Uzbekistan during the post-Soviet period has caused essential changes both in the general conditions of functioning of subjects of an economy, and in property relations.

The private property as a variety of the property of citizens has been legalized for the first time in Uzbekistan in 1990. Unlike a personal property which meant personal consumption, private one served for the purposes of profit (income) extraction.

After declaration of the state independence of Uzbekistan, and its own model of transition to the market economy, the real strengthening and the further development of a private property became priority. At first, the Law "On the property," then the Constitution of the Republic of Uzbekistan have confirmed a private property as one of necessary preconditions of functioning of market economy. The major stimulus to development of private business in Uzbekistan was the constitution-principles: Freedom and equality of various models of ownership, freedom of economic activities.

However, fastening of possibilities of private property development only in a legislative order did not solve a problem of formation of private business at the initial stage of reforms, and their practical realization became necessary, as the public sector (so-called "public property") completely dominated in a national economy throughout many decades. Therefore, at the initial stage of reforms the major priorities were the creation of conditions for private property expansion to the means of production by denationalization and privatization of objects under the state

2 The transition economies' past performance in infrastructure investment - from the communist era - exhibited extreme inefficiency (World Bank, 1996).

ownership, and stimuli for the development of small and middle entrepreneurship.

In fact, the formation of new economic structure began simultaneously in two ways in Uzbekistan:

First, by reorganization of the pre-existing enterprises through privatization, transformation to new organizational-legal forms, allocation of their structural parts in independent economic units.

Second, by stimulating the creation of the new enterprises in an initiative order, and developing the individual entrepreneurship activity.

The process specified above was based on key principles of economic policy of the transition period, formulated by the first President Karimov. The main conceptual positions are the following:

1. The multi-structure economy should be formed not in interests of realization of ideology and political ambitions of separate groups of citizens (parties, movements etc.), but in the best interests of achieving the social and economic transformations approved by the overwhelming majority of the population of Uzbekistan.
2. The State, by initiating process of formation of multi-structure economy, defines its directions, and directly participates in solving the each of their problems. Active participation of the state allows the realization of this process by legal means.
3. All forms of ownership and managing should be in the equal economic conditions, and each of them can have the niche, and the market is the main judge in their competitive struggle.
4. Orientation of state regulation system for the process of multi-structure economy formation through the development of such forms of ownership and management that are most effective in the conditions of Uzbekistan; they should correspond to mentality of the Uzbek people, their historical traditions, nature-climatic conditions, a present condition of economic development and other related factors.
5. Stage-by-stage formation of the multi-structure provides smooth, evolutionary transformation of the pre-existing productive and economic relations.
6. Non-admission of stratification of the society on extremely rich and poor as a result of multi-structure economy formation, and the realization of anticipatory effectual measures on protection of socially vulnerable groups of population, and of the households with the fixed incomes.

One of the main, and, at the same time, complex issues in the course of transformations to the market economy (in the formation of multi-structure economy) in the post-Soviet countries was the privatization of the state property, and formation of new relations of the property on this basis. Importance of this question arises by the fact that it infringes on interests of not only managing subjects, but also of all residents of the country.

Such large-scale privatization has never happened in any FSU country. The purpose of privatization in these countries consisted of creating the base conditions for the formation of market system

of management; including the formation of private property institution, the creation of economic and legal base and market economy institutes without which functioning of non-public sector was impossible.

Laws “On the property,” “On the denationalization and privatization” became one of the first regulations, accepted in 1991. Acceptance of the Civil Code in 1996 made important changes in civil legal relations in the conditions of market economy. According to this code, the property of citizens and of all not-state legal bodies became object of the private property. The sphere of the bases for the property right has considerably extended since then, and the realization of the private property rights and their legal protection were fixed by law.

More than 200 normative-legal documents regulating processes of denationalization, privatization, development of private business were accepted since then, including: “On joint-stock companies and protection of the rights of shareholders,” “On societies with the limited and additional responsibility,” “On economic associations,” “On private enterprise,” “On the warranty of freedom of entrepreneurship activity,” etc.

The countries with transition economies, including Uzbekistan, differ with starting conditions for the transition to the market economy, specificity of structure of the economy, historical traditions and mentality of the people, and other factors influencing the solution of problems of state property privatization. They cause impossibility of application of uniform approach to privatization for such countries. Therefore, taking into account features of its own model of transition to market relations in Uzbekistan, the principles and approaches to the state property privatization have been developed and carried out.

Below are the most important principles and approaches:

- Definition of forms of privatization taking into account the interests of members of trade unions;
- Observance to the requirements of the antimonopoly law;
- Combination of retribution and non-retribution, and of transfer of the state property;
- The equal rights of all citizens to receive a share of the property which are subject to retribution and non-retribution privatization;
- Maintenance of social security for all citizens;
- Publicity, state and public control over realization of denationalization and privatization measures.
- Denationalization and privatization to be carried in the following forms:
  - Transformation of the state enterprise to an economic societies or association;
  - Sales of the state property to non-state legal bodies and citizens through auction.
- However, privatization in Uzbekistan had a number of features, including:

Refusal of free privatization. In many countries of Eastern Europe and the post-Soviet territory - such as in the Czech, Slovak Republics, Poland, Russia, Kazakhstan, and others,

mass privatization assumed distribution of shares (stocks) of state enterprises among the population either for free or for the minimum payment, as a rule, by distribution of vouchers. In Uzbekistan, despite a number of persevering internal and external offers to direct privatization through vouchering, such method was refused due to the following reasons:

First, vouchering, which assumes estimation of the state property cost and its egalitarian distribution among all members of a society, would mean not confirming the observance for social justice, but the perverted form of socialist faceless leveling.

Secondly, free distribution of the property would not lead to care of its safety and augmentation. The one who gets it free of charge would not appreciate it as carefully as the property he gets through his capital. Such approach to denationalization and privatization was simple: To leave from faceless proprietor of vouchers and transfer of property to the one who will manage correctly and provide the greatest efficiency of its use.

Such approach allowed not only to direct the means received from privatization to support the enterprises, but also to develop the small and medium-sized enterprises (SME), i.e., in financing and crediting of priority branches and sectors of the national economy.

Another distinct feature of privatization in Uzbekistan was its addressed orientation. It is alternative to various methods of egalitarian distribution of the property to all; and it is rather directed to social protection of the most vulnerable groups of population. For example, during the course of privatization of tenancy, they were free of charge for the employees in non-productive sphere such as national education, public health services, culture and other budgetary organizations. Besides, members of trade unions had the opportunity to repay for the shares of the enterprises they were working on favorable terms, and to use objects of the social infrastructure free of charge. Also, the collectives of agrarian firms received preferences in privatization of the State farms, gardens, etc.

In addition, the whole system of privileges was created for privatization, including:

- A fixed capital with deterioration of more than 70%, and objects of a social infrastructure (first-aid posts, eateries, public showers, etc.) was transferred to the new proprietor on non-retribution (free of charge) basis;
- The costs to be directed to the development of manufacture were excluded from redemption cost;
- Preference shares were distributed free of charge among the members of trade unions, pensioners, invalids of work;
- Each member of the trade union, who had subscribed for the shares of the enterprise where they were employed, got them on a face-value; and the contract was signed between the proprietors of the privatized enterprise, their branches, and the State Property Committee. According to those contracts, the enterprises were obliged to maintain such production volume for the term up to 3 years below which it might cause huge production fall. Those contracts prohibited the firing the pregnant women, invalids, persons at a pre-pension age.

Another feature of privatization in Uzbekistan was its realization along with the solving the issues of enlargement and demopolization of the already formed industrial and administrative structures. Objects of trade and service spheres were excluded from the structure of many privatized enterprises as independent units of management, and according to economic feasibility and technical possibility - both auxiliary and serving and sites as well. In the first years of market reforms, the sectorial ministries have almost been completely liquidated, and market structures - republican and territorial economic associations (concerns, associations, corporations, etc.) were established on their base; their founders became the State and the enterprises which have entered into their structure. Furthermore, in process of finding private proprietors for the enterprises, measures on decentralization of management of the enterprises, and of the re-organizations of some sectors of economy (the local industries, building, motor transport, etc.) were implemented.

And another major feature of privatization in Uzbekistan was that the considerable part of income from privatization were directed to post-privatization support and business development. Throughout all 2<sup>nd</sup> stage, the financial resources acquired from privatization of the State assets were accumulated on the accounts of special off-budget fund, rather than directing them to the budget as it took place almost in all countries in the post-Soviet territory. Dividends on the state share of actions remained at the full disposal of the privatized enterprises and were directed to their reconstruction and modernization. Besides, in that period, 20% of receipts from privatization went on crediting of the privatized enterprises of various branches of a national economy.

Since then, the financial resources from privatization have been used mainly for the purposes of reforming the economy. For example, 25% of the financial resources from the sale of shares were transferred to the privatized enterprises themselves for measures of manufacture modernization and the replenishment of assets. More than half of the funds from the sale of shares of the enterprises of some industries, which required fast re-structuring and have special great value for a national economy (electric power industry, telecommunications, a railway transportation, etc.), were transferred to these enterprises. Besides, another considerable part of the privatization funds was used to support SME, and formation of a market infrastructure.

The program approach and step-by-step implementation of privatization. Denationalization and privatization of the state property were executed on the basis of State Programs and the governmental decrees. Overall, the privatization included the following phases:

At the preparatory phase (1990-1991), forms and privatization methods, comprehensible to the conditions of Uzbekistan were studied and the Law "On the denationalization and privatization" was passed, and other legal documents which made further normative-legal basis for transformation of property relations were prepared.

The first phase (1991-1993, so-called "small" privatization). At this phase, of privatization of the State housing fund, the SME in trade,

services, local and light industries, the food-processing industry, motor transport, building and manufacture of building materials allowed almost 5 million citizens to become proprietors of the housing units, and more than 50000 proprietors of units of trade, consumer services, public catering, consumption, etc. appeared (almost 95% of them didn't have the status of the legal body before). The collective enterprises and joint-stock companies of the closed type, small and medium units of economy branches such as "Makhalli sanoat" (the local industry), "Uzbitsoyuz" (consumer services), "Uzbeksavdo" (trade) were established and privileges to trade unions were granted. This phase is characterized also by transfer of farming areas to people living in rural areas for private use.

The second phase (1994-1998). During the 2<sup>nd</sup> phase, thousands of middle and large enterprises have been involved in privatization process by transforming the State enterprises into joint-stock companies of open type ("large-scale privatization"). Thanks to mass release of shares of the joint-stock companies established on the basis of the State enterprises, the foundations of securities market were formed. As a result of large-scale privatization of all industries (except the base ones), including agriculture, the class of proprietors of about 2 million owners (whom belonged the actions, shares, securities of the privatized enterprises), 3 million owners of farms, 85 thousand owners private and small enterprises, 14 thousand owners of real estate units appeared. During this period, the first Government Program on deepening of processes of denationalization and privatization of the State Property was passed.

The third phase (1998-present). The 3<sup>rd</sup> phase was characterized by defining objects under the State property as having strategically importance for the national economy, according to the resolutions of the Cabinet of Ministers of Uzbekistan and, thus, not privatizable. Since 1998, almost all objects and the enterprises, not listed as strategically important, have been privatized. Besides, denationalization and privatization at the present stage of economic development differs by its individual, differentiated approach to shifting the model of ownership of the large strategic State enterprises of the Republic with attraction of the international technical and financial advisers. Privatization of industrial giants, auxiliary and supporting enterprises of the fuel and energy complex, chemistry, metallurgy and mechanical engineering was implemented with wide attraction of the foreign capital.

Later, power, cotton processing, railway transportation, municipal services and the chemical industry were reformed through re-

structuring, demonopolization and privatization, along with management system improvement.

Consequently, decentralization and privatization measures, as a part of post-independence economic reforms towards market economy, led to increasing role of non-state ownership, especially, in GDP production (Figure 1).

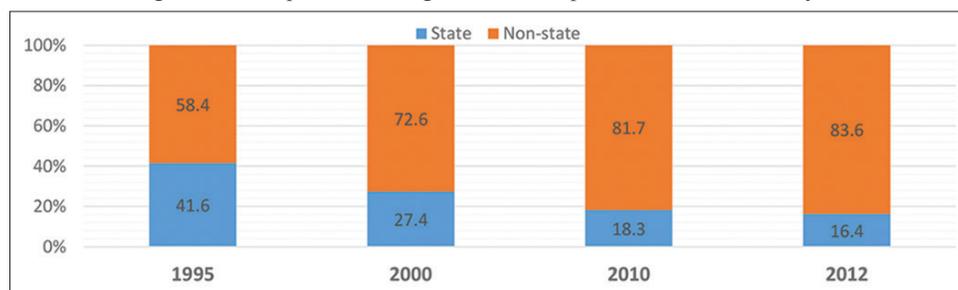
However, the absence of experience and of theoretical base for large-scale transformation of the property relations, along with lack of quantitative approach to its realization have caused a number of errors and miscalculations in privatization. For instance, during the first years of privatization, the significant number of the enterprises in building, trade and other sectors of economy were completely sold in the form of the property for trade union members. It was supposed that establishment of the collective enterprises would serve as the powerful factor of increasing the production efficiency. Nevertheless, in Uzbekistan, as well as in other CIS countries, such establishments did not produce the expected results: Members of trade unions did not become effective proprietors, and managers appointed did not prove their solvency as the hired managers, as they did not have sufficient incentives and potential. Besides, though each member of trade union received a small share in the base capital of the enterprise on favorable terms (at balance cost and by installments), they were insufficient for prompting their owners to measures for effective functioning of the enterprise whose co-owners they became. Lack of knowledge and necessary experience in efficiency improvement further worsened the situation.

In addition, easing of the direct State control over activity of the privatized enterprises in a situation where new proprietors have not realized their control functions over management created the favorable environment for heads of the trade unions to use the property of collective enterprises at their disposal, and in their personal interests.

Also, the idea that members of trade unions, receiving the shares of the enterprises transformed to joint-stock companies would become effective proprietors did not prove itself.

Furthermore, a hasty sale of large shares of some enterprises, which had great importance for a national economy, led to lessening the role of the State in regulating their activities. Therefore, urgent measures were required to increase the share of the State in the stock capital of the joint-stock companies, formed on the basis of the former state enterprises, up to 25% during 1997-1998. In

**Figure 1:** Transforming structure of production of gross domestic product in Uzbekistan, by the forms of ownership



Source: State Statistics Committee of the Republic of Uzbekistan

the subsequent years, the State share in the stock capital of some joint-stock companies, in particular, those of the wine-vodka enterprises, has been raised to 51% by increasing stock capitals of these enterprises.

Between 2001 and 2002, the State Property Committee of the Republic of Uzbekistan, together with economic associations, carried out the inventory of stock capitals of joint-stock companies for the purpose of increasing resources directed for realization in the securities market, including to foreign investors, at the expense of reducing the shares of trade unions and other shareholdings. As a result of such measures, the share of the actions distributed among the trade union members was reduced to 10% of their total value.

In spite of the fact that re-structuring of shareholdings at the initiative of the state was a compulsory measure directed to elimination of former miscalculations at earlier phases of privatization, it negatively affected trust of investors to the state as the guarantor of their interests, and led to washing out of the shareholdings which were available for shareholders. For example, after re-structuring of shareholdings in 1998, the share of PIFs in the stock capital of many enterprises reduced from 25-30% to 5-10%. As a result, these funds were not able to influence activities of enterprises actively.

Another fault during privatization was mass transformation of the average and above-average enterprises to open joint-stock companies. The fact that establishment and functioning of such organizational-legal forms of economic units demand the additional non-productive costs related with release and placing of actions, conducting the register of shareholders by the independent registrar, publication of results of economic activities, obligatory executing the audit, etc. was not considered, and such costs negatively influenced to results of their financial and economic activities.

Experience of Uzbekistan and other FSU countries in privatization testified that commercial organizations in the form of joint-stock companies should be transformed either into the large enterprises or the companies in the form of the integrated corporate structures. On other hand, the middle enterprises should be transformed to societies with the limited and additional responsibility.

There were also other mistakes in the course of privatization of the state objects. For example, in first half 1990s many former state objects were sold to private property at balance cost which was considerably below the market prices. Furthermore, those objects were re-sold at market costs, or were re-orientated to warehouse and other premises by new owners without observance of the terms concluded with the State Property Committee on preservation of specialization of the enterprise for a certain period of time. Besides, deliberate understating of costs of privatized objects, corruption and other cases of illegal actions were revealed by subsequent checking.

Priority directions of privatization of state property for 2003 and later were defined in the Decree of the President of Republic Uzbekistan #3202 on 24.01.2003 "On the measures of cardinal

increasing in the share and importance of a private sector in the economy of Uzbekistan." The primary goals of the decree are the following:

- Increasing the role of a private sector in economy of Uzbekistan while reducing the share of the State through deepening of privatizing the state enterprises and transforming them entirely into private property;
- Reforming the management system of privatized enterprises by introduction of corporate governance principles, increase of responsibility of the executive office and the supervisory board for the final results of economic activities and strengthening the role of shareholders in management;
- Reforming the management system in branches of economy by prevention of intervention of associations, the companies and other economic associations into operative activities of the enterprises in their structures.

The increase in the number of proprietors in many aspects depended on successful adaptation of the population to occurring changes, formation of productive models of the social and economic behavior adequate to the changing economic situation. Changes became obvious in dominating earlier the view the state as "general benefactor," and the citizens began to depend on their own possibilities.

As a result of privatization, development and support of entrepreneurship, the following types of economic units, corresponding to economic forms, have arisen in Uzbekistan:

- Individual business units, including the dekhkan farms;
- Private enterprises;
- Farms;
- Economic associations;
- Economic societies (joint-stock company, Open-type stock company);
- Co-operative societies (including agricultural ones);
- State enterprises in the form of the unitary enterprises.

Realization of programs of denationalization and privatization, along with the large attention of the State to stimulate and support of development of a small-scale business, led to total change in structure of managing subjects by their patterns of ownership. If the basis of Uzbekistan economy were the State Enterprises and collective farms in 1991, nowadays non-public ownership became prevailing almost in all sectors of a national economy.

On the basis of the above-stated, we can draw conclusion that as a result of privatization of economy, market transformations in Uzbekistan, the bases of multi-structure economy were formed. Its further development will depend on deepening of privatization process (including attraction of foreign investments), formation of market relations, and improvement of mechanisms to support private entrepreneurship.

## 5. MATERIALS AND METHODS

In this section we first outline the estimation methods, discuss the data used, along with summary statistics.

As noted earlier, Equation (3) is the basis for our empirical work. Our approach is to supplement the standard model of GDP growth with other factor inputs (private sector development, privatization, capital market development and government capital expenditure).

Consequently, we estimate a model in the form of:

$$GDP_{gr\_pc} = a_1 + a_2 INV_t + a_3 EMP_t + a_4 IHC_t + a_5 KMD_t + a_6 Sp_t + a_7 PRIV_t + E_t \quad (4)$$

Where,

GDP - Log of gross domestic product per capita growth;  
 INV - Log of change in the capital stock (gross fixed capital formation, K);

EMP - Log of employment (L);

IHC - Log of investment in human capital (A);

KMD - A measure of stock market development (stock market capitalization as a percentage of GDP, S);

Sp - The share of the private sector in the national income;

PRIV - Privatization index of EBRD.

The estimation period covers the post-independence period, from 1991 till 2014. And in the equation above, we predict all variables included to have a positive effect on national economic development.

As mentioned, our study exploits a data set macroeconomic performance in Uzbekistan since its independence in 1991 as a result of several transition-specific reforms, including privatization. The data set used for our study was collected from online database of the World Bank (for macroeconomics indicators), EBRD (for transition indicators), ILO (for employment), and the Committee of Statistics of the Republic of Uzbekistan (for the private sector share).

The statistical summary of the data variables used in the estimation is reported in Table 1:

## 6. ESTIMATION RESULTS

Using the date from the sources shown above, we employed time series data analysis to analyze the relationship between growth and privatization.

And the equation below represents the estimation results of equation (4) using STATA software. The significance levels are

**Table 1: Summary of the data used**

Variable	Obs	Mean±Standard deviation	Min	Max
GDP (per capita growth)	24	2.504167±5.211399	-13.3	8
Employment	24	53.41667±0.7877689	52.5	55.3
Investment to the human capital	24	9.375±0.0442323	9.3	9.4
Stock market capitalization	24	1.654167±0.3740834	1	2
Private sector share in the national income	22	18.23636±2.968653	13.6	23.7
Privatization index	24	1.627083±0.3159455	1	2

GDP: Gross domestic product

marked with asterisks as following: \*\*\* - 1% or less; \*\* - <5%. The standard errors are given in brackets below each coefficient:

$$GDP_{uzb} = -370.5^{**} + 0.171^{***} INV + 1.48^{***} EMP + 31.4^{**} IHC + 0.76 KMD - 0.28^{**} Sp + 1.35 PRIV$$

$$\begin{matrix} [134.2] & [0.04] & [0.44] & [15.5] \\ [0.85] & [0.15] & [1.22] & \end{matrix}$$

$$R^2 = 0.94; n = 22$$

Our estimation results are in line with the related literature findings. Indeed, we find that privatization is one of favorable economic conditions in a country characterized by relatively high GDP per capita and relatively high employment rates.

More specifically, despite the strong influence of time-specific factors during the transition process, the regression results provide a practical and predictable explanation of national economic performance in Uzbekistan in terms of factor inputs, including privatization.

The coefficients on factor inputs are stable and significant, and the findings are consistent with the type of growth process identified by Barro (1991) and many others, with the coefficient on investment to the human capital estimated to be around 0.17. The coefficient on the the share of employment in total workforce is also highly significant (1.48), but lower than typically obtained in the West, perhaps because of labor hoarding in the immediate post-transition period. Additionally, the investment to the human capital, as measured by the education expenditure share in GDP, as expected, has the greatest impact on the economic growth.

The development of the stock market, though statistically insignificant, has anticipated impact on GDP growth. Accordingly, this suggests that the growth-enhancing effects of capital market development relied on the growth of GDP.

Negative coefficient on the private sector share can be explained by the fact that newly privatized firms did not become effective proprietaries, and the managers appointed did not prove their creditworthiness as the hired managers, as they did not have sufficient incentives and entrepreneurship potential during the initial periods of transition.

Finally, the privatization index, dummied by small-scale privatization index of EBRD, has expected value and sign, though it is statistically insignificant. These findings suggest that Uzbekistan has in a position to exploit the improved market conditions in the late 1990's.

## 7. CONCLUSION

Privatization played crucial role in the transformation process in Uzbekistan. Through privatization the government created incentives for enterprises to increase production and improve quality fueling economic growth. The most impressive feature of privatization in the transition economies has been the speed and scale at which it occurred. The reforming governments of

the late 1980s and early 1990s, including Uzbekistan, managed successfully to transfer the huge state owned sectors into largely private hands. However, this led into situations where other crucial aspects of the business environment, besides for private proprietorship, were not yet sufficiently developed to support the private sector. The most serious problem for privatization as a policy has been the weak legal and institutional environment. In such cases, it rarely appears to have improved national economic performance, though it did provide the government of Uzbekistan with much needed revenues by selling state assets. Thus, in this paper we investigated the impact of privatization on national economic performance in Uzbekistan.

Our main objective was to estimate, using time series data, a growth equation model (modified with some transition-specific factors, including private sector development, privatization, capital market development and government capital expenditure) for the period 1991-2014. In so doing, we found that economic growth was significantly influenced by investment, employment growth and more importantly, investment to the education. Several other institutional components specific to the transition process, particularly the private sector share and capital market development, were also found to be significant determinants of economic development in our sample. It also should be noted that this study has some shortcomings, including the limited number of observations, the lack of data for the value-added, privatized companies' profits/revenues/sales, their market/book values, etc. But they can be overcome by panel data methods through including the data of other FSU countries into the model. And as a possible direction for the related research, the evaluation of Uzbek privatization performance should be considered in the context of initial conditions at the outset of transition and policy objectives as well, as Uzbek government declared at the start of reforms its adherence to socially oriented market economy and a strong social policy, and it has become increasingly reluctant to give up ownership control over large enterprises since then.

## 8. ACKNOWLEDGMENT

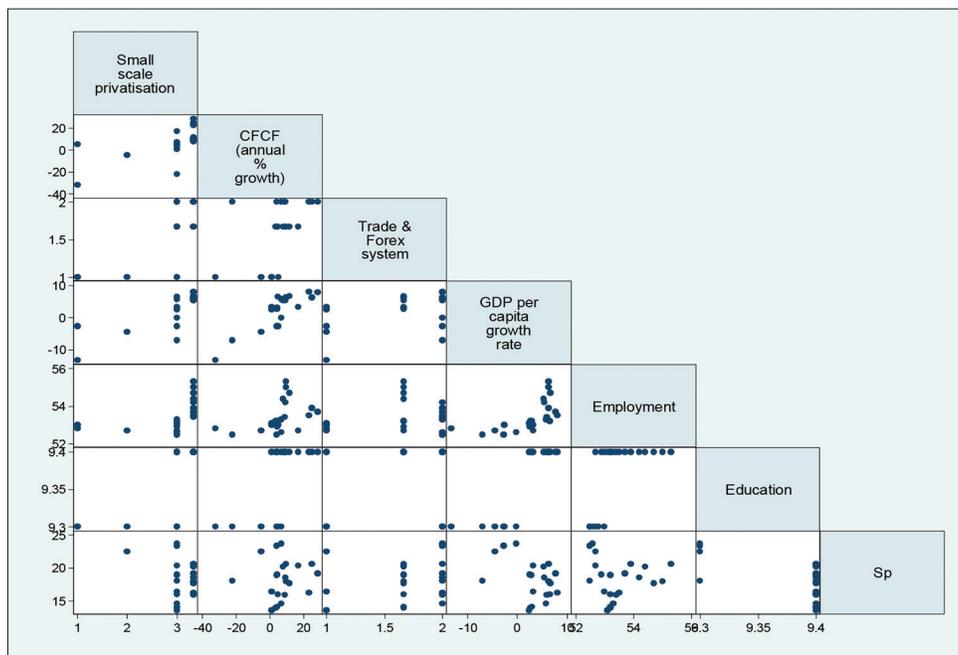
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## APPENDIXES

**Appendix Figure 1:** Correlation matrix of the variables used



**Appendix Table 1: Pairwise correlation matrix of the variables**

	GFCF	Employment	Education	Stock market capitalization	Private sector share	Privatization index
GFCF	1.0000					
Employment	0.4206	1.0000				
Education	0.5955	0.5490	1.0000			
Stock market capitalization	0.4735	0.1895	0.2431	1.0000		
Private sector share	0.0869	-0.0481	-0.5955	0.1678	1.0000	
Privatization index	0.5728	0.1171	0.5483	0.4069	0.0696	1.0000

GFCF: Gross fixed capital formation