

Privatization versus Debt Stock: A Preliminary Analysis on Turkey

Özelleştirmeye Karşı Borç Stoğu: Türkiye Üzerine Bir Önçalışma

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Yazar, 1999 yılından itibaren Dokuz Eylül Üniversitesi; İşletme Fakültesinde öğretim üyesi olarak görev yapmaktadır.

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Abstract

Large-scale privatization efforts began to have an important place in governments' economic programs in many countries in the last two decades including Turkey. The main goal of privatization is to put an end to the inefficiencies of the state owned enterprises by freeing the resources of this huge organism to enhance the living standards of the people. A successful privatization process requires supportive market environment with four essential elements of macroeconomic stability, hard budget constraints, competitive markets, and adequate property rights. This study focuses on the hard budget constraint and investigates whether the Turkish government substitutes privatization revenue for the debt stock or not. It is expected that as privatization revenue increases, debt stock and/or public investment will decrease. Our results for 1986-2002 show inconsistent results. Contemporaneous correlation coefficients between debt stock and/or public investment and privatization income are positive. This result is asserted by our first model, which regresses debt stock and/or public investment on privatization income and other control variables. However, the second model adds private investment to the regression, which has a better fit and shows a negative relationship between debt stock and/or public investment and privatization income. We conclude that these inconsistent results are due to two factors: 1) the data on privatization is insufficient, and 2) either Turkish government does not substitute privatization revenue for the debt stock and/or public investment or the privatization efforts of the Turkish government have not been successful and effective in the sense to reduce its debt stock or to reduce crowding-out effect of government expenditure.

Key words: privatization, debt stock, public investment, private investment

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Özet

Büyük ölçekli özelleştirme çabaları, son yirmi yıl içinde Türkiye dahil bir çok ülkenin ekonomi programları içinde önemli bir yer almaya başladı. Özelleştirmenin en önemli hedefi, kamu iktisadi teşebbüslerinin kaynaklarının serbest bırakılarak verimsizliklerine son verilmesi ve dolayısıyla kişilerin hayat standartlarının yükseltilmesidir. Başarılı bir özelleştirme programı, destekleyici piyasa ortamıyla birlikte, makroekonomik istikrar, sert bütçe kısıtları, rekabetçi piyasalar, ve yeterli özel mülkiyet haklarının mevcut olmasını gerektirmektedir. Bu çalışma, sert bütçe kısıtı üzerinde durmakta ve devletin borç stoğunun özelleştirme gelirleriyle ikame edip etmediğini incelemektedir. Özelleştirme gelirleri arttıkça borç stoğunun ve/veya kamu yatırımlarının azalacağı beklenmektedir. Sonuçlar, 1986-2002 dönemi için, tutarsızlık göstermektedir. Borç stoğu ve/veya kamu yatırımları ve özelleştirme geliri arasındaki aynı zamana ait korelasyon katsayıları pozitifdir. Bu sonuç, borç stoğunun ve/veya kamu yatırımlarını özelleştirme geliri ve diğer kontrol değişkenlerinin regresyonuna tabi tutan ilk model tarafından onaylanmaktadır. Ancak, ikinci model, özel yatırımları da regresyona ekleyerek daha iyi bir sonuç elde etmekte ve borç stoğu ve/veya kamu yatırımları ve özelleştirme geliri arasında negatif bir ilişki olduğunu göstermektedir. Sonuçlardaki tutarsızlıkların iki nedeni olabileceği sonucuna varılmıştır: 1) özelleştirme verileri yetersizdir, ve 2) ya Türk hükümeti borç stoğunu ve/veya kamu yatırımlarını özelleştirme gelirleriyle ikame etmemektedir ya da hükümetin özelleştirme çabaları, borç stoğunun veya devlet harcamalarının öteleme etkisinin azaltılmasında etkili ve başarılı olamamıştır.

Anahtar sözcükler: özelleştirme, borç stoğu, kamu yatırımları, özel yatırımlar

1. Introduction

Many countries have launched large-scale privatization programs in the last two decades including Turkey. Although Turkey has started her privatization efforts in 1983, its progress grows slower than many of the transition economies of Central and Eastern Europe. Main goal of privatization is to put an end to the inefficiencies of the state owned enterprises by freeing the resources of this huge organism to enhance the living standards of the people.

After the break-up of Soviet Union, there certainly has been a move from centrally planned (command) economies to competitive market economies where prices are determined freely through the supply and demand forces of the market and enforcing a hard budget constraint through privatization and eliminating various government support mechanisms. As it is observed, the key agent to this transformation from planned to market is private enterprises.

In theory, the advantage of private enterprises stems from its profit-maximizing behavior under competitive market environment. By confining the role of the state in the economy in areas like health, basic education, social security, national defense, infrastructure investments, and providence of legal and structural environment for private enterprises, progress in private sector development will be combined with the increase in productivity and the value added to the economy.

For a successful privatization process, supportive market environment which has four essential elements is vital; 1) macroeconomic stability, 2) hard budget constraints, 3) competitive markets, 4) adequate property rights (Oleh Havrylyshyn and Donald Mc Gettigan, 1999:7-12). But in practice, privatization programs in developing countries are mostly dictated by political rather than economic conditions.

Privatization revenues offer large amounts of instant money to the governments without political implications of tax increases. Since Turkey is one of the highly indebted

countries in the world (debt stock over 115 billion dollars in 2002), it is not difficult to understand how important these revenues are for the Turkish government. Therefore, privatization can be considered as an important instrument for providing additional revenue in order to finance foreign and Public Sector debt (Public Sector Debt / GNP has reached 31.08 in 2000 and 47.18 in 2001). This view is heavily criticized because opponents argue that it would be inappropriate to consider the process of privatization of State Economic Enterprises as a way to obtain debt relief rather than a strategy to improve the functioning of the market, because eventually it will come to an end (Dartan, 1996, p.126). Finally, the privatization process should be in accordance with the strategy to decrease the public deficit and hard budget constraint.

In this paper, emphasis will be put on the hard budget constraint. A hard budget constraint forces enterprises to be more aggressive in collecting receivables, linking investment more closely to profitability and shifting objectives from meeting output target to making profits. On the other hand, state owned enterprises take advantage of privileges in the form of direct budget subsidies, soft credit from the state banks, tax exemptions, toleration of persistent arrears among related enterprises, tax and energy payments. Supposedly, all these will come to an end with privatization.

In this paper, our concern is neither privatization models (techniques) nor the benefits of privatization in certain sectors but the relationship between the budget deficit and/or debt stock and the privatization revenue. Privatization may lead to 1) a decrease in public investment and/or 2) a shift in public investment to another area and/or 3) the use of privatization revenue in the finance budget deficit/debt stock (Easterly, 1999:68:70). This study investigates whether the Turkish government substitutes privatization revenue for the debt stock or not. If this is true, a negative relationship will be observed between privatization revenue and debt stock and/or public investment; as privatization revenue increases, debt

stock and/or public investment decreases. While searching the relationship between these two variables, the macroeconomic stability will have utmost importance. High inflation brings high nominal and real interest rates and adds to the cost of the private sector investments. Accompanying exchange rate depreciation and volatility to high inflation will increase uncertainty on the part of private sector, international trade and finance participant, overall harming the economy's growth prospects.

The paper is organized as follows; section 2 describes the privatization process in Turkey, section 3 provides descriptive statistics and correlations on the above-mentioned relationships. Section 4 reports the results and concludes.

2. Privatization in Turkey

The origin of the State Economic Enterprises (SEE) in Turkey goes back to the 19th century. Some state enterprises were established to meet the Ottoman Empire's needs, primarily for the army (Dartan, 1996:81). The modern SEE, however, were established after the foundation of the Turkish Republic in 1923. Till this time, foreign capital tended to control the commercial activities. The main problem that the young Republic faced, was the slow process of capital accumulation, therefore state intervention into the economy became inevitable. Most of the SEE were established between 1923-1950. But these also played an important role in the industrialization process of Turkey.

During the 1980s, the role of the State in the Turkish economy began to be seriously questioned. At the end of 1970s, deteriorating economic and political climate (inflation in 1979 was 63.9%, growth rate was -0.4%, in 1980 107.2% and -1.1% respectively) pushed government to switch from import substitution to export oriented strategies in order to adapt to the changing economic conditions. Jan 24, 1980 Austerity measures were the major step taken in this direction. State intervention in economic life was tried to be minimized.

Afterwards, the state primarily used its funds for infrastructure, defense and security, health, education and other public goods, leaving direct economic involvement in industry, trade and other sectors. The spirit of privatization can be summarized as to eliminate inefficiencies, to increase the productivity and supply elasticity, and to raise the welfare of the nation, to provide legal and structural environment for private sector to operate in the competitive markets. (Dartan, 1996:101).

As far as the legal framework, the Turkish Constitution does not include legal principles concerned with privatization. Legislation on the subject has serious deficiencies (Dartan, 1996:114). There are three Acts concerning the privatization in Turkey, by Law Nos. 2983¹, 3291² and 4046³, which were effected by 1984, 1986 and 1994 respectively. The insufficiency and ambiguity of the legal framework created many problems.

Since November 1994, under the Act 4046, Privatization Administration⁴ is responsible for carrying privatization program. The authority to privatize State Economic Enterprises has been given to the Cabinet of Ministers. When a SEE is decided to be privatized, it is automatically transferred to the Privatization Administration (Aktan, 1993:47).

3. Empirical Analysis

This study aims to investigate whether the Turkish government substitutes privatization revenue for the debt stock or not. Therefore, our hypothesis is that if the government engages in mass privatization efforts, increased privatization revenue should lead to a lower debt stock of the government and/or a lower public investment. So, in this section, an expected negative relationship between privatization revenue and debt stock and/or public investment will be searched.

¹ Law No: 2983, Concerning the Encouragement of Savings and Acceleration of Public Investments.

² Law No: 3291, Concerning the privatization of State Economic Enterprises.

³ Law No: 4046, Extending the existing legislation substantially.

⁴ For detailed info: www.oib.gov.tr.

Debt stock and public investment will be used interchangeably because we expect that an increase in the privatization revenue will reduce either the debt stock of the government or the investments carried out by the government. This is because, with the additional income government has gained; it will choose either to repay its debt or it will decrease public investment, which is expenditure for the government. The decrease in the public investment due to increased privatization revenue represents, in a way, a “crowding-in effect” of reduced government spending.

While searching for a negative relationship between privatization revenue and debt stock and/or public investment, the macroeconomic stability of the economy will have utmost importance and will be controlled with the variables; inflation and/or budget deficit, interest rates, and exchange rates.

Inflation is a crucial variable because high inflation raises high nominal and real interest rates and adds to the cost of the private sector investments. This in turn affects the consequences of the privatization process. Nominal government budget deficit will be used interchangeably with inflation rate. It is a widely accepted phenomenon by now that high and persistent inflation rates are the results of high government budget deficits usually financed by monetary growth. This has been the case for Turkey for at least the last thirty years. (Subaşı, 1999:27-31).

The interest rate is obviously necessary for this analysis as it represents both the cost of the government debt stock and the cost of the private sector investments. Accompanying depreciation and volatility of the exchange rate will increase uncertainty on the part of private sector, international trade and finance participants. Therefore, our last additional variable is the exchange rate.

As it has been discussed in the previous section, privatization efforts have started in 1985 in Turkey and data on privatization is insufficient and inconsistent. The data on

privatization obtained from the Privatization Administration consists of privatization revenue and value of the privatization transactions for 1986-2002 and they are in billions of TL. These variables will also be used interchangeably. The data for debt stock, public investment, inflation, government budget deficit, interest rate and exchange rate are obtained from State Planning Organization and the Statistical Institute of the State and are available for years 1960-2002. All of our data are annual.

As it can be seen, the data on privatization restricts our data set to 1986-2002. This is rather a very short time period considering yearly data; however there is no way at this point to extend the data. We are aware that sound econometric techniques are impossible to apply in this case. Therefore, we will use correlations and a simple econometric model, hoping to be a starting point for further research.

Table 1 gives the contemporaneous correlations for the relationships indicated by our study. All variables are represented in real terms. As debt stock and public investment will be used interchangeably, the correlation coefficient between these two variables is expected to be positive and closer to unity. As it can be seen from the table, the sign is positive and statistically significant but the magnitude is not as high as expected.

Debt stock and privatization income are expected to be negatively related, however the correlation is positive and statistically significant. The correlation coefficient between the debt stock and the value of privatization transactions is also positive but insignificant. The correlation coefficients between public investment and privatization income and the value of privatization transactions are also positive, reverse of the expected and insignificant.

These positive correlation coefficients between debt stock and/or public investment and privatization income and the value of privatization transactions could be an indicative of the fact that Turkish government does not substitute privatization revenue for the debt stock and/or public investment. Another explanation could be that the privatization efforts of the

Turkish government have not been successful in the sense to reduce its debt stock or to reduce crowding-out effect of government expenditure⁵.

Contemporaneous correlations are simple statistics in the sense that they give an initial idea about the relationships between the variables. However, to understand and investigate these relationships in detail, they are not sufficient. So, we apply two simple models, which can be shown as below:

$$\begin{aligned} (\text{dbs or pbi})_t = & a_0 + a_1 (\text{prvinc or prvtrns})_t + a_2 (\text{exc})_t + a_3 (\text{int})_t \\ & + a_4 (\text{inf or budgdef})_t + e_t \end{aligned} \quad (1)$$

$$\begin{aligned} (\text{dbs or pbi})_t = & b_0 + b_1 (\text{prvinc or prvtrns})_t + b_2 (\text{exc})_t + b_3 (\text{int})_t \\ & + b_4 (\text{inf or budgdef})_t + b_5 (\text{prvi}) + e_t \end{aligned} \quad (2)$$

where dbs : real debt stock

pbi : real public investment

prvinc : real privatization income

prvtrns : real value of privatization transactions

exc: exchange rate

int : real interest rate

inf : inflation rate

budgdef : nominal government budget deficit

prvi : real private investment

e : error term.

⁵ External factors may also lead to these results. For example, in periods where privatization revenue is high and a big portion of this revenue is transferred to the budget, an increase in the interest rate will cause the budget deficit/debt stock to increase. Therefore, the relationship between privatization revenue and budget deficit/debt stock would realize opposite of the expected.

In both models, debt stock and public investment will be used interchangeably as the dependent variables. For the first model, the independent variables include the exchange rate, the real interest rate, real privatization income and the real value of privatization transactions (used interchangeably), inflation and nominal government budget deficit (used interchangeably). For the second model, the independent variables are the same except for the inclusion of the real private investment. In both models, the signs of real privatization income and the real value of privatization transactions (a_1 and b_1) are expected to be negative. In addition, we expect that the fit of the model will improve with the inclusion of the real private investment to the second model. If the privatization efforts of the government are successful, debt stock and/or public investment should fall and private investment should increase, so the sign of private investment (b_5) is expected to be positive (Apergis, 2000: 232).

Table 2 gives the results of the first model. Regressions 1 through 4 use debt stock as the dependent variable where regressions 5 through 8 use public investment as the dependent variable. As the independent variables are the same in all regressions, we expect the signs of the variables to be consistent across equations 1-4 and 5-8.

In all the equations, both the real privatization income and the real value of privatization transactions have positive signs, which is the reverse of our assertions. Exchange rate and real interest rate are seen to have a positive effect on the debt stock and on the public investment. Inflation and budget deficit have different signs across the regressions. Inflation and budget deficit are positively related with the debt stock of the government but negatively related with public investment. Besides, it can be seen that the fit of the model is better with the debt stock as the dependent variable.

Table 3 gives the results of the second model. This model adds real private investment into the independent variables. Regressions 9 through 12 use debt stock as the dependent variable where regressions 13 through 16 use public investment as the dependent variable.

Again, as the independent variables are the same in all regressions, we expect the signs of the variables to be consistent across equations 9-12 and 13-16.

In all the equations, the real privatization income is seen to have a negative sign. This is the expected result of our model. However, the sign of the real value of privatization transactions is inconsistent across the equations. It affects the debt stock negatively but affects public investment positively. Exchange rate is seen to have a positive effect on the debt stock and on the public investment whereas the real interest rate is seen to have a positive effect on the debt stock and on the public investment, on average. The signs of inflation and budget deficit are also not consistent across the equations. The real private investment is seen to have a positive effect, on average, on both the debt stock and the public investment. It can be seen that the fit of the model is improved with the addition of real private investment to the equations and the fit is again better with the debt stock as the dependent variable.

Considering the results of the correlations and the regressions, it can be concluded that the evidence for the hypothesis that if the government engages in intensive privatization efforts, increased privatization revenue leads to a lower debt stock of the government and/or a lower public investment is uncertain. While the correlations show that the reverse of the hypothesis is true, the results of the regressions are mixed.

These inconsistent results could be due to two factors: 1) the data on privatization is insufficient to search for the relationship in question and 2) as mentioned before, either Turkish government does not substitute privatization revenue for the debt stock and/or public investment or the privatization efforts of the Turkish government have not been successful and effective in the sense to reduce its debt stock or to reduce crowding-out effect of government expenditure⁶.

⁶ In addition to these, two minor factors are apt to be mentioned. First of all, only part of the privatization revenue is transferred to the government budget. However, this data is not available. This can be considered as the limitation of the research. Also, total privatization revenue from the beginning of privatization efforts is about 7,5 billion dollars whereas total debt stock is about 140 billion dollars. The ratio of annual privatization revenue to the debt stock is small. This also could undermine the results of our analysis.

4. Conclusion

Large-scale privatization efforts began to have an important place in governments' economic programs in many countries in the last two decades including Turkey. Although Turkey has started her privatization efforts in 1983, its progress grows slower than many of the transition economies of Central and Eastern Europe. The main goal of privatization is to put an end to the inefficiencies of the state owned enterprises by freeing the resources of this huge organism to enhance the living standards of the people.

Theoretically, the advantage of private enterprises stems from its profit-maximizing behavior under competitive market environment. A successful privatization process requires supportive market environment with four essential elements of macroeconomic stability, hard budget constraints, competitive markets, and adequate property rights (Oleh Havrylyshyn and Donald Mc Gettigan, 1999:7-12).

This study focuses on the hard budget constraint and investigates whether the Turkish government substitutes privatization revenue for the debt stock or not. It is expected that as privatization revenue increases, debt stock and/or public investment will decrease. The decrease in the public investment due to increased privatization revenue represents, in a way, a "crowding-in effect" of reduced government spending. While searching the relationship between these two variables, the macroeconomic stability will have utmost importance and will be controlled with the variables; inflation and/or budget deficit, interest rates, and exchange rates.

Our results for 1986-2002, which is the only available period for privatization data, show inconsistent results. Contemporaneous correlation coefficients between debt stock and/or public investment and privatization income are positive. This result is asserted by our first model, which regresses debt stock and/or public investment on privatization income and other control variables. However, the second model adds private investment to the regression,

which has a better fit and shows a negative relationship between debt stock and/or public investment and privatization income.

We conclude that these inconsistent results are due to two factors. Firstly, the data on privatization is insufficient. We are aware that this is the basic limitation of our research but we hope that this study will be a starting point for further research suggested in the second reason.

The reason for the mixed evidence could also be the fact that, either Turkish government does not substitute privatization revenue for the debt stock and/or public investment or the privatization efforts of the Turkish government have not been successful and effective in the sense to reduce its debt stock or to reduce crowding-out effect of government expenditure. This latter point should be further investigated by asking the question: “how sincere has the Turkish government been towards privatization?”.

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Table 1. Correlations

Variables	Correlation coefficient
Debt stock & public investment	0,608**
Debt stock & privatization income	0,868*
Debt stock & privatization transactions	0,558
Public investment & privatization income	0,291
Public investment & privatization transactions	0,546

* : significant at 1 % level

** : significant at 5 % level

Table 2. The Results of Regression (1)

Independent variables	Dependent variable : dbs				Dependent variable : pbi			
	1	2	3	4	5	6	7	8
Constant	+***	+	+*	+*	+*	+**	+*	+**
Prvinc	+		+		+		+	
Prvtrns		+		+		+		+
Exc	+**	+	+***	+	+	+	+	+
int	+	+	+	-	+	-	+	+
inf	+	+			-	-		
budgdef			+***	+			+	-
R ²	0,86	0,87	0,89	0,91	0,46	0,56	0,42	0,43
DW	2,10	2,21	2,09	2,10	1,35	1,82	1,38	1,59
F	10,55*	6,52**	14,13*	9,50*	1,47	1,27	1,28	0,76

* : significant at 1 % level

** : significant at 5 % level

*** : significant at 10 % level

Table 3. The Results of Regression (2)

Independent variables	Dependent variable : dbs				Dependent variable : pbi			
	9	10	11	12	13	14	15	16
Constant	+	+	+**	+	+	+***	+	+
prvinc	-		-		-		-	
prvtrns		-		-		+		+
Exc	+	+	+	+	-	+	-	+
int	+	-	-	-	-	-	+	+
inf	+	-			-	-		
budgdef			+	+			-	+
prvi	+	+	+	+	+	+	+	-
R ²	0,90	0,94	0,92	0,91	0,58	0,58	0,46	0,47
DW	1,43	2,31	1,99	2,21	1,58	1,73	1,53	1,72
F	10,64*	9,37**	13,43*	8,99**	1,65	0,81	1,04	0,54

* : significant at 1 % level

** : significant at 5 % level

*** : significant at 10 % level