9 Privatization in Turkey

What has been achieved?

Çağla Ökten

The best of all monopoly profits is a quiet life.

(Sir John Hicks)

Introduction

In the last two decades, many countries have launched extensive privatization programs. There is now a growing body of literature on the effects of privatization on efficiency. In this chapter, we first review the theoretical and empirical literature on privatization. We then focus on privatization efforts in Turkey and analyze the Turkish experience within the context of the literature.

Privatization efforts in Turkey, fueled by the forces of globalization, started in 1985. These efforts should be considered as part of a larger plan which conceived that regulations, policies, and incentives should be readjusted to liberalize the Turkish economic environment for private and foreign direct investment (Öniş, 1991; Karataş, 2001). The primary objectives of the privatization program were to (1) minimize state involvement in economic activities; (2) promote competition, improve efficiency and increase the productivity of public enterprises; (3) relieve the state from the burdens of inefficient state industries; (4) facilitate a wider distribution of share-ownership and develop a viable capital market; and (5) create revenue for the government.

Although the privatization process in Turkey had started earlier than in most developing countries, its progress – measured in terms of the size of divestiture – had been slower when compared with the principal Latin American and Eastern European cases (Ercan and Öniş, 2001). From its start in 1985 up to 2005, the total proceeds from privatization efforts have amounted to $9.4 billion. More than half of this has been realized in the 2000–2005 period after the 1999 IMF Stand By agreement that placed a particular emphasis on privatization.

In the next section, we first review economic theory of privatization and identify arguments for and against public ownership. The economic theory of privatization is a subset of the vast body of literature on the economics of ownership and the role for government ownership of productive resources. There are two main branches in this literature: The Social View (Shapiro and Willig, 1990) and the Agency View (Vickers and Yarrow, 1988; Shleifer and Vishny, 1994).

We then turn our attention to empirical studies that examine the effects of privatization and identify common findings as well as conflicting results in the literature.

In the section on Privatization process in Turkey, we describe the privatization environment and process in Turkey. As a case study, we focus on the privatization process of Türk Telekom to show the specific challenges that privatization efforts had to face. In the section on Objectives of Turkish privatization: what has been achieved?, we assess the achievements of the Turkish privatization experiment in terms of reducing state's involvement in the economy, increasing efficiency, and generating revenue. The final section concludes.

Literature review

Theoretical literature on privatization

The economic theory of privatization is a subset of the vast body of literature examining the economics of ownership and the role of government ownership of productive resources. There are two main branches in this literature: the Social View and the Agency View.

According to the Social View (Shapiro and Willig, 1990), state-owned enterprises (SOEs) are capable of curing market failures by implementing pricing policies that take into account of social marginal costs and benefits of production. A privately owned firm is expected to maximize profits whereas a state owned firm is expected to maximize social welfare. For example, in a natural monopoly market structure, efficiency calls for a single firm to exist. A profit maximizing monopoly will, however, charge too high a price and produce too low a quantity. This potential inefficiency can be solved by state ownership.

The Agency View of firm ownership presents a strong critique of this theory. There are two complementary strands of the literature which differ as to whether the agency conflict is with the manager or the politician. Vickers and Yarrow (1988) argue that managers of SOEs may lack high-powered incentives or proper monitoring. Shleifer and Vishny (1994) stress that political interference in the firm results in excessive employment, poor choices of product and location, lack of investments and ill-defined incentives for managers.

The Social View unequivocally predicts that efficient technology will be chosen by the state-owned firms. Models of the Agency View, on the other hand; while predicting that inefficient technologies will be chosen by politicians/managers, have different predictions for the direction of the distortion in the production process. They either predict that state-owned firms will have low investment levels (Shleifer and Vishny, 1994) or that they will use excess capital as well as excess labor (Vickers and Yarrow, 1988). The over-capitalization argument stems from bureaucratic inefficiency models. The founder of this line of literature, Niskanen (1975), proposed that bureaucrats are inclined to maximize their total budget rather than the utility of their sponsors. Vickers and Yarrow (1988) argue that the bureaucrats will subject the state-owned firm to over-investment and over-capitalization to justify high salaries and perks.

On allocative efficiency, the Social View predicts that prices are likely to rise as a result of privatization. The Agency View, on the other hand; predicts that if a reasonable degree of competition ensues then allocative efficiency may actually increase as firms increase their productivity after privatization.

Empirical literature on privatization

Privatization and productive efficiency Firm performance has been the focus of the empirical literature on privatization. Studies cited in a survey of empirical studies of privatization almost unanimously report increases in firm performance associated with privatization (Megginson and Netter, 2001).[1] Most of these studies compare post-privatization performance changes with either a comparison group of non-privatized firms or compare three year mean/median performance of privatized firms to their own mean/median performance during their last three years as state owned firms.

Critics of these findings are quick to point out that most of the gains researchers have documented after privatization are due to selection bias. The argument is that better firms are privatized first and their comparison to more poorly performing firms which happen to remain public gives a spurious relationship between privatization and firm performance. Cross-sectional studies may not satisfactorily control for firm-specific effects and therefore address the selection problem for privatization. While comparing before and after three year averages of performance measures might be more promising, even that method may not entirely solve the selection problem. One could argue that, those firms would have improved at any rate even if they were not privatized (Omran, 2004). When Omran compares before and after privatization averages of performance measures of privatized firms from Egypt, he finds a significant increase in performance. When he carries out the same exercise for firms that remain state-owned, he finds that they also improve after the privatization period though they themselves are not privatized. Either the improvement of privatized firms had spillover effects on state-owned firms or privatization has nothing to do with the changes observed. The author suggests that other economic reforms that enhanced the competitive environment in which his sample of privatized and state-owned firms operate might have been responsible for his findings.

Recent studies improve on methodology by using panel data methods. Using firm fixed effects, they control for unobserved firm heterogeneity a potential source for selection bias (Ehrlich *et al.*, 1994; Frydman *et al.*, 1999; Villalonga, 2000; Wallsten, 2001; Earle and Telegdy, 2002; Ökten and Arin, 2005).

The results of these studies on privatization and firm performance are mixed. Ehrlich *et al.* use a sample of 23 comparable international airlines of different ownership categories over the period 1973–1983. Their results suggest that private ownership leads to higher rates of productivity growth and declining costs in the long-run, and that these differences are not affected by the regulatory environment. Their estimates suggest that the short-run effects of changes from state to private ownership on productivity and costs are ambiguous.

Villalonga examines 24 Spanish firms from different industries and finds that privatization does not increase firm efficiency – defined as rate of return on assets. He argues that political factors such as the business cycle during which the firm is privatized and foreign ownership are important determinants of firm efficiency. Wallsten (2001) finds that in the telecommunications sector, privatization by itself does not appear to generate many benefits and is negatively correlated with main line penetration. He points out the importance of regulatory framework ensuing privatization as he finds that privatization combined with the existence of a separate regulator, is correlated with increased connection capacity and labor efficiency as measured by employees per main line.

Earle and Telegdy find that privatization increases labor productivity growth in their heterogeneous sample of Romanian firms. Frydman *et al.* find that privatization to outsider owners has significant effects on revenue performance, but not on cost reduction using data from the Czech Republic, Hungary, and Poland, on 218 state-owned firms of which 128 were privatized during the 1990–1994 period. We should note that testing the effects of privatization on firm performance is even more difficult in transition economies than in non-transition economies as privatization in these countries occurs at the same time as and is part of, other massive economy-wide changes (Johnson *et al.*, 1994).

Ökten and Arin (2005) find that privatization increases labor productivity of Turkish cement plants in a study which controls for firm fixed effects and time effects with yearly dummies. We will discuss this study in detail in the section on Empirical studies of the cement industry.

Privatization and allocative efficiency Studies that examine the effect of privatization on allocative efficiency are rare (Megginson and Netter, 2001). These studies typically find that prices either increase or do not change after privatization. La Porta and Lopez-De-Silanes (1999) analyze Mexican firms from a variety of industries and find that consumer prices increase after privatization. In their analysis of the water and sewerage industry of England and Wales, Saal and Parker (2001) find that, output prices increase and furthermore, total price performance indices reveal that increases in output prices have outstripped increases in input costs. On the other hand, in a cross-country panel study of the telecommunications sector, Wallsten (2001) finds that prices are not correlated with privatization but are negatively correlated with competition measured by the number of mobile operators not owned by the incumbent. Ökten and Arin (2005) find that prices in the Turkish cement sector decrease following privatization.

It is unrealistic to expect that the effects of privatization on prices will be the same in every industry. Market structure of an industry – market power of firms in the industry – as well as firms' productivity will affect consumer prices. Studies should strive to differentiate the effects of private ownership from the changes in market structure and competitive environment induced by privatization.

Privatization and input choice Empirical studies of privatization do not directly examine the changes in input choice as a result of privatization. Rather, they report changes in employment and capital investment, which may suggest a change in technology. In their survey article, Megginson and Netter (2001) report

that almost all of the 22 studies from non-transition economies that they review find that capital investment spending increases significantly as firms are privatized. Perhaps surprisingly, they report that these studies are far less unanimous regarding the impact of privatization on employment levels in privatized firms.

La Porta and Lopez-De-Silanes (1999), in their study of 233 privatized Mexican firms, find that ratios of investment to sales and investment to fixed assets significantly increase after privatization while employment significantly decreases.

Bhaskar and Khan (1995) find that privatization has a large and significant negative effect on white-collar workers using employment data from Bangladesh, for 62 jute mills of which 31 were privatized.

Privatization and market structure There are only a few studies that have sought to estimate the effects of market structure along with privatization. These studies typically include some type of measure for market concentration as an additional control when they analyze the effects of privatization on firm productivity. In general, they do not analyze how privatization affects market structure or how changes in market structure affect allocative efficiency. Angelucci *et al.* (2001) analyze the effects of competitive pressures – measured by Herfindahl index and share of imports in sales – and ownership changes on productivity in Bulgaria, Poland, and Romania. Anderson *et al.* (2000) analyze the effects of competition and ownership in the productivity of the newly privatized enterprises using data from Mongolia. Kattuman and Domanski (1997) analyze market concentration ensuing mass privatization in Poland and find that concentration increased promptly in several markets. Warzynski (2003) in his study of 300 Ukrainian firms finds that competition does not have a significant effect on firm performance measured by productivity and profitability while privatization has a marginal positive significant effect on profitability and an insignificant effect on productivity. However, he points out that competition and privatization might be complementary measures as he finds that competition increases the performance of privatized firms.

Revenue generation Generating government revenue is a common objective in privatization. Governments use a variety of sales methods to achieve this objective including share issue privatizations (SIPs) and direct sales via auctions. According to the World Bank, over 12,000 companies were privatized during the period 1980–1993 (almost half were divested between 1991 and 1993), and less than 5 percent of these divestitures involved public share offerings. However, SIPs have accounted for the vast majority of the assets and employees moved from the state to the private sector through privatization. Perhaps, that is why a large number of studies focus on pricing in SIPs. Jones *et al.* examine 630 SIPs from 59 countries that raise over $446 billion during the period 1977–1997 and find that government consistently underprice SIP offers, tilt their share allocation patterns to favor domestic investors, impose control restrictions on privatized firms, and typically use fixed price offers rather than book building or competitive tender offers. The most likely explanation for underpricing is that it ensures a high demand for shares offered.

Few studies analyze the determinants of privatization prices that resulted from direct sales of assets and companies via auctions (Lopez-De-Silanes, 1997; Arin and Ökten, 2003). Lopez-De-Silanes (1997) examines 236 Mexican firms, which were privatized between the years 1983 and 1992. Arin and Ökten (2003) use a data set of 68 privatized firms from Turkey. Both studies find that the number of bidders increases privatization prices by increasing the level of competition in these auctions. However, there are notable differences on how firm characteristics affect privatization prices. While Lopez-De-Silanes finds that low profitability of state-owned prices explain the low price paid, Arin and Ökten find that revenues and market characteristics affect privatization prices, not profits. Arin and Ökten argue that what fundamentally determines the privatization price is the expected future profit of the firm. We will discuss Arin and Ökten study in more detail in the section on Revenue generation and share ownership.

Privatization process in Turkey

Historically, Turkey has a long experience of relying heavily on SOEs. SOEs were established during the 1930s by the government to jump-start the economy which had collapsed with the end of the Ottoman era in 1923. Over the years SOEs grew enormously, leaving the control of a large section of the economy to bureaucrats and politicians. By 1960, share of public sector in total value added in manufacturing was 60 percent. Politicians exploited SOEs to provide jobs to their constituents at the expense of consumers, who were faced with higher prices. Consequently, in the 1980s, SOEs began to be perceived negatively due to poor financial performance, overstaffing, dependence on subsidies, protected markets, and corruption (Ertuna, 1998). Furthermore, public enterprises were able to operate with a "soft budget" constraint which constituted an additional source of relaxation in performance, resulting in greater inefficiency (Öniş, 1991).[2] After a Military Regime (1980–1983), the first party that came to power was the Motherland Party (ANAP) under the leadership of Prime Minister Turgut Özal. Özal was a strong supporter of Thatcherism which promoted a reduction of the state's role in the economy. Privatization first entered the political agenda with Özal's trade and capital account liberalization program in 1984.

Despite this initial enthusiasm, the privatization process has been slow. Since its start in 1985, total proceeds from privatization efforts amounted to $9.4 billion by 2004. More than half of this was realized in the 2000–2004 period after the 1999 IMF Stand By agreement that placed a particular emphasis on privatization. Figure 9.1 shows annual total proceeds from privatization during 1985–2004. The observed spike in year 2000 is largely due to the block sale of the 51 percent of POAS (Petroleum Products Distribution) to Dogan Holding-İşBank consortium group for $1.260 billion[3] and public share offerings of the 31 percent of Tupras (Petroleum Refinery) which amounted to $1.194 billion.

Since 1985, state shares in 244 companies, 22 incomplete plants, 6 real estates, 4 power generation plants, 6 toll motorways, 2 Bosphorus bridges, 29 plants, and 1 service unit have been taken into the privatization portfolio (OIB, 2005). Later, state shares in 23 companies, 4 power generation plants, and 4 real estates have

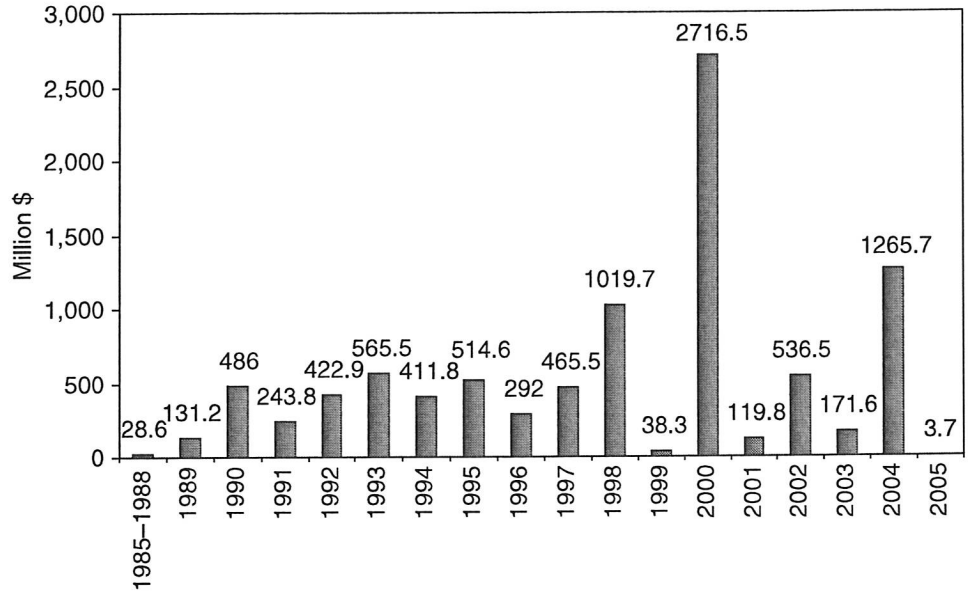

Figure 9.1 Revenues from privatization (million dollars).†

Note

† As of February 1, 2005 while the manuscript was in press revenues in 2005 amounted to 1,315.1 million dollars.

been taken out of the portfolio for various reasons. Over half of those that remained in the privatization portfolio have been fully privatized. Most of the full privatizations have been sales of assets or sales of minority state shares. Currently, there are 34 companies, 29 plants, 1 real estate, 6 toll motorways, 2 Bosphorous bridges in the portfolio. State shares amount to more than 50 percent in 24 of the 34 companies.

Block sales have been the most prevalent method of privatization. Forty-two percent of the total proceeds have been realized through block sales, 18 percent through public offerings, 16 percent through asset sales, and 12 percent through international offerings, 8 percent through sales in Istanbul Stock Exchange (ISE). Table 9.1 shows the list of the highest grossing (in total proceeds) 47 block sales. We notice that 19 of these are cement plants highlighting the importance of cement industry in the privatization process. Table 9.2 shows domestic public share offering privatizations, Table 9.3 shows international public share offering privatizations and Table 9.4 shows the list of companies that were privatized through a combination of block sales and public offerings.

The privatization reforms have not been fully carried out as intended, due to the lack of a legal framework, conflicting laws, and a wavering political will. Privatization efforts faced strong opposition by entrenched vested interests, notably senior bureaucrats in government departments and SOEs, Workers' Unions who have expressed serious concern about the possibility of mass lay offs, and leftist political parties (Karataş, 2001).

Following many amendments in the laws governing privatization of SOEs and a mind boggling number of decree-laws that were frequently invalidated by the

Table 9.1 Privatizations through block sales

Company	*State share (%)*	*Share sold (%)*	*Buyer*	*Date*	*Sale price ($)*
Etibank (Bank)	100.00	100.00	Medya-İpek holding A.Ş.	02.03.98	155,500,000
Asil Çelik (Steel)	96.64	96.64	Yazici-Güriş-Parsan	29.08.00	131,000,000
Lalapaşa Cement	100.00	100.00	Rumeli Çimento A.Ş.	14.06.96	125,890,000
Bursagaz (Gas distribution)	100.00	100.00	Çalik Enerji San. Tic. A.Ş.	19.04.04	120,000,000
Kümaş (Mining)	99.74	99.74	Zeytinoğlu Holding A.Ş.	28.09.95	108,100,000
Sümerbank (Bank)	100.00	100.00	İpeks Tekstil San. A.Ş.	17.10.95	103,460,000
Denizli Cement	100.00	100.00	Modern Çimento	04.12.92	70,100,000
Anadolubank (Bank)	100.00	100.00	Mehmet Rüştü Başaran	07.05.97	69,500,000
Denizbank (Bank)	100.00	100.00	Zorlu Holding	29.05.97	66,000,000
İpragaz (Gas distribution)	49.33	51.00	Primagaz A.G.	27.01.92	64,066,776
İskenderun Cement	100.00	100.00	Oyak-H. Ömer Sabanci	02.12.92	61,500,000
Deniz Nakliyati T.A.Ş. (Transportation)	99.99	99.99	Armatörler Den. Ve Nak. A.Ş.	24.03.00	59,000,000
Eti krom A.Ş. (Mining-chrome)	100.00	100.00	Yildirim Diş Ticaret Paz. A.Ş.	14.09.04	58,050,000
Ladik Cement	100.00	100.00	Rumeli Çimento	21.04.93	57,598,687
Şanliurfa Cement	100.00	100.00	Rumeli Çimento	21.04.93	57,405,988
Gaziantep Cement	99.73	99.73	Rumeli Holding	03.12.92	52,695,898
Adiyaman Cement	100.00	100.00	Teksko Giyim San. A.Ş.	16.08.95	52,500,000
Çayeli Bakir İşl. A.Ş. (Mining-copper)	45.00	45.00	Inmet Madencilik A.Ş.	23.09.04	49,250,000
Ergani Cement	100.00	100.00	Rumeli Çimento San. A.Ş.	03.04.97	46,700,000
Esgaz (Gas distribution)	100.00	100.00	Kolin İnş. Tur. San. Ve Tic. A.Ş.	10.03.04	43,000,000
Eti Gümüş A.Ş. (Mining-silver)	100.00	100.00	Kss Mad. İnş. Tur. San. Ve Tic. A.Ş.	13.08.04	41,200,000
Konya Krom Man. A.Ş. (Mining-chrome)	100.00	100.00	Konya Selçuklu San. Tic. A.Ş.	05.06.98	40,700,000
Havaş (Airport services)	100.00	60.00	Yazeks A.Ş.	17.04.95	36,000,000
Petlas (Tyre production)	99.97	99.97	Kombassan Holding A.Ş.	06.05.97	35,750,000

Çorum Cement	100.00	100.00	Yibitaş Holding	25.12.92	35,000,000
Ankara Cement	99.30	99.30	SCF	08.09.89	33,000,000
Trabzon Cement	100.00	100.00	Rumeli Holding	03.12.92	32,551,000
Aşkale Cement	100.00	100.00	Erçimsan	17.06.93	31,158,000
Yarimca Porselen (Porcelain)	100.00	100.00	Evyap San. Tic. A.Ş.	09.07.98	30,500,000
Sivas Cement	100.00	100.00	Yibitaş Holding	25.12.92	29,400,000
Div-Han A.Ş.	100.00	100.00	Erdemir	15.04.04	28,500,000
Kurtalan Cement	100.00	100.00	Canlar Oto İnş. San. Ve Tic. A.Ş.	09.01.98	28,100,000
Elaziğ Cement	99.89	99.89	Oyak/Gama A.Ş.	12.06.96	27,850,000
Havaş (Airport services)	40.00	40.00	Turgay Ciner	30.03.98	27,100,000
Pinarhisar Cement	99.90	99.90	SCF	08.09.89	25,000,000
Van Cement	100.00	100.00	Rumeli Çimento A.Ş.	12.06.96	24,500,000
Balikesir Cement	98.30	98.30	SCF	08.09.89	23,000,000
Kars Cement	100.00	100.00	Çimentaş Grubu	18.06.96	22,250,000
Eti Bakir A.Ş. (Mining-copper)	100.00	100.00	Ce-Ka İnş. Mak. Mad. San. Tic. A.Ş.	12.04.04	21,879,000
Bet Kütahya Şeker (Sugarproduction)	56.00	56.00	Torunlar Gida San. Tic. A.Ş.	08.10.04	21,438,000
Bartin Cement	99.78	99.78	Rumeli Çimento	06.05.93	20,568,669
Güneş Sigorta (Insurance)	30.00	30.00	Gan International	01.07.91	18,900,000
Filyos Ateş Tuğlasi	100.00	100.00	Zonguldak Yatırım Makinaları A.Ş.	13.05.97	18,150,000
Eti Elektrometalurji	100.00	100.00	Aksu Mad. San. Tic. A.Ş.	25.10.04	15,320,000
Çinkur (Mining)	98.41	98.41	K.M.M. Kayseri Maden Metal A.Ş.	22.05.96	14,000,000
Ansan – Meda	88.33	88.33	Atlantic Ind. Ltd	18.11.88	13,000,000
Bozüyük Seramik A.Ş. (Ceramics)	100.00	100.00	Ercan Madencilik A.Ş	01.10.97	12,000,000

Source: Compiled and rearranged from tables of Privatization Administration.

Notes
This list does not include all the privatizations through block sales. Companies are ranked according to the total proceeds from their privatization.

Table 9.2 Public share offering privatizations

	State share at date of offering (%)	*State share offered (%)*	*Date of offering offered*	*Total proceeds ($)*	*Number of applicants*
Erdemir (steel)	48.65	2.93	9–10.04.1990	53,105,711	33,953
Arçelik (appliances)	13.32	5.83	30–4/1.5.1990	19,890,196	12,618
Bolu Cement	34.50	10.38	30–4/1.5.1990	8,268,150	8,157
Çelik Halat (steel)	19.42	13.25	30–4/1.5.1990	7,750,179	6,517
Petkim (petro-chemicals)	99.97	8.08	18–29.6.1990	150,617,183	76,119
Konya Cement	39.87	31.13	24–25.10.1990	17,663,979	6,396
Ünye Cement	49.21	2.86	1–2.11.1990	927,162	281
Mardin Cement	46.23	25.46	22–23.11.1990	9,161,501	1,280
Thy (turkish airlines)	100.00	1.55	29–11.7.12.1990	4,976,165	2,488
Adana Cement	23.86	17.16	18–20.2.1991	25,162,623	3,355
Adana Cement	23.42	17.16	18–20.2.1991	2,795,847	3,355
Migros (grocery chain store)	42.22	36.40	25–26.2.1991	5,609,246	3,951
Ditaş (spare parts)	14.77	2.51	6–7.5.1991	219,411	1,263
Tüpraş (petroleum refinery)	100.00	1.66	27–29.5.1991	6,036,589	15,456
Tofaş Türk (auto)	23.13	0.85	13–14.6.1991	6,119,572	3,147
Tofaş Türk	4.46	0.13	4–7.3.1994	2,824,239	801
T. İş Bankasi (bank)	12.30	4.90	4–6.5.1998	240,702,529	80,978
Tüpraş (petroleum refinery)	96.42	23.88	5–7.4.2000	839,028,679	369,566
Thy (turkish airlines)	98.17	8.05	1–3.12.2004	65,326,696	29,280
Total				1,466,185,657	658,961

Constitutional Court, the first stand alone Privatization Law was ratified by Parliament in November 1994. After a round of revisions, the Privatization Law took its final form in April 1997. A legislation making international arbitration in disputes over contracts involving provision of public services was passed in August 1999. This legislation opened the door for active foreign participation particularly in infrastructure and utility privatizations (Aybar *et al.*, 2001).

Stand By Agreement with the IMF in December 1999 and the ensuing stabilization program to establish macroeconomic stability placed a particular emphasis on privatization which in turn increased the speed of privatization. Currently, there appears to be both external pressure and internal political will by the one

Table 9.3 International public offering privatizations

	State share at date of offering (%)	*State share offered (%)*	*Date of offering*	*Total proceeds ($)*
Tofaş Türk (Auto)	21.13	16.67	03.03.1994	330,000,000
T. İş Bankasi (Bank)	12.30	7.39	4–6.05.1998	391,949,083
Tüpraş (Petroleum refinery)	96.42	6.77	5–7.04.2000	265,491,985
Poaş (Petroleum distribution)	42.30	3.50	6–15.03.2002	38,891,914
Thy (Airline)	98.17	14.95	1–3.12.2004	125,952,471
Total				1,152,285,453

Source: Compiled and re-arranged from tables of Privatization Administration in Turkey.

party majority government to complete the remaining more controversial privatization projects. We will now review the privatization process of one of these, the privatization of Turk Telekom since this case is illustrative of the challenges that the privatization efforts had to face.

Privatization of Turk Telekom The telecommunications industry was once considered a textbook example for a natural monopoly since the fixed landline structure of this industry resulted in large-scale economies and hence efficiency required one firm to exist. Recent technological advances in this sector, such as the spread of wireless technology and communications via internet have produced alternatives to the fixed landline structure and made a competitive environment more viable.

Even if there is one dominant firm in this market, whether that firm should be state-owned or privately owned but supervised by a regulatory agency is open to debate. The trend in the world has been for the privatization of the telecommunications industry. During 1990–1999, 49 countries have privatized their telecommunications firms either partially or fully (Yılmaz, 2000).

An analysis of the privatization process of Turk Telekom is useful in understanding the privatization environment and process in Turkey. The privatization of Turk Telekom was initiated in 1994, only months after the September 1993 communique establishing the Turk Telekom as a separate entity from PTT and has not been completed as of today. In May 1995, law 4107 authorized the sale of 49 percent of the company and opened the door for telecommunications license agreements. However, since then privatization of telecommunication services has been subject to political and legal squabbling. In February 1996, the Constitutional court overturned critical parts of the law. After several round of cancellations the law 4161 was enacted. In the context of this law, Turk Telekom privatization was linked to sector reform, and company valuation, which would be followed by the sale of the company (Aybar *et al.*, 2001).

In 1998, the Council of Ministers adopted a sales strategy which consisted of a block sale of 20 percent to a strategic partner followed by a 19 percent of initial

Table 9.4 Privatizations through block sales and public offerings

	State share at date of offering (%)	*State share offered (%)*	*Buyer*	*Date*	*Total proceeds ($)*	*Number of applicants*
Afyon Cement						
Block sale	99.60	51.00	SCF	08.09.1989	13,000,000	
Public offering	48.60	39.87	Public offering	21–26.03.1991	8,422,698	12,591
Tofav Oto Tic. (Auto)						
Block sale	39.00	16.00	Fiat Auto S	22.02.1991	13,203,441	
Public offering	23.00	1.36	Public offering	13–14.06.1991	966,248	3,147
Niğde Cement						
Public offering	99.84	12.72	Public offering	13–14.05.1991	2,647,286	1,125
Block sale	87.12	87.10	Oyak-Sabanci	23.03.1992	22,500,000	
Çukurova Elekt. (Electricity)						
Public offering	18.65	5.45	Public offering	16–17.04.1990	38,829,409	22,184
Block sale	11.50	11.25	Rumeli Elekt.	16.02.1993	81,096,791	
Kepez Elektrik (Electricity)						
Public offering	42.05	8.14	Public offering	16–17.04.1990	9,390,359	8,320
Block sale	25.39	25.39	Rumeli Elekt.	16.02.1993	33,158,988	

Netaş (Telecommunications)						
Block sale	49.00	20.00	NTL	01.03.1993	26,000,000	
Public offering	29.00	7.75	Public offering	3–5.11–12.3.1993	8,723,623	4,897
Gima (Grocery stores)						
Public offering	54.68	4.15	Public offering	3–4.06.1991	406,902	283
Block sale	50.38	94.05	Bilfer-Dedeman	02.03.1993	21,787,413	
Teletaş (Telecommunications)						
Halka Arz	40.00	22.00	Public offering	29.02–2.03.1988	13,090,225	41,695
Block sale	18.00	18.00	Alcatel B.V.	19.08.1993	21,002,400	
Usaş (Airport services)						
Block sale	100.00	70.00	SAS	09.02.1989	14,450,000	
Public offering	30.00	30.00	Public offering	20–22.10.1993	15,205,871	4,672
Petrol Ofisi *A.Ş.* (Petroleum distribution)						
Public offering	100.00	4.02	Public offering	27–29.5.1991	14,386,888	17,206
Block sale	93.30	51.00	İş Doğan A.Ş.	21.07.2000	1,260,000,000	
Public offering	42.30	13.00	Public offering	27.02–15.03.2002	129,479,256	51,470
Total					1,747,747,798	167,590
Public offering					241,548,765	
Block sale					1,506,199,033	

Source: Compiled and re-arranged from tables of Privatization Administration in Turkey.

public offering of Turk Telekom's shares. The block sale to a strategic investor requires participation of an international telecommunications operator that would bring expertise and accelerate the commercialization of Turk Telekom (Aybar *et al.*, 2001). The steps involved in the privatization of this enterprise would include a financial review, valuation, a decision regarding an appropriate method of investment, invitation of bids and screening of prospective investors, negotiations with short-listed firms and final recommendation to cabinet for approval (Karataş, 2001). Unfortunately, sales of minority shares of Turk Telekom did not attract foreign investors as it was hoped due to obscure management rights (*Financial Times*, 18.09.2000).

Reconsidering the percentage of ownership stake to be offered to strategic partners and the controversial management rights the government authorized the block sale of 33.5 percent of the company in December 2000. The tender committee was to expect offers till May 14, 2001. However the financial crisis triggered by a confrontation between the prime minister and the president led to a collapse of the December 1999 Stand By Agreement with the IMF and the tender was cancelled. Since the uncertainty about management rights would be an obstacle to a successful privatization in by then a depressed global telecom market, it was proposed that a minimum of 51 percent of Turk Telekom's shares be privatized.

The privatization process gained momentum following the November 2002 elections which drastically altered the political landscape of Turkey. None of the ruling coalition parties received enough votes to be represented in Parliament, while a brand new party was able to form a majority government by itself. The Council of Minister Decree – dated November 13, 2003 stipulated that a minimum 51 percent of Turk Telekom shares were to be offered block, while remaining shares would be offered to public following the block sale. With the enactment of law 5189, the foreign ownership restriction on the part of foreign investors was lifted, the scope of the golden share has been limited and the satellite business has been taken out of Turk Telekom to function as a separate public entity (OIB, 2005).

The formal tender process for the block sale of 55 percent of Turk Telekom commenced with the tender announcements on November 25, 2004. Accordingly, to be able to submit bids, bidders would be required to satisfy the pre-qualification criteria determined by the Tender Committee. Applications for pre-qualification were delivered to the Privatization Administration on January 11, 2005 where 13 national and international bidders qualified. The bidding deadline for the tender is May 31, 2005 (OIB, 2005).

Objectives of Turkish privatization: what has been achieved?

The primary objectives of the privatization program were to (1) minimize state involvement in economic activities; (2) promote competition, improve efficiency and increase the productivity of public enterprises; (3) relieve the state from the burdens of inefficient state industries; (4) facilitate a wider distribution of

share-ownership and develop a viable capital market and; (5) create revenue for the government. In this section, we review evidence on to the achievements of Turkish privatization with respect to these objectives.

State's involvement in economic activities

According to the Privatization Administration Statistics the following privatization implementations have been realized since the start of privatization process in 1985:

- State completely withdrew from cement, animal feed production, milk-dairy products, forest products, civil handling and catering services, and petroleum distribution sectors.
- More than 50 percent of the state shares were privatized in tourism, iron and steel, textile, sea freight, and meat processing sectors.
- State has partially withdrawn from the ports and petroleum refinery sector.
- Privatization of public banks has commenced with Sümerbank and continued with Etibank, Denizbank, and Anadolu Bank. The international and domestic offering of the 12.3 percent state shares in İşBank in May 1998, had been the largest public offering in Turkey until that time and recorded as one of the largest privatization proceeds among the emerging European markets.
- Public shares in Netas (telecommunication firm) and Tofas (auto manufacturer) were issued to foreign investors through international public offering for the first time, which served as a driving force of the integration of ISE with foreign capital markets.
- Public shares in many companies were issued to the public, particularly in the beginning of this decade and this enhanced the institutionalization of ISE.
- 14.95 percent of the Turkish Airlines has been privatized in an International and Domestic Offering in December 2004, sales amounting to $126 million.

An appropriate measure to assess the degree of state involvement in economic activities is the share of public sector in total value-added manufacturing. Figure 9.2 shows the share of public sector and of private sector in total value-added annually for the 1985–2000 period, every 5 years for the 1970–1985 period and every 10 years for the 1950–1970 period. Data is compiled from the State Statistics Institute's Statistical Indicators (Istatistiki Gostergeler 1923–2002, DIE). The share of public sector is practically unchanged between 1950–1960 and is almost 60 percent of total value added. In the next 25 years, it falls by 34 percent to about 40 percent of total value added. The reduction in the share of public sector is significantly faster in the post-privatization period. The share of public sector is down from 40 percent in 1986 to 18.5 percent in 2000, which is a 54 percent reduction. Since the rate of reduction in the share of public sector in total value added is significantly faster in the post privatization period than in the decades prior to 1985, we can conclude that the privatization program appears to

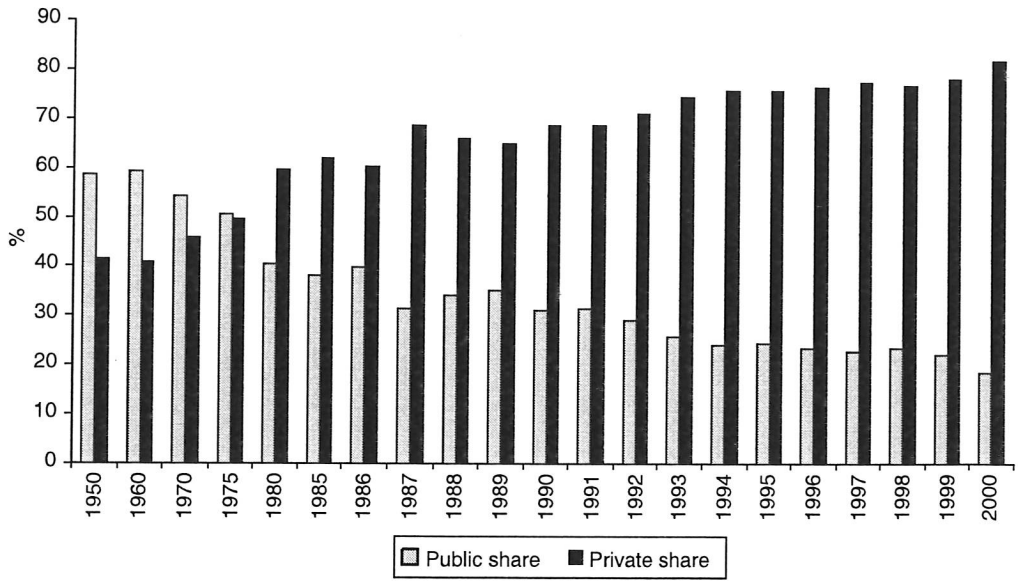

Figure 9.2 Share of public and private sector in total manufacturing value-added.

have been – at least partially – successful in achieving its objective of reducing the state's involvement in economic activities. However the privatization process has been slower compared with the principal Latin American and Eastern European cases and is yet to be completed.

Privatization and efficiency

In the case of the cement industry, there are relatively large numbers of state-owned plants that were sold during the 1989–1998 period, and hence sufficient time has elapsed for proper empirical analysis. Since almost all empirical studies on the Turkish privatization experience have focused on this industry, we will examine the privatization process in this industry and then discuss the findings of empirical studies.

Privatization in the cement industry

The first cement plant of Turkey was established in 1911 by a private firm. By 1950, four more private plants had been built. Only after 1950 did the cement industry develop on a large scale by means of a government initiative. A public enterprise, CISAN (Turkish acronym for Turkish Cement Industry Co. later named CITOSAN), was established in 1953 to build 15 plants in various regions. Before the privatization of the cement plants began in 1989, the public share in the cement industry was nearly 40 percent (Saygili and Taymaz, 2001). It is believed that each company was able to exercise some monopoly power within its hinterland (Ertuna, 1998), most probably due to the distance between firms and the lack of proper transportation facilities in the public sector.

In 1986 a French company, Sema-Metra Conceil was contracted by the Turkish government and the World Bank to prepare two reports, one on the structural regulation of the cement sector and privatization and the other on the plan for the reorganization of CITOSAN. In the latter report, Sema-Metra Conceil suggested that plants in the west be privatized first since they could be as profitable as private plants, and recommended that the eastern plants be restructured prior to privatization. The report also suggested privatization on a plant-by-plant basis, as the sale of the state firm as a single entity may have led to an unhealthy monopoly (Tallant, 1993). In 1986 there was a major change in the economic environment of the cement plants. Prior to 1986, the Turkish Cement Producers' Association (TCPA) set prices and market areas for all cement companies, however after 1986 firms were encouraged to operate independently and maximize profits. Sema-Metra's first report might have partially led to this change.

Privatization in the cement industry started in 1989, with the initial sale of five factories to the French firm Cement Francais (SCF). By 1998, the sale of 22 cement plants had been completed.[4] The recommendations of the Sema-Metra report were taken into consideration, and the western plants were privatized first.[5] It may also be the case that the privatization of the eastern plants was delayed, as the eastern region suffered from unemployment and terrorism throughout the 1990s, and the public enterprises were used as means of employment.

Privatization of the cement plants was carried out under the Privatization Administration of Turkey. Most of the privatizations were realized through block sales using closed-bid auctions and through a combination of block sales and public offerings in a few cases. Public sector employment was guaranteed to all workers that lost their jobs because of privatization. Hence there were no disposal costs of workers for the buyers of the privatized firms.

Saygili and Taymaz (2001) point out that, holding companies had a tendency to acquire plants in specific regions. For instance, Rumeli Holding bought plants in the eastern region and along the Black Sea coast. The Turkish Armed Forces Pension Fund (OYAK) and Sabanci Holding; one of the biggest conglomerates in Turkey formed an alliance and purchased companies in the Central Anatolia, Southern Anatolia, and Marmara regions. Set Cement Holding (a subsidiary of Italcementi which merged with Ciment Francais) focused on Central and Western regions, and finally, Lafarge and Yibitas bought cement plants in neighboring provinces of Central Anatolia. Saygili and Taymaz (2001) argue that, privatization through block sales, instead of public offerings in the stock market, gave rise to bigger regional monopolies. According to the report of the Central Anatolian Board of Export, however, the privatization of public cement plants increased competition in the industry and decreased prices.

Today, the Turkish cement industry consists of 39 private plants, some owned by giant industrial conglomerates and others by small one-plant companies. There are four foreign investors in the industry, namely, French Lafarge Coppee, Ciment Vicat, German Heidelberger Zement/CBR, and Italian Italcementi. Cement consumption continues to grow at sound levels and Turkey continues to be a major exporter of cement. According to the report of the Central Anatolian

Board of Export, in 1998 Turkey was the largest cement producer in Europe and seventh in the world (OAIB, Cimento Sektoru Raporu, 1998).

Empirical studies of the cement industry

There are several empirical studies that analyze the impact of privatization on the Turkish cement industry due to availability of pre- and post-privatization data for this sector (Çakmak and Zaim, 1992; Tallant, 1993; Karataş, 1995; Özmucur, 1998; Saygili and Taymaz, 2001; Ökten and Arin, 2005). Most of these studies only analyze how privatization affects firm efficiency and yield somewhat mixed results. Ökten and Arin (2005) also analyze how privatization affects allocative efficiency.

We can classify these studies into two groups. In the first group, studies compare the performance of *public versus private plants* and yield mixed results (Çakmak and Zaim, 1992; Tallant, 1993; Saygili and Taymaz, 2001). In the second group, studies compare *pre and post privatization* performance of privatized plants and present a more clear picture (Karataş, 1995; Özmucur, 1998; Ökten and Arin, 2005). All of these studies report a significant improvement in labor productivity in the post privatization period. We now analyze the studies in the first group in more detail.

Çakmak and Zaim (1992) compare the efficiency of private and public plants in 1985. They employ the stochastic production frontier approach to estimate the production frontier and technical efficiency at the plant level. Their input variables in the production process are value of expenditures for labor use, value of expenditures for energy use and depreciation on capital. Their findings suggest that private plants on average are no more efficient than public plants.

Tallant (1993) analyzes the relative efficiency of the public sector with respect to the private sector in Turkish cement industry in a cross-sectional study. He finds that private plants are more efficient in terms of labor productivity and capacity utilization. However, he argues that the better showing in physical measures is closely related to geographic location as western plants perform better which indicates that the initial location decision has had more to do with firm performance than public ownership per se. Tallant also analyzes financial measures of efficiency and finds that ratio of operating profit to net sales revenues is less for state owned plants than in private ones. However by his own account he is skeptical of financial measures as he states that Turkish financial measures are not detailed, accounting standards tend to vary and financial disclosures do not provide a complete picture of the firms' financial health.

Saygili and Taymaz (2001) analyze the effects of ownership and privatization on technical efficiency using a panel data set of public and private cement plants for the years 1980–1995. They have a sample of 13 private plants, 14 privatized plants, and 6 publicly owned plants during their period of study. They use dummy variables for these ownership categories omitting the dummy for public plants and estimate the effects of ownership on technical efficiency relative to the omitted dummy variable. In other words, they measure the relative performance of private or privatized plants with respect to the plants that remain public during the

study period (until 1995). They estimate a stochastic frontier production function and the efficiency effects model simultaneously.

They find that private plants were clearly more efficient than state-owned plants privatized after 1995 but a comparison of the average technical efficiency of private plants and public plants privatized in 1989 reveals no statistically significant difference. Their conclusion is that privatization authorities started the privatization process with the most efficient state-owned plants and the post-privatization performance of these "better" plants did not show any significant improvement. Their conclusion has a similarity to that of Tallant study in that public plants located in the east and privatized later during the process perform more poorly than private plants.

We now examine the studies in the second group. Karataş (1995) uses data collected by Istanbul Chamber of Industry and observes an improvement in labor productivity but consistently poor financial performance of the five plants privatized in 1989.

Özmucur (1998) analyzes a panel of public and private cement plants, using the results of the Istanbul Chamber of Industry 500 largest firms of Turkey surveys. He estimates a separate equation for each plant to determine the year of structural change for employment and labor productivity for the 1981–1995 period. He finds that structural change coincided with time of privatization for public plants and reduction in employment which to a degree happened in all plants was significantly higher in the privatized plants.

Ökten and Arin (2005) analyze the effects of privatization on firm productivity and allocative efficiency using a panel data set of 22 privatized cement plants during 1983–1999 period. The data set enables the authors to avoid the endogeneity problem associated with sample selection. All public cement plants in Turkey have been privatized by 1998 and the authors have pre- and post-privatization data for all. They use firm fixed effects and yearly dummies to control for period specific effects in their baseline specification. The results show that privatization increases labor productivity and decreases prices significantly indicating an improvement in both productive and allocative efficiency.

Their results on productive efficiency are robust to controlling for changes in the competitive environment (market structure) using a regional Herfindahl Index (HHI) while privatization has no longer a significant effect on prices in the presence of this control. This highlights the importance of market structure and competitive environment following privatization. They also find evidence that production technology becomes more capital intensive as the capital endowment, investment and capital labor ratios increase following privatization.

How can we reconcile the differences in results as to the effects of privatization on firm efficiency? One explanation can be the differences in the competitive environment in which public plants operate in. Before the start of privatization, there are many private plants in the western regions while few exist in the eastern regions. Hence public plants located in the east face little competition from private plants. Figure 9.3 presents the Herfindahl Index for Marmara (west) and Eastern Anatolia (east) regions (Ökten and Arin, 2005). HHI is calculated by

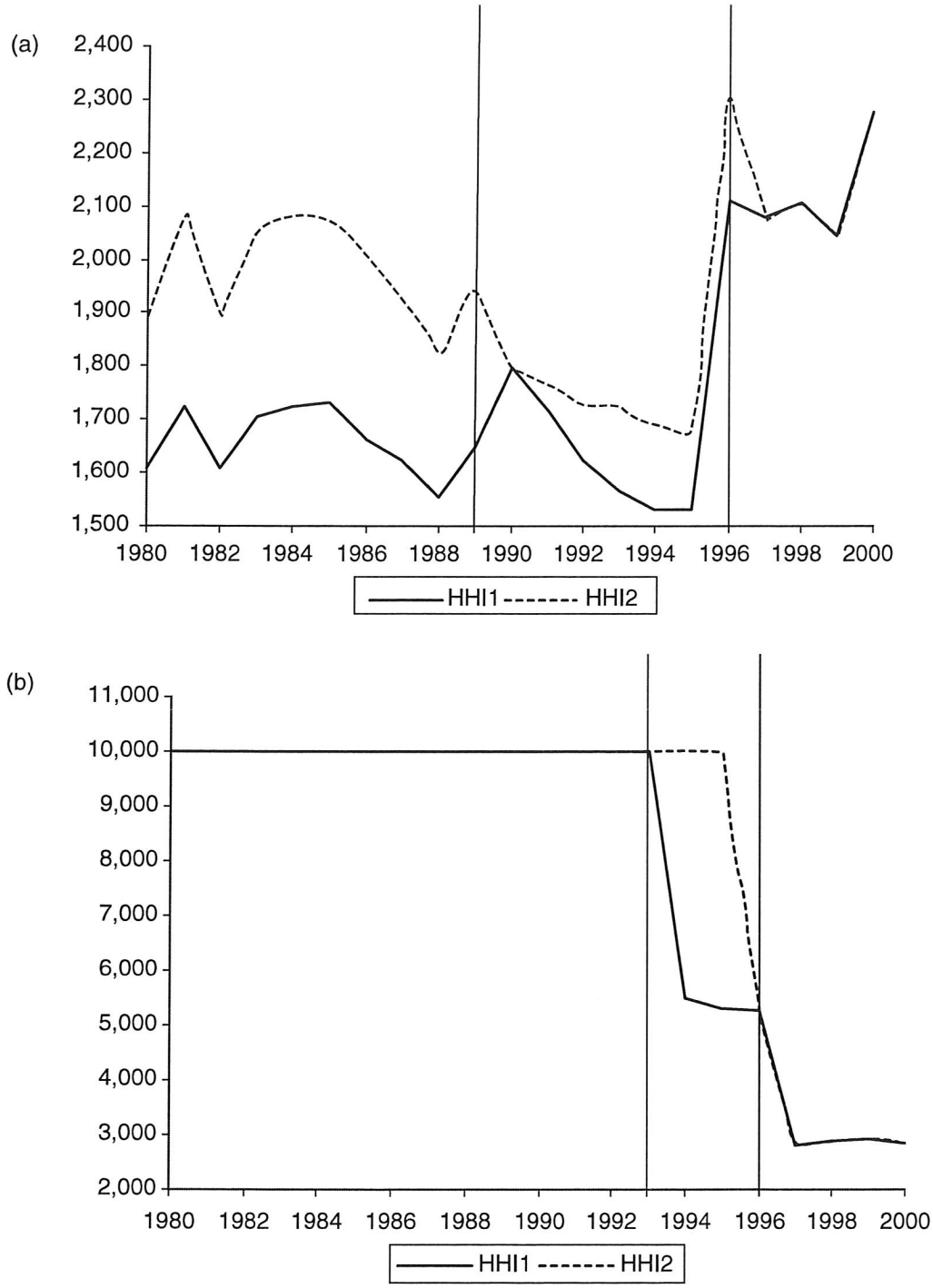

Figure 9.3 Market concentration measured by Herfindahl Index: (a) Marmara (west) region, (b) Eastern Anatolia (east) region.

summing the squares of market shares of plants in each region. If two or more plants are owned by the same parent company, then market share of the parent company in region is used in the calculation. The higher the HHI, the more concentrated the market.

In the graphs, HHI(1) is the Herfindahl index including the publicly owned plants and HHI(2) is the Herfindahl index excluding the publicly owned plants. In calculating HHI(1), share of output sold by publicly owned plants is considered as the share of a single firm – the public enterprise in that region. In calculating HHI(2), only output sold by privately owned plants is considered. Vertical lines indicate the years of privatizations.

From Figure 9.3, HHI(1) for Marmara Region has ranged between 1,600 and 2,300 during 1980–2000 period and actually increased after privatization. In contrast, public plants in the eastern region formed a monopoly prior to the start of the privatization process since no private plants existed in this region. The four public plants were privatized in 1993 and 1996 and HHI dropped significantly – from 10,000 to 3,000 – as each plant was sold to a different company. Hence the lack of competition from the private sector, might be responsible for poor performance of public plants located in the east and the relatively more competitive environment in the west might be responsible for the better performance of public plants located in the west.

Another possible explanation for the differences in findings is that studies are measuring short-run effects of privatization and while there is a significant improvement in labor productivity in the short-run, there are few changes in total productivity. We should note that, according to the Ökten and Arin (2005) study, capital and investment are increasing after privatization. This might indicate that plants are switching to more capital intensive technologies. These technologies might be more cost efficient in the long-run than labor intensive technologies, although both types of technologies are on the production possibilities frontier. Furthermore, the effects of investment in capital and technology might be observed with a lag. Hence a study that spans a longer post-privatization period may help reconcile some of the differences in results.

Ökten and Arin (2005) study is the only study that examines the effect of privatization on allocative efficiency of the cement industry. Their measures for allocative efficiency are plant specific cement prices (in log) and the relative inflation rate. The relative inflation rate is calculated by subtracting the wholesale price index inflation rate from the plant specific price inflation rate. Prior to the price de-regulation in 1986, the price of each publicly owned plant was set to the same amount by CITOSAN, the Public Enterprise. The authors lack data on these prices but have an industry-wide price index from the State Planning Institute of Turkey. Hence, they calculate the plant specific price inflation rate by using this industry-wide price index prior to 1986, and by using plant specific prices after 1986. Since this variable merely indicates rate of change, it is possible to construct it using two different price indices as long as we code the year for which we switch from one index to the next as missing. Their goal in constructing relative inflation rate is to achieve a longer series on price.

Both regressions, plant specific cement prices and the relative inflation rate, control for firm specific and period specific effects by adopting a firm fixed effect specification and including year dummies. The authors find that privatization decreases both cement prices and the relative inflation rate. A switch from public ownership to private ownership decreases cement prices by 32 percent.

Revenue generation and share ownership

Since its start in 1985, the total proceeds from privatization efforts have amounted to $9.4 billion by 2004. Block sales via auctions have been the most prevalent method of privatization. There is only one empirical study that analyzes the determinants of privatization prices in Turkey (Arin and Ökten, 2003). The authors use a data set of 68 privatized firms from Turkey gathered from official statistics of the Privatization Administration. The sample includes 24 cement plants/grinding facilities, 29 dairy product plants, 4 ports, 3 marinas, 2 airline service firms, and 6 heavy industry manufacturers like mining and metal firms, which were privatized in Turkey between the years 1989 and 1998. In that sample, 65 out of 68 firms are sold through block sales via auctions. The remaining 3 firms are sold through a combination of block sales and public offerings.

Interestingly, the authors find that revenues affect privatization prices, not profits and hence argue that what fundamentally determines the privatization price is the expected future profit of the firm. Potential buyers would discount firms' current cost information if they believe that these firms were inefficient. Current costs and hence profits do not affect privatization prices because they do not reflect expected future profits, whereas revenue and market characteristics are good indicators for future profitability. Firms' profit margins have positive and significant effects on privatization prices when the whole heterogeneous sample is used similar to findings for Mexico by Lopez-De-Silanes (1997). However, when authors concentrate on a single industry (cement industry), this variable is no longer significant. Therefore, their interpretation for the effect of this variable is different from that of Lopez-De-Silanes. They argue that profit margins measure the differences in market power of firms in different industries (market structures) rather than differences in firm efficiency and this is what gets reflected in privatization prices. Arin and Ökten (2003) find that the number of bidders increases privatization prices consistent with the results for Mexico.

Sales of SOEs through public offerings have been utilized on a limited scale. The limited size and depth of the ISE has undoubtedly restricted the sale of SOEs by public offerings. Hence one could argue that, the objectives of wider share ownership and developing a viable capital market have not been met. However, share issue privatizations include some of the largest SOEs as can be seen from Tables 9.2 and 9.3.

Concluding remarks

Economic theory specifies a role for state ownership only in natural monopoly type of market structures where efficiency requires a single firm to exist. Even then, state ownership may not improve efficiency if SOEs pursue other objectives due to political or bureaucratic pressure (Vickers and Yarrow, 1988; Shleifer and Vishny, 1994).

Historically, Turkey has had a long experience of relying heavily on SOEs even in markets that can not be characterized as a natural monopoly. SOEs were established during the 1930s by the government to jump-start the economy that collapsed with the end of the Ottoman era in 1923. SOEs grew enormously over the years and

served as engines of economic activity in the absence of a strong private sector. By 1960, share of public sector in total value added in manufacturing was 60 percent.

By the 1980s, SOEs began to be perceived negatively due to poor financial performance, overstaffing, dependence on subsidies, protected markets, and corruption. Hence, privatization came into the political agenda first with Prime Minister Özal's trade and capital account liberalization program in 1984. Despite the initial enthusiasm, it is not surprising that privatization of SOEs was a slow process. The preferences that created and promoted SOEs were also reflected in the country's laws and institutions that challenged many privatization attempts. Still, a large number of SOEs and state shares in companies have been divested between 1985 and 2005 and the total proceeds have amounted to $9.4 billion.

Block sales have been the most prevalent method of privatization. One could argue that this policy contradicts with the aim of developing a viable capital market and facilitating a wider distribution of share ownership. Arin and Ökten (2003) analyze the determinants of privatization prices in block sales via auctions and find that revenue and market characteristics affect privatization prices, not profits and argue that what fundamentally determines the privatization price is the expected future profit of the firm. They also find that competition measured by the number of bidders increases privatization prices.

There are several empirical studies that analyze the impact of privatization on the Turkish cement industry due to availability of pre- and post-privatization data for this sector (Çakmak and Zaim, 1992; Tallant, 1993; Karataş, 1995; Özmucur, 1998; Saygili and Taymaz, 2001; Ökten and Arin, 2005). Results of these studies are mixed on the effects of privatization on firm efficiency. Studies that span a longer post-privatization period and consider the links between ownership type and the competitive environment are needed to reconcile differences.

Notes

1 A survey by Djankov and Murrell (2002) examines the effects of privatization in transition economies. They conclude that in most countries, privately owned firms perform better than state-owned firms.

2 Bartero and Rondi (2000) show that consistent with theoretical predictions, Italian state-owned firms respond to financial pressure under a hard budget constraint by increasing total factor productivity and reducing employment whereas no such positive effect is observed under a soft budget constraint.

3 This is an interesting case. In July 1998, PA High Council reversed its previous decision that favored the offer of $1.6 billion by the highest bidder, the Akmaya-Orteks AS group and decided to sell 51 percent of POAS to the third highest bidder, the İşBank, Park Holding, Bayindir and PUIS consortium group. This group agreed to raise its initial bid to the level of the highest bid. Nevertheless, the privatization of POAS was suspended by the Ankara Supreme Court, as the privatization deal was deemed to be against the Constitution and the principle of wider share ownership. The partial sale of POAS took place in March 2000 after the legal framework has been prepared for its divestment (Karataş, 2001).

4 Also privatized were the two cement grinding facilities.

5 Two exceptions were Denizli and Lalapasa. These two public plants were established in 1987 and 1991 respectively, in order to meet the growing demand in the western regions.

References

Anderson, J.H., Y. Lee, and P. Murrell (2000), "Competition and Privatization Amidst Weak Institutions: Evidence from Mongolia," *Economic Inquiry*, 38(4): 527–549.

Angelucci, M., S. Estrin, J. Konings, and Z. Zolkiewski (2001), "The Effect of Ownership and Competitive Pressure on Firm Performance in Transition Countries, Micro Evidence from Bulgaria, Romania and Poland," CEPR Discussion Paper: 2985.

Arin, K.P. and C. Ökten (2003), "The Determinants of Privatization Prices: Evidence from Turkey," *Applied Economics*, 35(12): 1393–1404.

Aybar, C.B., E.S. Guney, and S. Suel (2001), "Privatization and Regulation in Turkish Telecommunications: A Preliminary Assessment," SNHU International Business Program Working Paper Series No. 2001–2002.

Bartero, E. and L. Rondi (2000), "Financial Pressure and the Behaviour of Public Enterprises under Soft and Hard Budget Constraints: Evidence from Italian Panel Data," *Journal of Public Economics*, 75: 73–98.

Bhaskar, V. and M. Khan (1995), "Privatization and Employment: A Study of the Jute Industry in Bangladesh," *American Economic Review*, 85: 267–273.

Çakmak, E. and O. Zaim (1992), "Privatization and Comparative Efficiency of Public and Private Enterprises in Turkey: The Cement Industry," *Annals of Public and Cooperative Economics*, 63: 271–284.

Djankov, S. and P. Murrell (2002), "Enterprise Restructuring in Transition: A Quantitative Survey," CEPR Discussion Papers: 3319.

Earle, J.S. and A. Telegdy (2002), "Privatization Methods and Productivity Effects in Romanian Industrial Enterprises," *Journal of Comparative Economics*, 30(4): 657–682.

Ehrlich, I., G. Gallais-Hamonno, Z. Liu, and R. Lutter (1994), "Productivity Growth and Firm Ownership: An Analytical and Empirical Investigation," *Journal of Political Economy* 102(5): 1006–1038.

Ercan, M. and Z. Önis (2001), "Turkish Privatization: Institutions and Dilemmas," *Turkish Studies*, 2(1).

Ertuna, O. (1998), "Constraints of Privatization: The Turkish Case," Bogazici University, Working Paper.

Ficici, A. (2001), "Political Economy of Turkish Privatization: A Critical Assessment," Working Paper, New Hampshire College.

Financial Times (18.09.2000), a news article by Leyla Boulton.

Frydman, R., C. Gray, M. Hessel, and A. Rapaczynski (1999), "When Does Privatization Work? The Impact of Private Ownership on Corporate Performance in the Transition Economies," *Quarterly Journal of Economics*, 114(4): 1153–1191.

Istatistiki Gostergeler (Statistical Indicators) (1923–2002), Devlet Istatistik Enstitusu, Ankara.

Johnson, S., H. Kroll, and E. Santiago (1994), "Strategy, Structure and Spontaneous Privatization in Russia and Ukraine," in *Changing Political Economies: Privatization in Post-Communist and Reforming Communist States*, Vedat Milor (ed.), Boulder: Lynne Rienner, pp. 147–173.

Karataş, C. (1995), "Has Privatization Improved Profitability and Performance of the Public Enterprises in Turkey," in *Privatisation Policy and Performance: International Perspectives*, P. Cook and C. Kirkpatrick (eds), London: Prentice Hall, pp. 244–262.

Karataş, C. (2001), "Privatization in Turkey: Implementation, Politics of Privatization and Performance Results," *Journal of International Development*, 13: 93–121.

Kattuman, P. and R. Domanski (1997), "Industrial Concentration Under Shock Therapy: Poland in the Early Transition Years," University of Cambridge, ESRC Centre for Business Research Working Paper: WP76.

La Porta, R. and F. Lopez-de-Silanes (1999), "The Benefits of Privatization: Evidence from Mexico," *Quarterly Journal of Economics*, 114(4): 1193–1242.

Lopez-De-Silanes, F. (1997), "Determinants of Privatization Prices," *Quarterly Journal of Economics*, 112: 965–1025.

Megginson, W. and J. Netter (2001), "From State to Market: A Survey of Empirical Studies on Privatization," *Journal of Economic Literature*, 39: 321–389.

Niskanen, W. (1975), "Bureaucrats and Politicians," *Journal of Law and Economics*, 18(3): 617–643.

OIB (Ozellestirme Idaresi Baskanligi – Privatization Administration) (2005), "Turkiye'de Ozellestirme (Privatization in Turkey)," www.oib.gov.tr (accessed February 1, 2005).

Ökten, C. and P. Arin (2005), "How does Privatization Affect Efficiency? Evidence from Turkey," Bilkent University Working Paper Series, No. 05–04.

Omran, M. (2004), "The Performance of State-Owned Enterprises and Newly Privatized Firms: Does Privatization Really Matter?," *World Development*, 32(6): 1019–1041.

Öniş, Z. (1991), "Evolution of Privatization in Turkey: The Institutional Context of Public Enterprise Reform," *International Journal of Middle East Studies*, 23: 163–176.

Orta Anadolu Ihracatcilar Birligi (1998), *Cimento Sektoru Raporu.* (Central Anatolian Board of Export, *Cement Industry Report.*)

Özmucur, S. (1998), "Privatization and the Labor Market in Turkey," in *Main Characteristics and Trends of the Turkish Labour Market*, Tuncer Bulutay (ed.), State Institute of Statistics: Ankara, pp. 171–209.

Saal, D. and D. Parker (2001), "Productivity and Price Performance in the Privatized Water and Sewerage Companies of England and Wales," *Journal of Regulatory Economics*, 20(1): 61–90.

Saygili, S. and E. Taymaz (2001), "Privatization, Ownership and Technical Efficiency: A Study of the Turkish Cement Industry," *Annals of Public and Cooperative Economics*, 74(4): 581–605.

Shapiro, C. and R. Willig (1990), "Economic Rationales for the Scope of Privatization," in *The Political Economy of Public Sector Reform and Privatization*, B.N. Suleiman and J. Waterbury (eds), London: Westview Press, pp. 55–87.

Shleifer, A. and R. Vishny (1994), "Politicians and Firms," *Quarterly Journal of Economics*, 109: 995–1025.

Tallant, D. (1993), "Relative Efficiency of Public and Private Sector Ownership and Privatization of the Turkish Cement Industry," *Review of Social, Economic and Administrative Studies*, 7(1–2): 73–103.

Vickers, J. and G. Yarrow (1988), "Privatization: An Economic Analysis," *MIT Press Series on the Regulation of Economic Activity*, 18. Cambridge, MA and London: MIT Press.

Villalonga, B. (2000), "Privatization and Efficiency: Differentiating Ownership Effects from Political, Organizational, and Dynamic effects," *Journal of Economic Behavior & Organization*, 42: 43–74.

Wallsten, S.J. (2001), "An Econometric Analysis of Telecom Competition, Privatization, and Regulation in Africa and Latin America," *Journal of Industrial Economics*, 49: 1–19.

Warzynski, F. (2003), "Managerial Change, Competition and Privatization in Ukraine," *Journal of Comparative Economics*, 31: 297–314.

Yılmaz, K. (2000), "Turk Telekomunikasyon Sektorunde Reform: Ozellestirme, Duzenleme ve Serbestlesme (Reform, Privatization, Regulation, and Liberalization in the Turkish Telecommunications Sector)," in *Devletin Duzenleyici Rolu*, Tesev Yayinlari, 19.