

PRIVATIZATION IN TURKEY &  
PERFORMANCE ANALYSIS OF THE PRIVATIZED  
COMPANIES  
IN CEMENT INDUSTRY

A THESIS  
SUBMITTED TO THE DEPARTMENT OF MANAGEMENT  
AND  
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
OF BILKENT UNIVERSITY  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
MASTER OF BUSINESS ADMINISTRATION

F. YERİM AKÇOLLU

JUNE 1997

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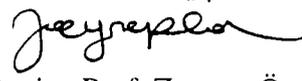
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Assist. Prof. Zeynep Önder

I certify that have read the thesis and in my opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Business Administration.



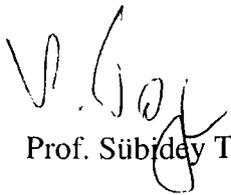
Assoc. Prof. Kürşat Aydoğan

I certify that have read the thesis and in my opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Business Administration.



Assist. Prof. Ayşe Yüce

Approved for the Graduate School of Business Administration



Prof. Sübidey Togan

To My Family,

## ABSTRACT

### PRIVATIZATION IN TURKEY AND PERFORMANCE ANALYSIS OF THE PRIVATIZED COMPANIES IN CEMENT INDUSTRY

F. YEŞİM AKCOLLU

Master of Business Administration

Supervisor: Assist. Prof. ZEYNEP ÖNDER

June 1997

Privatization is any transaction that reduces a government's ownership in or control over a public enterprise or results in the liquidation and sale of assets of a public enterprise. Turkish experiment of privatization attracted researchers' attention because of being an interesting case with an interactive triangle: relationship among the state, the society, and the international system. State Owned Enterprises were founded because of the desire of the Turkish Government to produce in the sectors where private sector was not producing. However, the performance of state owned enterprises deteriorated over time. Privatizing the ones with poor performances seemed to be the best solution. Turkish Government had made a strong commitment to privatization after a new government established in 1983. However, no progress worth to mention about had been made until 1989. Privatization efforts have gained momentum afterwards. This study examines the performance of the privatization in cement industry by Wilcoxon rank tests and t-test by comparing the pre- and post-privatization performances according to several characteristics (such as profitability, operating efficiency, output, employment, leverage). According to the test results, privatized cement companies have no significant improvement after privatization in terms of performance measures other than sales efficiency.

**Key Words:** Privatization, Cement Industry, Performance, Wilcoxon Rank Test

## ÖZET

### TÜRKİYE' DE ÖZELLEŞTİRME VE

### ÇİMENTO SEKTÖRÜNDEKİ ÖZELLEŞTİRMEİN PERFORMANS ANALİZİ

F. YEŞİM AKCOLLU

İşletme Enstitüsü Yüksek Lisansı

Tez Danışmanı: Yard. Doç. Dr. ZEYNEP ÖNDER

Haziran 1997

Özelleştirme, devletin bir kamu iktisadi teşekkülündeki payını ya da kontrolünü azaltan, veya kamu iktisadi teşekkülünün varlıklarının satımı veya tasviye edilmesi ile sonuçlanan her türlü işlemidir. Türkiye'nin özelleştirme çabaları, devlet, toplum ve de uluslararası sistemden oluşan bir üçgen olması nedeni ile araştırmacıların dikkatini çekmektedir. Kamu İktisadi Teşekkülleri, özel sektörün üretim yapmadığı alanlarda üretim yapmak için kurulmuşlardır. Fakat, zamanla performansları bozulmuştur. Kötü performans gösteren Kamu İktisadi Teşekküllerinin özelleştirilmesi en iyi çözüm olarak görülmüştür. Türk Devleti, 1983'te yeni hükümet kurulduktan sonra özelleştirme için kesin karar almıştır. Fakat, 1989 yılına kadar bahsedilmeye değer bir gelişme elde edilmemiştir. 90'lı yılların başlarında özelleştirme çabaları hız kazanmıştır. Bu çalışma, çeşitli kriterlere (karlılık, işlemsel verimlilik, çıktı, istihdam, mali kaldıraç ) göre çimento şirketlerinin özelleştirme öncesi ve sonrası performanslarını karşılaştırmaktadır. Kullanılan yöntem t-testleri ve Wilcoxon sıralama testleridir. Çıkan test sonuçlarına göre özelleştirilen çimento şirketlerinin performanslarında satış verimliliği dışındaki kriterlerde dikkate değer bir gelişme olmamıştır.

**Anathar Kelimeler:** Özelleştirme, Çimento Sektörü, Performans, Wilcoxon Sıralama Testi

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## I. INTRODUCTION

" Any form of ownership is inevitably imperfect. Market failures can lead to divergence between profit and welfare objectives in private firms. Government failure leads to divergence between political / bureaucratic and welfare objectives in state-owned enterprises. Monitoring failure leads to divergence between the objectives of the enterprise managers and their principles, whether the principles are private owners or political superiors. The effects of ownership changes on welfare will depend upon the relative magnitudes of these imperfections. As a first approximation, privatization can be viewed as a means of reducing the impact of government failure, albeit at the risk of increasing market failures, and of changing monitoring arrangements. " (Vickers and Yarrow, 1991)

Privatization is a process of change with political as well as socioeconomical dimensions; it is not a panacea for the ills of the economies in the developing world. The success of the newly conceived economic policies is anchored in the ability of the key actors to promote privatization by following effective macroeconomic policies and by building powerful coalitions of the public, politicians, bureaucrats, and special interest groups.

This study intends to analyze the privatization programs in Turkey including an analysis of performance of the privatized companies in the cement industry. It gives some information about why privatization is important in Turkey. Worldwide privatization efforts are also mentioned to make a comparison.

Second part gives the explanation of privatization and methods of privatization. Trade-off among the different methods of privatization and the methods according to the investor types are investigated. Also, summarizes the results of several studies examining the impact of privatization programs in several countries. According to the summary results of

the privatization programs in the world, the countries show different characteristics. Thus, we can not derive a generalization of the privatization applications and results worldwide.

Third part examines privatization process in Turkey. First, it gives information about the background and composition of State Economic Enterprises (SOEs) some of which were privatized and/or in the process of privatization. Then, the deteriorating performance of the SOEs and the main reasons of this deterioration are discussed. Then comes the privatization efforts of Turkish Government including objectives. The steps and objectives of privatization process in Turkey since 1983 are discussed. Steps taken in this process, obstacles of privatization program in Turkey and World Bank Assistance projects to help privatization process in Turkey are also mentioned. At the end of this part, the present status and future privatizations are also evaluated.

Fourth part summarizes the measure of performance of privatization at the firm level. Several literature survey results are presented in order to reveal the efforts to measure the performance of the privatization both in Turkey and in the world.

Fifth part examines the performance of the privatized companies in Turkish cement industry. First, a brief explanation of the cement industry in Turkey is given. Cement industry constitutes an important aspect of privatization program in Turkey since it is the first industry where all state owned companies except very small two companies have been privatized. The six first privatized cement companies, namely Afyon, Ankara, Balıkesir, Söke, Trakya and Niğde are included in the sample. Several hypotheses regarding to the performance of these companies are tested. Their performance is characterized by their profitability, operating efficiency, output, leverage and employment level. Several proxies are used to measure these characteristics. For example, 'return on sales', 'return on assets', 'return on equity' ratios are used to measure profitability. For operating efficiency, 'sales efficiency' and 'net income efficiency' are used. Performance in terms of output is measured by 'real sales'. 'Total number of employees' are used to measure employment level while 'debt to assets' and 'long-term debt to equity' are used to measure leverage. The hypotheses are tested using t-test, Wilcoxon rank test and Wilcoxon signed rank test. For measuring the performance of each company, t-test is employed. For the overall performance of the six, both the t-test and Wilcoxon rank tests are employed. T-test and

Wilcoxon signed rank test are used to make of comparison between the two means. Wilcoxon rank test is employed to measure the difference between the two medians. The results of t-test and Wilcoxon rank tests are consistent although the sample size is not very large. According to the test results, there is no significant improvement after privatization in terms of profitability, output, leverage. In terms of operating efficiency, sales efficiency improved after privatization while net income efficiency has no significant improvement. Employment level in all companies decreases in post-privatization years as expected.

## II. PRIVATIZATION PROCESS

Privatization is defined as any transaction that reduces a government's ownership in or control over a public enterprise or results in the liquidation and sale of assets of a public enterprise. (World Bank, 1994) The most common objectives worldwide for privatization can be stated as follows:

- To minimize the state involvement in the economy,
- To increase both the operating and financial performance of the companies, thus increase the overall efficiency,
- To reduce the deficit and burden of debt,
- To foster market competition and discourage monopoly,
- To raise country's economic credibility and attract investment.

### II.1 Methods of Privatization

There are several methods of privatization. The following are the most commonly used methods (Nellis, 1996) :

- Direct Sale to Outside Investors: This method involves the sale of the privatized company to one or more buyers. Buyers can be both foreign and domestic. For example, in Germany, each company can be sold to at least two buyers.
- Management / Employee Buyout: Managers and employees are given the equal chances with others to be buyers of their companies. Sometimes, they have serious advantages over the outsiders.
- Voucher or Mass Privatization: In this method, The vouchers are used rather than money as the medium to purchase shares in companies. Vouchers are given or sold to domestic citizens at very low prices, thereby eliminating the shortage of domestic capital that is the core problem with the sale approach.

- Spontaneous Privatization: The privatization can take place indirectly, for example by the liquidation of assets or by selling some of the assets.

These methods of privatization have some advantages and disadvantages. Nellis (1996) expresses the trade-off among these privatization methods for large firms (Table 1). For example, direct sale is good in order to achieve better corporate performance and provide better access to capital and skills. On the other hand, it is slow and not very feasible.

Voucher privatization can overcome perceived unfairness, the shortage of domestic capital, and the difficulty of placing monetary values on state assets. It can proceed rapidly and can simultaneously stimulate the development of market institutions and create new stakeholders. However, the outcomes in terms of corporate governance and better access to capital and skills are blur.

Management–employee buyouts are fast and easy to implement, both from political and technical standpoints. Insider ownership can be more equitable and efficient than outside ownership.

The outcomes of spontaneous privatization either depend on other constraints or have negative results. It does not generate government revenue and does not provide a better access to capital and skills.

Table 1: Trade-Off Between Privatization Methods

		Objectives				
		Better corporate governance	Speed & Feasibility	Better access to capital and skills	More government revenue	Greater fairness
<b>Methods</b>	Sale to Outside Owners	+	-	+	+	-
	Management-Employee Buyout	-	+	-	-	-
	Equal Access Voucher Privatization	?	+	?	-	+
	Spontaneous Privatization	?	?	-	-	-

Source: Nellis J. (1996), "Overall look to Privatization Worldwide", The World Bank Seminar

'+' : The method is proper for that kind of objective.

'-' : The method is not proper for that kind of objective.

'?' : The result highly depends on other constraints and it is hard to know the impact of the method without investigating other effects.

The selection of the privatization method depends on not only objective in the privatization process, but also the targeted investor in the privatized company. Suiçmez (1993) evaluates methods of privatization according to target investors. For example, if the aim is to allow as many as possible investor to take advantage of the privatization, then the most appropriate solution is equal-access voucher privatization. However, if they are willing to give the priority to the employees and the management who have been working for the company for years, then the best method is management-employee buyout.

Table 2: Sales Methods of Privatization According to the Target Investor

<b>TARGET INVESTOR(S)</b>	<b>SALES METHOD</b>
Citizens	-Equal-Access Voucher Privatization
Domestic and Foreign Portfolio Investors	-Selling at ISE -Equal-Access Voucher privatization -Block Sale
Management and Employees	-Management- Employee Buyout
Domestic and Foreign Firms	-Joint-Venture -Majority Shares Sale
Other	-Leasing -Management Contract -Asset Sale -Minority Shares Sale

Source: Suiçmez H., (1993), Privatization Applications in Turkey and in the World, National Productivity Center Press

## **II.2 Problems in Privatization Process**

Nellis (1996) states the main common difficulties worldwide in the privatization process as follows:

- **Corporate Governance**: It is very difficult to change things that are malfunctioning into things functioning well such as obtaining reasonable price at a reasonable time frame.
- **Capital Markets**: Registry, trading and minority rights are the critical issues in capital markets to consider. In most cases, insider becomes dominant and it becomes very difficult to hold minority rights.
- **Crime, Corruption and Regulation Difficulties**: While the companies are privatized, in many cases, corruption and crime take place during the privatization process. Also, enacting the laws for the privatization process is very difficult. Benchmarking is very difficult since each country's case differs from the others' in many aspects.
- **Business Advisory Services**: During privatization process, the business advisory services are highly needed. Their experience in the subject matter is crucial.

## **II.3 Worldwide Privatization Efforts**

A massive privatization effort has been taken worldwide. For example, between 1980 and 1991, 6,800 state owned companies were privatized in the world. Privatization was the number one priority in the countries facing transition economics such as Old Russia, Romania, Czech Republic, Slovakia, Macedonia, Hungary, Poland, Slovenia in early 90's. In these countries, 30,740 firms were privatized between 1990 and 1994 (Nellis, 1996).

Currently, worldwide, 25 % of the total number of the companies are in the privatization portfolio of the governments. Those companies in the privatization portfolio constitute 35% of the total value of the firms worldwide (Nellis, 1996).

Table 3 summarizes the results of several studies about privatization program in different countries (Vemon-Wortzel and Wortzel, 1989). According to that study, we can not conclude that there are similarities among the results of the privatization programs of the developing countries because of the scope of the privatization programs.

A study evaluating Turkish privatization programs found that there had been no real privatization until 1989 in Turkey, only the preparations for privatization program had been completed. According to his results, the main reason of the Turkish Government to initiate privatization program is the desire to increase efficiency and achieve economic growth. Turkish Government preferred to give the first priority in privatization program to the state owned enterprises that are easy to sell to get funding in short period of time.

Having examined the worldwide privatization process, next part explains the privatization process in Turkey. The third part of this study explains the background of state owned enterprises, privatization efforts up to now and future privatization plans, obstacles in the process, World Bank funded projects to help Turkish Government in privatization process.

Table 3: Privatization Programs in Some of the Developing Countries

Country	Author(s)	Privatized Organizations	Reasons for Privatization, Criteria	Achievements until 1989
Africa	Callaghy Wilson	-Special Selection	-Budget burden -Lack of foreign exchange -Economic crisis -Inefficiency -Abolishment of colonialist political economy	-Isolation of debit in small and medium scale industry -Some management contracts -Improvement of SOEs
Bangladesh	Chishty	-Textile Companies	-Creating proper investment environment	-Competition -Better performance than performance of the rest of the state companies
Brazil	Kapstein	-Agriculture firms that had gone bankrupt and bought by the government	-To get rid of state involvement from the economy	-Successful -Improvement in the traditional government sector
Chile	Marshall	-Banks -Production firms -Agriculture firms	-Protection	-Fast privatization created a system with monetary problems
Jamaica	Kennedy	-Food companies -Local transportation	-Economic growing	-Limited privatization made SOEs sensitive to the market forces
Malezia	Al-haj et al-	-General thought	-To provide equality	-Many monopolies
Pakistan	Igbal	-Flour firms -Rice firms	-Restructuring	-Not clear

Table 3 (Continued): Privatization Programs in Some of the Developing Countries

Country	Author(s)	Privatized Organizations	Reasons for Privatization, Criteria	Achievements until 1989
Philippines	Haggard	n.a.	-Arrangement of the unproductive assets of the state banks -Improving efficiency	-Very little privatization
Peru	Ortiz de Zavalios	-Various	-Economic growing -Efficiency	-At the planning stage
Sri Lanka	Jayasinghe	-Various	-Weak performance	-In textile companies, profitability instead of social utility
South Korea	Kao	-Commercial banks	-Sector efficiency	-Unsuccessful -Government is still effective on interest rates and credits
Thailand	Pakkasem	-City transportation	-Efficiency	-Better service
Turkey	Leeds	-The companies that are easy to sell	-Efficiency -Economic growing	-No privatization -Preparations for privatization are completed
Venezuela	Kelly de Escobar	-Various	-Weak performance -Stronger private sector	-Restructuring -Inefficiency in private sector companies

Source: Vernon-Wortzel, H. and Wortzel L. H., (1989), "Privatization: Not the Only Answer" , World Development, Vol. 17, No:5, 633-641, Great Britain

### **III. PRIVATIZATION PROCESS IN TURKEY**

The State Owned Enterprises (SOEs) were established since national independence war to function in the areas where the private companies were not producing. However, the performances of the SOEs deteriorated over time and they started to become a financial burden for the government . Because of the deteriorating performance of the SOEs, government stressed the need for improved performance of SOEs, including the shedding of SOEs through privatization and liquidation.

The privatization process was initiated in the early 1980s. Until the end of that era, no significant improvements are made. Since 1990, the privatization process gained acceleration. The Turkish experiment with privatization has been attracting the researchers' attention since it is an interesting case with an interactive triangle: the relationship among the state, the society, and the international system at a particular point in time. In this part, first State Owned Enterprises are examined. Then privatization efforts of Turkish Government, future plans of privatization, obstacles to apply the program, World Bank projects to provide technical assistance and funding to the privatization program constitute the rest of this part.

#### **III.1 Background of State Owned Enterprises (SOEs)**

##### **III.1.1 Composition and Importance**

State Owned Enterprises can be classified in three broad categories (World Bank, 1993):

- State Economic Enterprises (SEEs): They are the joint-stock companies wholly owned by the Treasury. An SEE reports to a ministry which is typically responsible for the policy-making and the co-ordination of the activities of the SEEs in an industry or sector.

Portfolios of the SEEs include a state bank which was to provide financing for the sector. Some of the SEEs are state monopolies.

- Wholly-Owned subsidiaries of SEEs and joint ventures with other private parties holding equity participation more than 50 %.
- Privately-owned or contracted enterprises with equity participation of the state through SEEs or subsidiaries.

The SOEs are mostly very large enterprises in the crucial sectors of the economy. Some of them are natural monopolies while others are virtually monopolies because of the very large size of investment required for the entry. Table 4 summarizes the important ratios of the SEEs in the manufacturing sector and their relative size in the Turkish economy. Although the investment made in the SEEs is high when compared to the sector's total, the SEE's profit share is very low compared to the sector's total.

Table 4: Selected Figures on the Performance of the SEEs in the Manufacturing Sector

<b>Selected Ratios</b>	<b>1988</b>	<b>1989</b>	<b>1991</b>
SEE's exports / total exports	10.40	16.99	19.33
SEE's imports / total imports	33.07	32.34	34.40
SEE's employment / total employment	3.70	3.60	3.70
SEE's fixed investment / total public fixed inv.	44.7	40.72	35.89
SEE's fixed investment / total investment	21.33	14.18	15.80
SEE's financing requirement / GNP	2.60	1.64	1.40
SEE's borrowing requirement / GNP	2.71	2.58	2.36
SEE's financing surplus / GNP	2.50	2.42	2.10
Foreign project loans / SEE's borrowing	59.00	35.85	41.00
Budgetary transfer to SEE's / GNP	1.00	0.72	0.45
Budgetary transfer to SEE's / budget expenses	4.80	3.16	1.99
SEE's consolidated profit / GNP	1.10	0.65	0.10

Source: The World Bank, 1992, Privatization Implementation Assistance and Social Safety Net Project, Staff Appraisal Report, 4.

### **III.1.2 Operations and Performance of SOEs**

In the 1960s and 1970s, Turkey turned to SOEs as other developing countries such as Egypt, Tunisia, Tanzania did in order to provide that the private sector seemed incapable of producing. However, dissatisfaction with inefficiency and costs of SOEs has been very strong. Rather than making a contribution to the economics of Turkey, these enterprises turned out to be a substantial drain.

Table 5 shows the key performance indicators of the SOEs between 1985 - 1992. The financial performance of the SOEs worsened over time. The return on capital employed fell from 17.2 percent in 1985 to -9.8 in 1992. Particularly poor performers include TTK (Hard Coal Mines), TEK (electricity), TDCI (steel), and Sümerbank, all of which are consistently large loss-makers. Together, all loss-making SOEs accumulated losses of 1.9 % of GNP in 1990 which rose to 4.2 % of GNP in 1992. Economic efficiency were lagging behind the private sector. In 1992, the labour productivity in the SOEs were only the 46 % of that in the private, while the marginal efficiency of capital was only about one-third of the total.

Table 5: Key Performance Indicators of SOEs (1985 - 1992) (% of GNP)

Performance Indicator	1985	1986	1987	1988	1989	1990	1991	1992
Operating Surplus	3.6	1.5	1.1	0.4	0.8	-0.6	-5.2	-5.4
Return on Capital Employed (%)	17.2	14.3	12.7	10.6	10.3	6.7	5.3	-9.8
Free Cash Flow	-6.4	-7.4	-12.5	-8.5	-8.8	-4.0	-5.4	-3.9
Financial Leverage Ratio	2.3	2.5	1.9	2.8	2.3	2.4	2.4	2.2
Earnings Decline Cover (%)	85.2	78.8	70.1	68.8	61.1	50.4	31.9	30.1
Industrial SOEs in Top 500 Firms Employment (% total)	58.0	57.0	55.0	55.5	54.5	53.4	54.5	55.0
Fixed Assets (% total)	69.6	69.0	68.7	69.8	68.9	65.9	60.0	53.5
Value Added (% total)	47.0	46.0	44.8	47.0	45.8	41.6	35.4	36.7
Labour productivity (% of private)	86.0	85.0	75.0	86.0	90.0	62.3	45.8	46.1

Source: The World Bank, 1992, Privatization Implementation Assistance and Social Safety Net Project, Staff Appraisal Report, 4.

### III.1.3 The Main Reasons for the Poor Performance of the SOEs:

The main reasons for the poor performance of the SOEs can be stated as follows:

- Noncommercial Objectives: The Government has used SOEs to achieve a range of noncommercial objectives, including income redistribution, regional development, employment creation, and industrial and infrastructure development. Also SOEs are used by the government parties as the political power and a tool to increase their vote potential.
- Soft Budget Constraints: Unable to adjust to changing market demands, SOEs have survived only because of the soft-budget constraint. This has led to a pervasive lack of financial discipline. The availability of guarantees from the Treasury on foreign borrowings, loans and rediscounts from the Central Bank, and commercial bank loans have given SOEs preferential access to credit without facing the risk of bankruptcy.
- Legal and Institutional Framework: In 1984, Decree Law 233 was issued to govern the establishment and operation of virtually all SOEs in Turkey. In practice, deficiencies in that law effectively perpetuate outside control over SOEs through annual budgets and financing programs that require rectification by other public agencies. The new privatization law has been enacted only recently, on November 1994 as the law No: 4046.
- Pricing Policies: Although SOE prices are regulated by the authority of the SOE management by Decree Law 233, Council of Ministers can still set the prices and rate schedules. In practice, the legislation did not lead to full pricing autonomy. Also, the compensations of noncommercial duties imposed on the enterprises are generally paid with a lag of at least one year and without interest.
- Personnel Regime: To circumvent the constitutional requirement to have SOEs managed by civil servants, Decree Law 233 introduced the possibility of hiring staff under one-year renewable contracts. This was done in order to attract better qualified people by offering higher salaries. However, the High Court of Justice ruled this

practice unconstitutional. Thus a category was introduced: civil servants with contracts. Salaries were not linked to the performance. Since 1989, the wage negotiations in SOEs have become highly politicized, leading to a more than doubling of the real wage workers in the two years to June 1992. At that date, the increases were moderated subsequently, with real wages increasing by 9 %. In addition, over employment policy of the government caused the personnel costs to increase a lot. While the number of personnel increased substantially, no extra value is added in terms of profitability and efficiency. New recruitments in the SOEs are seen as a way to decrease the unemployment rate by government.

- Market Regulation: Many large SOEs enjoyed the monopoly situation. The Government had to establish regulatory mechanisms to enhance efficiency and foster substantive private sector participation in those activities. Fundamental structural changes in the sector, including privatization, are needed to achieve an enduring improvement in performance.

Because of the reasons stated above, SOEs became a financial drain for the government and the need for privatization of the SOEs are deeply felt.

### **III.2 Privatization Efforts**

After the national independence war that was ended in 1923, Turkey had no view of the respective roles of the private and public sectors. Government was bound until 1929 with the promises given with the capitulations. Much of the economy other than infrastructure were in public hands. Commerce was preferred over trade. The military and bureaucratic leaders of the time had a distrust of the private investors and the external world. On the other hand, they were favouring emulating the west to strengthen Turkey's position. Therefore, state capitalism seemed to be the best solution for them. The state had a leading role in heavy industry (iron and coal) and light industry (textiles) while commerce and agriculture were left to the private sector. However, by the time as stated in previous section, SOEs became a financial burden for Turkish Government for the reasons stated in section III.1.3.

The military regime, which held power from 1980 to 1983, achieved stabilization because it was able to put an end to economic failures, fight inflation, overcome political anarchy and civil disorder, and restore confidence in the financial credibility of Turkey. (Arıcanlı and Rodrik, 1990).

At the beginning of 80s, the introduction of new economic strategies by the IMF and the World Bank to promote export and to develop a free market required a radical change in Turkish development strategy.

After being prime minister in 1983, Turgut Özal emphasized the excessive size and role of the state economic enterprises in the nation's economy. His solution was to encourage the private sector to achieve its full productive capacity.

Turgut Özal, was labelled as Turkey's economic czar and became famous as a believer in the private sector's ability to stimulate economic growth. Since Özal's government had to consolidate a broad coalition among groups with conflicting interests, they slowed down the pace of privatization and relaxed its fiscal policies.

Leeds (1987) studied the historical background of the SOEs and implementation of the privatization program that was initiated in 1983 by the Özal's government and evaluates the program between 1983 - 1987 as one of frustration, tension between competing national objectives, structural problems of both a political and an economic nature, and painstakingly slow process. He also criticizes the Minister Özal and his team by saying: "Prime Minister Özal and his team of like-minded technocrats encountered virtually all of the obstacles that would be contained in any privatization text book: political and bureaucratic resistance to change, a suboptimal macroeconomic policy environment and a relatively unattractive climate for private investment, controversy over the role of foreign advisors, weak and underdeveloped capital markets, inadequate staffing and a lack of indigenous technical knowledge of how to implement a privatization strategy, and political uncertainty that undermined public confidence in the future of the program. As a result, seven years after the military government designated by Özal the nation's authority on economic policy, and four years after he was elected prime minister in his own right, no major state-owned enterprise had been privatized."

One of the World Bank reports (1993) described the situation:" Although Özal had committed his government to privatization, he was entering uncharted territory, and one of his most difficult problems was the paucity of staff with the expertise to implement the program and the resentment of foreign experts and foreign investors."

Shaker (1992) states that, contrary to expectations, export promotion did not lessen state intervention; it merely changed its direction. This new direction created significant changes in state policies, which affected the interest groups (industrial, agricultural and private sector).

In the sixth five year plan (1990 - 1994), the Turkish government outlined broad economic policies, reiterating its emphasis on "privatization as a key instrument in reforming the economy."

The current privatization program, as launched by the former Motherland Party government in 1986 and approved by Demirel's government of 1991 - 1992, is centered on the sale of the government's shares in most of the SOEs and the restructuring of the state sector in order to prepare it for the sale to the public. It has been described by as " little more than a revenue-raising exercise which does not transform the structure and ownership of the Turkish industry."

### **III.2.1 Objectives**

Turkish Government has had almost the same objectives with the other developing countries which have initiated privatization programs recently. The main objectives can be stated as follows:

- To minimize *state involvement* in the industrial and commercial activities of the economy,
- To accelerate further establishment of *market mechanisms* within the context of *liberal economic policies*,
- To confine the *role of the state* in the economy to areas like health, basic education, social security, national security, large scale infrastructure investments and provide

suitable legal and structural environment for free enterprise to operate,

- To enhance the *competition* in the economy,
- To decrease the *financial burden* of the State Economic Enterprises on the national budget,
- To broaden and deepen the existing *capital market* by promoting wider share ownership,
- To provide efficient *allocation of resources*,
- To transfer privatization *revenues to* the major *infrastructure* projects.

### **III.3 Steps Taken for Privatization**

This section explains the legal and the institutional preparations done in order to achieve these objectives.

#### **III.3.1 Legal Preparations**

After the privatization program was initiated in 1983, the first two related regulations, Law No: 2983 and Law No:3291 were enacted in 1984 and in 1986, respectively. Within the perspective of the provisions of Law No: 3291, the Council of Ministers was authorized to give decision on the transfer of SOEs to the Public Participation Administration (PPA) and the High Planning Council was authorized to decide on the transfer of partially state owned companies and subsidiaries to the PPA for privatization. In 1992, with the Statutory Decree No: 473, Public Participation High Council (PPHC) was authorized to approve privatization transactions.

Upon formation of a political and social consensus on the needs for privatization, the new privatization law has been enacted on November 1994 as the Law No: 4046. Within the context of the new law, Public Participation High Council has been replaced with Privatization High Council (PHC) which is chaired by Prime Minister and the Public Participation Administration has been replaced with Privatization Administration (PA).

### **III.3.2 Institutional Responsibilities**

#### **IV.3.2.1 Privatization High Council (PHC)**

PHC is the ultimate decision making body for privatization and is composed of Prime Minister, Minister of Finance, Minister of Industry and Commerce and two ministers of State. Its main responsibilities are determined by Law No:4046 as follows:

- Decide on the transfers of State Owned Enterprises (SOEs), equity participants and assets either to the Privatization Administration (PA) or to Undersecretariat of Treasury and Foreign Trade (UTFT) for rehabilitation and restructuring prior to privatization,
- Decide to transfer enterprises to other public institutions and local administrations when required for national security and public interest,
- Decide to take SOEs out of privatization portfolio if need arises,
- Decide on the method of each privatization for each SOE,
- Decide on downsizing, ceasing or operations, close down or liquidation of companies under privatization,
- Approve privatization transactions, evaluate the privatization applications and programs, and take the necessary measures against problems,
- Approve budgets of the Privatization Fund (PF) and PA,
- Decide to issue domestic and foreign debt in various forms to be used for Privatization Fund,
- Decide on transfers from Privatization Fund to UTFT for necessary expenditures for restructuring and rehabilitation of SOEs to be privatized,
- Approve other issues related to the Privatization Fund,
- Decide to buy and sell shares and all commercial papers of SOEs in Privatization portfolio.

#### **IV.3.2.2 Privatization Administration (PA)**

PA is the executive body for privatization . Its main responsibilities and duties are:

- Advise PHC in matters related to the transfer of SOEs into or out of privatization portfolio, and for the need of restructuring and rehabilitation of SOEs,
- Implement decisions of PHC,

- Direct SOEs to prepare for privatization by,
  - Deciding whether SOEs should be converted into joint-stock companies and valuing in-kind capital to be contributed by the SOE being converted,
  - Determining the capital of SOEs till PA's shareholding falls below 50%,
  - Governing the financial, administrative, legal and technical structures of SOEs,
  - Deciding on demands from SOEs for obtaining assets, hiring or laying-off personnel,
  - Proposing Prime Minister nominees for Board of Directors and top management appointments,
  - Carrying out valuations of the SOEs or part of their assets,
  - Giving loans to SOEs,
- Manage Privatization Fund.

#### **III.4 Obstacles in Privatization Process in Turkey**

Privatization is not a very easy operation especially in the developing countries like our country. During privatization program, there occur lots of obstacles. In SOEs to be privatized, there were lots of things to be considered along with the financial and economic aspects of the privatization program.

Despite the well-publicized goals of privatization, only 0.5% of fixed assets of the SOEs could be sold until 1990 (Privatization Administration Bulletin, 1997). According to a World Bank report, only a few sales could be defined as privatization, since the public sector is still in control of these companies. As of January, 1997, there are still 55 companies in the privatization portfolio, 22 of which are 100% government owned.

"In evaluating the Turkish experience of the 1980s, one has to confront the apparent paradox of a tremendously successful external adjustment pitted against several internal imbalances. While the government launched a round of further trade and foreign exchange liberalization in the summer of 1989 to fight inflation, the government alienated all but the 'rentier groups' and the policies have had scarcely any effect on price stability." (Rodrik , 1990)

Heper and Evin (1993) states that the government has not displayed a consistent sense of the purpose and direction. "At times, it is said that the funds raised by the state would be recycled into new public investments. This required an overestimation of the value of fixed capital to be transferred. At other times, the impression was given that the government simply wanted to get rid of the SEEs altogether, for political and financial reasons. This, in turn, necessitated an underestimation of the sale value. More recently, macroeconomic considerations came to the fore. The inefficient operation of the SEEs is perceived to be one of the major stumbling blocks in the efforts to stem inflation."

Öniş and Riedel (1993) argue that Turkey's macroeconomic problems were homegrown, and successive governments pushed the economy beyond stability because of the political imperatives that were closely related to the needs of the broad national coalition. They argue that, until the military takeover of September 1980, "too often governments in Turkey tried to build a broad coalition by promising the various political constituencies more than they could deliver, causing economic instability and, periodically, a crisis."

Those obstacles can be examined according to the subtitles: organization itself, investors, privatization operations, political and legal problems.

#### **III.4.1 Organizational Obstacles:**

The studies of several researchers about the subject matter can be summarized under the subheadings: overemployment, old technology, management, production and marketing.

- Overemployment: In SOEs , the recruiting was not done according to profitability or efficiency, but rather by considering the social and political reasons. After privatization, employees should be taken in a very systematic social safety net for training and creation of new employment alternatives. That caused an overemployment in those companies which resulted in increasing salary costs when compared to the private sector personnel costs. On the other hand, seniority compensations of the SOE employees that should be paid after privatization were more than the private sector seniority compensation, causing extra personnel cost.

- Old Technology: In most of the SOEs, the technology was very old and thus, causing the costs to be very high and the profits very low. These companies needed high investments to be more profitable. The need for high investment makes the sale of the SOE difficult for the state.
- Financing Problem: Although the transfers were made from the several state organizations to the SOEs, by the time, because of the mismanagement, they ran out of their financial resources. Thus, they tried to finance from external sources with high interest rates. Having high debt/equity ratios makes the privatization for those companies more difficult.
- Management: Most of the time, the employees in the management of the SOEs are not knowledgeable enough about finance, marketing, sales methods, high technology requirements. Besides, top management personnel changes frequently because of the political reasons thus causing inconsistency in managerial decisions, lack of strategic planning, demotivation among employees. Some of the bureaucrats may resist privatization of the companies that are under their supervision because of the fear of the risk of losing their power.
- Production and Marketing: State organizations are production-oriented meaning marketing divisions are responsible of selling what production divisions produce. They do not have any idea of being consumer-oriented. State organizations are very powerless in terms of marketing and sales power when compared to the private organizations. Selling an organization that is not powerful in either marketing or sales is a very difficult task.

#### **III.4.2 Obstacles in Privatization Operations:**

- Timing: The timing of the privatization of an SOE is very important because the market forces at that time affect the demand for the advertised SOEs. Also, in going to public cases, the stock market conditions play an important role.

- Sales Methods and Comparative Advantages vs. Disadvantages of Those Methods: "There is no perfect method for privatization. All have advantages and disadvantages." states John Nellis in his seminar at the World Bank in October, 1996. Table 1 shows the summary of his presentation in section II.1. Privatization in Turkey is usually achieved by block sale, thus carrying the risk of monopolization / oligopolization.
- Priorities in Privatization: Since there are constraints such as the time to apply the privatization plan, financial constraints, social safety net of the employees that are working for SOEs, the priorities should be stated beforehand according to the objectives of the government.
- Revaluation of the Assets: In order to provide the condition that the assets of the state companies are sold at their real value, at the end of each year, they are revalued by the Law 2791 since January 21, 1983. The main obstacle here is that usually the revaluation rate is below inflation rate causing the company's assets to be seen less valuable than their real value. In 1995, the revaluation rate was 40% while inflation rate was 93% which was much more above revaluation rate.

#### **III.4.3 Obstacles with the Investors:**

- Insufficiency of Stock Market Intermediaries: In the countries like Turkey where the stock market is quite new, the investors have limited services. The citizens living in rural areas of the country do not have a direct access to the stock market. Besides, the information about the financial data of the firms may not be true.

Shaker (1991) defines the more general problem in privatization in Turkey as weak capital markets and a low level of profitability among SOEs. She states: "In other words, the enabling environment that can effectuate the transition to a free market economy is not available. This seems puzzling, considering the government's enthusiasm to privatize. One major factor that needs to be taken into account is that privatization is not merely cosmetic. The process entails societal change as well as political and economic changes, and the difficulty is compounded because those who stand to gain from new economic policies are a diffuse and unorganized group."

- Saving Habits of the Investors: Investors may be unwilling to invest their money in stock market by rather preferring to invest on gold, foreign exchange, real estate, etc. To attract the demand for the privatized companies, special efforts such as advertising, publicity are necessary.

#### **III.4.4 Political and Legal Obstacles**

In Turkish case, we see a very common feature in the privatization implementations: Political and bureaucratic resistance to change. One component of it is the resistance to change that is common for almost every company's employees. The other component of the obstacle is the fear of losing some part of political power after the companies are privatized.

While the protection creates rents, removing it penalizes not only workers but also certain elites who have been receiving rents as a windfall and government officials who see their power disappear with liberalization of the economy. Consequently, observers argue that privatization was not perceived as a positive-sum game in Turkey. (Heper, 1990)

Lack of proper laws for privatization procedures from the beginning and the frequent changes in the laws that were effective in the privatization program implementations made the implementation slow and inconsistent.

#### **III.5 The World Bank's Technical Assistance Projects for the State Owned Enterprises and Privatization in Turkey**

The World Bank's policy on privatization evolved from its experience in assisting member countries through structural adjustment and investment operation, economic and sector work on the reform of the public enterprise sector, and work related to private sector development. The World Bank's role in the coordinated assistance to the countries with International Fiduciary Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) is to provide on how to bring about an enabling environment, laws and regulations related to privatization, and the classification of public enterprises in line with the client

borrower's objectives. The Bank also gives advise on the design of specific privatization programs, including the selection of the enterprises for privatization, development of necessary institutions, and the design of regulations governing transactions (World Bank, 1994).

The World Bank gave loans to Turkish Government in order to assist the privatization program. The major projects are as follows:

- Technical Assistance Project For State Economic Enterprises (Loan 2400-TU),
- Privatization Implementation and Social Safety Net Project.

### **III.5.1 Technical Assistance Project For State Economic Enterprises (Loan 2400-TU)**

The project (Loan 2400-TU) was approved by the Executive Directors in March 1984, and was signed three weeks later.

#### **III.5.1.1 Objectives**

The SOE reform decree provided a framework for improving the financial, managerial and operational efficiency of the SOEs. However, Government of Turkey recognized that its operationalization depended on how readily the SOEs would avail of their new managerial autonomy and take steps to change the deep-rooted attitudes of their managers and boards. Against this background, the Bank and Turkish Government decided to improve the operational efficiency of the selected SOEs. That application would constitute an important demonstration effect for the other SOEs. The criteria for the selection of participating SOEs were:

- Receptivity of the SOE management to the objectives of technical assistance,
- Ongoing direct or indirect relation between the World Bank and the SOE,
- Possibly the role of the SOE in expending exports.

The project was to complement ongoing Bank efforts to assist some SOEs in their rationalization / modernization programs.

### III.5.1.2 Project Components

The loan was given to finance the technical assistance in support of the identified programs of three SOEs selected by government as noted below:

- Turkish Coal Corporation (\$ 2.95 million) - for improved management information system, streamlining of procurement of equipment, spare, training and manpower planning, and improvement management of lignite mines;
- Sümerbank (A conglomerate with operations in banking, manufacturing and retailing - \$ 2.45 million) - for reorganization and rationalization of sales and retail organization, improvement of management and data processing systems, feasibility study for the rationalization and modernization of Sümerbank's wool textile operations;
- Turkish Railways (TCDD / ADVAS) (One of the three main workshops / manufacturing establishments of Turkish Railways - \$ 0.98 million) - for improved cost estimation through appropriate breakdown of operations, improvement of operations planning and scheduling, including the management information systems to product quality, improving manual inventory management and control through the introduction of automated systems, and improved work organization and layout in production and repair facilities.

Project also provided funds for the technical assistance for other potential beneficiaries, services for consultants and equipment to better define user need, establish standards of data accuracy.

The Bank Loan was to be channelled to the SOEs through State Investment Bank (DYB), which had previously supported by the Bank.

### III.5.1.3 Project Design and Organization

The project was designed to demonstrate that by fully of the power and flexibility within the prevailing Turkish Government rules and procedures, and concurrently seeking

assistance to enhance their operational efficiency, SOEs could significantly improve their overall performance. Whereas the SOEs, particularly those with which the Bank had an ongoing relationship, recognized the need for operational improvements, the precise nature of the additional changes to be promoted under the project and their scope and timing may not have been the subject of a fully participatory discussion within Turkey.

#### III.5.1.4 Project Implementation

The approval was a year later than the planned date, because of the delay in enacting the Decree law. The original date of effectiveness was July 16, 1984, however it was extended three times before the Loan become effective in December 1984.

The implementation of the project encountered delays and serious problems from the outset, and there was little or no activity pertaining to the three SOEs for several months. There were delays in finalizing the consultants' short lists and letters of invitation, and terms of reference for studies.

The Coordination Committee which was supposed to monitor the progress of the project and resolve the problems which surfaced proved to be ineffective because it was never built up to full strength, replacement were not promptly found for departing members, and the first chairman was preoccupied with other pressing matters.

#### III.5.1.5 Project Costs and Financing

The Bank provided a loan of \$ 7.6 million over a three year period in order to finance technical assistance in support of the identified three SOEs selected by Turkish Government.

#### III.5.1.6 Project Results and Assessment

During the implementation of the project, some components of the project were revised so that there was little or no action pertaining to the original project components such as the situation in Sümerbank component. However, there was considerable activity involving

both high level Government personnel and Bank staff directed towards operationalizing the philosophy and program of the new Government, particularly with regard to industrial restructuring and privatization.

### **III.5.2 Privatization Implementation and Social Safety Net Project**

#### III.5.2.1 Objectives

Main objective of the project is to promote efficiency and productivity and the further development of Turkey's dynamic private sector by providing assistance for an accelerated privatization process (World Bank, 1994). The project would also help lay the basis for more comprehensive privatization and sustained fiscal contraction in the future. It would build up institutional capacity through technical assistance and the experience gained through the implementation of the current program, thereby enabling the Government's administrative machinery to manage the larger and more complex workload entailed by a broader divestiture program. Another important objective is to alleviate the adverse impact of SOE downsizing and divestiture on displaced workers and their families.

#### III.5.2.2 Project Description

The project would include:

- Technical and financial support for the preparation and implementation of privatization transactions; a public information campaign to promote and broaden public support for the Government's privatization agenda; the strengthening of PA; and the strengthening of the capacity of the Undersecretariat of Treasury and Foreign Trade to manage the debt liabilities of SOEs to be privatized,
- Social safety net measures, including labour adjustment programs to determine the extent of labour displacement in individual SOEs, assess the demand for labour services, and provide counselling, retraining, and small business assistance through local institutions; the strengthening of agencies responsible for the labour adjustment programs; and studies to analyze the options for the reform of the social insurance / pension systems,
- The preparation of a regional development plan to diversify the economic base of the Zonguldak region, where a high concentration of layoffs in steel and mining operations

is likely,

- Studies to develop a regulatory framework for the privatization of the telecommunications sector and establish a coordinated strategy for the private provision of infrastructure services.

#### III.5.2.3 Project Costs and Financing

Total project costs were planned to be \$ 129 million. Of the total Bank would finance \$ 100 million and the Government would finance \$ 29 million.

#### III.5.2.4. Project Implementation

PA would be responsible for the implementation of the privatization component, including the public information campaign. Treasury would be responsible for managing the SOEs' debt liabilities. The implementing agencies such as Treasury would need technical assistance, training, new responsibilities. Contract staff would be used according to the workload by the privatization effort.

Treasury would monitor the labour adjustment part with technical assistance. It would also act as the channel for directing loan funds to lead agencies which would be responsible for delivering the labour adjustment at the local level. The transfer and the use of the funds would be in accordance with criteria agreed with the Bank. Treasury would be responsible for the studies to be carried out under the project. The State Planning Organization would be responsible for the preparation of the Zonguldak regional development plan.

#### III.5.2.5 Project Results and Assessment

The project was mainly to assist three SOEs to improve operational and financial efficiency, however operational component never worked. Three month after the loan approval, the new Government issued a more sweeping decree on privatization and restructuring of SOEs than the one existing during loan approval. The utilization of funds are agreed to be transferred to the privatization studies precedent to privatization. Although studies were well receipt, the Government did not take any action to privatize.

### III.6 Where We Are Now in Privatization Process

Privatization implementations started in 1984 with the transfer of incomplete plants of the SOEs to the private sector to be completed or to construct a new plant. In this juncture, 6 plants were sold to different investors and 9 plants were transferred to municipalities or state enterprises on book value.

Since 1986, privatization implementations have gained momentum and 114 companies were privatized either via sale of shares or asset sale. Among those, no state shares were left in 95 companies (Privatization Administration Bulletin, 1997). Appendix 1 has the list of the completely privatized companies as of January 1, 1997.

Table 6: Privatization Gross Revenues

	1986-1995	1996	1997	TOTAL
	(\$)	(\$)	(\$)	(\$)
Block Sale	1,274,950,286	217,990,000	173,150,000	1,666,090,286
Asset Sale	203,539,351	71,765,349	380,012	275,684,712
Public Offering	433,197,263	0	0	433,197,263
International Offering	330,000,000	0	0	330,000,000
I.S.E. Sale	522,453,459	1,988,800	0	524,442,259
Incomplete Asset Sale	2,139,819	0	0	2,139,819
<b>TOTAL</b>	<b>2,766,280,178</b>	<b>291,744,149</b>	<b>173,530,012</b>	<b>3,231,554,339</b>

Source: Privatization Administration Bulletin, May 14, 1997

Since 1985, total sales of privatization implementations has been about \$ 3.2 billion as seen in Table 6. Some of these asset and share sales were made on installment compensation and foreign exchange basis. As of May 14, 1997, \$ 2.8 billion net privatization revenue have been realized. The discrepancy between sales value and net

revenues derives from interest on compensation by instalments and exchange rate variations in case of foreign exchange compensations.

Total income from organizations on the privatization program during the 1985-1997 period, including \$ 1 billion dividend income reached to \$ 4.2 billion as seen in Table 7.

Table 7: Cash Proceeds of Privatization

	1986-1994 (\$)	1995 (\$)	1996 (\$)	TOTAL (\$)
PRIVATIZATION REVENUES	2,123,534,920	440,254,934	221,949,035	2,785,520,404
_ Block Sale	872,871,069	264,815,854	168,128,778	1,305,815,701
_ Asset Sale	5,867,485	155,731,365	51,831,666	213,430,516
_ Public Offering	424,526,549	0	0	424,526,549
_ International Offering	316,305,000	0	0	316,305,000
_ I.S.E. Sale	502,410,599	19,697,504	1,988,591	524,096,694
_ Incomplete Asset Sale	1,554,218	10,211	0	1,345,944
DIVIDEND INCOME	671,883,268	72,083,857	306,228,324	1,050,195,449
ISSUED PRIVATIZATION BILLS	0	24,142,396	0	24,142,396
PRINCIPAL PAYMENTS	0	12,940,505	6,692,285	19,145,148
EXT. LOAN AND GRANT	0	255,069,501	3,776,110	258,845,611
OTHER	7,912,031	30,517,994	31,498,738	69,928,763
TOTAL	2,803,330,219	835,009,187	570,144,492	4,208,265,413

Source: Privatization Administration Bulletin, May 14, 1997

Table 8: Privatization Expenditures (1986 -1996)

	1986-1994	1995	1996	TOTAL
	(\$)	(\$)	(\$)	(\$)
Transfer to the Companies	278,766,588	9,521,421	8,478,330	291,368,030
Consulting	23,422,392	10,812,968	3,358,871	37,546,293
Public Relations	23,987,764	5,748,225	2,990,624	31,462,992
Capital Increase	1,704,440,340	141,684,632	180,026,631	2,004,065,306
I.S.E. Purchases	134,243,223	0	0	134,243,223
Transfers to the Treasury	404,117,168	402,856,193	354,669,411	1,157,355,489
Social Assistance Supplements	693,858	27,944,279	32,468,778	57,380,554
Credits to The Companies	0	82,238,905	53,260,695	157,955,504
Loan Compensations	0	28,982,665	6,867,964	34,143,483
Others	22,193,831	7,718,236	4,180,826	33,428,764
<b>TOTAL</b>	<b>2,591,865,164</b>	<b>717,507,524</b>	<b>646,302,130</b>	<b>3,938,949,638</b>

Source: Privatization Administration Bulletin, May 14, 1997

Table 9: Privatization Implementations By Years (1985-1996)

Years	Sales (Million \$)
1985-88	29.6
1989	131.2
1990	486.3
1991	223.6
1992	422.9
1993	545.5
1994	411.8
1995	515.4
1996	291.7
1997	173.5
<b>TOTAL</b>	<b>3,231.5</b>

Source: Privatization Administration Bulletin, May 14, 1997

In 1985 - 1997 period, total privatization expenses were \$ 3.9 billion. The largest item in privatization expenditures (about 60 %) was financing in the form of equity participants and loans as seen in Table 8. Table 9 shows the privatization implementations by years (1985 - 1997).

In January 1997, the negotiations for 21 companies to sell were completed by Privatization Administration. Now, they are waiting for the approval of Privatization High Council before meeting with IMF. The total sales amount is expected to be \$ 580 million. Appendix 2 shows the names of those companies and their sales amount.

Also, Etibank is sold in January 20, 1997 to Doğan Textile at amount of \$185 million while Anadolubank is sold to Mehmet Rüştü Başaran at \$ 69.5 million ( January 23, 1997) and Denizbank is sold to Zorlu Holding at \$ 66 million (January 24, 1997). Those three companies are also waiting for the completion of the technical preparations before the approval of PHC.

### **III.7 Planned Future Privatizations**

Since 1985, a total of 159 companies have been taken into the privatization portfolio. Some of these are fully state owned enterprises, while others have more than 50% state shares. Later, nine of the companies that were planned to be privatized were taken out for various reasons.

For 1997, the coalition government has an ambitious revenue targets form privatization. Erbakan stated that Turkey aims to have a balanced budget and to raise at least \$ 5.9 billion from privatizations in 1997. The World Bank officials told Turkish officials that the budgetary drain in this year's budget, which is expected to give a deficit of TL 1,300 trillion, would become worse unless substantial corrective measures are taken on social security and privatization.

Currently, there are 55 companies and some real estates in the portfolio for 1997. Thirty-seven of those companies have more than 50% state shares. (See Appendix 3.)

From the beginning of privatization program which started in mid 80s, 114 companies were privatized and more than \$ 3 billion of revenue was got. There are still remaining 55 companies in the privatization portfolio. The expected sales for the year 1997 is almost \$ 5.9 billion.

## **IV. MEASURE OF PERFORMANCE OF PRIVATIZATION**

Testing the performance of the privatization is a critical issue to see the impact of the privatization programs of the governments. However, most of the time, testing is not that easy. This section analyzes the studies performed in the world and in Turkey.

### **IV.1 Performance Analysis in the World**

The British privatization program has raised tens of billions of pounds for the Treasury, has created millions of new shareholders, and significantly reduced state involvement in enterprise decision making in a number of industries. However, its impact on economic efficiency is rather less clear. (Bishop and Kay, 1988)

Megginson, Nash, Randenborgh (1994) tested the performance of 61 privatized companies from 18 countries in terms of efficiency, investment, profitability, production by using the data of the privatized companies three years before and after privatization. They tried to measure and compare the pre- and post-privatization performances of the companies in different subsets. In fifth part of this study, performance analysis of the privatization program in the cement industry is performed and their study is taken as a base.

In their study, 'return on sales', 'return on capital', 'return on assets' ratios are used to measure the profitability. They find that there are problems with assets and capital in terms of revaluation. According to the research done with those profitability ratios, 70 % of the firms worldwide had improved profit margins after privatization. The increase in the profits are most of the time explained by the increase in the prices.

They used 'inflation adjusted sales/number of employees' and 'inflation adjusted net

income/number of employees' ratios to measure efficiency. The research result showed that the efficiency increased in satisfactory amounts after privatization. However, they admit that the data they had were not enough to determine the reasons of the performance improvement after privatization. Total employment level and output per employee decrease while leverage has no significant improvement after privatization.

“Yarrow (1990) tested the hypothesis: ' Privatization increases the efficiency and the profitability' for the period 1981 - 1986. He could not find any direct relationship between privatization and efficiency and/or profitability, but arrived at a conclusion that privatization in Great Britain caused the Public Sector Borrowing Requirement to decrease.” (Karataş, 1990)

The performance of the privatization in Great Britain is also studied by M. Bishop and J. Kay (1989). Their study shows that the main reason of the increase in the productivity is the decrease in the labour force.

#### **IV.2 Performance Analysis in Turkey**

In Turkey, Çakmak and Zaim (1992) used a stochastic frontier approach to analyze the relative technical inefficiency differences among the private, public and mixed enterprises in the Turkish cement industry. The results indicate that in terms of static inefficiency, the ownership type does not affect the performance in terms of technical efficiency of the enterprises. It was not possible to reject the hypothesis that if there is little competition in the product market, the pressures of the marketplace affect the private managers no more than the public managers. Therefore, at least in cement industry, government policies more oriented to promote competition with or without ownership transfer might generate substantial improvements in productive efficiency.

Karataş (1993) made a study on Teletaş, Ankara , Afyon, Balıkesir, Söke Cement companies to measure the labour productivity and sales profitability after privatization concluding increase in the labour productivity mainly because of the significant decrease in the employment levels.

Suiçmez (1995) made a limited study to measure the performance of the five first privatized cement companies between 1985 - 1992. He used 'return on sales' ratio to measure profitability and 'labour productivity' to measure productivity. He concluded that the decrease in the number of the employees was in large amounts for the cement industry. While this had a positive impact on the company, the impact of it on the national economy and social problems should be studied separately. Cement companies maintained almost the same amount of production with less labour force. This caused the labour productivity to increase after privatization. The improvement in the productivity is not accompanied with the improvement in the profitability. Some of the companies had negative profitability figures for a few years.

## **V. RESEARCH METHODOLOGY AND FINDINGS**

This part of the study compares the financial and operating performance of six cement companies in pre- and post-privatization periods. Five of them (Ankara, Afyon, Balıkesir, Söke, Trakya) are the first privatized cement companies of Turkey in 1989. The sixth one, Niğde was privatized in 1991. While Ankara, Balıkesir, Söke and Trakya were privatized by block sale, Niğde and Afyon were privatized by both block sale and public offering.

Since all of the companies, but two, in cement industry are privatized, cement industry is chosen for the performance analysis. In this part, first, background and structure of the cement industry are examined. Brief information is given about the companies in cement industry. Those companies are chosen for the analysis because they are the six first privatized cement companies, thus allowing us as many as post-privatization years for the analysis. The more the years to analyze, the more reliable becomes the analysis. Besides, those companies are approximately hundred percent owned by the state before privatization. Thus the difference between being state owned and being privately owned becomes more apparent. Data, hypothesis, methodology and findings are the remaining sections.

### **V.1 Background and Structure of Cement Industry in Turkey**

Cement is produced in Turkey since 1912. There are 41 cement companies only 2 of which are now in public hands in Turkey. Privatized cement companies are listed in Appendix 4 by privatization type.

Almost all of the cement plants were built during the import substitution era. As is the case for most of the industries in most developing countries, the cement industry in Turkey

enjoyed the benefits of tariff protection until 1984, when there was a significant shift towards the liberalization of foreign trade. In 1983, nominal and effective protection rates were 58% and 44.4% respectively. (Togan and Olgun, 1991)

In 1992, Turkey was producing 5.56 % of the world cement production which was a significant amount as seen in Table 10. At that point, the efficiency of the cement plants has become more important in order to be competitive in the world arena.

Table 10: Cement Industry in Western Europe and Turkey in 1992

COUNTRY	Cement Production (1,000 tons)	Imports (1,000 tons)	Exports (1,000 tons)	Cement Consumption (1,000 tons)
Austria	5,030	240	28	5,218
Belgium	7,933	400	2,300	2185,750
Denmark	1,791,	223	793	1,241
Finland	1,083	100	-	1,191
France	22,641	1,665	2,435	21,538
Germany	33,226	6,000	2,300	35,939
Great Britain	13,620	-	6,006	7,613
Greece	100	-	-	104
Iceland	1,480	260	300	1,450
Ireland	41,500	3,600	200	44,470
Italy	1,300	-	860	480
Luxembourg	3,100	3,200	710	5,250
Holland	1,300	50	150	1,210
Norway	1,638	-	38	7,580
Portugal	24,756	3,180	1,977	25,796
Spain	1,850	100	200	800
Sweden	4,284	366	51	4,250
Switzerland	30,194	398	4,417	25,965
Turkey	11,600	7,500	400	12,540

TOTAL	208,426	27,282	23,165	209,385
Turkey's Share (%)	5.56 %	27.49 %	1.72 %	5.98 %

Source: Türkiye Çimento ve Toprak Sanayi A.Ş., (1992), Annual Report

Cement manufacturers have an association called Turkish Cement Manufacturers Association. The Association had the right to determine the prices between 1981 - 1985 subject to the approval of the government. In 1986, the government control over the cement price was lifted. When we consider the decision power of the association and the tariff for the cement industry, it can be said that the cement industry is not highly competitive.

Up to now, 26 cement companies that were belonging to the state had been privatized (See Appendix 1). As of January, 1997, there are 2 cement companies in the privatization portfolio. (Ergani Çimento Sanayi Tic. A.Ş. and Kurtalan Çimento Sanayi Tic. A.Ş.) (See Appendix 3)

Figure 1: Breakdown of the Sales Methods in Privatization in Cement Industry

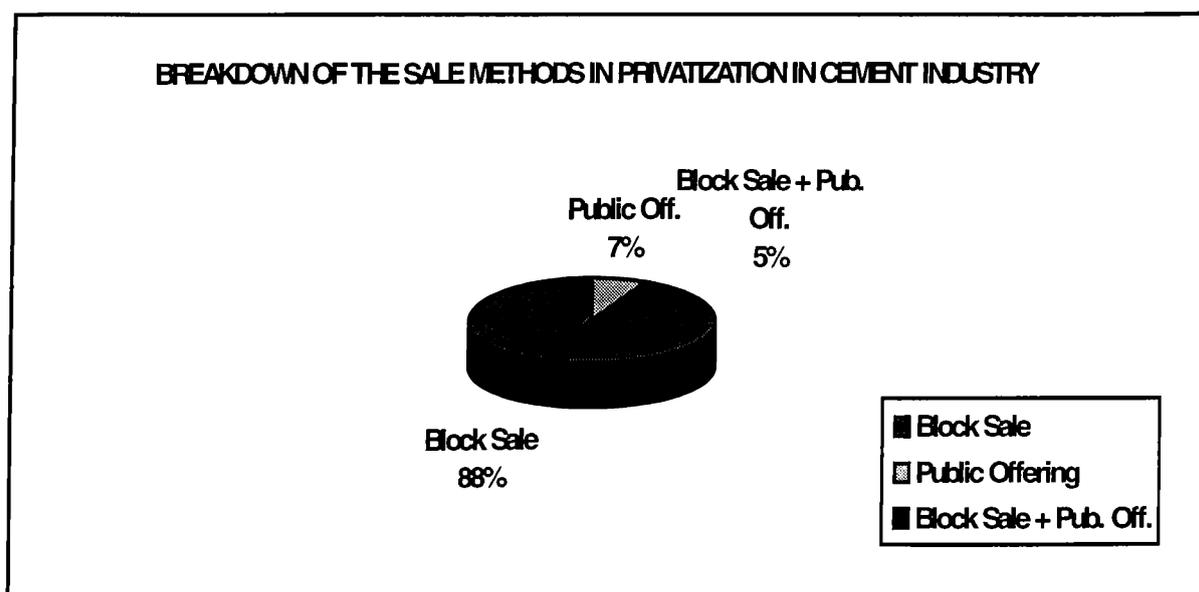


Figure 1 gives the breakdown of the privatization methods in cement industry. Up to now, 7% of the cement companies were privatized by public offering, 88% of them were privatized by block sale, and the remaining 5% of the cement companies were privatized by both public offering and block sale.

## **V.2 Information About the Six Cement Companies in the Analysis**

Privatization in cement industry started in 1989. Between 1989 and 1996, 26 cement companies have been privatized. Afyon, Ankara, Balıkesir, Söke, Trakya cement companies which had been operating related to Türkiye Çimento ve Toprak Sanayi A.Ş. were taken in the privatization portfolio by Mass Housing and State Partnership in April 30, 1987, and privatized during 1989.

In October, 1988, Societe Cement Français (SCF) bought those five by giving the best offer at the block sale auction.. SCF signed an agreement with High Planning Council in September, 1989. The points of the agreement are as follows:

- At least 40% of the shares of each of the five will be offered to the public.
- Against monopoly, the shares belonging to SCF will be sold to cement producers and SCF will not buy any shares from the existing cement firms.
- SCF will guarantee the seniority compensations and the other rights of the personnel.
- SCF will invest \$ 60 - 70 million in those five in the coming 5 years.

Niğde Çimento which was founded in 1957 was privatized in 1991 by block sale and in 1992 by public offering. The shares sold by block sale was bought by Oyak – Ömer Sabancı.

Those six companies in the analysis are important in a sense that they are the first privatized cement companies, thus allowing the analysis' time span to be as large as possible. On the other hand, their shares sold separately are almost 100% which means that public share is almost nonexistent after privatization.

For some of the other cement companies like Mardin, Ünye, Adana which were privatized, government just sold part of its dividend share without having any decision making power in terms of management or production. Thus including such companies in the analysis would not make sense.

### **V.3 Data**

The analysis is limited to the companies that are the first privatized six cement companies by block sale namely Ankara, Afyon, Balıkesir, Niğde, Söke, Trakya. This provides the advantage of measuring the pre- and post-performance of as many as years as possible.

In this study, a sample of the six for at least 5 years of pre- and post-privatization accounting data is collected. Since Ankara, Afyon, Balıkesir, Söke and Trakya were privatized in 1989, it was possible to make the analysis on 7 years of pre- and post-privatization data. Pre-privatization years in the analysis are from 1982 to 1988 and post-privatization years are from 1990 to 1996. Niğde was privatized in 1991, thus allowing an analysis of 5 years for pre- (between years 1986 and 1990) and post-privatization (between years 1992 and 1996).

Local currency data are employed to compute the ratios using nominal data in both the numerator and denominator. In computing real sales efficiency, the sales revenue data are deflated by using consumer price index (CPI) values taken from the Government Statistics Institute. For the sales efficiency (SALEFF) and net income efficiency (NIEFF) figures, sales and net income values are deflated by the mid-year dollar exchange rate values to get rid of the effects of inflation.

### **V.4 Hypothesis**

The expectations from a privatization program are that privatization will:

- 1) Increase the firm's profitability,
- 2) Increase its operating efficiency,
- 3) Increase its output,
- 4) Lower the employment levels,
- 5) Decrease the leverage.

The hypotheses are based on the measurement of whether there is a significant change between the pre- and post-privatization means and medians of the companies one by one and on the overall according to performance measures. The performance measures are as

follows:

- Profitability (In terms of return on sales, return on assets and return on equity)
- Operating Efficiency (In terms of sales efficiency and net income efficiency)
- Output (In terms of real sales)
- Employment (In terms of total employment)
- Leverage (In terms of debt to assets and long-term debt to equity)

T-test is used to test the significance of change between the pre- and post-privatization means for each company. For the overall analysis, Wilcoxon signed rank test and t-test are used to test whether there is a significant change in the pre- and post-privatization means of the six on the overall while Wilcoxon rank test is used to measure the overall performance according to the medians. The findings are discussed in the order of the performance measures stated above.

The goals stated above are tested to see whether they are achieved after privatization of the six cement companies. The testable hypothesis are listed in Table 11.

Table 11: Summary of Hypothesis about Performance of Privatized Companies

Characteristics	Performance Measures	Expected Outcome (Alternative Hypothesis)
Profitability	Return on Sales (ROS) = Net Income/Sales Return on Assets (ROA) = Net income / Total Assets Return on Equity (ROE) = Net income / Equity	$ROS_a > ROS_b$ $ROA_a > ROA_b$ $ROE_a > ROE_b$
Operating Efficiency	Sales Efficiency (SALEFF) = Sales / Number of Employees Net Income Efficiency (NIEFF) = Net Income / Number of Employees	$SALEFF_a > SALEFF_b$ $NIEFF_a > NIEFF_b$
Output	Real Sales (SAL) = Nominal Sales / Consumer Price Index	$SAL_a > SAL_b$
Employment	Total Employment (EMPL) = Total Number of Employees	$EMPL_a < EMPL_b$
Leverage	Debt to Assets (LEV) = Total Debt / Total Assets Long-Term Debt to Equity (LEV2) = Long-Term Debt / Equity	$LEV_a < LEV_b$ $LEV2_a < LEV2_b$

'a' : Post-privatization value

'b' : Pre-privatization value

This table details the economic characteristics that are examined for changes resulting from privatization. The expected (alternative) hypothesis are presented and defined. The predicted changes in the economic characteristics after privatization are based on the avowed objectives of the governments launching privatization program and the theoretical works cited in the text above. The index symbols in the predicted relationship column

stand for after privatization and before privatization, respectively. Profitability, operating efficiency and output are expected to increase after privatization. Post-privatization values of employment and leverage are expected to be lower than the pre-privatization values.

## **V.5 Methodology**

The average and median of each variable for each firm over the pre- and post-privatization windows (pre-privatization: years -7 to -1 for Ankara, Afyon, Balıkesir, Söke, Trakya, years -5 to -1 for Niğde, and post-privatization: years +1 to +7 for Ankara, Afyon, Balıkesir, Söke, Trakya, years +1 to +5 for Niğde) are calculated. For all firms, the year of privatization (year 0) includes both the public and private ownership of the enterprise. Therefore, year 0 is excluded from calculations.

T-test is used to test whether there is significant improvement in the means of each company comparing pre- and post-privatization periods. In order to test the difference between the means of the pre- and post-privatization values of the companies on the overall, both t-test and Wilcoxon signed rank test are used. Wilcoxon rank test is employed to measure the significance of the difference between the medians on the overall. Table 12 summarizes the methodology used for each criterion.

Table 12: The Methodology Used to Measure the Performance of the Companies

	<b>Mean</b>	<b>Median</b>
<b>Each Company Separately</b>	T-test	
<b>All Companies on the Overall</b>	Wilcoxon Signed Rank Test T-test	Wilcoxon Rank Test

### **V.5.1 T-test**

Having computed pre- and post-privatization averages, t-test for two population means is used to investigate the significance of the difference between the means of pre- and post-privatization parameters of each company and all companies on the overall. The test

statistic is

$$T = (X_a - X_b) / ((S_a^2 + S_b^2) / n)^{0.5}$$

Where n is the equal number of observation before and after privatization. 'n' equals 7 for Ankara, Afyon, Balıkesir, Söke and Trakya and equals 5 for Niğde. The degrees of freedom (df) is computed as follows:

$$df = \{ [((S_a^2 + S_b^2) / n)^2] / [((S_a^4 + S_b^4) / n) / (n^2 * (n + 1))] \} - 2$$

If  $T > T_{critical}$  with the calculated degrees of freedom, then reject  $H_0$ . This test is valid for the characteristics where  $H_a: \mu_a > \mu_b$ .

### V.5.2 Wilcoxon Signed Rank Test

This test is employed to measure the significance of the difference of the means. The computational sequence for this test for  $H_a: \mu_a > \mu_b$  is as follows:

- Calculate averages of pre- and post-privatization values,
- Calculate the difference between averages,
- Assign ranks to each difference in ascending order without regard to sign by ignoring zero values,
- Add sign of the difference scores to the ranks,
- Sum the ranks for negative difference scores, {T-}.
- If {T-}  $\leq T_{critical}$ , then reject  $H_0$ .

### V.5.3 Wilcoxon Rank Test

This test is employed to measure the significance of the difference of the medians. The computational sequence for this test for  $H_a: \mu_a > \mu_b$  is as follows:

- Calculate the medians of the pre- and post-privatizations values of each company,
- Assign ranks to each median in ascending order without regard to being pre- or post-privatization value ,

- Determine  $W_a$  by summing the ranks of medians for after privatization values,
- If  $P(W_a) = < \alpha$  (level of significance), then reject  $H_0$ .

## **V.6 Findings**

Findings are examined in terms of the five criteria stated above namely profitability, operating efficiency, output, employment and leverage.

### **V.6.1 Profitability**

In this study, profitability is measured using three ratios: Return on Sales (ROS), Return on Assets (ROA) and Return on Equity (ROE). The profitability ratios are expected to increase. The results for profitability ratios are seen in Tables 13-15.

All the test outcomes, contrary to the expectations, are resulted in the failure to reject null hypothesis. That means that there is no significant improvement in any of the companies or on the overall in terms of profitability.

**Table 13: RETURN ON SALES (ROS) = Net Income / Sales**

Before Privatization Years									
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1	Average $X_b$	Standard Dev. $S_b$
<b>ANKARA</b>	-0.2315	-0.2201	0.0167	0.0933	0.0786	0.1537	0.0069	-0.0146	0.1524
<b>AFYON</b>	-0.0513	0.0073	0.0686	0.1273	0.2259	0.2628	0.1985	0.1199	0.1173
<b>BALIKESİR</b>	0.1129	0.1820	0.3635	0.2907	0.4001	0.3266	0.3155	0.2845	0.1019
<b>NİĞDE</b>			0.2311	0.2870	0.3250	0.0826	0.0641	0.1979	0.1187
<b>SÖKE</b>	-0.0717	0.0190	0.1051	0.2212	0.2457	0.1611	0.2196	0.1286	0.1186
<b>TRAKYA</b>	-0.4101	-0.0688	0.3269	0.1991	0.2851	0.3035	0.2590	0.1278	0.2725
								0.1407	0.1758

After Privatization Years									
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7	Average $X_a$	Standard Dev. $S_a$
<b>ANKARA</b>	-0.1875	0.0172	0.0406	0.0296	-0.4652	-0.4525	-0.3560	-0.1963	0.2296
<b>AFYON</b>	0.1109	0.0309	-0.0074	0.0457	0.0301	-0.0197	0.0324	0.0318	0.0421
<b>BALIKESİR</b>	-0.0009	0.0356	-0.0502	0.0046	0.1270	0.0027	-0.0233	0.0136	0.0565
<b>NİĞDE</b>	0.1308	0.2600	0.2494	0.1190	0.2033			0.1925	0.0654
<b>SÖKE</b>	0.0898	0.1202	-0.0109	0.0095	0.0965	0.1465	0.0858	0.0768	0.0572
<b>TRAKYA</b>	0.0308	0.0341	-0.1291	-0.2543	-0.0005	-0.1201	0.0115	-0.0611	0.1095
								0.0096	0.1590

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
<b>ANKARA</b>	-1.7438	11.91	1.782	Fail to reject $H_0$	26	52	1	Fail to reject $H_0$	-0.1816	-4	Fail to reject $H_0$
<b>AFYON</b>	-1.8689	8.03	1.860	Fail to reject $H_0$					-0.0880	-3	
<b>BALIKESİR</b>	-6.1477	10.50	1.796	Fail to reject $H_0$					-0.2708	-6	
<b>NİĞDE</b>	-0.0899	7.34	1.895	Fail to reject $H_0$					-0.0054	-1	
<b>SÖKE</b>	-1.0409	9.53	1.812	Fail to reject $H_0$					-0.0518	-2	
<b>TRAKYA</b>	-1.7018	8.52	1.833	Fail to reject $H_0$					-0.1889	-5	
<b>OVERALL</b>	-3.4983	79.18	1.645	Fail to reject $H_0$					{ T- }	21	

Table 14: RETURN ON ASSETS (ROA) = Net Income / Total Assets

	Before Privatization Years								Average $X_b$	Standard Dev. $S_b$
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1			
<b>ANKARA</b>	-0.4727	-0.3939	0.0317	0.8663	0.1591	0.2167	0.0109	0.0597	0.4430	
<b>AFYON</b>	-0.1757	0.0247	0.1857	0.5533	0.5449	0.5881	0.5347	0.3222	0.3093	
<b>BALIKESİR</b>	0.2122	0.2536	0.5103	0.4126	5.3484	0.4756	0.0479	1.0372	1.9080	
<b>NIĞDE</b>			0.4095	0.4805	0.4484	0.1113	0.0883	0.3076	0.1915	
<b>SÖKE</b>	-0.2291	0.0597	0.2789	0.6498	0.5205	0.5017	0.5670	0.3355	0.3195	
<b>TRAKYA</b>	-0.7078	-0.0941	0.4401	0.3832	0.5644	0.5535	0.5599	0.2427	0.4789	
								0.3842	0.8721	

	After Privatization Years								Average $X_a$	Standard Dev. $S_a$
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7			
<b>ANKARA</b>	-0.3042	0.0365	0.0257	0.0124	-0.1440	-0.1287	-0.1459	-0.0926	0.1247	
<b>AFYON</b>	0.2985	0.0695	-0.0206	0.0927	0.0492	-0.0433	0.0804	0.0752	0.1112	
<b>BALIKESİR</b>	-0.0024	0.0567	-0.0703	0.0071	0.1491	0.0032	-0.0230	0.0172	0.0694	
<b>NIĞDE</b>	0.1988	0.3322	0.3132	0.1652	0.2432			0.2505	0.0718	
<b>SÖKE</b>	0.1408	0.2351	-0.0133	0.0154	0.1251	0.2181	0.0473	0.1098	0.0971	
<b>TRAKYA</b>	0.0429	0.0373	-0.1071	-0.2189	-0.0004	-0.0780	0.0103	-0.0448	0.0955	
								0.0525	0.1405	

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
<b>ANKARA</b>	-0.8758	7.26	1.895	Fail to reject $H_0$	24	54	1	Fail to reject $H_0$	-0.1523	-2	Fail to reject $H_0$
<b>AFYON</b>	-1.9887	8.03	1.896	Fail to reject $H_0$					-0.2470	-4	
<b>BALIKESİR</b>	-1.4135	6.02	1.944	Fail to reject $H_0$					-1.0200	-6	
<b>NIĞDE</b>	-0.6243	5.65	1.943	Fail to reject $H_0$					-0.0571	-1	
<b>SÖKE</b>	-1.7885	7.47	1.860	Fail to reject $H_0$					-0.2257	-3	
<b>TRAKYA</b>	-1.5581	6.64	1.895	Fail to reject $H_0$					-0.2876	-5	
<b>OVERALL</b>	-2.3744	41.13	1.645	Fail to reject $H_0$					{ T- }	21	

Table 15: RETURN ON EQUITY (ROE) = Net Income / Equity

Before Privatization Years									
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1	Average $X_b$	Standard Dev. $S_b$
ANKARA	0.5356	0.4260	-0.0596	-4.6806	0.7603	0.8836	0.0525	-0.2975	1.9631
AFYON	1.0611	-3.1667	1.2562	1.1937	1.0810	1.2138	1.0089	0.5211	1.6287
BALIKESİR	0.6906	0.3695	0.5866	0.5802	0.8242	0.7593	0.7548	0.6521	0.1541
NİĞDE			0.6200	0.7921	0.9014	0.2954	0.2975	0.5813	0.2787
SÖKE	1.7143	0.6111	1.0000	1.3006	0.8955	1.0109	1.0816	1.0877	0.3454
TRAKYA	0.7589	-0.2490	1.0898	0.5517	0.9272	0.9314	0.9642	0.7106	0.4568
								0.5426	1.1183

After Privatization Years									
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7	Average $X_a$	Standard Dev. $S_a$
ANKARA	-11.6116	0.0943	0.0477	0.0371	-0.4806	-0.3107	-0.3672	-1.7987	4.3331
AFYON	0.6084	0.2777	-1.0515	0.2763	0.1793	-1.0655	0.1932	-0.0832	0.6814
BALIKESİR	-0.0073	0.1777	-0.2307	0.0172	0.2993	0.0065	-0.0578	0.0293	0.1694
NİĞDE	0.4677	0.5509	0.5096	0.2516	0.3537			0.4267	0.1224
SÖKE	0.4264	0.5404	-0.0517	0.0387	0.2086	0.3074	0.1682	0.2340	0.2086
TRAKYA	0.1597	0.1782	-0.4893	-1.4811	-0.0009	-0.1462	0.0143	-0.2522	0.5869
								-0.2407	1.8909

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
ANKARA	-0.8349	9.15	1.883	Fail to reject $H_0$	22	56	1	Fail to reject $H_0$	-1.5012	-6	Fail to reject $H_0$
AFYON	-0.9056	8.72	1.883	Fail to reject $H_0$					-0.6043	-2	
BALIKESİR	-7.1968	13.86	1.761	Fail to reject $H_0$					-0.6229	-3	
NİĞDE	-1.1356	6.23	1.943	Fail to reject $H_0$					-0.1546	-1	
SÖKE	-5.5984	11.15	1.796	Fail to reject $H_0$					-0.8537	-4	
TRAKYA	-3.4250	13.09	1.771	Fail to reject $H_0$					-0.9628	-5	
OVERALL	-2.3744	41.13	1.645	Fail to reject $H_0$					{ T- }	21	

## **V.6.2 Operating Efficiency**

Governments expect firms to employ their human, financial and technical resources more efficiently after privatization. This is crucial for both the employees of the company and the shareholders. Inflation adjusted (adjustment is done by finding the dollar values of the sales and net income) sales and net income are employed for those ratios. Although it is unfavourable for the governments to face the decreasing employment levels, this is almost inevitable. Partly because of that decline in the employment levels, sales and net income efficiency figures are expected to increase. Tables 16-17 show the figures for efficiency.

- Sales Efficiency (SALEFF): The t-test results do not indicate significant improvements for each company. On the overall, the means seem to differ significantly after privatization according to the conclusion drawn from t-test for two means, Wilcoxon signed rank test for two means and Wilcoxon rank test for two medians. On the overall, sales per employees working in the company have been increased.
- Net Income Efficiency (NIEFF): Tests other than the t-test for Söke result in the failure to reject the null hypothesis. Thus, one can conclude that the companies other than Söke do not show some significant improvement in terms of net income/ number of employees ratio. The overall picture got by t-test and Wilcoxon tests are consistent with the each other, thus we can conclude that there is no significant increase in the net income per employee.

## **V.6.3 Output**

There are conflicting discussions about the predicted result of the output change after privatization as stated above. Some economists argue that government can expect an increase in real sales because of better incentives, more flexible financing opportunities, increased competition, and greater scope for entrepreneurial initiative. On the other hand, some researchers expect a decrease in output since the government can no longer entice managers (through subsidies) to maintain inefficiently high output levels. In this analysis, the output is expected to increase after privatization as stated in Table 11. The figures become all inflation adjusted after they are divided by consumer price index (CPI). Table 18 has the results of real sales.

- Real Sales (SAL): T-test for each company is resulted in failure to reject the null hypothesis. That is also consistent with the t-test and Wilcoxon rank test for medians that measure the overall performance. On the other hand, Wilcoxon signed rank test for means shows that there is a significant improvement in real sales.

Table 16: SALES EFFICIENCY (SALEFF) = Sales (\$) / Number of Employees

Before Privatization Years									
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1	Average $X_b$	Standard Dev. $S_b$
<b>ANKARA</b>	57722	52676	64211	62008	72438	97583	102443	72726	19645.0278
<b>AFYON</b>	6001	37640	44455	41162	46269	53244	65950	42103	18438.3751
<b>BALIKESİR</b>	42126	40054	39626	38786	49213	51594	59707	45872	7878.3021
<b>SÖKE</b>	45633	37692	30323	38250	36434	70531	67197	46580	15891.3347
<b>TRAKYA</b>	56381	44203	46736	25069	87317	9225	117331	55180	36758.8672
							Mean $b$	52492	23372.7249

After Privatization Years									
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7	Average $X_a$	Standard Dev. $S_a$
<b>ANKARA</b>	60929	188714	245684	28237	430888	199022	279050	204646	135687.0180
<b>AFYON</b>	103088	131749	176439	228314	260842	101225	126714	161196	62843.3031
<b>BALIKESİR</b>	110860	130585	153782	184916	239660	112476	120119	150343	47401.4258
<b>SÖKE</b>	72090	118770	123969	223677	400731	213073	280515	204689	112615.1685
<b>TRAKYA</b>	115297	152774	223558	261456	402446	155387	199087	215715	95728.3489
							Mean $a$	187318	94390.4544

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
<b>ANKARA</b>	2.5458	6.34	1.782	Reject $H_0$	40	15	0.0040	Reject $H_0$	131920.3680	3	Reject $H_0$
<b>AFYON</b>	4.8111	7.37	1.860	Reject $H_0$					119092.7834	2	
<b>BALIKESİR</b>	5.7522	6.44	1.796	Reject $H_0$					104470.6500	1	
<b>SÖKE</b>	3.1086	4.24	1.895	Reject $H_0$					158108.8896	4	
<b>TRAKYA</b>	4.1420	8.31	1.812	Reject $H_0$					160534.6035	5	
<b>OVERALL</b>	8.7690	44.01	1.645	Reject $H_0$					{ T- }	0	

Table 17: NET INCOME EFFICIENCY (NIEFF) = Net Income (\$) / Number of Employees

	Before Privatization Years								Average X <sub>b</sub>	Standard Dev. S <sub>b</sub>
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1			
<b>ANKARA</b>	-13364.86	-11595.85	1068.84	5782.59	5691.28	14994.57	707.69	469.18	10032.0464	
<b>AFYON</b>	-3063.40	274.53	3043.26	5239.75	10449.25	13982.61	13087.63	6144.81	6555.5596	
<b>BALIKESİR</b>	4729.36	7289.57	14382.45	11270.80	19686.09	16840.75	18828.86	13289.70	5755.5371	
<b>SÖKE</b>	-3256.18	716.08	3180.64	8460.17	8951.90	11357.23	14751.10	6308.71	6336.7450	
<b>TRAKYA</b>	-22994.67	-3040.52	15253.91	9604.25	24894.42	24901.07	30372.20	11284.38	18858.3691	
							Mean <sub>b</sub>	7499.35	11033.2757	

	After Privatization Years							Average X <sub>a</sub>	Standard Dev. S <sub>a</sub>
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7		
<b>ANKARA</b>	-11424.66	3238.91	9962.82	8363.55	-200454.07	-90050.88	-99338.61	-54243.28	79449.1889
<b>AFYON</b>	11432.90	4068.29	-1306.20	10430.87	7844.93	-1990.04	4105.73	4940.92	5311.0298
<b>BALIKESİR</b>	-104.77	4649.11	-7725.08	849.32	30426.26	305.88	-2793.15	3658.23	12396.2195
<b>SÖKE</b>	6475.70	14273.57	-1350.67	2129.51	38660.27	31222.60	24.08	13062.15	15953.8799
<b>TRAKYA</b>	3552.17	5212.55	-28850.48	-66491.83	-206.74	-18667.37	2294.22	-14736.78	26226.1623
							Mean <sub>a</sub>	-9463.75	43743.5925

	T-Statistic for Means	Degrees of Freedom	Critical T-value at α=.05	Result	Sum of Ranks W <sub>a</sub>	Sum of Ranks W <sub>b</sub>	Critical Value at α=.05	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at α=.05
<b>ANKARA</b>	-1.8076	6.26	1.943	Fail to reject H <sub>0</sub>	18	37	0.9841	Fail to reject H <sub>0</sub>	-54712.4550	5	Fail to reject H <sub>0</sub>
<b>AFYON</b>	-0.3775	13.34	1.771	Fail to reject H <sub>0</sub>					-1203.8815	1	
<b>BALIKESİR</b>	-1.8645	9.30	1.833	Fail to reject H <sub>0</sub>					-9631.4709	3	
<b>SÖKE</b>	0.8797	5.85	1.943	Fail to reject H <sub>0</sub>					6753.4446	-2	
<b>TRAKYA</b>	-2.1313	12.53	1.771	Fail to reject H <sub>0</sub>					-26021.1653	4	
<b>OVERALL</b>	-2.3781	44.20	1.645	Fail to reject H <sub>0</sub>				{ T- }	2		

Table 18: REAL SALES (SAL) = Nominal Sales / Consumer Price Index

	Before Privatization Years								
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1	Average $X_b$	Standard Dev. $S_b$
<b>ANKARA</b>	566.1765	562.5600	633.4052	712.5651	884.7598	926.2371	852.4850	734.0269	153.7625
<b>AFYON</b>	568.9076	416.8000	400.7543	442.6022	535.1739	549.4856	439.5244	479.0354	69.6197
<b>BALIKESİR</b>	394.5378	419.3600	380.6034	435.0929	572.1149	484.7633	427.2708	444.8204	65.1950
<b>NİĞDE</b>			486.1403	430.6159	129.0060	359.0690	385.6040	358.0870	136.8341
<b>SÖKE</b>	281.0924	277.9200	276.9397	302.4535	319.5472	493.2004	342.6093	327.6804	76.9669
<b>TRAKYA</b>	478.9916	428.0000	408.0819	252.4164	932.8548	81.1321	771.2725	478.9642	291.1691
								470.4357	196.9017

	After Privatization Years								
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7	Average $X_a$	Standard Dev. $S_a$
<b>ANKARA</b>	347.3175	623.2936	663.7217	681.3086	685.9689	689.6346	1582.9365	753.4545	385.5329
<b>AFYON</b>	580.4747	448.4349	489.7742	490.5430	391.5896	350.7565	702.1775	493.3929	118.2693
<b>BALIKESİR</b>	722.5004	447.7652	417.2327	407.9246	357.8142	366.3178	634.1245	479.0970	141.7638
<b>NİĞDE</b>	407.1042	452.8640	446.8904	446.1505	874.0924			525.4203	195.7588
<b>SÖKE</b>	324.4920	290.4669	264.1613	316.1035	353.6868	447.8357	1030.1712	432.4167	269.9947
<b>TRAKYA</b>	697.3175	593.1791	609.3130	660.8823	703.7628	6.2376	1266.4256	648.1597	366.1782
								555.3235	277.5476

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
<b>ANKARA</b>	0.1238	8.48	1.782	Fail to reject $H_0$	44	34	0.2424	Fail to reject $H_0$	19.4275	3	Reject $H_0$
<b>AFYON</b>	0.2768	10.95	1.860	Fail to reject $H_0$					14.3575	1	
<b>BALIKESİR</b>	0.5812	9.24	1.796	Fail to reject $H_0$					34.2766	2	
<b>NİĞDE</b>	1.5666	8.73	1.895	Fail to reject $H_0$					167.3333	5	
<b>SÖKE</b>	0.9870	7.29	1.812	Fail to reject $H_0$					104.7364	4	
<b>TRAKYA</b>	0.9569	13.23	1.833	Fail to reject $H_0$					169.1955	6	
<b>OVERALL</b>	1.5777	71.93	1.645	Fail to reject $H_0$					{ T- }	0	

#### **V.6.4 Employment**

The decreasing levels in the employment of the companies privatized, due to the desire to increase efficiency and profitability, is the great fear of the governments. This is examined by the total number of employees. Table 19 shows the findings about employment.

- Total Employment (EMPL): As expected, the employment levels are all increased for all the six. The results of all tests are consistent.

#### **V.6.5 Leverage**

Leverage ratios are expected to drop after the privatization. The most important reason is that the SOEs have extremely high debt levels because most of the equity is available in form of capital injections from the government and retained earnings. After privatization, cost of financing is high for the firms. Tables 20-21 exhibit the results for leverage.

- Debt to Assets (LEV): On the contrary of the expectations, the leverage seems to have a significant change after privatization neither for any of the companies nor on the overall.
- Long-Term Debt to Equity (LEV2): Same result with debt to assets ratio holds for this one. There is no significant change in any of the company's leverage and on the overall after privatization.

There is no significant change in the leverage of the firms after privatization. The companies might be financing their investment requirement by debt. They have a mandatory amount of money that they have to invest in the first five years of the privatization. It is most probably that their debt ratios increase because of financing this amount by borrowing.

Table 19: TOTAL EMPLOYMENT (EMPL) = Total Number of Employees

	Before Privatization Years							Average $X_b$	Standard Dev. $S_b$
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1		
<b>ANKARA</b>	426	407	418	420	415	395	457	420	19.2675
<b>AFYON</b>	414	422	382	393	393	431	366	400	23.1620
<b>BALIKESİR</b>	409	399	407	410	395	391	393	401	7.9970
<b>SÖKE</b>	269	281	387	289	298	291	280	299	39.7774
<b>TRAKYA</b>	371	369	370	368	363	366	361	367	3.7161
								377	48.1449

	After Privatization Years							Average $X_a$	Standard Dev. $S_a$
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7		
<b>ANKARA</b>	328	262	218	210	193	183	173	224	54.3674
<b>AFYON</b>	324	270	224	187	182	183	169	220	57.4962
<b>BALIKESİR</b>	375	272	219	192	181	172	161	225	76.0194
<b>SÖKE</b>	259	194	172	123	107	111	112	154	57.3469
<b>TRAKYA</b>	348	308	220	220	212	212	194	245	58.6044
								213	65.5606

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
<b>ANKARA</b>	8.9838	7.98	1.860	Reject $H_0$	15	40	0.0040	Reject $H_0$	-196	-5	Reject $H_0$
<b>AFYON</b>	7.6951	8.53	1.833	Reject $H_0$					-180	-4	
<b>BALIKESİR</b>	6.0918	6.18	1.943	Reject $H_0$					-176	-3	
<b>SÖKE</b>	5.5077	12.25	1.872	Reject $H_0$					-145	-2	
<b>TRAKYA</b>	5.4968	6.06	1.943	Reject $H_0$					-122	-1	
<b>OVERALL</b>	12.7429	73.26	1.645	Reject $H_0$					{T+}	0	

Table 20: DEBT TO ASSETS (LEV) = Total Debt / Total Assets

Before Privatization Years									
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1	Average $X_b$	Standard Dev. $S_b$
ANKARA	0.6712	0.3603	0.4459	1.1851	0.7908	0.7548	0.1027	0.6158	0.3499
AFYON	0.5171	0.5481	0.2695	43.5321	0.4959	0.5155	2.6098	6.9269	16.1614
BALIKESİR	0.3704	0.3573	0.3772	0.2889	3.5174	0.3736	0.0367	0.7602	1.2219
NİĞDE			0.3413	0.0222	0.1978	0.6230	0.7031	0.3775	0.2855
SÖKE	0.6826	0.2622	0.3543	0.0094	0.4187	0.5037	0.4758	0.3867	0.2118
TRAKYA	0.1196	1.5486	0.1415	0.0080	0.3913	0.4058	0.4193	0.4334	0.5182
								1.5834	6.8249

After Privatization Years									
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7	Average $X_a$	Standard Dev. $S_a$
ANKARA	0.9738	0.6136	0.4618	0.6662	0.7004	0.5857	0.6027	0.6577	0.1583
AFYON	0.5093	0.7499	0.8039	0.6643	0.7258	0.6939	0.5837	0.6758	0.1009
BALIKESİR	0.6767	0.6807	0.6954	0.5888	0.5019	0.5083	0.6023	0.6077	0.0809
NİĞDE	0.5962	0.3970	0.3811	0.3435	0.3124			0.4060	0.1113
SÖKE	0.6697	0.5648	0.7430	0.6029	0.4005	0.2904	0.7187	0.5700	0.1683
TRAKYA	0.7312	0.7908	0.7811	0.4782	0.5557	0.4663	0.2814	0.5835	0.1918
								0.5835	0.1560

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
ANKARA	-0.2888	9.14	1.883	Fail to reject $H_0$	49	29	0.9535	Fail to reject $H_0$	0.0419	2	Fail to reject $H_0$
AFYON	1.0233	6.00	1.943	Fail to reject $H_0$					-6.2510	-6	
BALIKESİR	0.3295	6.07	1.943	Fail to reject $H_0$					-0.1525	-4	
NİĞDE	-0.2466	5.78	1.943	Fail to reject $H_0$					0.0286	1	
SÖKE	-1.7931	13.22	1.771	Fail to reject $H_0$					0.1833	5	
TRAKYA	-0.7187	8.15	1.860	Fail to reject $H_0$					0.1501	3	
OVERALL	0.9264	39.04	1.645	Fail to reject $H_0$					{T+}	11	

Table 21: LONG-TERM DEBT TO EQUITY (LEV2) = Long-Term Debt / Equity

Before Privatization Years									
	Year -7	Year -6	Year -5	Year -4	Year -3	Year -2	Year -1	Average $X_b$	Standard Dev. $S_b$
ANKARA	-0.0103	-0.0066	-0.1376	-0.9791	0.1812	0.8675	0.5677	0.0690	0.5848
AFYON	0.0000	0.0000	0.0000	29.9937	0.0815	0.0537	0.0315	4.3086	11.3261
BALIKESİR	0.1954	0.0310	0.0091	0.0000	0.0384	0.0521	0.0306	0.0509	0.0661
NİĞDE			0.0448	0.0365	0.3977	0.7633	1.2248	0.4934	0.5067
SÖKE	-0.0357	-0.0514	0.0000	1.0000	0.0623	0.0426	0.0203	0.1483	0.3777
TRAKYA	0.0000	0.0027	0.0001	0.4402	0.0125	0.0613	0.0234	0.0772	0.1615
								0.8579	4.7353

After Privatization Years									
	Year +1	Year +2	Year +3	Year +4	Year +5	Year +6	Year +7	Average $X_a$	Standard Dev. $S_a$
ANKARA	0.3493	0.0458	0.4860	1.2656	1.8841	0.7165	0.9157	0.8090	0.6168
AFYON	0.0000	0.2224	21.2282	1.1956	0.8601	5.9767	0.4051	4.2697	7.7581
BALIKESİR	0.6790	1.1039	0.9268	0.6196	0.2764	0.2180	0.5285	0.6217	0.3214
NİĞDE	0.6930	0.3243	0.3301	0.3162	0.2203			0.3768	0.1824
SÖKE	0.1839	0.0790	0.8040	0.9266	0.0680	0.0723	0.4041	0.3626	0.3647
TRAKYA	0.9629	1.3615	1.5616	1.9429	0.5647	0.2698	0.0902	0.9648	0.6926
								1.2341	3.3804

	T-Statistic for Means	Degrees of Freedom	Critical T-value at $\alpha=.05$	Result	Sum of Ranks $W_a$	Sum of Ranks $W_b$	Critical Value at $\alpha=.05$	Wilcoxon Test Result for the Medians	Difference Between Means	Rank	Wilcoxon Test Result for the Means at $\alpha=.05$
ANKARA	-2.3035	13.95	1.761	Fail to reject $H_0$					0.7400	5	Fail to reject $H_0$
AFYON	0.0075	12.15	1.782	Fail to reject $H_0$				-0.0389	-1		
BALIKESİR	-4.6027	6.68	1.895	Fail to reject $H_0$				0.5708	4		
NİĞDE	0.5731	5.53	1.895	Fail to reject $H_0$				-0.1167	-2		
SÖKE	-1.0796	13.98	1.761	Fail to reject $H_0$				0.2142	3		
TRAKYA	-3.3021	6.87	1.895	Fail to reject $H_0$				0.8876	6		
OVERALL	-0.4089	72.17	1.645	Fail to reject $H_0$				{T+}	18		

## **V.7 Summary of the Findings**

Table 22 summarizes the results of the t-test and Wilcoxon tests for the six on overall in terms of each criteria. For other than real sales, all of the tests are consistent with each other. Profitability , shows no significant improvement after privatization, on the contrary there is a significant amount of decrease in profitability that can be seen in the results of t-test on the overall in Tables 13-15. Whether the profitability has a significant decline after privatization are not tested with the other tests, Wilcoxon signed rank test and Wilcoxon rank test, since this subject is beyond the scope of this study.

Operating efficiency shows improvement in terms of sales efficiency while it shows no significant improvement in terms of net income efficiency. Net income efficiency decreased on the overall according to t-test (See Table 17). The main reasons for that are discussed in the sixth part.

In real sales, the result of t-test and Wilcoxon rank test is the failure to reject the null hypothesis. However, Wilcoxon signed rank test concludes that null hypothesis is rejected.

Employment decreases in each company and on the overall as expected. This is quite normal since the companies laid off many employees after privatization.

Leverage has no significant change after privatization. Actually, a decrease in the leverage is expected after privatization since the cost of borrowing increase for the private firms. The main reason for no significant change may be the obligation of firms to make investments in the first five years of the privatization and firms financing those investments by debt.

Table 22: Results of T-test and Wilcoxon Rank Tests for the Six Companies

Characteristics	Performance Measures	T-Test Results	Wilcoxon Rank Test Results (Median)	Wilcoxon Signed Rank Test Results (Mean)
Profitability	Return on Sales	Fail to reject $H_0$	Fail to reject $H_0$	Fail to reject $H_0$
	Return on Assets	Fail to reject $H_0$	Fail to reject $H_0$	Fail to reject $H_0$
	Return on Equity	Fail to reject $H_0$	Fail to reject $H_0$	Fail to reject $H_0$
Operating Efficiency	Sales Efficiency	Reject $H_0$	Reject $H_0$	Reject $H_0$
	Net Income Efficiency	Fail to reject $H_0$	Fail to reject $H_0$	Fail to reject $H_0$
Output	Real Sales	Fail to reject $H_0$	Fail to reject $H_0$	Reject $H_0$
Employment	Total Employment	Reject $H_0$	Reject $H_0$	Reject $H_0$
Leverage	Debt to Assets	Fail to reject $H_0$	Fail to reject $H_0$	Fail to reject $H_0$
	Long-Term Debt to Equity	Fail to reject $H_0$	Fail to reject $H_0$	Fail to reject $H_0$

Table 23 summarizes the results of the t-test to compare each company's pre- and post-privatization performance. Most of the time, the expectations about the performances are not revealed. Just the employment for each company and the net income efficiency for Söke resulted in the rejection of the null hypothesis, thus meaning that the expectations are revealed in those cases.

Table 23: Results of T-test for Each Company

	Ankara	Afyon	Balıkesir	Niğde	Söke	Trakya
Return on Sales (ROS)	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>
Return on Assets (ROA)	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>
Return on Equity (ROE)	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>
Sales Efficiency (SALEFF)	R H <sub>0</sub>	R H <sub>0</sub>	R H <sub>0</sub>	n.a.	R H <sub>0</sub>	R H <sub>0</sub>
Net Income Efficiency (NIEFF)	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	n.a.	FTR H <sub>0</sub>	FTR H <sub>0</sub>
Real Sales (SAL)	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>
Total Employment (EMPL)	R H <sub>0</sub>	R H <sub>0</sub>	R H <sub>0</sub>	n.a.	R H <sub>0</sub>	R H <sub>0</sub>
Debt to Assets (LEV)	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>
Long-Term Debt to Equity (LEV2)	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>	FTR H <sub>0</sub>

FTR H<sub>0</sub> : Fail to reject null hypothesis

R H<sub>0</sub> : Reject null hypothesis

## **VI. CONCLUSION**

Two different conclusions are drawn from this study. First one is the overall assessment of the privatization program in Turkey. Second part examines the performance of the privatization in cement industry.

### **VI. 1 Overall Assessment of The Privatization Program in Turkey**

The success of a privatization program is measured by:

- The extent to which it produced desired changes in the composition and size of the public sector,
- Whether it was accomplished as fast as planned,
- Whether the privatized enterprises became more efficient under private ownership,
- Whether the economy's overall efficiency improved,
- Whether privatization helped meet fiscal objectives,
- Whether social objectives associated with privatization were met.

(World Bank, 1994)

Although Turkey had made a strong commitment to privatization in 1983 when Turgut Özal was the Prime Minister, the implementation phases were painstakingly slow. The main reason of that was the frequent government changes, bringing different views on privatization program, and the fear of losing political vote potential by changing an on-going system where the interest groups and rentiers were a lot.

At the beginning of each year, the targets were set for the privatization program for the coming year. However, none of the actual sales were matching with the pre-set target values

at year ends. There had been a big lag between the plans and the actual outcomes causing a mistrust among public against privatization policies.

Worldwide, the revenues from the sale of the SOEs are used for the rehabilitation and modernization of the SOEs. In Turkey, the main objective of the privatization is the desire to get rid of the financial burden of the SOEs, and that money is used to pay the debt liabilities and interest payments of the Government.

Insufficient stock market and the low level of savings of the public cause the sales to be in the form of block sales. This situation can not prevent monopolization. There occurs monopoly / oligopoly since the shares of the companies are usually bought in large amounts by some powerful other firms. Besides some of those are the monopolies formed by foreign firms. In Turkey, we need to take possible actions in both economical and legal terms to prevent the formation of the monopolies. Although the anti-trust law is enacted, still there is no anti-trust committee.

The Government's commitment to the privatization is a must. The Government borrows large amount of money from the World Bank for implementation of privatization program, however there are lots of problems with the effective use of those loans. During the implementation of the projects, some components of the project were revised so that there was little or no action pertaining to the original project components causing waste of money and waste of time such as the situation in Sümerbank component. " While the Bank staff (both programs and project staff) made a strong effort to keep the selected SOEs involved, we probably perceived that in view of Turkish Government's commitment to the Bank in the context of the project, their participation in the project was a requirement rather than a voluntary decision. " stated in the Project Completion Report of the Technical Assistance Project for the State Economic Enterprises that was funded by the World Bank.

The acceptance of the privatization concept and the need for the management's desire to participate in the efforts are other crucial issues. There is a great resistance to change among the management who are afraid of losing their power, and the employees who are facing the risk of losing their jobs. The resistance among the employees can be decreased by forming an effective social safety net.

## **VI. 2 Performance Analysis of the Privatized Companies in Cement Industry**

The analysis part of this study to measure the performance of the privatization of a sample of six cement companies reveals the fact that the expectations from the privatization are not realized (Just two of the nine expectations are met on the overall). According to t-test and Wilcoxon tests (both for means and medians) , after privatization, all profitability ratios (return on sales, return on assets, return on equity), net income efficiency, leverages do not have any significant improvements. Expectations hold for the sales efficiency and the employment. Sales efficiency increases after privatization while employment declines.

Profitability ratios do not show significant improvement after privatization, on the contrary there is a significant amount of decrease in profitability that can be seen in the results of t-test on the overall in Tables 13-15. Wilcoxon signed rank test and Wilcoxon rank test are not employed to test whether the profitability has a significant decline after privatization, since this subject is beyond the scope of this study.

Operating efficiency shows improvement in terms of sales efficiency while there is no significant improvement in terms of net income efficiency. Net income efficiency decreased on the overall according to t-test as seen in Table 17. There might be two reasons for the net income efficiency to decrease while sales increase on the overall. First of all, in pre-privatization years, managers of the state owned enterprises might be willing to show their net income more than the actual amount in order to be seen operating well which can be called as 'Window Dressing'. Second reason might be that, in post-privatization years, the private companies might be adjusting their profits by overvaluing their expenditures in order to pay less tax.

The conflicting results are got for real sales. T-test and Wilcoxon rank test conclude that there is no significant improvement in output. However, Wilcoxon signed rank test results in the rejection of the null hypothesis concluding an improvement after privatization.

Employment decreases in each company and on the overall as expected since the companies laid off many employees after privatization.

Leverage has no significant change after privatization. Actually, a decrease in the leverage is expected after privatization since the cost of borrowing increase for the private firms. The obligation of firms to make investments in the first five years of the privatization and firms financing those by debt might be the reason for not decreasing leverage.

Among the studies that are done to measure the performance of the privatization, Suiçmez (1995) intended to measure the profitability and the productivity of the privatization in the cement industry in Turkey with the help of return on sales ratio and labour productivity. He concluded that productivity improved while profitability deteriorated. The hypothesis that the privatization increases labour productivity, in some extent, is true in Turkey because most of the companies laid off almost one third of their employees and the production levels usually increased due to the investments in technology and know-how. His analysis is not a comprehensive one since he studies on just two criteria for five companies. His results on the profitability may be regarded as consistent with the results that are got by t-test of this study to measure the overall profitability.

Megginson, Nash and Vishy (1994) on their analysis of comparison of pre- and post-privatization financial and operating performance of 61 companies from 18 countries and 32 industries done with Wilcoxon signed rank test concluded significant increase in profitability, output per employee (adjusted for inflation) and total employment. The results of the cement industry in Turkish case are quite the contrary to these results. In their study, leverage is lower after privatization. For leverage, there is no significant difference between the pre- and post-privatization values in this thesis' research.

Actually, the sample size is not large enough . Six companies' financial data over the seven years pre-privatization and seven years post-privatization are not enough to reach at a certain conclusion about the performance of the privatization program in cement industry. Despite the sample size limitation, the results of all tests (t-test for means, Wilcoxon signed rank test and Wilcoxon rank test) are consistent. Further study with larger sample size may be helpful to come up with certain results on whether privatization has made significant improvement in cement industry and to make a comparison with the results of this study.

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# **APPENDICES**

Appendix 1: Completely Privatized Companies

Name of the Company	% of Shares Sold
Adıyaman Çimento T.A.Ş.	100.00
Aşkale Çimento T.A.Ş.	100.00
Denizli Çimento T.A.Ş.	100.00
İskenderun Çimento T.A.Ş.	100.00
Karabük Demir Çelik Fabrikası	100.00
Ladik Çimento T.A.Ş.	100.00
Lalapaşa Çimento T.A.Ş.	100.00
Ordu Soya Sanayi A.Ş.	100.00
Sivas Çimento Sanayi T.A.Ş.	100.00
SÜMERBANK A.Ş.	100.00
Şanlıurfa Çimento Sanayi T.A.Ş.	100.00
Trabzon Çimento Sanayi T.A.Ş.	100.00
USAŞ Uçak Servisi A.Ş.	100.00
Van Çimento Sanayi T.A.Ş.	100.00
Trakya (Pmarhisar) Çimento Sanayi T.A.Ş.	99.90
Elazığ Çimento Sanayi T.A.Ş.	99.89
Çorum Çimento Sanayi T.A.Ş.	99.85
Niğde Çimento Sanayi T.A.Ş.	99.84
Bartın Çimento Sanayi T.A.Ş.	99.79
KÜMAŞ Kütahya Manyezit İşletmeleri A.Ş.	99.74
Gaziantep Çimento Sanayi T.A.Ş.	99.73
Söke Çimento Sanayi T.A.Ş.	99.60
Afyon Çimento Sanayi T.A.Ş.	99.59
Ankara Çimento Sanayi T.A.Ş.	99.30
ÇINKUR Çinko Kurşun Metal Sanayi A.Ş.	98.80
Balıkesir Çimento Sanayi T.A.Ş.	98.30
GİMA Gıda ve İhtiyaç Mad. T.A.Ş.	98.20
NİMSA Niğde Meysu ve Gıda SAN. A.Ş.	97.80
Meysu A.Ş.	96.15
Gümüşhane Çimento Sanayi T.A.Ş.	95.46
ANSAN Ankara Meşrubat Sanayi A.Ş.	88.33
Köytaş Köy Tarım Makinaları A.Ş.	85.59
T.O.E.Türk Otomotiv Endüstrisi A.Ş.	81.35
Güneysu A.Ş.	67.31
Adana Kağıt Torba Sanayii T.A.Ş.	60.00
Bursa Soğuk Depoculuk Ltd. Şti.	52.00
İpragaz A.Ş.	51.00
Ray Sigorta A.Ş.	49.65
Ünye Çimento Sanayii T.A.Ş.	49.21
Çaybank A.Ş.	49.00
NETAŞ Northern Elektrik Telekom A.Ş.	49.00
Binaş - Bingöl Yem ve Süt A.Ş.	47.50
Adana Çimento Sanayi T.A.Ş.	47.28
Mardin Çimento Sanayi A.Ş.	46.23

Appendix 1 (Continued): Completely Privatized Companies

Name of the Company	% of Shares Sold
Eskişehir Yem Fabrikası A.Ş.	45.00
Trakmak Traktör ve Ziraat Mak. A.Ş.	45.00
Türk Traktör ve Ziraat Makinaları A.Ş.	44.97
Pan Tohum Islah Üretme A.Ş.	43.93
Kepez Elektrik A.Ş.	43.68
Migros Türk T.A.Ş.	42.22
Polinas Plastik Sanayi T.A.Ş.	40.67
TELETAŞ Telekom End. ve Tic. A.Ş.	40.00
İstanbul Demir Çelik Sanayi A.Ş.	40.00
Biga Yem Fabrikası A.Ş.	40.00
Aksaray Yem Fabrikası A.Ş.	40.00
Konya Çimento Sanayi A.Ş.	39.87
SUNTEK Ağır Isı Sanayi A.Ş.	39.00
AEG Eti Elektrik A.Ş.	38.96
Türkkablo A.O.	38.00
Kars Yem Fabrikası A.Ş.	37.07
Bolu Çimento Sanayi A.Ş.	35.33
Şeker Sigorta A.Ş.	31.00
Güneş Sigorta A.Ş.	30.00
Çorum Yem Fabrikası A.Ş.	30.00
ALTEK Elek. Sant. Tes. İşlt. ve Tic. A.Ş.	29.28
Çelik Halat ve Tel Sanayi A.Ş.	28.00
MEKTA Ticaret A.Ş.	26.83
Çamsan Ağaç Sanayi T.A.Ş.	25.45
Çukurova Elektrik A.Ş.	25.00
Toros Zirai İlaç Ve Pazarlama A.Ş.	25.00
SAMAŞ Sanayi Madenleri A.Ş.	24.60
Bandırma Yem Fabrikası Ltd. Şti.	24.00
Konya Şeker Fabrikası A.Ş.	20.00
YEMTA A.Ş.	17.27
Tat Konserve Sanayi A.Ş.	17.00
Hascan Gıda Endüstrisi A.Ş.	16.00
Pancar Motor Sanayi A.Ş.	15.66
Fruko Tamek Meyve Suları San. A.Ş.	15.00
Manisa Yem Fabrikaları A.Ş.	15.00
İsparta Yem Fabrikası A.Ş.	15.00
Arçelik A.Ş.	14.77
DİTAŞ Doğan Yedek Parça İmalat A.Ş.	14.77
ABANA Elektromekanik San. A.Ş.	13.50
Sivas Yem Fabrikası A.Ş.	13.37
Kayseri Yem Fabrikası A.Ş.	13.33
Türkiye Sınai Kalkınma Bankası A.Ş.	11.68
Şekerbank T.A.Ş.	10.00
Aroma Bursa Meyve Suları San. A.Ş.	9.17
Ankara Halk Ekmek Un Fabrikası A.Ş.	6.63

Appendix 1 (Continued): Completely Privatized Companies

<b>Name of the Company</b>	<b>% of Shares Sold</b>
Çanakkale Seramik Fabrikaları A.Ş.	5.80
Tamek Gıda Sanayi A.Ş.	5.54
Hektaş Ticaret T.A.Ş.	5.47
Layne Bowler Dik Türbin Pomp. A.Ş.	4.17
ÇESTAS Çukurova Elektrik A.Ş.	2.29

Source: Privatization Administration Bulletin, January 1, 1997

Appendix 2: The Sales in January 1997 That are Waiting for the Approval of PHC

<b>Company</b>	<b>Sales Amount ( \$ )</b>
Tekirdağ Harbour	134,558,509
Antalya Harbour	102,520,769
Hopa Harbour	4,004,718
Giresun Harbour	3,203,774
Rize Harbour	5,606,605
Ordu Harbour	1,607,887
Sinop Harbour	800,944
Trabzon Harbour	-
Akçay Holiday Village	5,300,000
Ürgüp Hotel	3,500,000
Akçay Land	460,000
Akçay Land	175,000
Filyos Brick	18,150,000
Konya Chrome	40,070,000
Ergani Cement	46,700,000
Kurtalan Cement	22,705,000
Bozüyük Cement	8,830,000
Cemaş Casting	2,150,000
Cimhol Cement	900,000
Petlas	35,750,000
Deniz Transportation	142,255,000
<b>TOTAL</b>	<b>579,248,000</b>

Source: Sabah Newspaper, January 15, 1997

Appendix 3: Companies In The Privatization Portfolio

Name of the Company	Industry Type	PA Share (%)
EBK Et ve Balık Ürünleri A.Ş.	Meat, Fish, Poultry	100.00
Etibank Bankacılık A.O.	Banking	100.00
Anadolubank A.Ş.	Banking	100.00
Denizbank A.Ş.	Banking	100.00
Hamitabat Elektrik Üretim ve Ticaret A.Ş.	Power Generations	100.00
Kemerköy Elektrik Üretim ve Ticaret A.Ş.	Power Generations	100.00
ORÜS Orman Ürünleri Sanayi A.Ş. (1)	Forestry Wood Materials Manuf.	100.00
SEK Süt Ürünleri A.Ş. (1)	Milk and Dairy Products	100.00
Soma Elektrik Üretim ve Ticaret A.Ş.	Power Generations	100.00
SÜMER Holding A.Ş. (1)	Textile, Leather, Ceramics, Carpet	100.00
T. Gemi Sanayi A.Ş.	Vessel Construction	100.00
T.Denizcilik İşletmeleri (1)	Maritime	100.00
TURBAN Turizm A.Ş. (1)	Tourism	100.00
TÜRK Telekomünikasyon A.Ş.	Telecommunications	100.00
YEMSAN Yem Sanayi A.Ş. (1)	Animal Feed Production	100.00
Yeniköy Elektrik Üretim ve Ticaret A.Ş.	Power Generations	100.00
Ergani Çimento Sanayi A.Ş.	Cement	100.00
Kurtalan Çimento Sanayi Ticaret A.Ş.	Cement	100.00
Bozüyük Seramik Sanayi A.Ş.	Ceramic	100.00
Filyos Ateş Tuğlası Sanayi Ticaret A.Ş.	Refractory Brick	100.00
Konya Krom Magnezit Tuğla Ticaret A.Ş.	Refractory Brick	100.00
Yarımcı Porselen Sanayi Ticaret A.Ş.	Porcelain	100.00
Sivas Demir Çelik İşletmeleri A.Ş. (1)	Chromium Extraction	99.98
KBİ-Karadeniz Bakır İşletmeleri A.Ş.	Copper	99.97
ÇİTOSAN Çimento ve Toprak Sanayi T.A.Ş.	Holding Company	99.96
PETLAS Lastik Sanayi A.Ş.	Tire Manufacturing	99.96
Deniz Nakliyatı T.A.Ş.	Sea Freight	99.92
TESTAŞ T. Elektronik Sanayi Ticaret A.Ş. (1)	Electronics	99.91
KÖYTEKS Yatırım Holding A.Ş. (1)	Investment	99.84
Meybuz A.Ş.	Food Freezing and Transportation	99.57
THY - Türk Hava Yolları A.Ş. (1)	Airline	98.17
TÜPRAŞ Türkiye Petrol Rafinerileri A.Ş. (1)	Petroleum Refining	96.42
PETKİM Petrokimya Holding A.Ş. (1)	Petrochemicals	95.86
Petrol Ofisi A.Ş. (1)	Gasoline and Fuel Oil Marketing and Distribution	93.30
TÜSTAŞ Sınai Tesisleri A.Ş.	Engineering/ Consulting	57.52
Ereğli Demir Çelik Fabrikaları A.Ş.	Iron and Steel	51.66
DİTAŞ Deniz İşletmeciliği ve Tankerciliği A.Ş.	Sea Transportation of Crude Oil	50.96
ÇEMAŞ Döküm Sanayi T.A.Ş.	Steel Casting	49.61
Gönen Gıda Sanayi A.Ş.	Food	49,00
TÜMAŞ Türk Müh. Müş. ve Müt. A.Ş.	Engineering/ Consulting	49,00

Appendix 3 (Continued): Companies In The Privatization Portfolio

Name of the Company	Industry Type	PA Share (%)
ETİTAŞ Elektrik Tec. İmal. Tesisat A.Ş.	Electric Equipment	46.64
HAVAŞ Havaalanları Yer Hizmetleri A.Ş. (1)	Airport Handling Services	40,00
ÇİMHOL Çimento ve Yan Mamülleri San. A.Ş.	Holding	30.42
SOY-TEK Elektrik Sant. Tes. İşlt. ve Ticaret A.Ş.	Power Generation	30,00
KAYSERİ Cıvırı Elektrik T.A.Ş.	Electricity	20,00
Metal Kapak Sanayi A.Ş.	Metal Lid	18.66
Tofaş Oto Ticaret A.Ş. (1)	Automobile Distributor	17.23
Toros Gübre ve Kimya Endüstrisi A.Ş.	Fertilizer	14.48
YERTEKS Tekstil San. ve Ticaret A.Ş.	Textile	10,00
Pınar Entegre Et A.Ş.	Meat	5.76
MAKSAN Malatya Makina Kimya Sanayi A.Ş.	Machinery	2.50
Tofaş Türk Otomobil Fabrikaları A.Ş. (1)	Automobile Manufacturing	1.95
İMSA İstanbul Meşrubat Sanayi A.Ş.	Beverages	1.01
Aksaray Azmi Milli T.A.Ş.	Flour	0.91
ASELSAN A.Ş.	Electronics	0.27

Source: Privatization Administration Bulletin, January 1, 1997

Appendix 4: Privatized Cement Companies By Privatization Type

Privatization Type	Name of the Company	% of Shares Sold	Purchased By	Sales Date	Sales Amount (\$)
Block Sale	Ankara	99.30	Societe Cement Français	8/9/89	33,000,000
	Balıkesir	98.30	Societe Cement Français	8/9/89	23,000,000
	Trakya	99.90	Societe Cement Français	8/9/89	25,000,000
	Söke	99.60	Societe Cement Français	8/9/89	11,000,000
	Gaziantep	99.73	Rumeli Holding	3/12/92	52,695,898
	İskenderun	100.00	Oyak- H. Ömer Sabancı	2/12/92	61,500,000
	Trabzon	100.00	Rumeli Holding	3/12/92	32,551,000
	Denizli	100.00	Modern Çimento	4/12/92	70,100,000
	Çorum	100.00	Yibitaş Holding	25/12/92	35,000,000
	Sivas	100.00	Yibitaş Holding	25/12/92	29,400,000
	Ladik	100.00	Rumeli Holding	21/4/93	57,598,687
	Şanlıurfa	100.00	Rumeli Holding	21/4/92	57,405,988
	Bartın	99.78	Rumeli Holding	6/5/92	20,568,669
	Aşkale	100.00	Erçimsan	17/6/93	31,158,000
	Adıyaman	100.00	Teksko A.Ş.	16/8/95	52,500,000
	Elazığ	99.89	Oyak/ Gama	12/6/96	27,850,000
	Van	100.00	Rumeli Holding	12/6/96	24,500,000
	Lalapaşa	100.00	Rumeli Holding	14/6/96	125,890,000
	Kars	100.00	Çimentaş	18/6/96	2,225,000
	TOTAL				792,968,242
Public Offering	Bolu	10.38	-	April, 1990	8,268,150
	Konya	31.13	-	Nov., 1990	17,663,979
	Ünye	2.86	-	Nov., 1990	927,162
	Mardin	25.46	-	Nov., 1990	9,161,501
	Adana	34.32	-	Feb., 1991	27,958,470
		TOTAL			

Appendix 4 (Continued): Privatized Cement Companies By Privatization Type

Privatization Type	Name of the Company	% of Shares Sold	Purchased By	Sales Date	Sales Amount (\$)
Public Offering and Block Sale	Afyon	Block Sale:	SCF	Sep., 1989	13,000,000
		51.00			
	Niğde	Public Off. :	Oyak- H. Ömer Sabancı	March, 1991	8,422,698
		39.87			
		Block Sale:		May, 1991	2,647,286
		12.72			
Public Off. :	March, 1992	22,500,000			
87.10					
			TOTAL	Block Sale	15,647,286
				Public Off.	30,922,698

TOTAL	Block Sale	808,615,528
	Public Off.	94,901,960
GENERAL TOTAL		903,517,488

Source: Privatization Administration Bulletin, January 1, 1997