THE LIBERALIZATION OF DOWNSTREAM OIL INDUSTRY IN TURKEY

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN
THE DEPARTMENT OF ECONOMICS

DECEMBER 2006

Approval of the Graduate School of Social Sciences

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ABSTRACT

THE LIBERALIZATION OF DOWNSTREAM OIL INDUSTRY IN TURKEY

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December 2006, 153 pages

This study attempts to analyze the deregulation process of downstream oil industry in Turkey and to develop policies concerning Turkish downstream oil industry. Privatization of Petrol Ofisi and TÜPRAŞ and the enactment of the Petroleum Market Law in 2003 were the main implementations of radical deregulation process of downstream oil industry. The main goal of deregulation process has been to create a competitive market. However, establishment of a competitive downstream oil industry has not been achieved, yet. Despite the price liberalization, price competition between distribution companies has not been realized, so far. TÜPRAŞ was transformed to a private monopoly through the privatization. Moreover, price liberalization has increased both the refining margins of TÜPRAŞ and distribution margins of distribution companies at the expense of consumers. A comprehensive competition policy about downstream oil industry should be developed immediately. Furthermore, due to its poor performance since 2003, Energy Market Regulatory Authority's (EMRA) responsibilities in downstream oil industry should be removed and a new regulatory authority which will solely interest with petroleum sector should be established.

Keywords: TÜPRAŞ, Petrol Ofisi, deregulation, oil, The Petroleum Market Law

ÖZ

TÜRKİYE'DE RAFİNERİ VE AKARYAKIT DAĞITIM SEKTÖRÜNÜN LİBERALLEŞMESİ

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Aralık 2006, 153 sayfa

Bu çalışma Türkiye rafineri ve akaryakıt dağıtım sektörünün serbestleşme sürecini incelemeyi ve rafineri ve akaryakıt dağıtım sektörü hakkında politika geliştirmeyi hedeflemektedir. TÜPRAŞ ve Petrol Ofisi'nin özelleştirilmeleri ve Petrol Piyasası Kanunu'nun 2003 yılında yürürlüğe girmesi sektördeki radikal serbestleşme sürecindeki en önemli uygulamalardır. Serbestleşme sürecinin temel amacı rekabetçi bir piyasa yaratmaktı. Ancak, rekabetçi bir rafineri ve akaryakıt sektörü yaratılması henüz başarılamamıştır. Fiyat serbestleşmesine rağmen, dağıtım şirketleri arasında henüz fiyat rekabeti olmamıştır. TÜPRAŞ özelleştirme ile birlikte özel tekele dönüşmüştür. Buna ek olarak, fiyat serbestleşmesi TÜPRAŞ ve dağıtım şirketlerinin tüketicilerinin aleyhine rafineri ve dağıtım marjlarını yükseltmelerine neden olmuştur. Kapsamlı bir rekabet politikası bir an önce geliştirilmelidir. Buna ek olarak, 2003 yılından itibaren ki kötü performansı nedeniyle, Enerji Piyasası Düzenleme Kurulu'nun rafineri ve akaryakıt dağıtım sektöründeki görevleri kaldırılmalı ve yalnızca petrol piyasası ile ilgilenecek yeni bir düzenleyici otorite kurulmalıdır.

Anahtar Kelimeler: TÜPRAŞ, Petrol Ofisi, serbestleşme, petrol, Petrol Piyasası Kanunu

Babama…

ACKNOWLEDGMENTS

I would like to express my deepest gratitude to Assoc. Prof. Dr. Erkan Erdil for his friendly attitude and advices throughout preparation of this thesis. I would also like to thank to Prof. Dr. Erol Taymaz and Dr. Müge Özman for their valuable critiques and suggestions.

I owe special thanks to my friends Mehmet Emre Tiftik, Özlem Kocabaş and Uygar Yıldırım for their support, encouragement and friendship and also to Hülya Peker for her guidance in accessing Turkish data and legal sources. Finally, I offer my sincere thanks to my family for their generous support and peerless patience, without them this thesis could not be completed.

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CHAPTER 1

INTRODUCTION

Oil is still the leading energy source in the world despite the increase in the share of natural gas during the last two decades. The share of oil in total world primary energy consumption was 37% while the share of natural gas, coal, nuclear energy and hydro-electricity was 24%, 27%, 6% 6% in 2004 respectively (BP, 2005).

Developments in oil sector seem to influence world economy profoundly in the near future on account of the fact that a sharp decline in the share of oil is not expected. Moreover, sharp rise in oil prices during the last few years has aroused concerns about the stability of world economy. The price of oil reached to $ 75 per barrel in July 2006 which was around $ 11 in November 1998[1]. Thus, oil price has increased by approximately six times between 1998-2006 period. Increasing oil demand in developing countries and political instability in Middle East following the Iraq invasion of USA in 2001 are the main reasons for sharp rise in oil prices.

In Turkey, the share of oil, natural gas, coal, hydro-electricity was 38%, 23%, 27%, 12% in 2004 respectively(BP, 2005). It can be inferred from these data that oil is also the main energy source in Turkey. Having poor oil reserves Turkey imports more than 90% of crude oil. Rise in oil prices has also affected Turkish economy negatively. Turkey paid $ 2 billion for 23,7 million tons crude oil imports in 1998. As to 2004, although nearly the same amount of crude oil was imported, 23,8 million tons, the bill reached to $ 6 billion (GDPA, 2004). Increase in cost of crude oil also raised the petroleum product prices in Turkey. Final consumer price of gasoline 95

[1] US Energy Information Administration website, http://tonto.eia.doe.gov/dnav/pet/hist/rclc1d.htm, Accession: November 12, 2006.

RON exceeded YTL 3,0 per liter in July 2006 and final consumer price of diesel oil 50 ppm exceeded YTL 2,50 per liter in July 2006[2].

The main objective of this thesis is to analyze the deregulation process of downstream oil industry in Turkey and to develop policies concerning the liberalization of downstream oil industry. The deregulation process aimed to establish the institutionalization of market economy in downstream oil industry. For this purpose, public fuel distribution company Petrol Ofisi and public refining company TÜPRAŞ were privatized. In addition, the Petroleum Market Law enacted in 2003 allowed refining companies and distribution companies to set petroleum product prices freely. Moreover, the Petroleum Market Law made it necessary to get license in order to operate in downstream oil industry and arranged national marker to solve the smuggled oil problem. Since smuggled oil forces economic actors in the sector to unfair competition, preventing smuggled oil is a necessity to establish the institutionalization of market economy. However, despite the privatizations and enactment of the Petroleum Market Law, establishment of a competitive downstream oil industry has not been achieved, yet. Turkish downstream oil industry is far away from a competitive structure. Petrol Ofisi has increased its market share since privatization and price competition between distribution companies has not been realized yet. Furthermore, TÜPRAŞ transformed to a private monopoly through the privatization. Besides, as opposed to expectations, the price liberalization has increased petroleum product prices due to rise in refining margins and distribution margins. Finally, smuggled oil problem in Turkey has not been solved despite the arrangements in the Petroleum Market Law.

What the uniqueness of this thesis is that it is the first comprehensive attempt about the deregulation of downstream oil industry in Turkey. There is a lack of sufficient academic study about this subject. I hope that my thesis will make up this deficiency in some degree. Academic studies about downstream oil industry liberalization in Turkey mainly focus on privatization of public oil companies. For instance, Kayıkçı

[2]EMRA's website, http://akaryakit.epdk.org.tr/Raporlar/RaporSekizfirma.aspx, Accession: November 12, 2006.

(2005) discusses the privatization process of TÜPRAŞ while Özel (2003) studies the applicability of vertical integration of oil companies in Turkey. Yeldan (2005) also discusses the privatization of TÜPRAŞ while studying the privatization experience in Turkey.

This thesis is composed of seven chapters. Chapter 2 will discuss the literature about deregulation of oil industry and overall energy industry deregulation in detail. Since the academic studies about deregulation of oil industry is limited, literature about overall energy deregulation in the world will also be scrutinized. Chapter 2 provides some lessons about Turkish case by understanding the world experience in oil and energy industry deregulation.

Chapter 3 will define the downstream oil industry in Turkey. Initially, the importance of oil in Turkish economy and the production, consumption and foreign trade trends of oil in Turkey will be examined. Secondly, the operational and financial performance of TÜPRAŞ will be analyzed in detail. Finally, the fuel distribution sector in Turkey will be investigated. Chapter 3 aims to take a picture of downstream oil industry in Turkey.

In Chapter 4, the legislation about downstream oil industry will be analyzed. First of all, the important legislations before the Petroleum Market Law will be discussed. Later, The Petroleum Market Law and the License Regulation of Energy Market Regulatory Authority (EMRA) will be studied in detail. Chapter 4 will ensure the understanding of the legal aspect of the deregulation process in downstream oil industry.

Chapter 5 will examine the European Union's energy policies. Since, Turkey is a candidate country for EU membership, European Union's energy policies are also important for Turkey's energy policies. Moreover, Turkey also has an important role in European Union's energy policy due to its geopolitical position. While European Union meets its energy demand mostly from Former USSR countries and Middle East countries, Turkey has a critical importance for European Union's security of

energy supply. In Chapter 5, initially the historical evolution of European Union's energy policy will be discussed. Secondly, the main aspects of the European Union's energy policy such as supply security, establishment of an internal energy market and environmental protection will be investigated. Thirdly, European Union's policies about oil industry will be discussed. Finally, deregulation processes of downstream oil industry in two EU member countries, Spain and Poland, will be analyzed. Due to the fact that both of the deregulation processes of downstream oil industry in Spain and Poland were parallel with EU membership processes, investigation of deregulation of downstream oil industry in both countries will provide lessons for Turkish case.

In Chapter 6, the deregulation process of downstream oil industry in Turkey will be studied and policies about downstream oil industry in Turkey will be recommended. Firstly, the privatization processes of TÜPRAŞ and Petrol Ofisi will be discussed in detail. Secondly, the effect of price liberalization on January 1, 2005 will be discussed by comparing unleaded gasoline and diesel oil prices in Turkey and EU-15 countries. Thirdly, the smuggled oil problem will be analyzed. After these, the performance of EMRA during the last three years in downstream oil industry will be assessed and policies about the restructuring of regulatory authority will be discussed. Finally, Chapter 7 concludes the thesis.

CHAPTER 2

DEREGULATION IN THEORY AND ACTION

Deregulation of oil industry has been experienced in many countries such as Spain, Brazil, Argentina, Japan, Turkey, Kenya during the last two decades with different policies and different degrees. In many countries deregulation and privatization of oil industries resulted in oligopolistic market structures and also in some countries such as Philippines and Spain led to asymmetric pricing behavior. In most countries despite progress in competition, deregulation has not produced desired competition levels, yet.

Deregulation of overall energy sector has also important consequences. It is generally accepted that deregulation of energy sector led to decrease in consumer prices as a result of rising competition. However, there are negative consequences of energy deregulation. First of all, energy deregulation affected investment on renewables and nuclear energy adversely. Since renewable energy has not been sufficiently competitive yet; private companies are reluctant to invest on renewables. This situation is also same for nuclear energy. Renewable energy sources and nuclear energy are vital for preventing global warming. Thus, decrease in investments on renewable energy and nuclear energy makes it difficult to prevent global warming. On the other hand, private companies prefer short-term less-risk energy investment, which also damages the security of energy supply in the long-run.

In this chapter, studies which solely argue deregulation of oil industries in different countries will be evaluated. Investigation of the deregulation of oil industry in different countries will provide some lessons for the deregulation of Turkish downstream oil industry. Since the literature related to deregulation of oil sector is not so rich, studies discussing deregulation of gas sector, power sector and oil sector together, and studies discussing overall energy deregulation will also be examined in

this chapter. Analyzing the deregulation of energy sectors other than oil industry and the overall energy deregulation will provide a broader point of view while discussing the deregulation of Turkish downstream oil industry.

2.1. Deregulation of Oil Sector

2.1.1. Consequences of Deregulation of Oil Sector

Clarke and Edwards (1998) investigate, through simulation, the net welfare effect of deregulation in oil industry realized in 1996 in Japan. They argue that, deregulation will reduce oil product prices, thus leads to increase in welfare. On the other hand, decrease in prices will increase consumption and gas emissions. Increase in gas emissions will lead to pollution which reduces welfare. Their simulation model examines whether welfare gain from price decrease exceeds welfare loss from pollution. Initially, they discuss the history of oil industry in Japan. Oil was the leading energy source in Japan with a share of 56% in 1993. Until the 1980s oil industry was heavily controlled by the government. Ministry of International Trade and Industry controlled oil market by imposing quotas and tariffs on crude oil imports, banning imports and exports of oil products and controlling the capacities of refineries. In the mid 1980s, Japanese government started to deregulate oil industry. In 1986, restrictions on imports of petroleum products were relaxed. However, only domestic refineries has benefited from this change, whereas non-refiners could not. There has been an upsurge in petroleum products imports following the relaxation of imports. In 1989, gasoline production quotas were abolished. However, initial deregulation did not have a strong effect on prices. In 1995, gasoline margins in Japan were 4.5 times higher than gasoline margins in Germany and were 8 times higher than gasoline margins in USA. Finally on 1 April 1996, government permitted non-refiners to import oil products. In addition, in October 1996, restrictions on opening new service stations in designated areas were removed in order to increase competition.

In order to investigate the net welfare effect of deregulation in 1996, Clarke and Edwards (1998) developed a simplified general equilibrium model. They consider two basic changes: liberalization and rationalization. Liberalization means opening industry to direct competition from imports which is expected to increase after 1996. Rationalization means modernizing the refining sector by closing or merging old, high-cost refineries and by consolidating output on more modern plants. They develop three models. In the basic model, liberalization occurs without rationalization. In the second model, rationalization occurs without liberalization and in the third model both liberalization and rationalization occurs. In the basic model there is a 0.08% net welfare gain, in the second model net welfare gain was 0.3% and in the third model net welfare gain was 0.37%. They conclude that deregulation is likely to result net welfare gain despite the increasing pollution.

Okech and Nyoike (1999) analyze the liberalization of the petroleum retail market in Kenya considering the pricing, taxation and investment in petroleum retail market. Firstly, they analyze the situation of the Kenyan economy and Kenyan energy sector. Kenya demonstrated an average GDP growth of 5% between 1986 and 1990. However, GDP growth declined to 2.1% in 1991 which further decreased to 0.5% in 1992 and 0.1% in 1993. Following 1994, the Kenyan economy started to recover. Oil had a share of 24% in Kenya's energy consumption in 1996. Fuel wood was the leading energy source with a share of 53% in 1996. Oil was mostly used in commercial and transportation sector.

There were seven oil companies operating in downstream oil market in 1996. The market share of BP/Shell (jointly operates in marketing and retail segment) was 24% and market share of Caltex was 22% and market share of Total was 15%. Okech and Nyoike (1999) indicate that petroleum market was virtually an oligopoly. They argue that the main reasons for oligopolistic market structure were high capital requirement for new entrants and policies of existing firms which prevent new firms' entrance to market. After analyzing the general market structure, Okech and Nyoike (1999) discuss the pricing mechanism. Before liberalization, government determined prices considering procurement and refining costs, industry managed cost, return on trading

assets and transshipment losses. Following liberalization, prices were determined in free market conditions. Their investigation of prices demonstrates that gross profit margin for petroleum motor spirit, diesel oil, Jet A-1 and illuminating kerosene in October 1997 were, 62.7%, 46.1%, 46.7% and 12.8% respectively. They argue that high margins reveal the fact that there was a high-cartel pricing policy which exploits retail consumer. Only in Jet A-1, gross profit margin was relatively low due to the bargaining power of airlines. Later, they maintain that existing regulations were insufficient to correct market distortions. Moreover, tax policy of the government was viewed as discriminatory by Okech and Nyoike (1999). After that, they try to answer whether high profit margins were used for investments or not. They see that while public firms reinvest their profits in infrastructure in petroleum sector, private firms distribute most of their profits as dividend. Later, they analyze the capital market of Kenya which could be a resource for investments. Finally, they develop policy recommendation for petroleum industry such as harmonizing and rationalizing taxes, developing an appropriate policy for PDL (Petroleum Development Levy) which aims to develop petroleum industry, establishing a legal framework in order to prevent market distortions, ensuring unconstrained access of foreign investors to domestic financial markets and accelerating the liberalization of the Kenyan economy.

2.1.2. Asymmetric Pricing in Oil Industry Following Deregulation

Salas (2002) analyzes the price adjustments in the Philippine retail gasoline market since its deregulation in February 1998 by using three models; ordered probit model, partial adjustment model and vector error correction model. Salas (2002) uses weekly-unleaded gasoline data covering the period from the third week of January 1996 through the first week of February 2002. The ordered probit model is used to determine the appropriate and relevant lag length. On the other hand, the partial adjustment model (PAM) is applied to analyze the adjustment rate of retail prices to its long-run equilibrium relation with crude cost. Finally, the vector error correction model is used to test the asymmetric pricing in gasoline market.

The estimation results of the probit model indicates that the firm's decision to alter or maintain prices is influenced by up to eight weeks of prior changes in crude cost. Moreover, the results demonstrate that the Big Three (Petron, Shell and Caltex) refines the gasoline they sell in the market, in contrast to the new entrants. Furthermore, the passthrough rate for the Big Three is 90.5% compared to 70.6% for small firms which means that the Big Three transmitted a larger proportion of crude cost changes to prices than small firms (Salas, 2002).

The estimation results of the PAM model reveal that the deregulation of the downstream sector has led to faster adjustment rates through time. However, the temporary suspension of import duty on crude oil and petroleum products, mini-supply shock and currency depreciation disrupted this trend. Besides, the Big Three had faster adjustment rates than the small oil companies. Furthermore, retail prices adjusted faster when it is below from the predicted long-run equilibrium price.

Finally, the estimation results of the vector error correction model (VECM) say that the big and small firms have passed 90% of the crude cost increase to retail prices; however they have reduced the prices by 58% and 46% respectively for the same amount decline in crude cost. Indeed, there is an upward trend for cumulative responses to crude cost increases both for the Big Threes and small firms, nonetheless there is no adjustment for a cost decrease until the second week and the adjustment only reaches to 20% in the fifth week for the Big Three. For small firms, the adjustment rates to cost decrease reach to 10% in the second week and remain constant until the sixth week. Thus, the asymmetric pricing is a characteristic of the retail gasoline sector in Philippines. On the other hand, Salas (2002) resolves that contrary to public perception, the deregulation of the downstream oil industry led to acceleration of the adjustment speed of retail prices to crude cost changes. However, suspension of import duty for three months in 2000 disrupted the acceleration of price adjustment. Salas (2002) also states that market share of the small oil companies is continuously increasing. Finally, Salas (2002) asserts that policies aiming more competition should be developed by mitigating the incumbent advantages of major oil firms and by easing entrance to market.

Contin et al. (2004) investigate the pricing behavior of retail gasoline market between January 1993 and December 2002 in Spain by using multivariate error correction models. They ask whether the abolishment of the ceiling price regulation in October 1998 leads to faster adjustments of retail gasoline prices to change in crude oil prices compared to the period of price regulation. Furthermore, they also investigate the existence of asymmetric pricing after and before October 1998. Initially, Contin et al. (2004) analyze the structure of Spanish oil industry. Although, the market shares of the new firms increased from 15% to 28% between 1993 and 2002, Spanish refineries had a total market share of 72%; Repsol-YPF 46.7%, Cepsa-Elf 18.6% and BP 6.8% in 2002. In June 1990, Spanish government put into force ceiling price regulation. According to this regime, ceiling prices were determined considering the prices in 6 European countries (Belgium, Germany, France, Italy, Holland and the UK). Between January 1993 and September 1996, the actual price did not vary significantly from the ceiling price. From September 1996 to October 1998, actual price was two pesetas below the ceiling price. Finally, ceiling price regulation was abolished in October 1998 (Contin et al. 2004).

The empirical results of the multivariate error correction models show that during the period of ceiling price regulation, companies adjusted their gasoline prices to crude price decrease faster than crude oil price increase. Moreover, estimation results reveal that after the abolishment of ceiling price regime, companies adjust their gasoline prices to crude oil price increases faster than crude oil price decreases. After the abolishment of ceiling price regime, retail gasoline prices react faster than before the abolishment of ceiling price regime to oil price increase; however the reaction to price decrease is similar in both periods. In addition, oil price changes were fully passed to the retail gasoline prices in the long run. Later, Contin et al. (2004) conclude that short-run price asymmetry after October 1998, was resulted due to the lack of competition. They affirm that deregulation of Spanish oil industry aimed to protect the domestic refiners and also aimed to establish a “national champion” Repsol. Finally, they suggest a more “active approach” in order to ensure a competitive market. They propose that the authorities of both the independent regulatory in the energy market and competition agencies should be increased.

2.1.3 Privatization of Oil Companies

Palacios (2002) studies the reform process of oil industry in Latin American countries, mainly Argentina, Brazil, Venezuela and Mexico. Palacios (2002) analyzes in detail the history of oil industry in all four countries. Initially, Palacios (2002) discusses the importance of oil in Latin America. Latin America has been a net oil exporter historically. Latin America had a share of 12% in world oil reserves in 2000. The share of Latin America in world oil production was 14% and the share of Latin America in world oil consumption was 9% in 2000. Venezuela and Mexico are the two major oil exporters in Latin America. On the other hand, Argentina can be described as a self-sufficient country in terms of oil and Brazil is a net oil importer.

Palacios (2002) examines the history of oil industry in all four countries in detail. Argentina was the only country in the region which liberalized oil industry completely. Former state-owned company, YPF was sold to Repsol, a Spanish oil company, in 1999. Palacios (2002) states that with the liberalization of oil industry in 1990s, Argentina has augmented production and become a net oil exporter since the early 1990s. Brazil, compared to Argentina, experienced limited liberalization in oil industry. Government had a share of 33% and has voting rights of 56% in Petrobras, major oil company in Brazil. Palacios (2002) discusses that unlike YPF, since Petrobras is relatively efficient company, total privatization of the company is unlikely to realize in the short-run. On the other hand, Venezuela has also liberalized oil industry limitedly like Brazil. In 1990s oil industry was opened to foreign companies. However, PDVSA; state-owned oil company was still the greatest monopoly in oil industry. Palacios (2002) states that Chavez administration in Venezuela creates doubts about further opening of oil industry. Finally, oil industry in Mexico was completely controlled by PEMEX, state monopoly in oil industry. Mexico has experienced the most limited liberalization among four countries.

Finally, Palacios (2002) reaches main findings about deregulation of oil industry in Latin America. Firstly, Palacios (2002) argues that the level of openness of oil

industry in Latin America related to a country's position in oil, whether it is a net oil exporter or net oil importer. Countries which are net oil exporter such as Venezuela and Mexico heavily depend on foreign and fiscal revenues gained from oil industry. Therefore, these countries are reluctant to open their oil industries. On the other hand, countries which are not net oil exporter such as Brazil and Argentina are willing to liberalize their oil industries. Secondly, financial situations of national oil companies are also important determinant for privatization of these companies. For instance high deficits of YPF in Argentina facilitated the privatization. However, Petrobras's financial profitability makes further privatization of company difficult. Thirdly, national oil companies in Latin America have a strategic position as net fiscal contributors. These companies can borrow from international sources easier than their governments. Moreover, these companies contribute fiscally to government budget by royalties and taxes. Therefore, net fiscal contributor position of national oil companies prevents oil industries from complete opening.

Lewis (2004) assesses the deregulation and privatization of the oil and gas sector in Brazil. Initially, the deregulation process of oil and gas sector is described. Brazil experienced an energy crisis in 2001 which dampened economic growth. Electric shortages severely hit the Brazilian industry. Former president Cardoso developed an emergency plan called Energia Brazil which aimed electricity rationing. Cardoso also increased investments on gas-fired thermoelectric power generation in order to reduce dependence on hydroelectricity in electricity sector. For this purpose, construction of a gas pipeline between Brazil and Bolivia was started. Moreover, efforts had been increased to improve domestic hydrocarbon production. Petrobras, state-owned oil and gas company, is an important position in Brazilian economy. Petrobras is the sole owner of natural gas in Brazil and also owns gas fields in Bolivia and gas pipeline between Bolivia and Brazil. Moreover, Petrobras is the largest company in oil sector, operating in all segments of industry including exploration and production, refining, distribution and importation. Lewis (2004) argues that success of the energy reforms in Brazil depends on the success of reforms in democratization, liberalization, development of social welfare and

decentralization. Lewis (2004) also insists that successful privatization and deregulation of Petrobras could contribute to overall reform process in Brazil.

According to Lewis (2004), successful privatization of Petrobras depends on four factors. Firstly, corporatization and financial performance of the company should be increased before privatization. Secondly, all the stakeholders which will be affected by Petrobras's privatization must be identified and must be included to privatization process. Thirdly, advanced legal institutions must be established before privatization. Finally, an autonomous regulatory authority must be constituted in order to separate the government and state-owned oil and gas companies.

Lewis (2004) divides the stakeholders in Petrobras into five groups: (1) employees, pensioners, future employees and owners, (2) domestic economic partners, (3) Brazilian federal and local governments, (4) the Brazilian public and (5) international employees, owners, partners, governments and competitors. Lewis (2004) analyzes how these different groups will be affected from privatization process in detail. Lewis (2004) argues that employees may have incentives under privatization. Moreover, Lewis (2004) claims domestic partners of Petrobras will likely be unaffected by privatization. Later, Lewis (2004) discusses the importance of Petrobras both for federal government and local governments. Petrobras is an important revenue source both for federal governments and local governments. Petrobras also has a crucial role in federal government's economic policy. For instance, Petrobras paid $2.4 billion federal income tax and held $3.5 billion treasury bonds in 2000. Lewis (2004) argues that although Brazilian public mostly oppose the privatization of Petrobras since they see Petrobras as a symbol of economic nationalism, Brazilians could economically gain much from the deregulation and privatization of Petrobras. Moreover, Lewis (2004) asserts that Petrobras is already competitive with multi-national oil companies and further privatization will increase the competitiveness of Petrobras.

Finally, Lewis (2004) implies that there are some obstacles in energy markets which discourage domestic and foreign investments. Government still intervenes fuel prices

for the success of macroeconomic policy and there is a lack of credible source of data and analysis due to the monopolistic position of Petrobras. Also, Petrobras ignores the regulations about the third-party access to pipelines. Besides, there is a lack of international cooperation in gas market among Latin American countries. Lewis (2004) maintains that in order to succeed deregulation of energy sector, a fiscal system which does not depend on state-owned oil and gas companies should be established. Moreover, the authority of independent regulatory agency should be strengthened in order to protect the interests of Brazilians.

Kayıkçı (2005) discusses the privatization process of TÜPRAŞ, Turkish refining company. Initially, Kayıkçı (2005) analyzes the structure of petroleum industry in Turkey which will be scrutinized in detail in Chapter 3. Before 1990, public oil companies were vertically integrated. TPAO (Turkish Petroleum Corporation) was the public company dealing with exploration and production of crude oil. BOTAŞ (Petroleum Pipeline Corporation) and DİTAŞ were the public transportation companies which were affiliates of the TPAO. TÜPRAŞ, public refining company, and Petrol Ofisi, public distribution company, both were affiliates of the TPAO. In 1990, Petrol Ofisi and TÜPRAŞ were decided to be privatized and DİTAŞ was also decided to be privatized in 1993. Kayıkçı (2005) argues that privatization process of public oil companies removed the vertically integrated structure of public oil companies in Turkey.

Kayıkçı (2005) explores the privatization process of TÜPRAŞ in detail. In 1991, initial public offering of 3% of TÜPRAŞ's capital was realized. Following the further public offerings, 34% of TÜPRAŞ's capital was floated in Istanbul Stock Exchange in 2000. Kayıkçı (2005) argues that public offering methodology in TÜPRAŞ's privatization aimed to prevent the negative public response against privatization process. Moreover, special incentives were ensured to TÜPRAŞ's employees in the public offerings in order to reduce their struggle against privatization. In 2003, remaining public shares were sold to Efromov Kautschuk Gmbh. However, this sale was cancelled by Turkish Court. In 2005, 15% of TÜPRAŞ was sold to foreign investors in Istanbul Stock Exchange.

Kayıkçı (2005) concludes that privatization of TÜPRAŞ did not occur as a result of public demand. Kayıkçı (2005) also argues that complete privatization of TÜPRAŞ would result in unemployment. Kayıkçı (2005) proposes that public oil companies should be vertically integrated rather than privatizing individually. Finally, Kayıkçı (2005) asserts that social and economic cost of privatization of TÜPRAŞ should be re-evaluated before complete privatization.

2.2. Deregulation of Energy Sector

Because of the fact that the literature about deregulation of oil industry is not so rich, studies discussing deregulation of gas sector, power sector and oil sector together, and articles discussing overall energy deregulation will be studied in this part.

2.2.1 Critization of Energy Deregulation

Having investigated the effects of energy deregulation on Research and Development (R&D) activities in energy sector Dooley (1998) evaluates the trends in energy R&D programs of nine industrialized countries such as the USA, the UK, Germany, France, Canada, Italy, Japan, Netherlands and Switzerland which account for 96% of industrialized world's public sector energy R&D between 1985 and 1995. There was a 23% decline in energy R&D of nine countries between 1985 and 1995. Indeed, combined energy R&D funding of nine countries in 1995 was $ 3 billion lower than combined funding in 1985 (Dooley, 1998).

Considering these facts, Dooley (1998) analyzes the benefits of deregulation and impact of deregulation on energy R&D. The primary benefit of deregulation is the emergence of more custom-oriented, more efficient utilities. Secondly, "super utilities", which means utilities that deliver any combination of natural gas, electricity, water, sewage and phone services to their customers, have emerged as a result of deregulation. Super utilities have increased customer satisfaction by giving several different services to customers and by replacing many different utility bills with one consolidated bill. Thirdly, energy R&D is based on business needs rather

than political consideration which are more beneficial for sponsoring utilities. Finally, restructuring of utilities allows consumer to choose to pay a premium for environmental friendly energy supplies. For instance, this kind of program has received great public support in Sweden.

However, Dooley (1998) maintains that deregulation has some adverse effects on energy R&D. Firstly, following deregulation, utilities have decreased their investment on energy R&D. Secondly, energy R&D activities have focused on short-term less risk projects rather than long-term, high-risk projects. Indeed, utilities are reducing their participation on collaborative energy R&D projects. Moreover, mergers in energy sector have also reduced energy R&D. Following mergers, new companies have reduced their R&D activities in order to rationalize their activities. Finally, an interesting feature of deregulated market is that utilities use most of their R&D funds to improve load estimation, energy balance and metering technologies. In addition, utilities also focus on development of new "energy products and services" such as home monitoring systems that allows consumers to monitor the physical security of their homes in order to develop their market positions. Dooley (1998) asserts that investment on new "energy products and services" aggravates the trends towards short-term research and reduces investment in energy R&D.

Finally, Dooley (1998) observes the effects of deregulation on energy R&D in the United States. Dooley's (1998) analysis shows that between 1991 and 1994, private sectors' support on energy R&D had decreased by 34%. Since both federal government and utilities reduced funding collaborative energy R&D projects, equipment manufacturers can not realize long-term energy R&D. Dooley (1998) concludes that long-term energy R&D programs are unlikely sponsored by private utilities in a deregulated market. Dooley (1998) warns unless governments support energy R&D, declining trends in energy R&D will continue.

Buchan (2002) examines the energy security problems arising as a result of deregulation of energy markets. Buchan (2002) states that deregulation would worsen the prospects for importing gas via long-distance pipelines. Unlike oil, gas

has to be transported along pipelines or in compressed form in special LNG ships. Construction of long distance pipelines are very expensive investments. Therefore, mostly long-term 'take or pay" contracts are established in order to cover construction costs. However, deregulation threatens these contracts since operators do not want to commit themselves with long contracts. As a result, duration of contracts is becoming shorter. Shorter contracts make it difficult to finance long distance pipelines which threats prospect of natural gas supply. In addition, gas companies are reluctant to maintain stocks in a deregulated market since stocks mean extra costs. Moreover, there does not exist of emergency stock system in natural gas like oil. Furthermore, deregulation could lead to collaboration between producers against consumers' interests. Natural gas exporting countries established Gas Exporting Countries Forum in 1998, which could be a threat of gas producers' cartel in the future.

Buchan (2002) claims that deregulation in energy sector could damage development of nuclear energy and renewable energy. Both nuclear energy and renewable energy help energy security since they are domestic energy sources. In addition, both energy sources are carbon-free energy. Only a few new nuclear plants are being built worldwide and most of the existing plants are not replaced with new ones mostly due to the past nuclear accidents. Indeed, deregulation also worsens the current situation of nuclear energy. The establishment of a typical nuclear plant takes approximately ten years and costs around $2 billion. Financing an at least ten years project is difficult in a deregulated market due to rise of uncertainty which damages investments. According to Buchan (2002), deregulation also adversely affects renewable energy. Most of the renewable energy is still uncompetitive compared to fossil fuels due to cost problems. Thus, investment in renewable energy is still not attractive for private companies. However, governments develop policies in order to increase the share of renewable energy.

Buchan (2002) asserts that problems related to constructing long distance pipelines, building nuclear plants and generating renewable energy can be considered as market failure. Therefore, government should intervene in the market in order to prevent

market failures. Buchan (2002) states that "people may look to private companies to supply them energy, but they will blame governments for any black-outs". Indeed, Buchan (2002) discusses that the fuel mix can not be left entirely to the market. Moreover, deregulation reduces energy diversity which increases security risks. Governments should also develop policies to increase energy diversity. Buchan (2002) claims governments need to ensure the maintenance and extension of existing electricity grids and gas pipelines. Finally, in a competitive energy market idle capacity is viewed as worse for company performance which also threatens supply security. Finally, Buchan (2002) concludes that there is still a role for government in the energy sector. Indeed, industrialized countries should not endanger their energy supply security by rapid deregulation in order to achieve low prices.

Criticizing the deregulation of energy market in EU, Meyer (2003) says that the political aim of deregulation of energy has been considered in a narrow perspective as only reducing consumer prices. Deregulation of energy ignores the protection of environment and security of supply which are crucial tasks in energy policy. Meyer (2003) discusses mainly the deregulation of electricity sector. Meyer (2003) asserts that deregulation of energy based mainly on ideological reasons. Meyer (2003) opposes the liberal idea which treats energy as any other commercial goods. Meyer (2003) states that energy is different than other commercial goods, since energy is crucial for the good functioning of society. In addition to low consumer prices, energy policies should consider environmental protection, rational usage of energy resources and supply security.

Meyer (2003) takes attention to role of renewables on global warming. Energy conservation is also vital for global warming. Indeed, oil demand is expected to rise in the future and oil production is expected to reach its peak in the near future. Development of renewables and energy conservation are the only long term solution to resource exhaustion. Meyer (2003) asserts that energy deregulation both neglects development of renewables and energy conservation. Both development of renewables and energy conservation require long-term investment supported by state, but in a deregulated energy market realization of these long-term investments are

very difficult, since market forces only focus on short-term profits. Later, Meyer (2003) claims that deregulation of energy market threats supply security by giving example from Nordic electricity markets. After the liberalization of electricity market in Nordic countries, it is impossible to realize coordinated long-term investments between Nordic countries which realized coordinated investments in the past.

Meyer (2003) also indicates that liberalization has resulted in a high concentration in electricity markets which may lead to uncompetitive markets in the long-term. Although liberalization of electricity market reduced prices in the UK and Germany, in Nordic countries electricity liberalization did not lead to significant decline in prices. Meyer (2003) also claims dominance of foreign companies in electricity sector in Denmark, could prevent Danish government to implement independent energy policies. Moreover, in a liberalized energy market new transaction costs such as new large database establishment cost and advertisement costs will emerge which could increase energy prices. Meyer (2003) concludes that European energy policies are to be revised to promote energy sustainability and supply security. For this purpose, a new EU directive is needed in which energy investments are regulated by national energy authorities. Such a directive should encourage co-operation between neighboring countries.

Arocena et al. (2002) investigate the distribution of benefits of the price regulation between firms and consumers in the Spanish energy sector (electricity, oil, gas) between 1987 and 1997 by using an econometric model. Arocena et al. (2002) compare the growth of energy prices with CPI. They conclude that between 1987 and 1997 the growth of energy prices was less than CPI. However, this analysis is not sufficient, since it does not provide any information on costs. Later, they investigate the electricity, gas and oil market structures. There were four firms operating in the electricity industry in 2000. Endesa, privatized by the end 1997, and Ibera together had a share of 80% both in generation and distribution. The price mechanism in electricity market gave strong incentives to firms in order to reduce costs. In gas market, Gas Natural Group was the leading firm, following merger and acquisition of ENASA (state-owned company), covered 86% of the residential and commercial

market and 98% of the industrial market in 1998. The Spanish government realized reforms which liberalize the gas market. In gas market there were two different systems for industrial prices and residential/commercial prices. Government sets the maximum industrial gas prices considering heavy fuel oil, diesel and propane prices. Residential/commercial prices were set according to a cost-plus system. In oil market, Repsol, Cepsa/Elf and BP have a total market share of 86% in 1997. Until 1997, oil prices were administratively established. In 1990, ceiling price regulation came into force. According to ceiling price regulation, ceiling price was determined considering the average pre-tax prices in six European countries. Ceiling price regulation for fuel oil, gas oil and gasoline was in force until 1992, 1996 and 1998, successively.

The estimation results show that in electricity market, pricing policy was quite favorable to firms. Moreover, in gas market, in the early years the evolution of prices reflects a pro-consumer bias; however from 1993 there existed a pro-industry bias. Finally, in oil market oil price adjustments allowed companies to transfer input price changes to consumer. Moreover, the profitability in all three sectors had risen between 1987 and 1997. Thus, Arocena et al. (2002) conclude price regulation in energy sector demonstrated a pro-industry bias rather than a pro-consumer bias.

2.2.2 Deregulation in Different Energy Markets

Aldaba (2003) investigates the deregulation process of electricity industry and downstream oil industry in Philippines. Firstly, Aldaba (2003) discusses the theory of deregulation. Later, Aldaba (2003) discusses the history of electricity sector and deregulation process of electricity sector. Philippines experienced a serious power outage problem in late 1980s and early 1990s. Philippine government responded power outage problem by deregulating electricity industry. For this purpose, monopoly position of National Power Corporation (NPC) was removed in 1987. In addition, built-operate-transfer (BOT) model was adopted in electricity market. Independent power producers (IPPs) became important players in electricity sector. However, contracts with IPPs worsened the financial position of NPC, since NPC

assumed large financial commitments with the supply contracts. In 2001, the Electric Power Industry Reforms Act was enacted to rehabilitate power sector. The Law separated the power sector into four groups; generation, transmission, distribution and supply. The Law aimed to create competitive markets in generation and supply. Moreover, transmission and distribution continued to be regulated by government. The Power Sector Assets and Liabilities Management Corporation was established to manage the sale and privatization of NPC generation assets and IPP contracts. The Law allowed generation companies to set their prices freely. However, distribution and transmission prices remained to be regulated (Aldaba, 2003).

Later, Aldaba (2003) analyzes the deregulation process of oil industry. Since Philippines' domestic oil production only meets two percent of consumption, the downstream oil industry is more important than upstream oil industry. Before the deregulation, an Oil Price Stabilization Fund (OPSF) was in force. In OPSF, industry contributed to fund when crude oil prices were low and draw from fund when crude oil prices increase. The OPSF mechanism created large government deficit in early 1990s. In 1998 with the Downstream Oil Industry Deregulation Act, OPSF and price controls were removed. An Automatic Pricing Mechanism was constituted to enable domestic prices reflect quickly to international prices. Following the deregulation, with the entrance of new firms to petroleum industry, market share of Big Three (Petron, Shell and Caltex) declined from 95.6% in 1998 to 90.1% in 2000 (Aldaba, 2003). Aldaba (2003) argues that although market share of Big Three declined with the deregulation, competition in oil industry was still insufficient to decrease petroleum product prices.

Aldaba (2003) concludes that the absence of appropriate regulatory framework in the beginning of deregulation process of power industry resulted in long-term costs for Philippines. Although contracts with IPPs solved the power crisis in early 1990s, these contracts created large debt on government budget. In downstream oil industry, deregulation resulted in a limited competition, but price competition in the oil industry could not be achieved. Aldaba (2003) asserts that both electricity market and oil market were still far away from competition.

Erdogdu (2006) analyzes the deregulation process of Turkish energy market, mainly concentrating on electricity market. Erdogdu (2006) briefly discusses the history of electricity market in Turkey. Turkish Electricity Administration (TEK) was established in 1970s which was a monopoly in electricity sector except distribution, which was left to local administrations. In 1982, state monopoly on electricity generation in electricity market was removed and private companies started to operate in electricity market. In 1984, TEK was restructured as a public enterprise. In 1993, TEK was included to privatization plans. For this purpose, TEK was restructured and two new companies were established, Turkish Electricity Generation Transmission Company (TEAS) and Turkish Electricity Distribution Company (TEDAS). In 2001, Electricity Market Law came into force aiming the deregulation of electricity market. With the new Law, TEAS was divided into three public companies such as, Turkish Electricity Transmission Company (TEIAS), Electricity Generation Company (EUAS), and Turkish Electricity Trading and Contracting Company (TETAS). In addition, Electricity Market Regulation Authority was created to regulate electricity market. Following Natural Gas Market Law in 2001, Electricity Market Regulation Authority was renamed as EMRA. Later, downstream petroleum market and LPG market were also started to be regulated by EMRA (Erdogdu, 2006).

Erdogdu (2006) also investigates market reforms on electricity, gas and petroleum and LPG market, but mainly reforms on electricity markets. With the new Electricity Market Law, eligible consumers are free to choose their suppliers. Electricity generation, wholesale supply, distribution, retail supply, import and export of electricity activities requires license granted by EMRA. The Electricity Market Law adopts third party access regime for accession to transmission and distribution system. The existing power plants were transferred to EUAS. TETAS is responsible for the wholesale activities and holder of all previous Built Operate and Transfer (BOT) contracts, Built Operate and Own (BOO) contracts and Transfer of Operating Rights (TOOR) contracts. Turkish government plans to privatize TETAS and EUAS in the future, and TEIAS is planned to remain as public company in the future. In addition, Erdogdu (2006) examines functions of EMRA in electricity market. The

main functions of EMRA are granting licenses, regulating tariffs. Then, Erdogdu (2006) tries to figure out reforms in natural gas market, downstream petroleum market and LPG market. By means of Natural Gas Market Law, eligible consumers have the right to choose their gas suppliers. However, since BOTAS is still a monopoly in natural gas supply, this regulation has no meaning in practice. An important reform in natural gas market is transfer of import contracts of BOTAS to private companies. However, transfer of import contracts has not realized yet. In downstream petroleum market and LPG market, both the Petroleum Market Law and the LPG Law aimed the deregulation of both markets. Through the Petroleum Market Law prices were started to be set freely by companies and restrictions on petroleum product imports were lifted.

Erdogdu (2006) claims that there is no need for restructuring in petroleum and LPG markets. In addition, Erdogdu (2006) asserts that electricity market and natural gas market are far away from competition in spite of the realized reforms. Privatization in electricity market and natural gas market have not been achieved yet. Erdogdu (2006) describes reforms in energy market as "textbook reforms" which means that these reforms were copied from regulation literature and the economic logic of reforms are not adopted by Turkish government and EMRA. Erdogdu (2006) develops some suggestions for Turkish energy market. Firstly, public companies in electricity and natural gas market should be privatized as soon as possible despite the existence of bureaucratic opposition against privatization. Secondly, EMRA should develop a platform in energy market in which related parties in energy sector debates their ideas. In addition, EMRA should specify its short, medium and long-term objectives. An important proposal of Erdogdu (2006) is that the responsibilities of EMRA in petroleum and LPG markets should be eliminated. Moreover, Erdogdu (2006) suggests that EMRA should only regulate transmission and distribution activities in natural gas and electricity markets. There is no need for regulation in generation and retail supply sectors. Finally, Erdogdu (2006) argues that if reforms are practiced, the reforms may transform Turkey from a "Euroasia energy corridor" into an "energy base" country in which electricity is produced ad exported to other countries.

2.3 Conclusion

Deregulation of oil industry has been on the agenda in either developed countries or developing countries in the world during the last two decades. However, the degree of deregulation and methods used in deregulation differ between countries. Deregulation of oil industries is not an easy task as analyzed by studies above. Although the main objective of deregulation is to create competitive markets, in most countries this objective has not been accomplished at desired levels. For instance, as Okech and Nyoike (1999) state high profit margins of the oil companies was a proof of high-cartel pricing policy in the sector in Kenya. Existing legislations were insufficient to correct this market failure. On the other hand, considering Salas's (2002) statements, the asymmetric pricing was a characteristic of the retail gasoline sector in Philippines which was a proof of insufficient competition in the oil industry. Asymmetric pricing was also observed in Spanish oil industry as discussed in Contin et al. (2004). Contin et al. (2004) say that asymmetric pricing was resulted due to the lack of competition.

On the other hand, deregulation of oil industry in Latin America has important features. Mentioned by Palacios (2002), the level of openness of oil industry in Latin American countries depends on the countries' position in oil, whether they are net oil exporter or net oil exporter. Net oil exporter countries in Latin America, such as Venezuela and Mexico are reluctant to open their oil industry, on grounds that governments in both countries are heavily depend on revenues gained from oil industry. Also, financial situations of the state-owned oil companies affected the privatization process of these companies. In Argentina, high deficit of YPF accelerated the privatization process. However, in Brazil, successful management of Petrobras makes it difficult the privatization process of the company. In addition, state-owned oil companies can borrow from international markets easier than their governments. Therefore, state-owned companies are important tools for governments in external borrowing, which impedes the privatization of these companies.

Deregulation of overall energy industry also has important consequences around globe. There is a general consensus that energy deregulation decreases consumer prices. Nevertheless, energy deregulation has negative effects on energy R&D activities. As Dooley (1998) states following the energy deregulation, energy R&D diminished considerably in the industrialized countries. Private companies prefer short-term, less-risk investments rather than long-term, high-risk projects which threatens the prospect of energy security. Pointed by Buchan (2002), deregulation has negative effects on nuclear energy and renewable energy. As investments on nuclear energy and renewable energy are not sufficiently competitive compared to investments on hydrocarbons, private firms do not prefer to invest on renewables and nuclear energy. Since both nuclear energy and renewable energy are vital for energy security and environmental protection, decline in nuclear energy and renewable energy investments could create important problems in the future. As Meyer (2003) stated, energy policies should consider environmental protection, rational usage of energy resources and supply security as well as low consumer prices.

Examined by Aldaba (2003) and Erdogdu (2006), deregulation of power sector is a problematic process due to the monopolistic structures of power sector. Although BOT, BOO, TOOR contracts help to increase production, public companies assumed large financial commitments with these contracts which deteriorated public companies' financial position. Further, implementation of reforms aiming deregulation is not so easy in power sector with regard to the monopolistic positions of the public companies.

Finally, the deregulation of oil industry and overall energy industry are complex processes. The main findings of the studies discussed in this chapter are summarized in Table 2.1. Deregulation of oil industry and overall energy industry could create security of supply problems and establishment of competitive energy markets are very difficult in practice. Therefore, while discussing the deregulation of downstream oil industry in Turkey, these facts should be considered in a broad perspective.

Table 2.1: Deregulation in Theory and Action

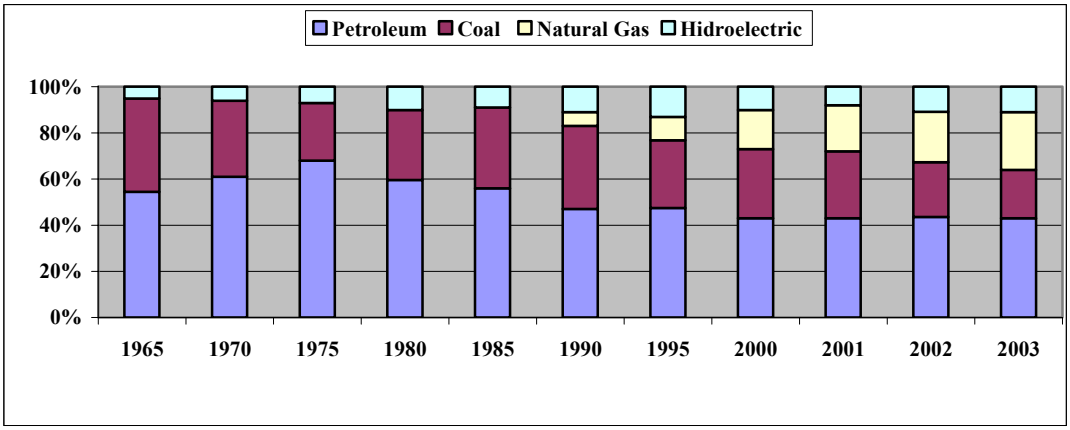
Author	Country	Method	Main Findings
Clark and Edwards (2003)	Japan	Simulation	Deregulation is likely to result net welfare gain despite the increase in pollution.
Okech and Nyoike (1999)	Kenya	Descriptive Analysis	Liberalization of oil sector should be continued and a legal framework must be established in order to prevent market distortions.
Salas (2003)	Philippines	Ordered probit model, partial adjustment model and vector error correction model	Deregulation of the downstream sector has led to faster adjustment rates through time and asymmetric pricing is a characteristic of the retail gasoline sector.
Palacios (2002)	Argentina, Brazil, Venezuela and Mexico	Descriptive Analysis	Countries which are net oil exporter, reluctant to open their oil industry and Countries which are not net oil exporter are willing to liberalize their oil industries.
Lewis (2004)	Brazil	Descriptive Analysis	Successful privatization and deregulation of Petrobras could contribute to overall reform process in Brazil and reforms about deregulation of oil industry should continue.
Contin et al. (2004)	Spain	Multivariate error correction model	After the abolishment of ceiling price regime in October 1998, there existed short-run price asymmetry in retail gasoline market due to lack of competition
Kayıkçı (2005)	Turkey	Descriptive Analysis	Social and economic cost of privatization of TÜPRAŞ should be re-evaluated before complete privatization.
Dooley (1998)	Nine industrialized countries	Descriptive Analysis	Deregulation of energy sector reduced Research and Development activities.
Arocena et al. (2002)	Spain	Econometric model	Price regulation in energy sector demonstrated a pro-industry bias rather than a pro-consumer bias
Buchan (2002)	-	Descriptive Analysis	Deregulation of energy sector threats the security of energy supply and there is still a role for government in energy sector.
Meyer (2003)	European Countries	Descriptive Analysis	European energy policies are needed to be revised to promote energy sustainability and supply security.
Aldaba (2003)	Philippines	Descriptive Analysis	Both electricity market and oil market were far away from competition.
Erdogdu (2006)	Turkey	Descriptive Analysis	The responsibilities of EMRA in petroleum and LPG market should be eliminated and reforms about deregulation of natural gas and electricity should be continued.

CHAPTER 3

SOME STYLIZED FACTS ON TURKISH PETROLEUM MARKET

3.1. Production and Consumption Trends

Petroleum products still have a share of more than 40% in Turkey's energy consumption, despite the rise in natural gas consumption during the last decade. In 1965, the share of petroleum in Turkey's energy consumption was 54%, while the share of coal was 40% and the share of hydroelectric was 5%. In 2003, the share of petroleum declined to % 43, whereas the share of natural gas raised to 25%, which was only 6% in 1990. In short, despite increase in natural gas consumption, petroleum is still the dominant energy source in Turkey (Figure 3.1).

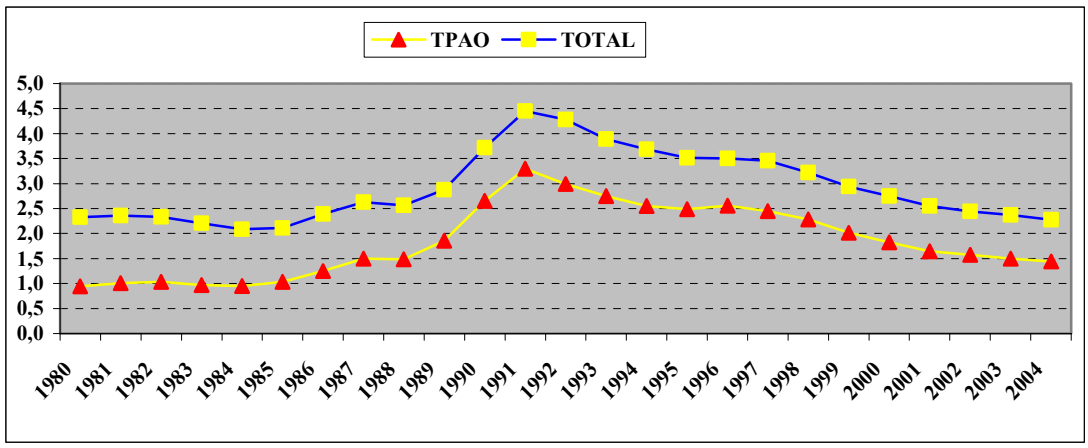


Source: Association of Petroleum Industry (PETDER)

Figure 3.1: The Distribution of Turkey's Energy Consumption

Due to the scarce oil reserves, Turkey is not an attractive country for the petroleum companies dealing with exploration and production. Moreover in 2003, only 9 new

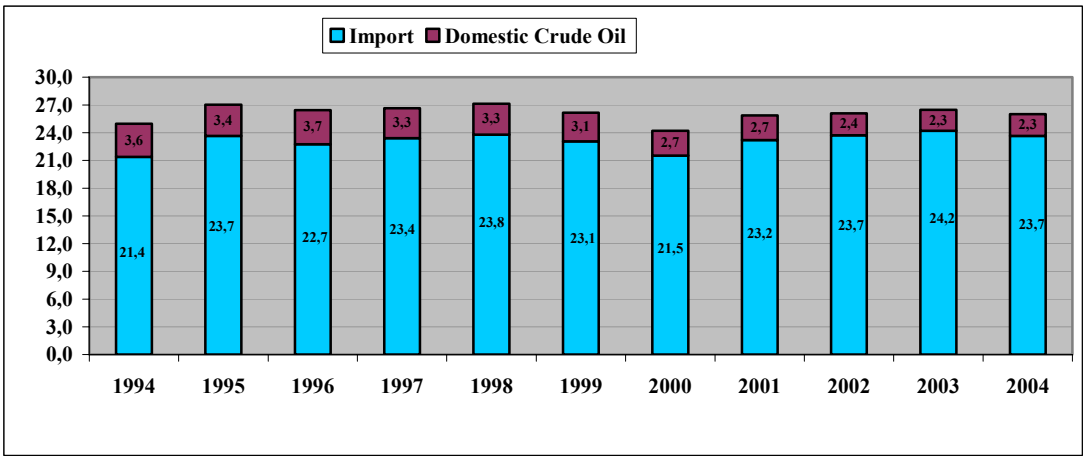
companies (4 of them were foreign) took out license for oil exploration (GDPA (General Directorate of Petroleum Affairs), 2003). Figure 3.2 demonstrates the evolution of domestic crude oil production in Turkey and the production realized by TPAO, the public company dealing with oil exploration and production, between 1980-2004. As seen in the Figure 3.2, crude oil production reached to the maximum value of 4,5 million tons in 1991, and then crude oil production decreased up to 2,3 million tons in 2004. The share of TPAO's production has floated between 60-75 % during the last 15 years.



Source: GDPA (2004)

Figure 3.2: Crude Oil Production of Turkey (Million Metric Tons)

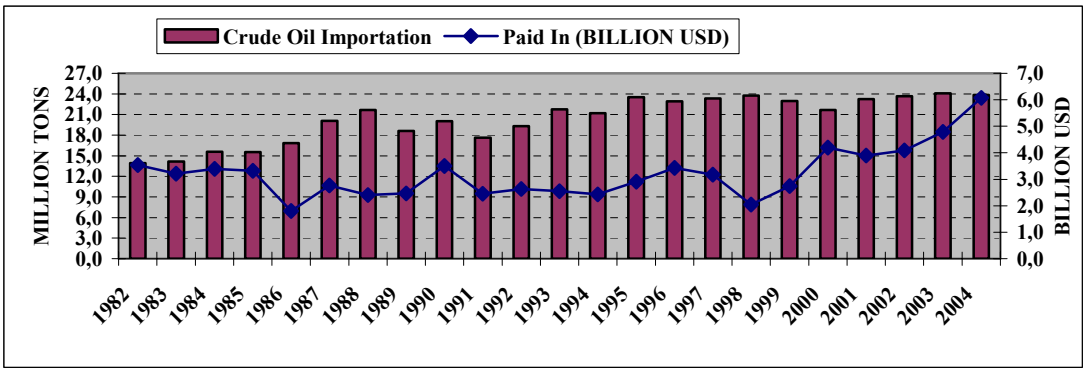
As a result of poor crude oil production performance, crude oil production in Turkey can only meet less than 10% of the total consumption. Indeed, the share of domestic crude oil in total crude oil refined in Turkey was 9% in 2004. Figure 3.3 reveals that the share of domestic crude oil in total crude oil refined in Turkey has declined gradually during 1994-2004. As a result of this fact, the share of imports in total refined crude oil increased from 86% in 1994 to 91% in 2004.



Source: GDPA (2004)

Figure 3.3: Crude Oil Refined in Turkey (Million Metric Tons)

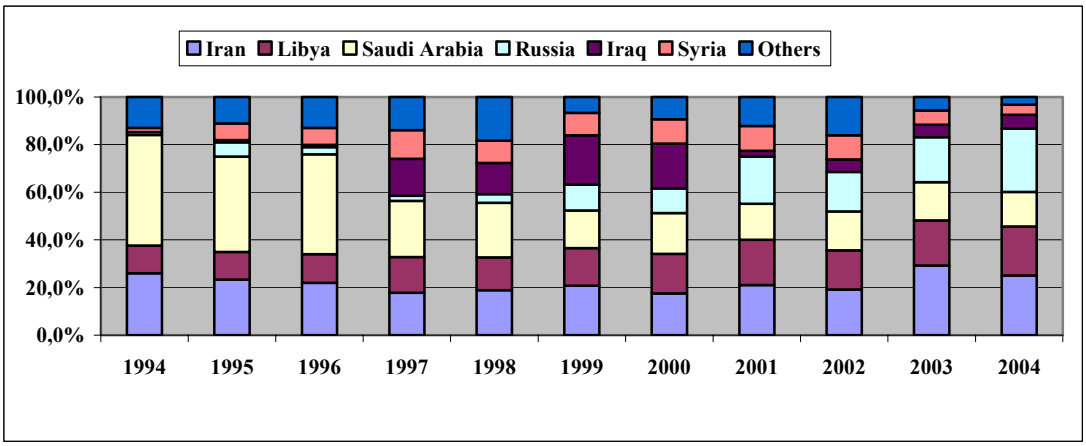
The analysis of the crude oil imports shows that, the crude oil imports have steeply increased in 1980s, and in 1990s crude oil imports have lost its acceleration. As a matter of fact, between 1982 and 1990 crude oil imports increased by 44%, however between 1990 and 2004 crude oil imports raised by 19% (Figure 3.4). Further, despite the low growth rate of the crude oil import between 1990 and 2004 cost of imported crude oils increased by 73% from $ 3,5 billion to $ 6,1 due to the rise in crude oil prices.



Source: GDPA (2004)

Figure 3.4: Crude Oil Importation and the Money Paid for in Turkey

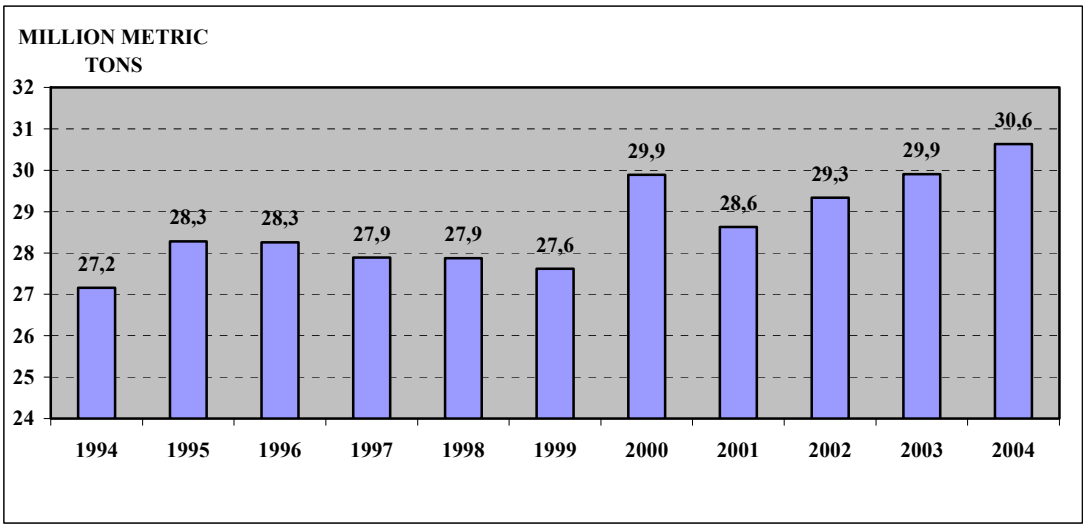
As inferred in Figure 3.5, the composition of Turkey's crude oil import according to countries has changed drastically between 1994-2004. In 1994, the total share of Saudi Arabia, Iran, Libya, and Russia was 85% whereas in 2004 was 87%. During the last 7 years the share of Russia increased dramatically and the share of Saudi Arabia declined rapidly after 1996. On the other hand, the share of Iraq increased substantially between 1997-2000, but later declined sharply due to the political situation of Iraq.



Source: GDPA (2004)

Figure 3.5: The Composition of Crude Oil Import of Turkey According to Countries

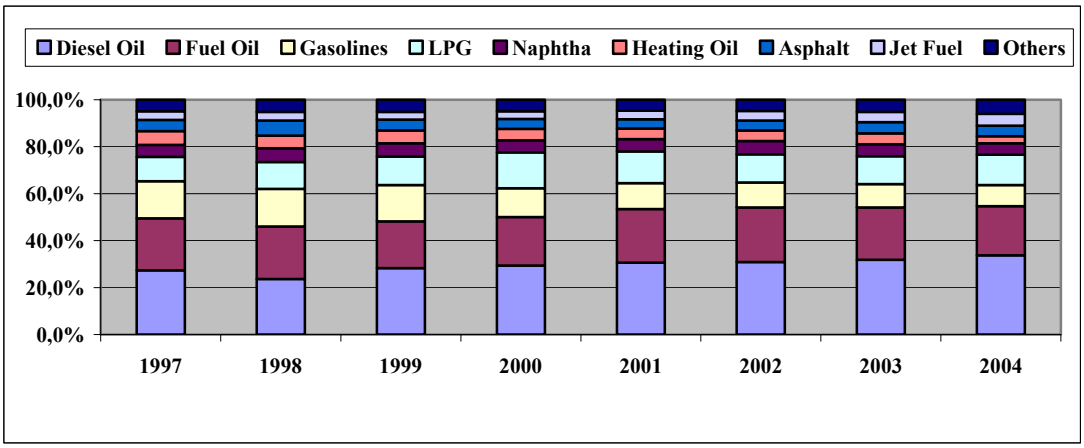
Turkey's petroleum product consumption exceeded 30 million tons in 2004, which was only a 13% increase compared to 1994 (Figure 3.6). The main reasons for this poor performance are the poor economic growth, increase in the consumption of natural gas, which is a substitute product for petroleum products, and smuggled oil. The average GNP growth between 1994-2004 was 3,2%. Turkey has experienced three economic crises during this period. Turkish economy shrank by 6,1%, 6,1% and 9,5% in 1994, 1999 and 2001 respectively. The natural gas consumption of Turkey reached to 22,1 billion cubic meters in 2004, which indicates a-240%-increase compared to 1994 (BP, 2005). According to the estimation of Association of Petroleum Industry (PETDER, 2004) total amount of annual smuggled oil is 2,5 million tons (1,5 million tons diesel oil and 1 million tons gasoline) having posted $ 2 billion tax loss for the government.



Source: GDPA (2004)

Figure 3.6: Civilian Consumption of the Petroleum Products in Turkey

Analyzing the composition of Turkey's petroleum product consumption between 1997-2004, it is clear that diesel oil consumption exceeded 10 million tons which was 7,6 million tons in 1997. During the same period, LPG consumption increased by 1 million tons to 4 million tons in 2004. On the other hand, gasoline consumption diminished from 4,4 million tons in 1997 to 2,8 million tons in 2004. The share of diesel oil, fuel oil, LPG and gasoline in 2004 was 34%, 21%, 13% and 9% in 2004 respectively.

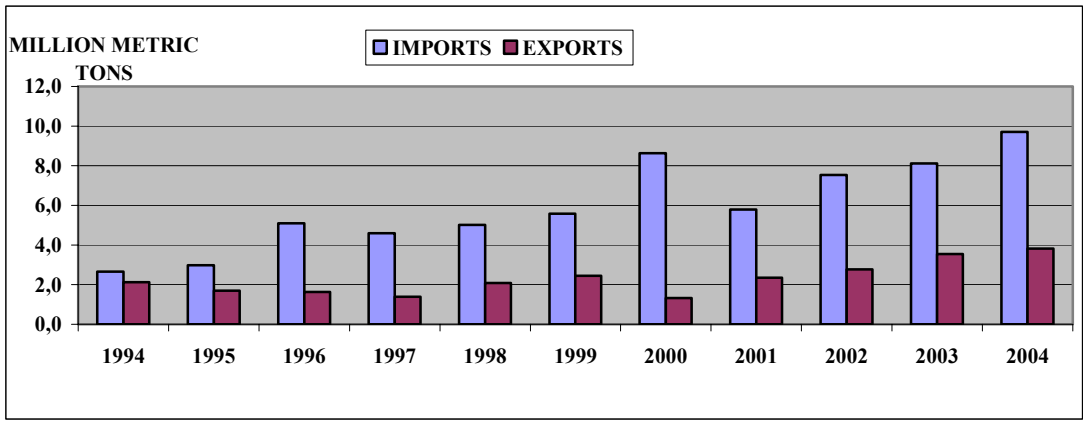


Source: GDPA (2004)

Figure 3.7: Market Shares of Petroleum Products in Turkey

While crude oil imports have been rising slowly, petroleum product imports have experienced a sharp rise during the last 10 years. Between 1994 and 2004 petroleum product imports have raised from 2,7 million tons to 9,7 million tons (Figure 3.8). Considering the composition of the petroleum product imports in 2004, LPG imports had a share of 35% and diesel oil had a share of 39%. In 2004, 50% of diesel oil imports realized by Petrol Ofisi (the leading distribution company). On the other hand, since importing LPG is cheaper than purchasing from TÜPRAŞ, the LPG distribution companies which have enough storage capacity prefer importing LPG instead of purchasing from TÜPRAŞ. In 2004, major four LPG distribution companies (Aygaz, İpragaz, BPgaz and Milangaz) imported more than 2 million tons LPG (GDPA 2004).

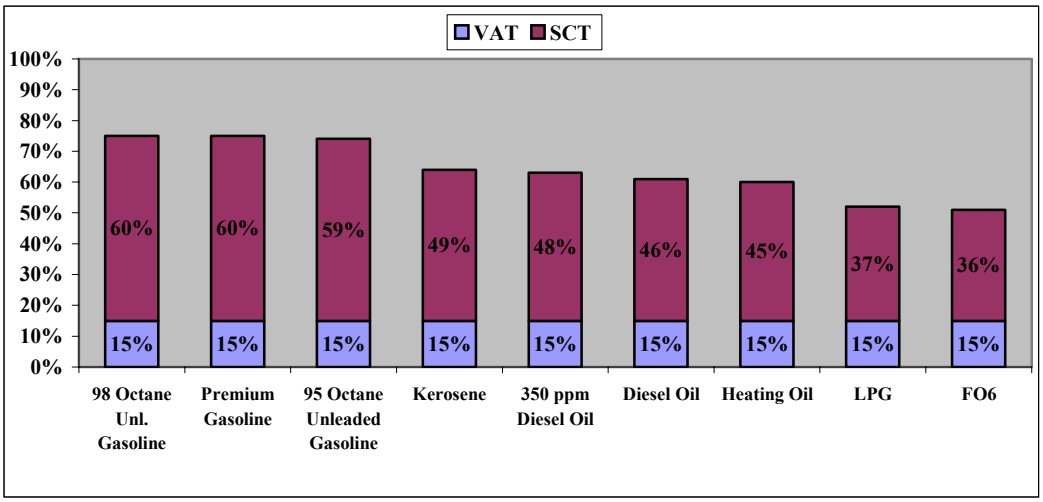
During the same period, petroleum product exports rose by 80% from 2,1 million tons to 3,8 million tons (Figure 3.8). In 2004, 29% of the petroleum product export was fuel oil and 28% was gasoline and 15% was diesel oil. Moreover, in 2004 TÜPRAŞ's share in petroleum product exports was 88% (GDPA 2004).



Source: GDPA (2004)

Figure 3.8: Petroleum Product Exports and Imports of Turkey

Despite the existence of smuggled oil problem, Turkish petroleum industry ensured YTL 20,5 billion direct tax income in 2004. YTL 16 billion of tax income was from Special Consumption Tax (SCT) and YTL 4,5 billion from Value Added Tax (VAT) (PETDER, 2004). High tax burden on petroleum products are the main characteristics of the Turkish oil industry. As seen in Figure 3.9, the share of the taxes in final prices in petroleum products range between 50-70%.



Source: PETDER

Figure 3.9: Tax Burden on Petroleum Products at the End of 2004 in Turkey

3.2. Turkish Refining Sector

3.2.1 History of the Turkish Refining Sector[3]

So far 8 refineries have been established in Turkey, four of which are still in operation. Established in Beykoz in 1930, Boğaziçi Refinery can be considered as the first and private refinery. Processing the crude oil imported from Romania, the oil refining capacity of this refinery was 13.200 tons/year. It was shut down in 1934 due to tax problems. The second refinery established in Turkey was the Raman Testing Refinery. Raman Testing Refinery, founded in 1942, was set up after the exploration of oil in Raman Mountain in 1940. The oil refining capacity of the refinery was 3.300 tons/year and it was closed in 1945 through the installment of the Batman Testing Refinery. Another pilot refinery Batman Testing Refinery was founded in 1945 with an oil refining capacity of 66.000 tons/year. Later, this refinery was taken over by TPAO.

[3] This part is summarized from TÜPRAŞ's website and ATAŞ's website.

Installed in 1955 after the foundation of new oil springs in Raman and Garzan, Batman Refinery was the first modern refinery in Turkey. The initial refining capacity of 330.000 tons/year increased to 580.000 tons/year in 1960 after the discovery of new oil springs. In 1966, REFORMER and LPG units were added in order to produce high octane gasoline and LPG. Finally, Batman Refinery's capacity rose to 1,1 million tons/year in 1972 which is the same as today.

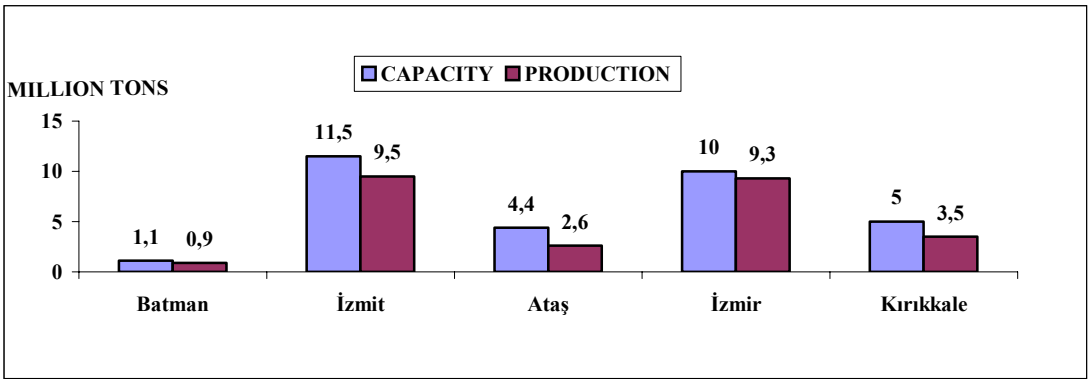
By means of a special treaty between Turkish government (first party) and Mobil Oil, Shell and Caltex (second party) ATAŞ was founded in 1957. ATAŞ started to process crude oil in 1962 with a capacity of 3,2 million tons/year. The refining capacity of ATAŞ refinery increased to 4,4 million tons/year in 1969. CALTEX later sold its share in ATAŞ. Current shareholding structure of the ATAŞ is BP 68%, Shell 27% and Marmara Petrol 5%. ATAŞ refinery was converted to a petroleum product terminal in 2005. In order to comply with EU norms, ATAŞ is to take new investments to its agenda. On the other hand, the new petroleum market law lifted restrictions on imports of petroleum products. Thus, ATAŞ owners decided to use ATAŞ as a petroleum product terminal.

In 1959 TPAO and CALTEX signed an agreement and Istanbul Petrol Rafinerisi A.Ş. (İPRAŞ) was founded in order to construct a refinery at İzmit Bay. TPAO held 51%, and CALTEX held 49% of the İPRAŞ. According to the agreement, CALTEX would sell its shares in İPRAŞ 10 years later. CALTEX sold its shares in 1972 and İPRAŞ became a wholly national company. İzmit Refinery was commissioned in 1961. İzmit Refinery's capacity raised to 2,2 million tons/year in 1967, to 5,5 million tons/year in 1972, to 7 million tons/year in 1977, to 7,8 million tons/year in 1980 and finally to 11,5 million tons/year in 1982.

İzmir refinery was established in 1967 in Aliağa and started to process crude oil in 1972 with an initial capacity of 3 million tons/year. The refining capacity of İzmir Refinery increased to 3,8 million tons/year in 1982, to 5 million tons/year in 1984 and to 10 million tons/year in 1987. In addition to these, İzmir Refinery has the only machine oil complex in Turkey with a capacity of 300.000 tons/year.

Through an agreement between TPAO and Romanian Industrial Export Import Company in order to meet the petroleum product needs of the Central Anatolian Region, Kırıkkale Refinery was established in 1977. It started to operate in 1986 with a capacity of 5 million tons/year. Crude oil is supplied to Kırıkkale Refinery from BOTAŞ Ceyhan Terminal through pipeline.

The total refining capacity of Turkey was 32 million tons and total production was 26 million tons in 2004 (Figure 3.10). After the closing down of ATAŞ, Turkey's refining capacity diminished to 27,6 million tons and TÜPRAŞ became the sole refining company in Turkey which means that the analysis of the refining sector will be an analysis of TÜPRAŞ at the same time.



Source: GDPA (2004)

Figure 3.10: Total Production and Refining Capacities of the Refineries in Turkey in 2004

3.2.2. TÜPRAŞ

TÜPRAŞ is the 7th biggest refining company in Europe and the biggest refining company among the emerging European countries, in terms of refining capacity. TÜPRAŞ owns 4 refineries in İzmir, İzmit, Kırıkkale and Batman.

TÜPRAŞ was established in 16 November 1983 as a subsidiary of PETKUR (Association of Turkish Petroleum), which was set up in order to combine public oil companies in a single roof, according to the Law of State Economic Enterprises dated October 19, 1983 and numbered 2929. For this purpose, İPRAŞ's articles of association were converted to TÜPRAŞ's articles of association. İzmit Refinery which was owned by İPRAŞ and İzmir Refinery, Batman Refinery and Kırıkkale Refinery which was owned by TPAO were transferred to the TÜPRAŞ. With this operation, public refineries were organized in a single company. In 1984 TÜPRAŞ became a subsidiary of TPAO (Kayıkçı 2005). Considered to be privatized in 1990, TÜPRAŞ was affiliated to Privatization Administration (Ö.İ.B). The privatization process of TÜPRAŞ, which will be discussed in Chapter 6 in detail, was completed in 2005.

TÜPRAŞ imported 23,5 million tons of crude oil in 2005 which indicates a 6% upsurge compared to 2002 (Table 3.1). Between 2002-2005 period, crude oil imports from Russia have increased substantially. In 2002, TÜPRAŞ imported only 84.000 tons of crude oil from Russia. However, TÜPRAŞ imported nearly 7 million tons of crude oil from Russia in 2005. The total share of Iran, Libya, Saudi Arabia and TPIC[4] in total TÜPRAŞ's crude oil imports was 72% in 2002 and the total share of Iran, Russia, Libya and Saudi Arabia in total TÜPRAŞ's crude oil imports was 93% in 2005. Thus, it can be concluded that TÜPRAŞ crude oil imports were more diversified in 2002 compared to 2005.

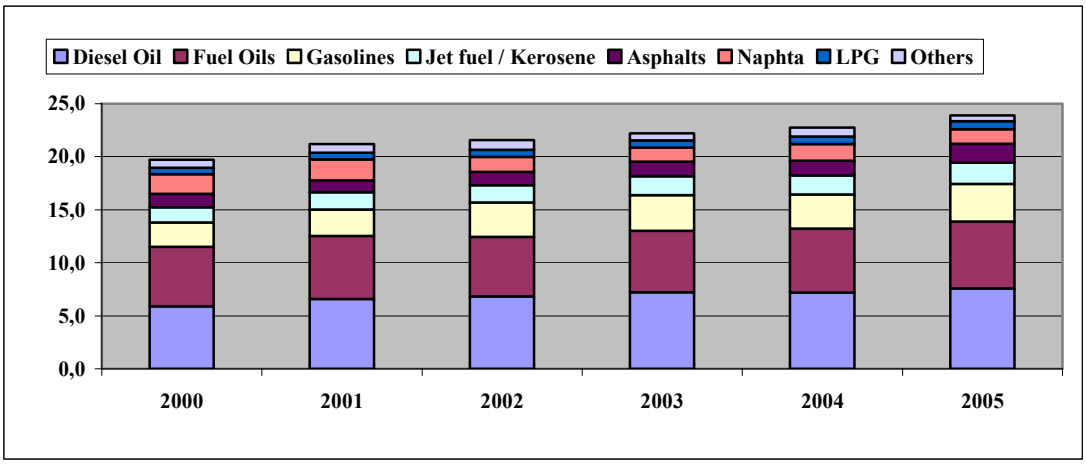
[4] TPIC is the subsidiary of TPAO which was established in 1988 to operate in all branches of oil industry including exploration, drilling, field development, production, transportation, refining, crude oil and oil products trading and marketing.

Table 3.1: Crude Oil Imports of TÜPRAŞ (million tons)

Country	**2002**	**2003**	**2004**	**2005**
Iraq	1,1	0,9	1,2	0,9
Libya	3,9	4,7	4,8	4,6
Iran	5,3	6,5	5,8	7,0
Saudi Arabia	3,9	3,9	3,5	3,5
Algeria	0,3	0,2	0,4	0,0
Syria	1,1	0,7	0,4	0,3
TPIC	2,9	0,6	0,0	0,0
Russia	0,1	2,8	4,7	6,8
Other	3,7	1,3	1,5	0,4
Total	**22,2**	**21,5**	**22,3**	**23,5**

Source: TÜPRAŞ

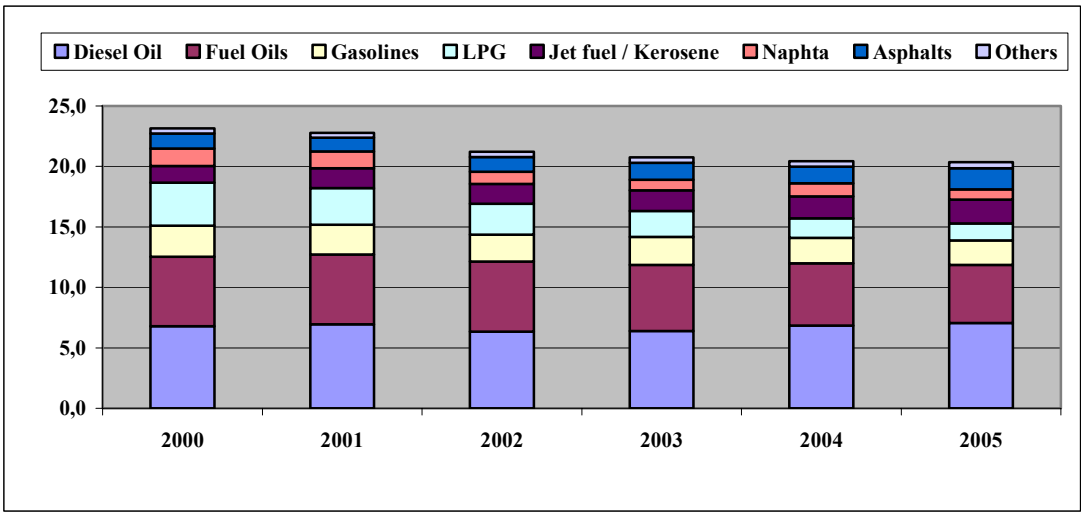
Taking a look at TÜPRAŞ's production between 2000-2005 period shows that, it reached to 24 million tons in 2005 which was 4 million tons more than 2000 (Figure 3.11). TÜPRAŞ's production has performed a steady increase since 2000. However, in 2000 TÜPRAŞ's production decreased compared to previous year due to the earthquake in 1999 which adversely affected production of İzmit Refinery. In 2005, 32% of TÜPRAŞ's production was diesel oil, 26% was fuel oils, 15% was gasoline and only 3% was LPG. TÜPRAŞ's production has been increasing regularly since 2000 and composition of production has not altered significantly between 2000-2005 period.



Source: TÜPRAŞ

Figure 3.11: TÜPRAŞ Production (million tons)

Between 2000-2005 period TÜPRAŞ's domestic sales have decreased from 23 million tons in 2000 to 20 million tons in 2005 (Figure 3.12). Detailed analysis of TÜPRAŞ's domestic sales reveals that during 2000-2005 period LPG sales have declined dramatically. In 2005, 35% of TÜPRAŞ domestic sales was diesel oil, 24% was fuel oils, 10% was gasolines and 7% was LPG. Briefly, TÜPRAŞ sales have declined gradually during the last 5 years and especially LPG sales have diminished drastically by 2 million tons.



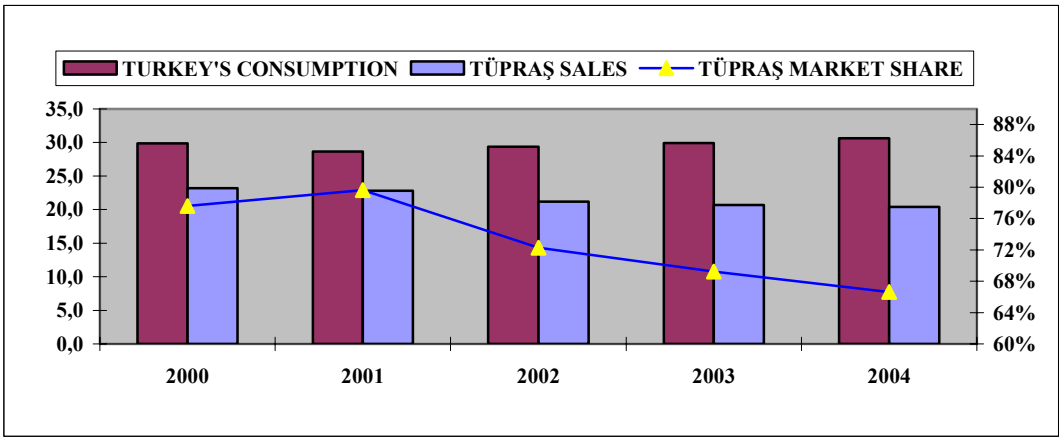
Source: TÜPRAŞ

Figure 3.12: TÜPRAŞ Domestic Sales (million tons)

Comparison of TÜPRAŞ's production and domestic sales between 2000-2005 indicates that between 2000-2001, TÜPRAŞ's domestic sales exceeded production. Then, conversely production dominated domestic sales. In 2000 domestic sales was 3,4 million tons more than production due to the 1999 earthquake. Following 2001, production started to cover domestic sales. In 2005, production was 3,5 million tons more than domestic sales. TÜPRAŞ's domestic sales exhibited negative trend during the last six years and production showed positive trend during the last five years. During the last six years, domestic LPG sales has declined dramatically and there has been excess production in gasolines, diesel oils and fuel oils during the last three years.

TÜPRAŞ's market share was 67% in 2004, which was 11% lower compared to 2000 (Figure 3.13). The main reason for this decline is the LPG sales. Between 2000-2004 Turkey's total LPG consumption has been stable around 3,5 million tons, except 2000 with a LPG sales of 4,5 million tons. However, TÜPRAŞ's sales, during the same period declined by 2 million tons between 2000-2004 period. As a result, TÜPRAŞ's market share in LPG declined from 78% in 2000 to 41% in 2004. The

reason for this market share loss is domestic LPG distributors preferred importing LPG instead of purchasing from TÜPRAŞ. Furthermore, diesel oil market share of TÜPRAŞ declined from 74% in 2000 to 66% in 2004. During the same period, TÜPRAŞ' market share in gasoline increased from 70% to 76% and TÜPRAŞ's market share in fuel oils declined from 75% to 70%.



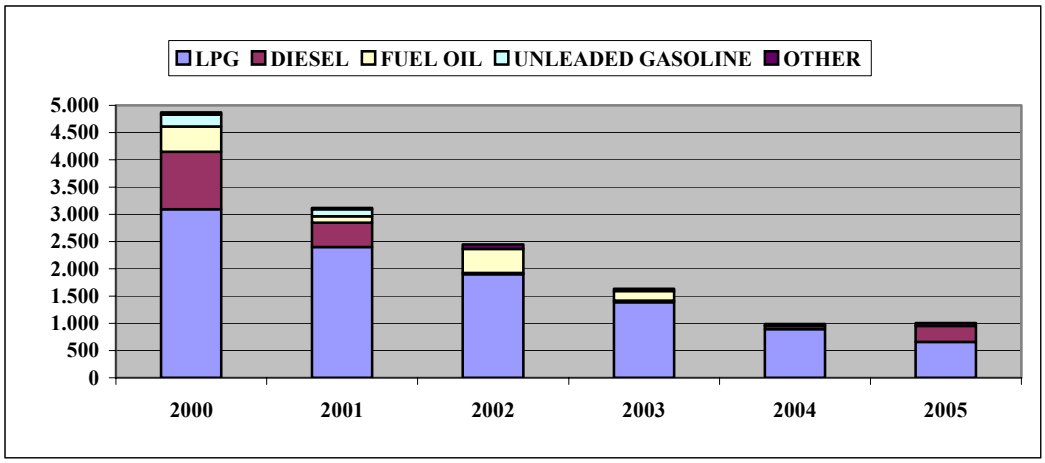
Source: TÜPRAŞ, GDPA (2004)

Figure 3.13: TÜPRAŞ's Market Share (million metric tons)

The evolution of TÜPRAŞ's production and Turkey's petroleum product consumption between 2000-2004 reveals the fact that, TÜPRAŞ failed to meet the domestic market's needs, especially in gasoline and diesel oil. For instance, TÜPRAŞ produced more gasoline than Turkey's total gasoline consumption in 2004. On the other hand, between 2001-2004 TÜPRAŞ's diesel oil production has increased by 9% while Turkey's diesel oil consumption has increased by 20%. In addition, TÜPRAŞ's LPG production only met 19% of Turkey's LPG consumption in 2004.

TÜPRAŞ imports petroleum products when domestic demand exceeds TÜPRAŞ's production. TÜPRAŞ's imports declined from 5 million to 1 million tons between 2000-2005 (Figure 3.14). Between 2000-2004, Turkey's total petroleum product

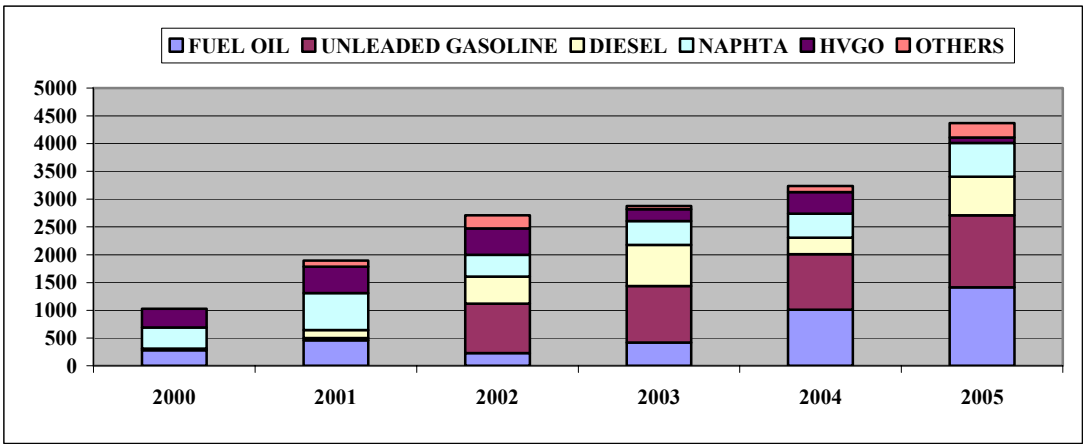
imports increased from 8,6 million tons to 9,7 million tons (GDPA, 2004). Thus, it can be considered that the distribution companies increased imports while TÜPRAŞ decreased. Between 2000-2005 period, for the petroleum product imports TÜPRAŞ paid $ 1,4 billion, $ 0,8 billion, $ 0,6 billion, $ 0,5 billion and $ 0,4 billion, and 0,5 billion respectively (TÜPRAŞ, 2004-2005).



Source: TÜPRAŞ

Figure 3.14: Petroleum Product Imports of TÜPRAŞ (Thousand tons)

TÜPRAŞ exports the excess production. TÜPRAŞ's export increased from 1 million tons in 2000 to 4,5 million tons in 2005 (Figure 3.15). TÜPRAŞ did not export unleaded gasoline in 2000, but the share of unleaded gasoline exports was 31% in 2004 and 30% in 2005, since TÜPRAŞ exported excess gasoline production.



Source: TÜPRAŞ

Figure 3.15: Petroleum Product Exports of TÜPRAŞ (Thousand tons)

Basic financial indicators of TÜPRAŞ are stated in Table 3.2. Between 2000-2005, TÜPRAŞ's net sales value increased by 273% and reached to YTL 15 billion. TÜPRAŞ's total sales in 2005 were 25 million tons which was 0,7 million tons higher than 2000. Thus, increase in net sales was mostly due to the increase in petroleum product prices rather than increase in sales volume. Net profit of TÜPRAŞ increased by 171% between 2000-2005. Indeed, profit increase in 2004 and 2005 was dramatically due to the rise in refining margins. On the other hand, TÜPRAŞ's total assets value reached to YTL 5,7 billion in 2005. In 2005, current assets were 54% of total assets. Moreover, in 2005 current liabilities and long term liabilities were YTL 1,8 billion and YTL 658 million respectively. TÜPRAŞ Debt/Equity ratio was 0,8 in 2005 which was 1,6 in 2000, which means share of liabilities has decreased significantly. Thus, it would not be optimism to assert that TÜPRAŞ has strengthened its financial position during the last six years.

Table 3.2: Financial Indicators of TÜPRAŞ

INCOME STATEMENT

(Million YTL)	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Net sales	3.975	6.352	7.757	10.539	11.487	14.845
Profit before taxation	383	284	258	734	933	880
Net profit	**243**	**189**	**174**	**470**	**659**	**658**

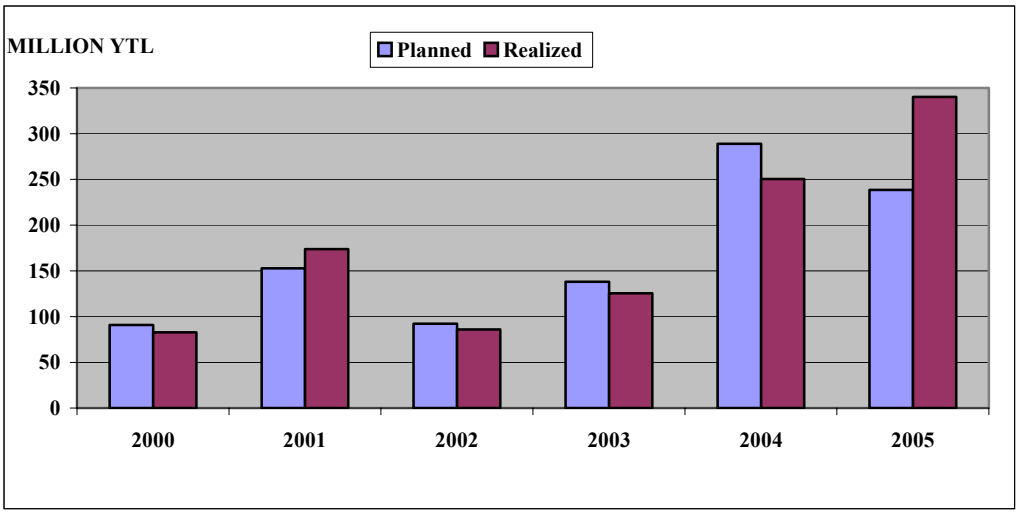
BALANCE SHEET

(Million YTL)	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Current Assets	1.171	1.351	1.936	2.731	3.124	3.091
Fixed Assets	449	834	1.072	2.251	2.239	2.646
Total Assets	**1.619**	**2.185**	**3.008**	**4.983**	**5.363**	**5.737**
Current Liabilities	804	1.034	1.504	1.629	1.741	1.807
Long Term Liabilities	191	419	382	450	429	658
Shareholders' Equity & Minority Interest	624	732	1.122	2.904	3.194	3.272
Total Liabilities and Shareholders' Equity	**1.619**	**2.185**	**3.008**	**4.983**	**5.363**	**5.737**

Source: TÜPRAŞ

In 1989, TÜPRAŞ started a Master Investment Plan covering the 1989-2007 period. The main objectives of the plan were; changing the composition of production from black products to white products, improving product quality and meeting EU standards, saving energy consumption, preventing environmental pollution and protecting human health. At the end of 2004, TÜPRAŞ completed $ 1,5 billion of investments and additional investments valued $ 750 million will have been completed at the end of 2007. Thanks to completed investments TÜPRAŞ increased its unleaded gasoline production capacity by 1,6 million tons. Furthermore, in order to meet EU standards TÜPRAŞ stopped producing normal gasoline in 2002. Indeed, the lead content of leaded premium gasoline was reduced from 0,4 gr/l to 0,1 gr/l and the maximum natural lead content of unleaded gasoline was reduced from 0,013 gr/l to 0,005 gr/l (TÜPRAŞ, 2004). Investment plans and expenditures of TÜPRAŞ between 2000-2005 are seen in Figure 3.16. TÜPRAŞ planned YTL 240 million investments in 2005 but realized YTL 340 million. TÜPRAŞ also continues its

investments to reduce the maximum sulfur content of diesel to 50-ppm and to increase the unleaded gasoline output.



Source: TÜPRAŞ

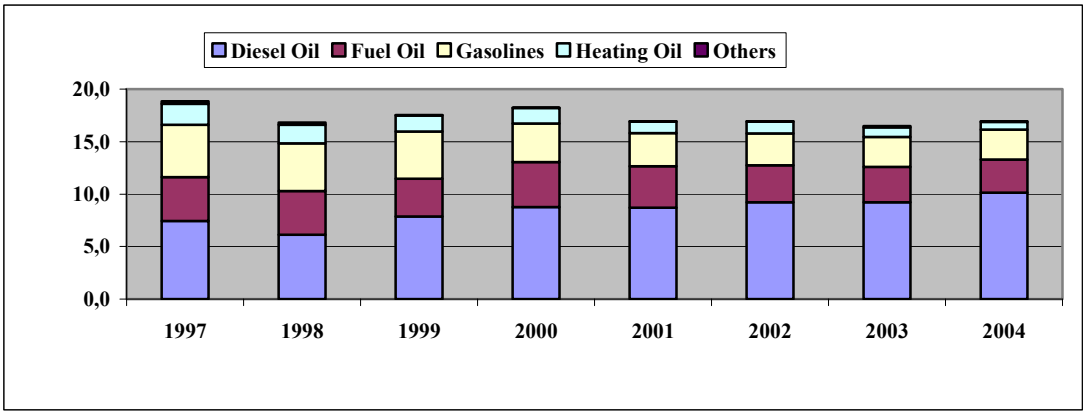
Figure 3.16: TÜPRAŞ Investments

3.3. Distribution Sector[5]

In 2004, 21 companies operated in the distribution sector (GDPA, 2004). As the Petroleum Market Law enacted in 2003 made it easier to establish fuel distribution company, the number of distribution companies operating in the sector increased to 49 as of November 31, 2006. Before the implementation of Petroleum Market Law, a distributor had to have TL 15 trillion capital, a minimum storage capacity of 50.000 m^3 and at least 20 stations. However, according to the new Law, annual sales volume of 60.000 m^3 is sufficient to get a distributor license that is why the number of fuel distribution companies operating in the sector has increased substantially with the Petroleum Market Law. According to the estimation of PETDER (PETDER, 2006), the sum of market shares of 9 companies including Petrol Ofisi A.Ş.(POAŞ), Shell, BP, Opet, Turcas, Total, Aytemiz, Petline and Delta in the sector is more than 95%.

[5] Information about major distribution companies exists in the APPENDIX.

Between 1997-2004, the sales of distribution companies decreased by 10% from 19 million tons in 1997 to 17 million tons in 2004 (Figure 3.17). Despite the strong GDP growth rate during the last three years, sales of distribution companies were nearly stable around 17 million tons. During the last eight years, unleaded gasoline replaced normal gasoline and premium gasoline. However, total gasoline sales declined from by 2 million tons between 1997-2004 period. On the other hand, diesel oil sales reached to 10 million tons in 2005 which was a 36% increase according to 1997. On the other hand during the same period, heating oil sales of distribution companies declined by 1 million tons between 1997-2004. In addition, fuel oil sales also decreased by 1 million tons between 1997-2004. Briefly, the total shares of white products (diesel oil, gasolines and kerosene) was 77% in 2004 which was 66% in 1997 and the total shares of black products (heating oil, fuel oil) was 23% in 2004 which was 34% in 1997. The main reason for dramatic decline in the share of black products was the substitution of natural gas usage.



Source: GDPA (2004)

Figure 3.17: Petroleum Product Sales of Distribution Companies (Million metric tons)

The market shares of the distribution companies shows that Petrol Ofisi was the leader of distribution sector with a market share of 35% in 2004 (Table 3.3). BP, Shell, Opet, Total and Turcas and Aytemizler followed Petrol Ofisi with market

shares of 15%, 14%, 10%, 7% and 6% and 4% respectively. Total market shares of the 7 major companies were 92%. Petrol Ofisi's market share in white products and black products were 34% and 38% successively. Petrol Ofisi was leader in all products except unleaded gasoline. Shell was the leader in unleaded gasoline with a market share of 25%. Total market shares of foreign companies (BP, Shell, and Total) and Turcas which is controlled by foreign owners in white products and black products were 46% and 32% in rows. After its privatization, Petrol Ofisi did not lose its leadership in the sector, nevertheless foreign companies were important players of the Turkish fuel distribution sector.

Table 3.3: Market Shares of Distribution Companies in 2004

	POAŞ	**BP**	**SHELL**	**TURCAS**	**OPET**	**TOTAL**	**AYTEMİZLER**	**OTHERS**
Premium Gasoline	33,7%	18,0%	16,2%	10,3%	8,2%	6,5%	1,9%	5,2%
Unleaded Gasoline	23,0%	20,4%	25,0%	9,6%	10,4%	6,6%	1,4%	3,5%
Total Gasolines	25,8%	19,8%	22,6%	9,8%	9,8%	6,6%	1,5%	4,0%
Diesel Oil	36,5%	12,5%	14,3%	6,7%	7,9%	8,6%	4,0%	9,6%
White Products	**34,2%**	**14,1%**	**16,1%**	**7,3%**	**8,3%**	**8,2%**	**3,4%**	**8,4%**
Heating Oil	57,1%	7,8%	2,8%	0,7%	8,2%	3,6%	8,7%	11,1%
Fuel Oil	33,8%	21,6%	8,6%	1,3%	16,9%	4,0%	5,5%	8,4%
Black Products	**38,0%**	**19,1%**	**7,5%**	**1,2%**	**15,3%**	**3,9%**	**6,1%**	**8,9%**
TOTAL	**35,0%**	**15,2%**	**14,2%**	**5,9%**	**9,9%**	**7,2%**	**4,0%**	**8,5%**

Source: GDPA

Through the Petroleum Market Law, limits on petroleum product imports were lifted. Before the new Law, the distribution companies could only import 40% of their sales, so storage capacities of the distribution companies became more important after the abolishment of the import limits. At the end of 2004 the total storage capacities of distribution companies were 2,4 million tons, of which 1,9 million tons were white product storage capacity and 0,5 million tons were black product storage capacity (Table 3.4). In 2004, 35% of the white product storage capacity and 27% of the black product would belong to Petrol Ofisi. Therefore, Petrol Ofisi has an important advantage compared to its competitors especially in white products. By the

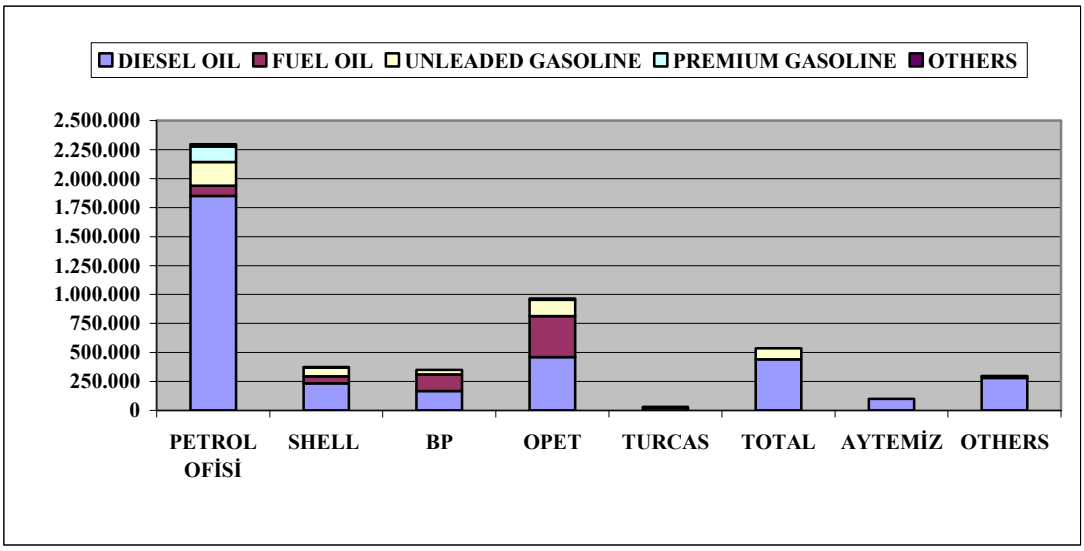
way, OPET and TOTAL have important white product storage capacities relative to other major oil companies.

Table 3.4: Storage Capacities of Distribution Companies in 2004 (Metric tons)

	WHITE PRODUCT	BLACK PRODUCT	TOTAL
POAŞ	508.306	171.487	679.793
SHELL	56.646	21.830	78.476
BP	130.302	15.520	145.822
OPET	196.199	98.381	294.580
TURCAS	66.213	0	66.213
TOTAL	243.900	0	243.900
AYTEMİZ	131.000	45.000	176.000
DELTA	170.000	96.000	266.000
OTHERS	408.226	46.544	454.770
TOTAL	**1.910.792**	**494.762**	**2.405.554**

Source: GDPA

In 2004, distribution companies imported 5 million tons of petroleum products (Figure 3.18). 48% of the import of the distribution companies was succeeded by Petrol Ofisi, while 20% by OPET and 11% by TOTAL. As mentioned above, these three companies' storage capacities provide them great advantage for petroleum product imports. Also 75% of total petroleum product imports in 2004 was diesel oil import. On the other hand, only two distribution companies, TURCAS and OPET, exported petroleum products in 2004.

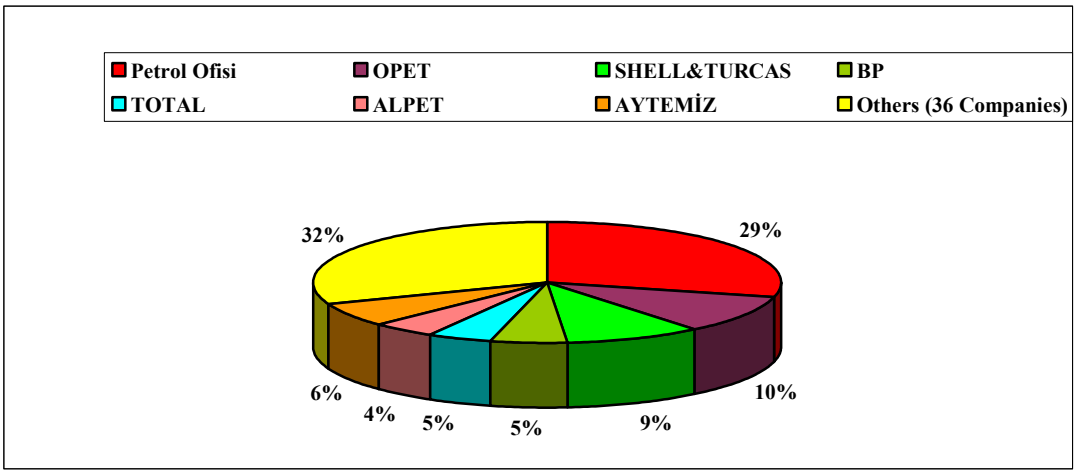


Source: GDPA (2004)

Figure 3.18: Petroleum Product Imports of Distribution Companies in 2004 (Metric tons)

According to the Petroleum Market Law, retailers should get retailer license from EMRA in order to operate in the sector. There are two types of retailer license; retailer with station and retailer without station. As of October 31, 2006 more than 14.500 retailer got retailer license from EMRA. 11.500 retailers got with station license and 3.000 retailers got without station license[6]. 29% of the total retailers works for Petrol Ofisi (including Erk brand), 10% of retailers for OPET (including SUNPET brand) and 10% of retailers for SHELL&TURCAS (Figure 3.19).

[6] EMRA's website, http://www.epdk.gov.tr/lisans/petrol/bayilik/bayilik.asp, Accession: November 12, 2006.



Source: EMRA

Figure 3.19: Distribution of Retailers among Distribution Companies (%)

3.4. Conclusion

Petroleum products still have more than 40% in Turkey's total energy consumption. Since Turkey has not sufficient oil reserves to meet domestic demands, 90% of the crude oil refined in domestic refineries was imported. Increase in crude oil imports has lost its acceleration during the last 10 years. However, due to the sharp rise in crude oil prices, cost of crude oil imports reached to $ 6 billion in 2004 which was $ 2 billion in 1998. The share of major four countries in Turkey's crude oil imports was 87%. In addition, TÜPRAŞ imported 93% of crude oil from only four countries including Iran, Russia, Libya and Saudi Arabia. Due to the political instability in Middle East the petroleum supply security is adversely affected. Therefore, diversification of imports of crude oil according to countries in order to minimize the crude oil supply risk seems to be compulsory for Turkey. For this purpose, crude oil imports from Former USSR countries can be increased. Accomplishment of Baku-Tblisi-Ceyhan (BTC) Pipeline project is an important opportunity for Turkey to manage this plan.

Petroleum products import has substantially increased during the last ten years especially because of the rising demand on distribution companies' imports of petroleum products. In 2004 Turkey's petroleum products imports reached to 10 million tons which was 2 million tons in 1994. The rise in petroleum product imports is a serious threat for Turkish economy and especially for Turkey's petroleum product industry.

After the shut down of ATAŞ refinery, TÜPRAŞ became the sole refining company in Turkey with a capacity of 27,6 million tons / year. TÜPRAŞ's capacity is less than the Turkey's petroleum consumption which reached to 30,6 million tons in 2004. Furthermore, domestic LPG production only meets 20% of the total consumption and domestic diesel oil production meets 63% of total consumption in 2004. During the last 5 years TÜPRAŞ's domestic sales had a negative trend while its production had a positive trend. As a result, TÜPRAŞ had excess production especially in gasolines and fuel oils. TÜPRAŞ tries to solve this problem by exporting the excess production.

Finally, through the Petroleum Market Law which facilitates establishment of distribution companies, the number of distribution companies reached to 49 which were 21 at the end of 2004. Petrol Ofisi was the leader among the distribution companies with a market share of 34% in white products and 38% in black products in 2004. Moreover, total market share of the major seven distribution companies was 92% in 2004. During the last years, distribution companies which have enough storage capacity imported increasing amount of petroleum products instead of purchasing from TÜPRAŞ. One of the innovations of the Petroleum Market Law is the abolishment of the restriction on petroleum product imports. Therefore, storage capacities of the distribution companies become more important in terms of competition.

CHAPTER 4

PETROLEUM MARKET LEGISLATION IN TURKEY

The legal aspect of the liberalization of downstream oil industry in Turkey began with the amendment of the Article 5 of the Law No 79 with the Law No 3571. Through this amendment, government control on crude oil and petroleum product prices was abolished and refining companies, distribution companies and retailers started to set crude oil and petroleum product prices freely. However, since TÜPRAŞ and Petrol Ofisi were public oil companies at that time, price liberalization could not be achieved in practice. In 1990s, GDPA governed downstream oil industry by publishing regulations. However, the absence of a comprehensive Law about downstream oil industry made it difficult to govern downstream oil industry. The Petroleum Market Law enacted in 2003 was the first comprehensive law about downstream oil industry in Turkish history. By means of the Petroleum Market Law a new era started in Turkish downstream oil industry in which crude oil and petroleum product prices were started to set freely, restrictions on petroleum product imports were lifted and EMRA started to regulate the industry.

The first task of this chapter is to analyze the legislation published prior to the Petroleum Market Law. Then the Petroleum Market Law and the License regulation published by EMRA will be examined in detail. By this examination, the legal background of the liberalization of downstream oil industry in Turkey can be determined profoundly.

4. 1. Previous Legislation

Before the Petroleum Market Law, downstream oil industry in Turkey had been governed according to the decrees of the Council of Ministers based on the Article 5 of the Law No 79.

The Law No 79 was published in the official journal dated 16.9.1960 and numbered 10605. This Law was a critical legislation in petroleum market. In Article 5 of this Law, prices, purchases and sales of the petroleum products were arranged. According to the Article 5, the government was authorized to make arrangements with regard to price, purchase, sale and distribution of the petroleum products. In other words, prices of petroleum products were determined by the government. In addition, government could also order the distribution sector according to this Law.

Article 5 of the Law No 79 had been in force about 29 years. Governments had delegated their authority to the Ministry of Energy and Natural Resources, and the Ministry of Energy and Natural Resources had governed the distribution sector and had determined the prices of the petroleum products.

The Law No 3154, which was published in the official newspaper dated 1.3.1985 and numbered 18681, had arranged the establishment of the Ministry of Energy and Natural Resources. According to this Law, The Ministry of Energy and Natural Resources had the authority to coordinate and supervise the activities concerning production, transmission, distribution of the energy. Also, the Ministry of Energy and Natural Resources could determine the policies about the production, distribution and consumption of the underground and aboveground energy and natural resources and energy products. The Ministry of Energy and Natural Resources could also determine the prices in case of necessity.

In short, through the Law No 79 and 3154, the public authority had determined the petroleum product prices and had governed the petroleum market through the Ministry of Energy and Natural Resources.

The Article 5 of the Law No 79 was changed with the Law No 3571, which was published at the official journal dated 20.6.1989, numbered 20201. In the new version of the Article 5, importers, refining companies and distribution companies and retailers were allowed to set crude oil and petroleum products freely. However, if necessary, the Council of Ministers could determine the procedures of the purchase,

sale and distribution of the crude oil and petroleum products concerning the developments in international markets. Thus, although prices were set freely, the Council of Ministers had the authority to intervene the market if necessary.

Based on the Law No 3571, government published a decree numbered 89/14264 about the purchase, sale and pricing of the crude oil and petroleum products at the official journal dated 24.6.1989, numbered 20205. According to the decision numbered 89/14264, except refining companies having petroleum right, other institutions and companies had to take certificate from the Ministry of Energy and Natural Resources in order to import crude oil and petroleum products. Moreover, companies importing petroleum products must have had at least 1.000 tons storage capacity for LPG and 30.000 tons storage capacity for other petroleum products. Companies who do not have any retailers were forbidden to sell petroleum products to retailers of other companies and to final consumers. However, these companies could sell petroleum products to other distribution companies and facilities having at least annual 5.000 tons consumption. Further, refining companies were allowed to set their prices freely considering the free market conditions. Finally, distribution companies were obliged to give information about petroleum product prices to the Ministry of Energy and Natural Resources and to the province governors. In short, although the crude oil and petroleum product prices were set freely with the Law No 3571, government had continued to determine the prices through TÜPRAŞ and Petrol Ofisi. In 1990s, there were only two refining companies and TÜPRAŞ had the 86% of the Turkey's refining capacity. Also, Petrol Ofisi was the leading distribution company in the distribution sector. Thus, determining prices of TÜPRAŞ and Petrol Ofisi would mean to determine market prices. In other words, although liberal prices regime was adopted legally, it could not be realized in practice.

Cabinet decision numbered 89/14264 had remained in effect until to the cabinet decision numbered 98/10745. With the cabinet decision numbered 98/10745, purchasing, sale and pricing of the petroleum products were rearranged. A new pricing policy called Automatic Pricing Mechanism (APM) was accepted.

According to the APM, a ceiling price was determined considering the international petroleum prices and exchange rate. If the last 7 days average price differs from the ceiling price by ± 3%, the ceiling price was re-determined. Refining companies and importers could determine prices freely provided not to exceed ceiling price. As in 89/14264, except refining companies having petroleum right, other institutions and companies had to take certificate from the Ministry of Energy and Natural Resources in order to import crude oil and petroleum products. Furthermore, petroleum product importers must have at least 3.000 tons storage capacity for LPG and 30.000 tons storage capacity for other petroleum products. Indeed, except LPG, importers had to keep 10% of the import amount as stock during 2 months. Besides this, companies having not any retailers were forbidden to sell petroleum products to retailers of other companies and to final consumers. However, importers could sell petroleum products to other distribution companies and facilities having at least annual 5.000 tons consumption and also could sell to institutions like hospitals, universities so on, for heating purpose.

According to the APM, distribution companies and retailers could not set their prices freely, instead of this, distribution companies and retailers got fixed portion for each unit of petroleum products. The shares of the distribution companies and retailers for different petroleum products before realization of full price liberalization on January 1, 2005 were; 12.50 uscent/lt for gasoline, 10.50 uscent/lt for diesel oil, 6.50 uscent/lt for kerosene, 3.20 uscent/kg for heating oil, 3.50 uscent/kg for fuel oils and 25,00 uscent/kg for LPG. Distribution of the portion between retailers and distributors were left to the free market conditions.

TÜPRAŞ had benefited significantly from the APM. Before APM, governments had intervened to TÜPRAŞ's prices and had kept prices low in order to decrease the high inflation which caused TÜPRAŞ to make net losses before APM. Indeed, in 1996 and 1997, TÜPRAŞ had a net loss of TL 19 trillion and TL 29 trillion respectively. However, following to the APM, TÜPRAŞ made a profit of TL 96 trillion in 1998. Indeed, in 1999 TÜPRAŞ's net profit had reached to TL 213 trillion (TÜPRAŞ, 2000). For distribution companies and retailers, profits had changed according to the

evolution of exchange rate of TL against USD. Depreciation of TL had increased profits of distributors and retailers and appreciation of TL had decreased profits of distributors and retailers. In 2004, due to the appreciation of TL against USD, retailers and distributors demanded an increase in shares from the government. As a result government had increased the shares by 1.50 cents per liter both in gasolines and diesel oil in 2004.

4. 2. The Petroleum Market Law

The Petroleum Market Law No 5015 was enacted in 04.12.2003.This Law was the beginning of a new era in Turkey's petroleum sector. Through this Law, legislation and execution of the upstream and downstream oil industry separated from each other. Before the Petroleum Market Law; refining, processing, transmission and similar activities had been governed according to the Petroleum Law numbered 6326. However, the Petroleum Law mostly arranged exploration and production of crude oil. There were not comprehensive arrangements about refining, processing and transmission in the Petroleum Law. Moreover, there was not any comprehensive Law regarding distribution activity. Distribution sector had been governed by decree laws and communications issued by the General Directorate of Petroleum Affairs. This was a substantial deficiency for the distribution sector which had a great importance in Turkish Economy. Thus, by the Petroleum Market Law the distribution sector gained the first law in Turkish history and the upstream and downstream sectors were separated from each other.

According to the Commission Report of the Grand National Assembly of Turkey related to the Petroleum Market Law (The Grand National Assembly of Turkey, 2003), the main objectives of the Law were;

- to achieve the institutionalization of the market economy
- to comply with EU legislation and other international obligations

The Law actually aimed a liberal petroleum market. For this purpose, petroleum prices were set freely, entrance to petroleum market became easier as compared to previous legislation, and limits on petroleum products imports were lifted. Moreover, in order to comply with EU and IEA (International Energy Agency) arrangements, keeping at least 90 days national petroleum stock was obliged by the Law to decrease possible supply risks.

In order to regulate and control the petroleum market, the EMRA, at that time the public authority regulating the electricity and natural gas market, became the public authority also in petroleum market instead of GDPA affiliated with Ministry of Energy and Natural Resources. Thus, the Law took the authority from the political authority and delegated authority to EMRA which is an independent public agency. This action was one of the main characteristic of the Turkish Economy during the last decade. Other independent public authorities for different markets have been established during the last decade such as Banking Regulation and Supervision Agency, Telecommunication Agency, Sugar Agency, Tobacco and Alcoholic Drinks Market Agency, Public Tender Agency. Thus, establishment of EMRA as the regulator body in the petroleum market can be considered as the reflection of neo liberal economic policies to petroleum market. Neo-liberal economic policies claim that political authority is not rational due to the political reasons and therefore their regulations regarding the different markets distort the markets. Thus, delegating authority to independent public agencies in order to regulate and supervise markets would enhance well-operated markets.

Following to the enacting of the Petroleum Market Law, EMRA started to publish legislation based on the Petroleum Market Law. The most important legislation was the License Regulation, which regulate the fundamental principles of the licenses for the market activities.

Thus, in the following parts of the chapter the Petroleum Market Law and the License Regulation of the EMRA will be analyzed in detail. Moreover, the difference

between the current legislation and previous legislation issued by GDPA will also be investigated.

The objective of the Law was explained in Article 1 as;

> to regulate the guidance, surveillance and supervision activities in order to ensure the transparent, non-discriminatory and stable performance of market activities pertaining to the delivery of petroleum supplied from domestic and foreign resources to consumers, directly or after processing, in a reliable, cost-effective manner within a competitive environment.[7]

As inferred in Article 1 the Law has three main objectives;

- to deliver petroleum products in a reliable and competitive environment
- to construct a well-operated market
- to execute the guidance, surveillance and supervision activities in order to realize first two objectives.

In Article 3, the procedures and principles of the licenses were arranged. According to Article 3, in order to perform refining, processing, liquid fuel distribution, transportation, retailer, lube oil production, storage, transmission, eligible consumer and bunker activities, real or legal persons should get license from EMRA. Moreover, The Law delegated authority to EMRA to enact regulations regarding licenses.

An important arrangement in Article 3 was; while granting licenses, EMRA could not bring any quantity limitations such as the number of retailers or storage capacity. EMRA could establish criteria in terms of technology, quality and sustainability of the services and enterprise. This arrangement was aiming to develop a competitive market by making it easier to enter to the market. For instance, before the Petroleum Market Law, according to the Cabinet Decision No 2002/4313 about establishment of fuel distribution companies, in order to establish a fuel distribution company,

[7] The Petroleum Market Law (English), EMRA web site

firms should have at least 20 retailers, TL 15 trillion capital and 50.000 m³ storage capacity. Indeed, within 2 years period, the number of retailers should be increased to 100 of which 15 of them should be operated in the developing provinces. In this Law, there was no limitation on number of retailers and storage capacity. As a result, number of distribution companies operating in the sector rose to 49 which was 21 in 2004. However, increase in the number of fuel distribution companies made it difficult to control distribution firms and retailers, which worsened the smuggled oil problem.

According to the Article 5 and Article 9, firms which have refining license can perform activities mentioned below;

- Processing, storage, and transportation to other facilities in the vicinity by pipelines
- Fuel distribution by its distribution company
- Importing petroleum and petroleum products
- Bunker activity

As seen above, The Law allows refining companies to establish fuel distribution company. Before the Petroleum Market Law refining companies were not allowed to establish distribution companies. In other words, The Law allows vertical integration in the petroleum industry which can give rise to start of a new era in fuel distribution sector. The main objective of this decision was to increase the value of TÜPRAŞ before the privatization tender. Before 1990, public oil companies had a vertically integrated structure. TÜPRAŞ, the public refining company and Petrol Ofisi, the public distribution company were subsidiaries of TPAO, the public petroleum exploration and production company. However, TÜPRAŞ and Petrol Ofisi were decided to be privatized in 1990 and this vertically integrated structure was broken. Thus, the Law allows the new owners of the TÜPRAŞ to establish a vertically integrated oil company.

In Article 7, the principles of the distribution license were arranged. According to the Article 7, firms which have distribution license have the right to distribute liquid fuel products. Distribution companies distribute fuel products to retailers under their ownership or retailers established by contracts. Moreover, distribution companies can perform liquid fuel wholesale activity to eligible consumers and can transport fuel oil by pipelines to the facilities within the vicinity of storage facilities. Furthermore, distribution companies have the liability to give EMRA at least 60.000 tons/year distribution projection.

The Law restricted the market share of a distribution company maximum of 45%. Furthermore, the sales of retailers under the ownership of the distribution company shall not exceed 15% of the distributor's total sales. These two arrangements do not create a problem for any distribution company in the sector. Petrol Ofisi, leading distribution company has a market share less then 40%. Furthermore, retailers owned by distribution companies are exceptions in the distribution sector. Thus, these limitations can be viewed as a precaution to provide competition in the sector in the future. On the other hand the Law prohibited distribution companies to distribute fuel to retailers of the other distribution companies.

According to Article 8, retailers were obliged to depend on a distribution company. Independent retailers in the sector, called white-flag retailers, were prohibited. Moreover, in Article 8 retailers were also obliged not to deliver fuel from other distribution companies and their retailers and not to add products to petroleum products for fraud purpose.

The Law gives EMRA the right to determine the distance between two retailers on the same direction on highways and in the cities. However, distance between two retailers on the same direction should not be less than 10 km. on highways and 1 km. in the cities. According to the previous legislation published by the Ministry of the Energy and Natural Resources, distance between two retailers on the same direction should not be less than 10 km. on highways and 2 km. in the cities. Thus, the new legislation decreased the distance between two retailers on the same direction from 2

km. to 1 km in the cities. As a result of this implementation, this would lead an increase in the number of retailers in the cities. Furthermore in Article 9, retailers were not obliged to participate to the promotion campaigns realized by distribution companies.

In Article 9, only refining companies, distribution companies and bunker delivery companies were allowed to import crude oil and petroleum products. Indeed, there was no limitation on the crude oil and petroleum products. In the previous legislation, distribution companies should deliver at least 60% of their total sales from domestic refining companies. Therefore, the new legislation radically changed the petroleum product import policy. This policy gave important advantage for the distribution companies having enough storage capacity. Also, distribution companies having enough storage capacity could import petroleum products cheaper in order to buy from TÜPRAŞ. It can be forecasted that Turkey's petroleum product imports would increase in the following years. Indeed, major distribution companies are increasing their storage capacities in order to enjoy from new legislation.

An important arrangement in the Petroleum Market Law was the new pricing mechanism in Article 10. Petroleum and petroleum product prices were set freely according to world free market conditions. Refining companies and distribution companies determine their ceiling product prices freely and should give the ceiling product prices to EMRA. Furthermore, EMRA has the authority for intervening prices and determining prices for maximum 2 months in the case of market distortions.

The price determination mechanism of domestic crude oil was explained in detail in the Law. In addition, domestic refining companies were obliged to give priority to domestic crude oil. EMRA was authorized to solve the price conflicts between the refining companies and domestic crude oil producers.

In Article 12, transmission and storage licensees having spare capacity in their facilities should meet the transmission and storage demands meeting the conditions

described in the Law. This arrangement also aims to achieve free market but realization of this arrangement is very difficult in practice.

According to Article 15, license owners should arrange insurance against risks for their activities. EMRA was authorized to publish legislation about the insurance liability.

Another important arrangement in the Petroleum Market Law was the national petroleum stock requirement. This arrangement's purposes were;

- To sustain continuation in the petroleum market
- To prevent supply risks in extraordinary conditions
- To comply with international agreements

The Law obliged to keep at least 90 days amount of the net petroleum import. In order to achieve this stock, refining companies, fuel distribution companies and LPG distribution companies were obliged to keep at least 20 times of their average supplied daily product. Furthermore, eligible consumers that consume at least 20.000 tons of each type of petroleum products were obliged to keep stocks equal to at least 15 days of their consumption. The complementary part of the national petroleum stock would be kept by refining companies and cost of this stock will be added to final prices.

The Law supplied authority to The Council of Ministers to make arrangements regarding national stock requirement. Moreover, a Commission would be established to work in respect of national petroleum stock. The members of the Commission would be selected from related public institutions.

The national petroleum stock requirement can be evaluated as a positive arrangement in order to decrease possible supply risks. Indeed, this arrangement became more important nowadays due to the arising supply risks in the Middle East region. The

petroleum stock requirement could not have been implemented although the Law made it necessary.

In Article 17, EMRA was authorized to make arrangement about the eligible consumers. Moreover, distribution companies were prohibited to sell products through the stations owned by themselves to consumers whose annual consumption of heating oil, fuel oil and diesel oil is below the annual consumption amount determined by EMRA, but this amount should not be less than 5.000 tons. This arrangement aims to protect retailers by creating a market that only retailers can perform.

Another important legislation was the national marker arranged in Article 18. With the national marker arrangement, refining companies and distribution companies should add a marker to the product they sold. The conditions and quality of the marker will be determined by EMRA. This arrangement's objective was to solve the smuggled oil problems and prevent tax losses due to smuggled oil. In order to realize national marker, EMRA made two tenders, but these two tenders were cancelled. Finally, TUBITAK (The Scientific and Technological Council of Turkey) was authorized by EMRA to realize national marker.

In Article 19 and Article 20, Administrative Fines and Sanctions were arranged. EMRA had the authority to give fines amount of YTL 50.000, YTL 250.000 and YTL 500.000 in the case of violation of the Law. Moreover, for the retailers one-fifth of the fines shall be applied. In the case of the repetition of the violation of the Law in 2 years, fines would be two-folds. These fines could have limited deterrent effects especially for the big companies operating in the sector. Indeed, the fines were very small when considering the economic size of the petroleum product industry in Turkey.

On the other hand, administrative sanctions had more deterrent effects compared to administrative fines. EMRA had the authority to stop the operations of the licensees temporarily or permanently. Furthermore, supplying illegal products would be

punished by stopping the operations. When a distribution company's operations were stopped, the retailers of the distribution company could have continued their activities as the retailers of the other distribution companies

4. 3. License Regulation

In order to determine the basis and procedures related the licenses, License Regulation prepared by EMRA, was published at the Official Newspaper on 17 June 2004. This regulation will be analyzed below in detail.

In Article 5, for every single market operation, granting a license from EMRA was necessary. Moreover, alienating licenses to third parties were forbidden by EMRA.
In Article 6, the license types were determined as, refining license, processing license, lube oil license, storage license, eligible consumer license, bunker activities license, distribution license, transport license and retailer license. Retailer license subdivided into liquid fuel and bunker. Moreover, retailer licenses categorized as retailer with station and retailer without station. Finally, EMRA arranged some exemptions to operate in market without license. For instance, companies having refinery, distribution or bunker activity license do not have to get license for adding inorganic or organic additives to improve the quality of petroleum products and for blending activities which do not bring petroleum products different feature.

In Article 7, license application procedures were arranged in detail. According to Article 7, real or legal persons, who are Turkish residents, registered to commerce and industry record and income or corporate tax payer could apply to EMRA to get license. For refining, transmission, storage, processing, distribution and bunker activities, the applier should be joint-stock company or limited company. Furthermore, distribution companies' sales target should be at least 60.000 tons per year. Article 7 was amended in June 2006. Through the amendment, refining licensees must have at least YTL 50 million capital, transmission licensees must have at least YTL 500.000 capital, storage licensees must have at least YTL 1 million capital, processing licensees must have at least YTL 500.000 capital, distribution

licensees must have at least YTL 5 million capital, and bunker licensees must have at least YTL 2 million capital. Licensees which got license before amendment must increase their capital to YTL 5 million up to June 1, 2007.

According to Article 14, maximum license duration was 49 years. In Article 17 conditions for expiration and termination of the licenses were arranged. Licenses would expire or would be terminated with the conditions mentioned below;

- In the case of bankruptcy of the licensee
- At the deadline of the license duration
- With the demand of the licensees, except for the refining, transmission and storage licensees,
- In the case of eligible consumers could not meet the required annual sales volume
- In the case of retailers not to make a new contract with another distributor within the three months period after the expiration of the contract with the distribution company.

Besides these, EMRA could terminate the license of the distributors if the distributor could not sell at least 60.000 tons of gasoline and diesel oil. In other words, EMRA was not obliged to terminate the license of the distributor not meeting the annual 60.000 tons white products sales.

As to refining, transmission and storage licensees, the licensee could not stop its operations without the approval of the EMRA. For refining companies, the license were terminated with the approval of EMRA after the refining company deliver the facility and stocks related to national petroleum stock to EMRA. For transmission and storage licenses, the license was abolished through the approval of the EMRA, after the licensee prove that it has no liability to the third parties related to any contract.

In Article 18, basic rights and liabilities of the licensees were arranged. An important arrangement was related with the national petroleum stock. When determining the average product amount to determine the national stock requirement, previous years sales were divided into 360. Distributors shall not keep less than 3.300 tons stock.

In Article 19 the activities that refining companies could perform were determined as;

- To establish and operate refining facilities
- To buy and sell petroleum
- To produce new products from crude oil
- To buy and sell crude oil only with the other refining companies and crude oil producers.

The liabilities of the refining licensees were set in the Article 20. The most important liabilities of the refining licensee were;

- To give priority to domestic crude oil
- To keep the complementary part of the national stock
- To determine the ceiling prices for petroleum products considering the international free market prices
- To keep national stock equal to at least 20 times of daily delivery
- To sell petroleum products to distribution companies with the same conditions with its own distribution company
- To add national markers to petroleum products

In Articles 26 and 27 storage licensees and transmission licensees were obliged to meet demands meeting the conditions stated in the regulation.

In Article 29, eligible consumers could obtain fuel oil, heating oil and diesel oil both from refining companies and distribution companies. Furthermore according to the Article 30, eligible consumers who have annual consumption of at least 20.000 tons

for each fuels, have to keep petroleum stocks equal to 15 days consumption. In Article 32, bunker companies were not allowed to sell fuels to commercial vehicles.

According to Article 30, the operations that the distributors could perform were;

- To import fuels
- To sell petroleum products domestically and to sell wholesale to eligible consumers
- To deliver petroleum products to facilities vicinity to its facilities by pipelines
- To establish retailer organization
- To deliver fuels to retailers
- To sell directly fuels without consumption tax to commercial sea vehicles

In addition, distribution companies can perform the storage, lube oil, bunker and transport activities without granting license. Furthermore, distributors can sell fuels to other distributors' retailers if the other distributors' operations were stopped. Finally, with the permission of the EMRA, distributors could sell fuels to other distributors.

According to Article 34, the most important liabilities of the distributors were;

- Not to sell fuels to other distributors' retailers
- To add national marker to fuels
- To perform the quality control checks of the products sold by its retailers
- To determine the ceiling prices freely considering the international free market prices
- To keep stocks equal to 20 daily delivery
- Not to perform discriminative activities between the retailers owned by itself and retailers with contract

In addition, the sales of retailers under the ownership of the distribution company shall not exceed 15% of the distributor's total sales.

According to Article 37 retailers were divided into two groups, fuels retailer and bunker retailer. Furthermore, retailers were also categorized to retailers with station and retailers without station. If the license of the distributor whom the retailer depends were canceled, retailer could make a new contract with another distributor. Indeed, if the operations of the distributor whom the retailer depends were stopped temporarily, retailer could deliver petroleum products from another distributor.

In Article 38, the major liabilities of the retailers were;

- Not to change the use objective or quality of the products
- Not to sell fuels out of the station
- To perform activities according to the contract made with distributor
- Not to sell petroleum products for resale purpose

In Article 40, 41, 42 the declarations of the licensee were arranged. Declarations were divided into two groups; periodic declarations and declarations depend on existence of special cases.

EMRA demands information from licensees depending on their activities. The refining, distribution and bunker licensees shall give the annual marketing projections to EMRA in every February. Furthermore refining, distribution and bunker licensees shall give the realized sales information to EMRA in every three months. In addition, lube oil licensees shall give the lube oil realized importation and exportation declaration to EMRA for every three months. Finally, refining companies shall give the stock declaration and crude oil importation and exportation declaration to EMRA for every month and distribution companies shall also give the stock declaration and crude oil importation and exportation declaration to EMRA for every months.

Licensees shall also give information to EMRA in the case of existing of special activities or situations such as;

- Licensees, except eligible consumers, must give information when they start to operate or stop their operations.
- Licensees must give information to EMRA in the occurrence of important events which threat safety of people, environment and their facilities.
- Refining, distribution and bunker activity licensees shall declare the export and imports to EMRA before the date of realization of import or export.

In Turkish petroleum industry, GDPA has published the annual data about the petroleum industry since its establishment. However, through the Petroleum Market Law and license regulation, for the downstream oil industry EMRA will publish these data.

In Articles 44, 45 and 46 limitations in petroleum market were arranged. Exportation of petroleum was unrestricted. Moreover, the sales of retailers under the ownership of the distribution company shall not exceed 15% of the distributor's total sales and the market share of any distributor could not exceed 45%. Besides these, the distance between two fuel or LPG stations at the same direction could not be less than 10 km. on highways and 1 km. in the cities. Finally, the limitation for the eligible consumers for each product (heating oil, fuel oil and diesel oil) was annually at minimum of 5.000 tons.

According to Article 49, licensees should arrange insurance against risks for their activities. In order to regulate the insurance liability EMRA published the official communication of insurance liabilities in the petroleum market on June 15, 2005.

In Article 50 and 51, income and participation fees paid to EMRA were arranged. Income fee was YTL 0,0015 per liter. Moreover, except eligible consumers, all licensees were obliged to pay participation fee to EMRA annually. Participation fee is calculated by multiplying participation fee ratio with net sales. EMRA determine the participation fee ratio annually. However, this ratio could not exceed 0,1% and participation fee could not be more than $ 2.000.000. According to Article 55,

EMRA shall solve the price conflicts between domestic crude oil producers and refining companies within 30 days.

According to Article 56, EMRA had the authority to interfere to market if the continuation of the delivery and sale of the petroleum products was blocked or if unfair competition exists in the market.

4. 4. Conclusion

As stated above in detail, The Petroleum Market Law was the beginning of a new era. As a matter of fact, The Petroleum Market Law has both positive and negative aspects for the Turkish petroleum market.

Initially, governing of downstream oil industry according to a comprehensive law instead of government decrees gave the public authority sanction power which makes it easier to realize the guidance, surveillance and supervision activities. Furthermore, license necessity in order to operate in the petroleum market could also contribute to the institutionalization of the market. With the license regulation, the rights and liabilities of each license owner were arranged in detail. However, for the success of the license regulation, EMRA should use the authority delegated by the Petroleum Market Law effectively.

Another positive aspect of the Petroleum Market Law was the 90 days national petroleum stock requirement. During the last decade, due to the political instabilities in the energy supplier countries, energy supply security became more important especially for energy importer countries. National petroleum stock requirement was an important precaution for a possible supply outage. From the day of the enactment of the Petroleum Market Law, national petroleum stock arrangement has not been realized yet. As of February 2006, $ 30 million was accumulated for the complementary part of the national petroleum stock. However, Commission of

National Petroleum Stock has not realized anything related with this topic[8]. Indeed, following to the Iraq War, petroleum supply risks increased substantially. Therefore, the national petroleum stock shall be realized immediately to reduce petroleum supply risks.

National marker was also another positive aspect of the Petroleum Market Law. By means of the national marker, the smuggled oil problem was expected to be solved. However, the national market tender was cancelled two times. Finally EMRA and TUBITAK (The Scientific ad Technological Research Council of Turkey) agreed on production of national marker and national marker control machines. EMRA plans to realize national marker in 2006.

The Petroleum Market Law allows vertical integration. The refining companies could establish distribution companies. This was an important step for the Turkish petroleum industry. All major petroleum companies in the world were vertically integrated. Major petroleum companies perform the exploration, production, refining and distribution activities together. Vertical integration ensures economies of scale to petroleum companies. Thus, vertical integration was an important step for the development of the Turkish petroleum industry. Furthermore, through the Petroleum Market Law, retailers should depend on a distributor. During the last decade, retailers who did not depend on a distributor (called white flag retailer) had operated in the petroleum sector. GDPA, former public authority in the downstream oil industry, could not apply strict sanctions due to the lack of a comprehensive law. The Petroleum Market Law banned operation of white flag retailers and obliged retailers to depend on a distributor.

On the other hand the Petroleum Market Law had also negative aspects. Firstly, before the Petroleum Market Law, distribution companies had to purchase 60% of petroleum products from domestic refining companies. The Petroleum Market Law

[8] Zaman newspaper, http://www.zaman.com.tr/?hn=255597&bl=ekonomi&trh=20060212, Accession: November 12, 2006

had abolished this restriction. Abolishment of import restriction could increase petroleum product imports. Increase in petroleum product imports could decrease domestic production of petroleum products. Therefore, domestic refining industry could be negatively affected from the abolishment of import restriction. However, if domestic refineries work in international margins, increase in petroleum product imports will be limited. Moreover, increase in petroleum product imports would also raise the current deficit of Turkey.

Secondly, price liberalization which came into effect on January 1, 2005, can be considered as a mistake in terms of timing. Following the Iraq War, crude oil prices has fluctuated substantially and increased from $ 30 per barrel to $ 70 per barrel. Furthermore, approximately 15% depreciation of Turkish Lira against USD in May 2006 also led to increase in the price of petroleum products. As will be discussed in Chapter 6 in detail, both TÜPRAŞ and distribution companies have increased their margins following to the price liberalization.

Finally, according to the Petroleum Market Law, to establish distribution companies there was not any requirement in terms of capital, number of retailer and storage capacity. The only requirement was to sell annual 60.000 tons white products. Indeed, if a distribution company fails to meet sale of 60.000 tons white product EMRA is not obliged to terminate the license. As a result, the number of distribution companies increased to 49 which was 21 in 2004. Increase in the number of distribution companies makes it difficult to audit distribution companies and solving the smuggled oil problem. EMRA amended license regulation in June 2006. Through the amendment distribution companies must have at least YTL 5 million capital. However, this arrangement seems to be insufficient to decrease the number of distribution companies.

CHAPTER 5

THE ENERGY POLICY OF THE EUROPEAN UNION

Turkey-EU relationship had a history of more than 40 years. Turkey has been a candidate state for EU membership since the Helsinki European Council in 1999. In addition, accession negotiation was started in October 2005. In order to be a member of the EU, Turkey should comply its social, legal and economic structure with European Union. Energy is also an important topic in Turkey's EU membership process and has a special part in the National Programme of Turkey for EU membership (The Cabinet Decision, 2003). In the energy part of National Programme, Turkey determined its priorities in order to comply with EU energy policies in detail.

As discussed below, the EU energy policy has three main objectives; to create an internal energy market, to ensure supply security and to protect environment. In the energy part of National Programme, Turkey determined three priorities for creation of internal market. These are; ensuring the independence and effectiveness of the regulatory authority in energy sector; removing restrictions on the cross-border trade in energy and ensuring competitive internal energy market in gas and electricity sector. Turkey has already realized the first and third priorities in terms of legal aspect. An independent board, Energy Market Regulatory Authority was established in 2001 and also the Electricity Law and the Natural Gas Law, both aiming liberalizing electricity and gas market, was enacted in the same year. Yet, liberalization of electricity market and natural gas market has not achieved in practice despite the existence of laws. The second priority is a medium term requirement of the Council Decision of 19 May 2003 on the Accession Partnership with the Turkey (Cabinet Decision, 2003). Turkey must ensure the parallel work of its national transmission system with European's transmission system.

In order to guarantee the supply security, Turkey arranged keeping 90 days national petroleum stock with the Petroleum Market Law in 2003 which was discussed in Chapter 4. However, the National Stock Arrangement has not been realized yet. Turkey is planning to establish a nuclear plant in the medium term in Sinop[9]. Establishment of nuclear energy shall ensure the diversification of energy sources and decrease the energy independence; both contribute to supply security.

Finally, the Renewable Energy Law was enacted in 2005 to comply with the third principle of the EU energy policy, protection of environment. The goal of the Renewable Energy Law is to increase the share of renewable energy in the electricity production, to diversify the energy resources, and to decrease the gas emissions.

As stated above, European Union energy policies shape the energy policies of Turkey while Turkey is a candidate country for the EU membership. Therefore, investigation of EU energy policies is essential to clarify the deregulation of downstream oil industry in Turkey. In this chapter, initially the current energy structure of the European Union will be analyzed. Furthermore, dependence of the European Union in terms of energy will be discussed. Then, history of the EU energy policy will be investigated. After then, current energy policy of the EU will be examined and policy of the EU in downstream oil industry will be studied. Finally, the downstream oil industry of Spain, Poland will be analyzed. The reason for the selection of these two countries is that the liberalization of downstream oil industry in both countries experienced with the EU membership process. In other words, liberalization of downstream oil industry in both countries was a result of the EU membership process. It is possible to draw some lessons for Turkish case by using these examples.

[9] Sabah Newspaper, http://www.sabah.com.tr/ozel/nukleer1929/dosya_1929.html, Accession: November 12, 2006.

5.1. Energy Dependency of the European Union

European Union is consuming more and more energy every year. In 2003 EU-15 countries consumed 1.513,4 Mtoe energy, which was 1.486,2 in 2001 (EU, 2003). Indeed, with the participation of 10 countries, total energy consumption of the EU-25 was 1.726,0 Mtoe in 2003. The share of oil, natural gas, solid fuels, nuclear and renewables in total energy consumption of EU-25 was, 37%, 24%, 18%, 15% and 6% in 2003 respectively. Indeed, the sum of share of oil and natural gas, which were large extent imported, was 61% (Table 5.1).

Table 5.1: Gross Inland Energy Consumption of the EU in 2003 (Mtoe)

	All fuels	**Solid Fuels**	**Oil**	**Natural Gas**	**Nuclear**	**Renewables**
EU 25	**1.726,0**	314,4	645,8	408,1	251,2	103,4
EU 15	**1.513,4**	222,5	596,0	366,1	231,7	92,1

Source: EU (2005)

The distribution of the EU final energy consumption according to the sectors is shown in Table 5.2. Final Energy Consumption of the EU-25 countries was 1.131,6 Mtoe in 2003. The share of industry, households, services and transports was 28%, 27%, 11% and 30% respectively. The energy intensity[10] of industry had declined by 23% between 1985 and 1998. On the contrary, the energy intensity of transport increased by 10% between the same period (EC, 2001). It seems that while the energy dependency of industry was decreasing in Europe, whereas energy dependency of transport was rising.

[10] Enery intensity measures energy consumption in relation to GDP

Table 5.2: Final Energy Consumption of the EU by Sector in 2003 (Mtoe)

	All Sectors	Industry	Households	Services	Transports	Other
EU 25	**1.131,6**	317,2	300,5	129,2	344,4	40,3
EU 15	**1.003,5**	277,6	262,1	113,4	316,8	33,6

Source: EU (2005)

As stated above, oil and natural gas accounted for approximately 60% of the EU's total energy consumption. Oil and natural gas resources of the EU were insufficient to meet consumption. Moreover, the production of solid fuels has declined gradually in Europe. European coal is uncompetitive compared to imported coal due to the existence of worse geological conditions and high labor costs. Therefore, the dependency of the EU on imported coal is increasing day by day. In addition, the share of nuclear energy could not increase due to the social and political resistance and the share of the renewables are still very low. In Table 5.3, the import dependency of the EU is demonstrated. The import dependency of the EU-25 and EU-15 in 2003 was 50% and 52% respectively. Furthermore the import dependency of EU-25 in oil was 77% and in natural gas was 53%. The import dependency of EU-25 in solid fuels was 20% less than EU-15 due to the existence of solid fuel resources of the countries which participated to EU in 2004. European Union's energy dependency is expected to reach 70% in 2030. In case of oil, natural gas and coal the dependency is expected to reach 90%, 70%, and 100% in 2030 (EC, 2001).

Table 5.3: Import Dependency of the European Union in 2003 (%)

	All fuels	Solid Fuels	Oil	Natural Gas
EU 25	**49,5**	35,4	76,6	53,0
EU 15	**51,8**	55,1	79,2	49,2

Source: EU (2005)

Due to the dependence on oil and natural gas, the diversity of the imported countries for oil and natural gas is a crucial task for the European Union. As seen in Table 5.4, crude oil imports from Former USSR Countries had increased stably between 2002-2004 and the share of the Former USSR Countries was 31% in 2004. While import from Norway was stable around 100 million tons, import from Saudi Arabia, Libya and Iran had increased between 2002 and 2004. Considering the possible political instabilities in the Middle East region and Former USSR countries in the future, imports from both regions could create possible supply disruptions.

Table 5.4: Crude Oil Imports of the EU-15 (in Mio tones)

Country	**2002**	**%**	**2003**	**%**	**2004**	**%**
Former USSR	123,2	26%	140,7	29%	158,5	31%
Norway	101,6	21%	104,6	21%	104,0	20%
Saudi Arabia	53,1	11%	61,5	12%	66,1	13%
Libya	38,8	8%	45,7	9%	49,6	10%
Iran	25,9	5%	34,7	7%	35,9	7%
Middle East not specific	19,6	4%	11,7	2%	9,0	2%
Other Origin	110,7	23%	94,5	19%	91,0	18%
Total Imports	**472,9**	**100%**	**493,5**	**100%**	**513,9**	**100,0%**

Source: EU (2005)

Finally, in Table 5.5 the natural gas imports of the EU-15 countries are shown. Russia was the leading country in gas imports of the EU-15 like in the oil, with a share of 33% in 2004. The total share of the Russia, Norway and Algeria was 82% in 2004, which demonstrates European countries' failing to diversify natural gas imports.

Table 5.5: Natural Gas Imports of the EU-15 (in Mio cubic metres)

Country	2002	%	2003	%	2004	%
Russia	68.807	33%	74.160	33%	76.709	33%
Norway	61.351	29%	66.707	30%	67.212	29%
Algeria	53.162	25%	52.086	23%	49.879	21%
Non Specific Region	15.966	8%	18.700	8%	24.899	11%
Nigeria	6.276	3%	8.746	4%	10.538	4%
Qatar	2.070	1%	1.893	1%	3.770	2%
Other Origins	2.972	1%	1.666	1%	2.747	1%
Total Imports	**210.604**	**100%**	**223.958**	**100%**	**235.754**	**100,0%**

Source: EU (2005)

5.2 History of the EU Energy Policy

EU still feels deeply the absence of a common energy policy. Energy has been one of the most important tasks of the European Union for 50 years. Indeed, two of the three main treaties in European Community were related with energy. The first one was the Paris Treaty in 1952, which established the European Coal and Steel Community (ECSC). The second one was the European Atomic Energy Treaty (Euratom Treaty) which was signed in 1957.

The ECSC is still considered as the first major step towards the European Union. The motives in the establishment of the ECSC were political rather than economic. Following to the Second World War Europe needed energy for the reconstruction but there was a shortage for coal which was the main energy sources at that time. Germany had great coal resources and coal was the main input for steel which was mainly produced in France. Thus, the ECSC viewed as the instrument for the establishment of peace between France and Germany. In addition to France and Germany, the Benelux countries and Italy were also included to the Paris Treaty (Matlary, 1997). The primary objective of the ECSC was to achieve economic

development, increase the living standards and employment by establishing a common market for coal and steel (Ege, 2004a). The ECSC expired in 2002.

The Euratom Treaty signed on March 25, 1957, aimed to create an alternative energy to prevent the increasing dependency of European Countries to oil. In this context, nuclear energy viewed as a clean and safe energy resource which could meet the increasing energy demand in Europe. The Euratom also aimed the usage of atomic energy for peaceful purpose and development of the nuclear technology (Ege, 2004b).

Signed in Rome in 1957, The European Economic Community Treaty, did not constitute a special part regarding energy policy. Coal and nuclear energy had been arranged in ECSC Treaty and Euratom Treaty. However, there was no regulation regarding oil, gas and electricity market. These markets were governed according to the general regulations in the Treaty of Rome, especially using competition law. In short, the Treaty of Rome did not have an energy policy.

In 1960s, the usage of oil expanded substantially due to the low oil prices. Increase in oil consumption reduced the importance of ECSC and Euratom Treaty due to the decline in importance of coal and nuclear energy. As a result, the share of oil in European Countries boomed to 67% in 1973 (Ege, 2004). Low oil prices helped economic development of the European Economic Community (EEC). In 1968, The European Commission tried to constitute an internal energy market. However, this attempt failed due to the resistance of the member states.

The first oil crisis in 1973 severely affected EEC. Crude oil prices rose by 5 times with the crisis. Due to the high dependence on oil, EEC experienced with stagflation and balance of payment problems. With the oil crisis, energy policy of the EEC was reconsidered. Supply security became the most popular task in European energy policy. EEC started to reduce the energy dependency, and started to diversify the imported energy sources. Moreover, EEC also tried to diminish the energy intensity

of the economy by rational usage of the energy. For this purpose, energy saving programs were developed.

On the other hand, following the first oil crisis, OECD countries established the International Energy Agency (IEA) in 1974. The main objectives of the IEA were to prevent the disruptions in oil supply, to promote worldwide rational energy policies, to establish an information system about energy markets, to diversify the energy suppliers and to decrease the energy dependence of OECD countries by demand management and by increasing domestic production and research on renewable energy (Belyi, 2003). As a result of IEA policies, OECD countries' dependence on oil declined sharply. Net imports of the OECD countries decreased from 27 Mb/day in the mid-1970s to 16 Mb/day in the mid-1980s (Bielecki, 2002). However, due to the low oil prices after the mid-1980s, the crude oil imports of OECD countries started to rise again.

In 1968 the European Council obliged member countries to keep emergency petroleum stocks equal to 65 days consumption. In December 1972, the emergency petroleum stocks increased to 90 days. In September 1974, the European Council accepted "The New Energy Policy Strategy". This could be evaluated as the first important attempt regarding the energy policy (Ege, 2004). The basic objectives of this "New Energy Policy Strategy" were;

- To decrease the growth rate of energy consumption without damaging the economic development
- To increase the supply security by decreasing import dependency, diversifying imported energy, increasing the share of nuclear energy and solid fuel
- To protect environment both during the production and consumption of energy

The second oil crisis in 1979 also increased the attention on supply security. In the second half of the 1980s, efforts in the European Community increased in order to

create an EC energy policy. In 1980's the European Council continued to dedicate importance to the supply security. In addition to supply security, environmental protection and establishment of an internal energy market became other popular issues in energy policy.

In September 1986, the Council of the Ministry of Energy indicated that establishment of the internal energy market was a necessity for Europe. However in the Single European Act, adopted in 1986, there was no chapter regarding energy policy due to the disagreement between the member countries (Andersen, 2000).

In 1988, efforts to develop an internal energy market were initiated by the European Commission. Energy policy was discussed on a White Paper[11]. The Commission determined that the downstream oil industry was mainly operating in a free market. However, this was not current in gas and electricity markets. As a result, The Commission started to work for the liberalization of electricity and gas markets despite the existence of great resistance both from the member states and gas and electricity sectors.

In 1991, the European Energy Chart, established thanks to the efforts of the European Union, was signed by 51 countries. In 1994, the Chart was transformed to the European Energy Chart Treaty. In April 1998, the European Chart Treaty came into effect after the required number of countries signed the treaty. The main objective of the European Energy Chart Treaty was to ensure the security of supply by modernizing the energy facilities of the producer countries. The modernization of the producer countries' facilities would be financed by the developed countries which were net energy importers. Moreover, the European Energy Chart Treaty was also aiming to increase the efficiency of production, transportation, distribution and

[11] White papers are documents containing proposals for Community action in a specific area. They sometimes follow a green paper published to launch a consultation process at European level. While green papers set out a range of ideas presented for public discussion and debate, white papers contain an official set of proposals in specific policy areas and are used as vehicles for their development. Green Papers are discussion papers published by the European Commission on a specific policy area. Primarily they are documents addressed to interested parties - organisations and individuals - who are invited to participate in a process of consultation and debate.

consumption of the energy and also the environmental protection. Through the European Energy Chart Treaty, countries had to ensure the same conditions to foreign investors with the domestic investor in energy investments. However, despite signing of the Treaty, Russia, which was a crucial country for the success of the Treaty, has not approved the Treaty yet (Altunışık, 2004).

The Maastricht Treaty, signed in 1993, also did not have a chapter relating the energy policy. In 1994, the directive relating the hydrocarbon licensing was passed in and come into the force in 1995 (Andersen, 2000).The license directive intended to ensure the ruling of market principles in the upstream industry. Moreover, it also prevented member states to grant privileges to national companies. In 1995, the European Commission adopted a White Paper on Energy Policy (1995). The White Paper determined the three aspects of the European energy policy as the security of energy supply, establishment of internal market and environmental protection. In 1996, the European Council and the Parliament adopted the directive concerning a single market for electricity. With this directive both production and transportation of the electricity market was deregulated. In 1998, the directive concerning a single market for gas was accepted (Andersen, 2000).

The Green Paper (2001) was also an important document for the European Energy Policy. The Green Paper was a reaction to the increasing energy dependence of the European Union. According to the Green Paper, "security of supply does not seek to maximize the autonomy of the EU in energy or to minimize the dependence of the EU, but to reduce the risks connected to latter" (EC, 2001). Consequently, the European Commission adopted a new Green Paper in March 2006. According to this new Green Paper, European Energy Policy should have three main objectives; sustainability, competitiveness and security of supply (EC, 2006).

5.3. The Energy Policy of the European Union

As mentioned above, energy policy was not a concern in the main treaties of the European Union such as the Treaty of Rome, the Single European Act and the Maastricht Treaty.

> *Structural differences between countries led to a lack of shared interest among European states towards a common energy policy: countries with poor energy resources (particularly Belgium, Italy and Spain) were in favor of the Energy Chapter in the EU Treaties, while large energy producers, particularly the UK (for oil and gas), Germany (for coal) and France (for nuclear energy) were opposed to this position (Belyi, 2003).*

However, following the mid-1980s, as discussed above, a great deal of efforts have been made to develop a common energy policy. Despite the differences between member states' energy policies, it is possible to discuss about European energy policy in a general perspective. Three basic principles of the European Union's energy policy are to ensure the supply security, to establish an internal market for energy and to protect environment. These three main principles of the EU's energy policy are interacted. For instance, development of renewable energy is required for the supply security and environmental protection. A rise in the share of renewable energies would decrease import dependency on oil and gas, which contributes to supply security. Moreover, development of renewable energy also contributed to environmental protection, since renewable energy is environmental friendly. On the other hand, EU Commission argues that development of an internal energy market would make European Union to react more effectively against supply disruptions which would strengthen the supply security. Thus, EU Commission asserts that main principles of the EU energy policy should be evaluated together rather than separately. However, in contrast to EU Commission, it is argued that the deregulation of energy markets threatens the supply security and environmental protection. For instance, Dooley (1998) states that deregulation of energy markets reduced investments on energy R&D. Moreover, Dooley (1998) implies that environmental friendly long-term energy R&D is unlikely to be realized by private sector in a deregulated energy market. Buchan (2002) also indicates that deregulation of energy

markets endangers the energy security. Buchan (2002) asserts that deregulation of gas sector decreases the duration of gas contracts. Shorter gas contracts make it difficult to finance long-distance gas pipelines which would damage security of supply. In addition, development of nuclear energy and renewable energy are very difficult in a deregulated energy market. Establishment of a new nuclear energy plant takes almost ten years and costs approximately $ 2 billion. Financing this kind of long and high-cost investment is very difficult in a deregulated energy market. Moreover, since renewable energy is still uncompetitive compared to oil and natural gas, investment on renewable energy is mostly unattractive for private companies. Finally, Meyer (2003) claims that deregulation of energy markets ignores the environmental protection and supply security. Development of renewables and energy conservation is vital for both supply security and environmental protection. However, realization of long-term renewable energy investments and energy conservation projects are very difficult in a deregulated energy market, since private companies mainly focus on short-term profits. In short, although EU Commission affirms that liberalizing energy markets contributes to supply security and environmental protection, it is also argued that deregulation of energy markets threat supply security and environmental protection.

Three principles of the EU energy policy such as security of supply, establishment of an internal energy market and environmental protection will be discussed below. Initially, security of supply has been an important task in EU energy policy as of the first oil crisis in 1973. The concept of security of supply at first was evaluated in a narrow perspective as the import dependency. Following the first oil crisis, European Countries reacted to crisis to reduce their import dependency. However, after 30 years from the first oil crisis security of supply is considered in a broader perspective. Today security of supply is defined as “reliable and adequate supply of energy at reasonable prices” (Bielecki, 2002). Reliable and adequate supply means that whether the supply meets demand and reasonable prices means “prices are cost based and determined by the market based on supply/demand balances” (Bielecki, 2002). Moreover, as mentioned above, in Green Paper (2001), security of supply

defined as to reduce the risks related to import dependency rather than maximize the autonomy in energy or minimize dependence in energy.

EU imports approximately 50% of the energy. According to the Green Paper (2001), if no measure taken, import dependency could reach to 70% in the following 20-30 years. Thus, supply security will become more and more important in the future. In order to reduce this risk, the EU is developing policies such as increasing domestic production, increasing diversification of imported energy and diversification of the imported countries and developing relationships between energy-producer countries.

As EU does not have abundant oil and gas reserves, it can only increase production by increasing the production of coal, nuclear energy and renewable energy. However, increasing the production of coal is not possible due to the cost problems of EU coal industry and also due to the environmental concerns. Firstly, the EU coal industry is highly uncompetitive because of the existence of difficult geographical conditions and high social insurance cost. Indeed, average cost of production in EU coal industry is 3-4 times higher than the international world prices. On the other hand, coal produces pollution in every stage of production and utilization cycle (EC, 2001). Thus, increasing the share of coal is not possible in the future.

Furthermore, nuclear energy, having a 15% share in energy consumption and 35% in electricity consumption, could not be a solution to increase the domestic production due to political and social resistance against nuclear energy. Although, nuclear energy does not produce greenhouse gas, the Chernobyl calamity in 1986 still leads to a negative opinion in the European Union. Indeed, only Finland in the EU decided to build a new reactor in the future. Italy stopped using nuclear energy in 1987 with a referendum, Germany and Belgium has announced to shut down their reactors in 2021 and 2025 (EC, 2001).

Renewable energy has more prospects compared to coal and nuclear energy. According to the Green Paper (2001), increasing the share of renewable energy from 6% to 12% until 2010 is one of the objectives of the European Union. Moreover, the

installed wind energy of European Union reached to a capacity equivalent to 50 coal fired power stations and 300.000 people is working in the EU renewable energy market (EC, 2006). However, renewable energy still meets only a small portion of the increasing energy demand of EU in the near future but renewable energy is becoming a more crucial energy sources every year. Thus, rising investments on renewable energy is one of the solutions to decrease supply risks in the long-term. However, it is not possible to decrease import dependency of EU in a great rate in the next 20-30 years.

On the other hand, another policy to reduce the import dependency is to decrease energy demand by increasing energy savings in buildings and transport sectors. There is no problem in industry sector, since the energy intensity and oil dependency of industry sector has gradually declined. However, 63% of household consumption was met by oil and gas and 98% of transport consumption by oil. Furthermore, the energy intensity of transport sector increased by 10% between 1985 and 1998 (EC, 2001). Thus, development of energy saving policies in buildings and in transport sector could ensure significant energy saving which will decrease import dependency. In Green Paper (2001), policies proposed for energy saving were; to ensure development in vehicle technology, to encourage use of fuel substitutes such as biofuels and natural gas for vehicles, in transport and heating in the longer term hydrogen and to develop a transport policy concerning energy saving.

Another task to manage supply risks is to ensure import product diversification and geographic diversification. Import dependency of EU in oil was 76%, in natural gas 53% and in solid fuels 35% in 2003. Indeed, import dependency will increase in all types of energy in the future. On the other hand, in 2003 more than 80% of gas imports of the EU-15 was realized from three countries (Russia, Norway and Algeria) and also most of oil imports realized from two regions (Middle East and Former USSR). Since most of world's oil and gas reserves are located in Middle East and Former USSR, EU has little room to diversify energy imports geographically (EU, 2005).

Since there is a little opportunity for import product diversification and geographic diversification, international relations became more important for EU energy policy. During the last decade, EU made a great deal effort about this topic. The European Energy Chart Treaty, which came to in effect in 1998, was one of the important efforts concerning supply security. In addition, INOGATE (Interstate Oil and Gas Transport to Europe) and TRACECA (Transport Corridor Europe-Caucasus-Asia) programs are other important efforts in energy security. INOGATE, launched in 1995, aimed to upgrade existing transmission network and build new oil and gas pipelines from Caspian and Black Sea region to Europe. TRACECA, established in 1993, following a proposal of Eduard Shevardnadze, aimed to create transport corridor from Central Asia, across the Caspian Sea, through the Caucasus, across the Black Sea to Europe (Fischer, 2002). Both programs are very crucial for the energy security of Europe. Finally, EU and Russia established a strategic partnership in 2000. The basic topics of this strategic partnership were energy policies, technology transfer, investment and energy efficiency (Bielecki, 2002).

The second principle of the European Union's energy policy is to establish an internal market for energy. Establishment of an internal energy market means to liberalize energy sector and create an internal energy market in European Union. This can be evaluated as the most difficult task in European Union's energy policy. In order to establish an internal market, European Union made a lot of attempts during the last two decades. Most of the arrangements faced with a great resistance both from the member states and energy sector. Especially, during the liberalization of gas and electricity sectors governments and energy sector showed great resistance. The liberalization of gas and electricity sectors is still continuing. According to the Green Paper (2001), energy sector liberalization would also contribute to the security of supply by sending the right signals to industry participants. Moreover, it was argued that, the internal market for the overall EU economy could not be accomplished without a competitive energy market.

Finally, the third principle of the European Union's energy policy is to protect environment. The European Union signed the Kyoto Protocol of the United Nations

in 1998. Through signing the Kyoto Protocol European Union commit itself to reduce gas emissions by 8% between 2008-2012. In order to achieve this goal, EU tries to decrease the share of coal and increase the share of renewable energy and natural gas. Moreover, energy saving is also an important instrument to reduce gas emissions.

5.4. Oil Policy of the European Union

Oil is still the leading energy source in European energy. In 2003, 37,4% of the EU-25 energy consumption was met by oil (EU, 2005). The share of oil is not expected to decrease sharply in the next 20 to 30 years (EU, 2001). In this part, basic arrangements of European Union in oil sector will be investigated. Initially, the emergency petroleum stock arrangement will be analyzed and later other policies of EU considering oil will be discussed.

The first arrangement of the European Community regarding minimum petroleum stocks was the Council Directive 68/414/EEC of December 20, 1968, which aimed to increase the security of oil supply. According to Directive 68/414/EEC member states were obliged to keep equal to at least 65 days' average daily internal consumption in the preceding calendar year for each of the categories of petroleum products listed below;

- motor spirits and aviation fuel
- gas oil, diesel oil, kerosene and jet-fuel of the kerosene type
- fuel oils

With the Council Directive 72/425/EEC/ of December 19, 1972 the minimum petroleum stocks increased to 90 days. Final arrangement about minimum petroleum stocks was the Council Directive 98/93/EC of December 14, 1998. Like the Council Directive 72/425/EEC, member states are still obliged to maintain petroleum products stocks equal to at least 90 days of average daily consumption in the

preceding calendar. Moreover, member states were obliged to establish a stockholding agency, which would be responsible from strategic stocks.

International Energy Agency (IEA) also makes it compulsory for its members to keep at least 90 days stock. However, there are some differences between the petroleum stock arrangements of the European Union and IEA. First of which arises at calculating the 90 days. EU takes into consideration the oil consumption for three types of petroleum products mentioned above, but IEA takes into consideration net oil imports. Secondly, EU does not apply the IEA's 10% deduction for stocks supposed unavailable in the case of a crisis. Thirdly, according to IEA regulations- net exporting countries do not have to keep emergency stock. However, according to EU regulations there is 25% derogation for net exporting countries. Unlike IEA, there is no centralized decision-making mechanism to manage emergency stocks in case of crisis. The member states are only obliged to consult the other member states if they want to release emergency stocks. European Union discusses increasing emergency oil reserves and establishment of a system to manage these stocks in a crisis (Bielecki, 2002). European Commission proposed to increase the minimum stock requirement to 120 days in 2002, however this proposal has not been accepted yet (EC, 2002). In addition, Green Paper (2001) proposed to use emergency stocks "to make prices more stable or to respond exceptional demand".

Establishment of an internal energy market in EU has been discussed for two decades. This dispute was mainly on gas and electricity markets. The oil market was regarded as generally competitive. Thus, unlike gas and electricity markets, there is no need for broad regulations. According to the Commission Working Document in 1988, oil market was "already to a large extent subject to competition" due to the existence of reasons below (EC, 88);

- *global integration of markets for crude oil and petroleum products,*
- *the large number of operators in the oil industry in the Community; multinational oil companies, national companies or independent distributors,*
- *the ample supply of petroleum products from Community refineries, whose aggregate capacity is big enough to satisfy demand, and from refineries in non-Community countries,*

- *the numerous ways and means of moving products: by sea, inland waterway, rail, road and pipeline,*
- *Lack of a network structure; with oil, unlike natural gas and electricity, the consumer can choose between a number of competing suppliers*
- *Price transparency, be it of international prices (as quoted on the Rotterdam and Genoa oil markets) or those paid by final consumers (the Commission's Weekly Oil Bulletin) (EC, 88)*

Although the oil sector was generally accepted competitive, existence of obstacles in member states for internal energy market were also discussed in Working Document of European Commission. Some member countries, such as Denmark, Greece, Ireland, Italy and Netherlands, reserved exploration and production privileges to their national oil companies. Policies on crude oil and petroleum import products from certain non-Community countries varied between member countries. Moreover, in Spain, France and Portugal, there was an obligation to use national flag shipping for the carriage of crude oil and petroleum products by sea which violates Council regulations. Furthermore, in some member states national refineries had exclusive rights in their domestic markets. In addition, in some member states there were quantitative restrictions on the import of EEC oil products. For instance, in Greece, it was obligatory to buy 40% of consumption from State-owned refineries. Besides, there were discrepancies in rules and technical norms applicable to petroleum products between member states. In Spain and Greece, price determination mechanisms violated competition rules. Finally, there were differences in indirect tax systems with regard to oil products between member states (EC, 88). After the investigation of member states' oil industries the Commission determined three priorities (EC, 88);

- to approximate taxation among members
- to remove the differences in rules and technical norms applying to petroleum products
- to remove obstacles to internal transport for the liberalization of services

In short, oil industry was evaluated as competitive despite the existence of some problems. Commission believed that most of the existing problems could be solved

by the application of existing laws and by arrangements regarding internal market (Altunışık, 2004).

Finally, in 1994, The Commission adopted a Directive, which regulates the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons (EC, 94). The Directive 94/22/EC aimed to liberalize the upstream oil and gas industry. It also included the protection of environment and planned management of resources (Hamor, 2004).

5.5. Downstream Oil Industry in Some Selected European Countries: Cases of Spain and Poland

In this part, the downstream oil industries of two European Countries will be analyzed. The selection criterion for countries is that liberalization of downstream oil industries in all two countries was parallel with the process of the EU membership. In other words, the liberalization of downstream oil industries in all three countries was part of being a member of European Union.

5.5.1 Spain

Spain, became a member of European Union in 1986, consumed 134,1 Mtoe energy in 2003. Oil had a share of 50%, gas 16%, solid fuels 5%, nuclear energy 12% and renewable energy 7%. Moreover, import dependency of Spain in 2003 was 76,4%. This ratio was very high compared to EU-25 import dependency, which was 49,5%. Indeed, oil dependency of Spain was 99,6% and gas dependency of Spain was 99,4% in 2003 which means that Spain's both oil and gas production was negligible share in total oil and gas consumption (EU, 2005). In short, half of the Spain's energy consumption was met by oil and Spain was importing approximately all of the oil consumption.

Spain has liberalized its downstream oil industry for the last two decades. The liberalization process of downstream oil industry was parallel with Spain's EU

membership process. Before 1980s, the government totally controlled Spanish oil industry. CAMPSA, which was established in 1927, was the public monopoly in the distribution and marketing of petroleum products. The national refineries, mostly joint ventures with international oil firms, supplied oil products to CAMPSA. Moreover, increasing the refining capacities was subject to approval of the government. Finally, petroleum product prices were determined by the government and CAMPSA (Contin, 1999).

The liberalization of Spanish oil industry began in the first half of the 1980s, Refining, distribution and marketing activities were gradually opened to third parties. Initially, the public oil companies were merged in a new company called Repsol. Then, two private refining companies, Cepsa and Petromed were sold to Elf and BP respectively. After these, in 1984 CAMPSA, public monopoly in distribution and marketing of oil products, were sold to three refining companies, Repsol, Cepsa-Elf and BP on the basis of their refining capacities (Arocena, 2002). At that time, CAMPSA had distribution and storage facilities and also had service stations. Thus, national refiners were vertically integrated with the sale of CAMSPA (Contin et al., ?).

In 1989, privatization of Repsol was started with the initial sale of 30,6% public shares and privatization of Repsol was accomplished in 1997 with the sale of last 10% public shares (except a golden share) (Verges, 2000). In 1998 Repsol purchased YPF, Argentinean public oil company, and Repsol's was renamed as Repsol YPF. In July 1990, Spanish government adopted the ceiling price regime in petroleum products. According to the new regime, a ceiling price was calculated based on the average pre-tax prices of 6 European Countries such as Belgium, Germany, France, Italy, Holland and the United Kingdom. Between July 1990-mid 1992 CAMPSA determined prices significantly lower than ceiling prices and independent operators followed it. In 1992, by the Oil Industry Law, imports, distribution and marketing activities in Spanish oil market were liberalized (Salmon, 2002). In 1992, CAMPSA's service stations were transferred to Repsol, Elf and BP on the basis of their respective shares in CAMPSA. CAMPSA became only a transport company

and renamed as CLH. Repsol sold 5% of CLH to Shell in 1993. Moreover, in 1993, legal monopoly of CAMPSA was abolished. After the transfer of CAMPSA's service stations to its owners, Repsol and Cepsa started to determine petroleum product prices just below the ceiling prices and the other firms followed them. However, Repsol and Cepsa lost market shares during this period. In 1996, Repsol started to decline prices and reduced its margins. As a result, the difference between actual and ceiling price increased. Finally, in 1998 with the new Hydrocarbon Law, ceiling price regulation was removed and prices were started to set freely (Contin et al., 1999).

Initial deregulation of Spanish oil industry had created an oligopolistic market structure. In 1993,Repsol, Cepsa-Elf and BP owned 54.8%, 23.7%, and 6.3% of total 5.983 service stations in Spain respectively. Indeed, despite the increase in the share of other firms in 1990s, Repsol, Cepsa-Elf and BP owned 46.7%, 18.6% and 6.8% of total service stations in Spain in 2002 (Contin et al., 2004). Moreover, CLH, which was owned by Repsol, Cepsa-Elf, BP and Shell, was the only company distributes oil by pipelines and transported about 90% of the transportation of automobile fuels in mid-1990s (Contin et al., ?). The independent operators blamed CLH applying discriminatory policy against companies, which were not owners of CLH.

In June 2000, Spanish government took new steps further liberalization of oil market. For this purpose, CLH was opened to companies other than Repsol, Cepsa-Elf, BP and Shell. Moreover, the government restricted that a single company could not own more than 25% of CLH and the share of refining companies could not exceed 45%. Moreover, in order to decrease the weight of Repsol and Cepsa-Elf in oil market, the government banned the oil companies which has a market share of more than 30% to increase their service stations for 5 years which affected Repsol adversely and also banned the oil companies which has a market share between 15% and 30% to increase their services for 3 years which affected Cepsa-Elf negatively (Contin et al., 2004). In short, despite the efforts of the government, Spanish oil market is still far way from a competitive market due to the weight of Repsol and Cepsa-Elf.

5.5.2 Poland

Poland, accepted to the EU in 2004, consumed 94,1 Mtoe energy in 2003. The share of solid fuels was 61%, the share of oil was 22%, the share of natural gas was 12% and finally the share of renewable energy was 5%. There is no nuclear plant in Poland. Poland's import dependency was 14,3% in 2003, which was very low compared to EU average. The solid fuels dependency of Poland was -23% which means that Poland was a net solid fuels exporter. Oil and natural gas dependency of Poland in 2003 was 96,5% and 66,6% respectively. It is noticeable that energy dependency is not an important problem in Poland due to existence of domestic coal reserves. However, Poland also heavily depends on imported oil and imported natural gas (EU, 2005).

There are seven refineries in Poland three of which belong to PKN Orlen SA and 4 of which belong to Lotos Group SA. PKN Orlen, is the biggest producers in refining sector which processed 12.2 million tons crude oil in 2004. Lotos Group is the second biggest producer in refining sector, which processed 4.7 million tons in 2004. Both companies are vertically integrated, in other words operate both in refining and distribution sector. There were 6.770 service stations in Poland in 2004. PKN Orlen owned 28% and Lotos Group owned 6% of the total stations in Poland in 2004. 51% of the total stations was operated by independent operators, 14% of total stations was operated by foreign companies and 1% was operated by hyper and supermarkets (Polish Ministry of Economic Affairs and Labor, 2005).

The liberalization of oil industry in Poland was started at the beginning of 1990s, but accelerated after the adoption of new Energy Law. Fuel prices were liberalized in February 1997. Although, The Council of Ministers and Ministers of Finance still have the power to intervene prices in case of social and economic crisis, it has never used this power since 1997. Moreover, import quotas was removed in 1997 and import duties reduced to zero in September 2000. There is an Energy Regulatory Authority in energy sector; however this authority does not have an independent authority other than licensing upstream and downstream activities. According to the

anti-monopoly law, market share of a company could not exceed 40% in retail market (OECD, 2002).

The most difficult task of the liberalization, the privatization of public companies operating in the sector, is still continuing. The first step in liberalization of downstream oil industry was the establishment of Nafta Polska in 1994, joint stock company which was responsible for the privatization of oil and gas sector. Nafta Polska initially owned public refineries and CPN (Central Distribution Company) (Muir, 2002). In 1998, PKN Orlen was established through the merger of CPN and Plock refinery, both owned by Nafta Polska. Thus, PKN Orlen was vertically integrated at the beginning. In 1999, privatization process of PKN Orlen was started by selling of 45% in Warsaw Stock Exchange. Privatization of PKN Orlen continued in following years, government still has a 27,5% share in PKN Orlen[12]. In 2003 Grandska refinery, which is the second biggest refinery and owned by Nafta Polska, changed its name as Lotos Group. In January 2005, Lotos Group purchased three southern refineries and Petrobaltic (Oil and Gas Research Enterprise) from Nafta Polska. In June 2005, Lotos Group shares started to float on Warsaw stock exchange. Currently, government's share in the Lotos Group is 58,8%[13]. Briefly, although Polish government performed good deal of efforts to privatize public oil companies, government still goes on to hold 27,5% share in PKN Orlen and so controls Lotos Group. An important aspect of the privatization of oil companies in Poland is that both PKN Orlen and Lotos Group was vertically integrated before privatization.

5.6. Conclusion

European Union's energy dependency is increasing every year. Moreover, energy dependency problem worsened after the participation of new 10 countries in 2004 due to poor energy resources of these countries. Renewable energy is considered as the only way to reduce import dependency, but share of renewable energy is still

[12] PKN Orlen's website, www.orlen.pl, Accession: November 12, 2006

[13] Lotos Group website, http://www.gpw.com.pl/zrodla/gpw/zlote/eng/lotos.html, Accession: November 12, 2006

around 6% and increase in the share of renewable energy is expected to realize gradually in the future. In 2003, European Union imported half of total energy consumption. EU-25 countries imported 76,6% of oil consumption and 53% of natural gas consumption. Moreover, the sum of share of oil and gas in EU-25 was 61% in 2003. Indeed, European Union is highly dependent on Russia and Norway in natural gas and is highly dependent on Former USSR countries, Middle East countries and Norway in oil. Political stability in Middle East and Former USSR countries is very crucial for supply security of European Union. Therefore, energy policies of European Union have great importance for the future prospect of the Union. As discussed in Chapter 3, Turkey also imports most of its oil needs from Middle East countries and Russia. Therefore, diversification of oil imported countries is also crucial for Turkey like European Union.

Although two of three treaties, which established European Community, are related with energy, European Union still has not got a common energy policy adopted by all member countries. Historically, countries with poor energy resources such as Belgium, Italy and Spain were in favor of a common energy policy, while large energy producers, such as UK, Germany and France were opposed to it. However, efforts to create a common energy policy accelerated in 1980s. European Countries realized the importance of a common energy policy with the occurrence of first oil crisis in 1973. 1973 oil crisis revealed that security of energy supply is vital for the future of European Community. In addition to supply security, in 1980s establishment of an internal energy market and protection of environment emerged as the other basic policies in energy.

EU has developed several policies to ensure supply security. After the first oil crisis, European countries achieved to reduce the share of oil in their energy consumption by increasing the share of nuclear energy and coal. However, today EU does not have the same chance. Moreover, the share of natural gas, which mostly imported, also increased during the last two decades. Although European Commission has never ignored nuclear energy when proposing energy policies, there is still great political and social resistance against nuclear energy. Coal also could not be a

solution to oil, since European coal industry is highly uncompetitive compared to imported coal due to existence of bad geological conditions and high labor costs. In addition, coal as an energy source pollutes environment very much. It seems that the only alternative to oil is renewable energy, which still has less than 10% share in total energy consumption.

European Union also desires to diversify imported products and imported countries. However, since oil and natural gas resources are mostly located in Middle East and Former USSR countries, there is little room for diversification of imported products and imported countries. Another policy of the EU for supply security is to give importance to development of relationships between energy producer countries. The Energy Charter Treaty, the INNOGATE and the TRACECA programs were the results of this policy. Moreover, EU also tried to develop cooperation with Russia at the field of energy.

Establishment of an internal energy market is the most difficult task of the EU in energy. Liberalization of gas and electricity market has continued for two decades. Member countries and companies operating in natural gas and electricity sector have showed great resistance to this process. However, despite the existence of strong resistance, liberalization of both sectors made a significant progress. EU Commission believes that establishment of an internal market helped EU to react together to supply disruptions which would also contribute to security of supply.

Third principle of the EU energy policy is the protection of environment. Environmental protection has great support in EU which is the leading community with regard to environment policies in the world. Although EU failed to realize the targets imposed by the Kyoto Protocol, EU performs great effort for acceptance of this treaty by other countries. For this purpose, development of renewable energy is very crucial in order to decrease gas emissions. Incidentally, natural gas has become more popular in European Countries since it is a clean energy source.

Oil policy of the EU is the least controversial area in energy, since EU considers oil market as being mainly competitive. Although member countries' oil sectors have

some uncompetitive characteristics, EU tried to solve these problems by using competition law. Emergency petroleum stock is an important legislation in EU. Initially, European Community obliged member countries to keep petroleum stock equal to at least 65 days consumption, in 1968. In 1972, it was increased to 90 days. In 1998, EU revised the emergency stock legislation and obliged member countries to establish a stock agency which would be responsible from emergency stocks. There are some differences between EU and IEA legislation regarding to emergency stocks. What the most important difference is that IEA has the power to use these stocks in case of a supply disruption whereas EU feels the lack of such power. EU Commission proposed to give such power to the European Union. Finally, EU adopted license directive, which liberalize the upstream oil and gas industry in 1994.

Deregulation of downstream oil industry both in Spain and Poland highly depends on EU membership process. Therefore, investigation of both countries provides important lessons for deregulation process of Turkey. Spain started to liberalize downstream oil industry at the beginning of 1980s. On the other hand, Poland began liberalization of downstream oil industry in the first half of 1990s. Although both countries made a great amount of efforts to deregulate oil market, deregulation process still continues. Privatization is the most difficult task in both countries. In Poland, government still has shares in both two biggest companies operating in the sector, PKN Orlen and Lotos Group. In Spain, government only has a golden share in Repsol YPF. The main problem of both countries is that liberalization of oil industry emerged oligopolistic market structure in oil industry. Previously public-owned companies dominate oil industry in both countries. Spain developed policies in order to reduce the market share of Repsol YPF and also to reduce the shares of domestic refineries in CLH, major transport company. On the other hand, market share of a distribution company could not exceed 40% in Poland.

Finally, a crucial similarity between both countries' privatization experience in oil industry is that public companies were vertically integrated before the privatization. Vertical integration ensured great advantage to Repsol YPF and PKN Orlen in

international markets considering that they have important investments around the globe.

CHAPTER 6

FURTHER NOTES FOR POLICY IN TURKISH OIL INDUSTRY

As discussed in Chapter 3 and Chapter 4, Turkish downstream oil industry has experienced a radical deregulation during the last two decades. The deregulation process was started in 1989 through the price and import liberalization. The second step was the beginning of privatization processes of TÜPRAŞ and Petrol Ofisi in 1990 which was fully accomplished in 2005. Finally, the Petroleum Market Law enacted in 2003 can be considered as the final step for the deregulation of downstream oil industry.

Deregulation of downstream oil industry aimed to establish the institutionalization of market economy in downstream oil industry. However, privatization of public oil companies Petrol Ofisi and TÜPRAŞ did not increase competition in the sector. Petrol Ofisi has substantially increased its market share following the privatization. Also, TÜPRAŞ was also transformed from public monopoly to private monopoly. Public oil companies in most countries were vertically integrated before privatization. However, in Turkish case vertically integrated structure of public oil companies had been broken before privatization which prevented emergence of a national oil company operating in international markets like Repsol-YPF in Spain, PKN-Orlen in Poland, Petrobras in Brazil. By the way, the lack of sufficient transparency during the privatization processes of Petrol Ofisi and TÜPRAŞ is also other problematic aspect of privatization process.

Another important step in deregulation process was the liberalization of petroleum product prices on January 1, 2005. It was expected that the prices of petroleum products would decrease after price liberalization via price competition. However, approximately 2-years-experience reveals that petroleum product prices increased comparatively compared to European countries due to the increase in profits of

TÜPRAŞ and distribution companies. The Petroleum Market Law also aimed to solve smuggled oil problem. Since smuggled oil problem leads to unfair competition in downstream oil industry, solving smuggled oil is a necessity for the institutionalization of market economy. Although it has been three years since the enactment of the Petroleum Market Law, national marker application which is vital for solving smuggled oil problem has not been realized yet.

Energy Market Regulatory Authority's existence as a regulatory authority is questioned nowadays due to its poor performance in downstream oil industry since 2003. EMRA could not establish an effective supervision mechanism in sector. In addition, EMRA does not have enough staff and experience in order to regulate and supervise downstream oil industry.

In this chapter, privatization policies in downstream oil industry in Turkey will be discussed in detail. Also, the effect of price liberalization will be studied too. This chapter further aims to investigate smuggled oil problem in downstream oil industry and EMRA's performance during the last three years.

6.1. Privatization Policies

In this part, privatization policies of Petrol Ofisi and TÜPRAŞ will be analyzed in detail. The first step of Petrol Ofisi's privatization was that Petrol Ofisi, which had been a subsidiary of TPAO since 1984, became a subsidiary of Privatization Administration in 1990. Until 1999, 7% of Petrol Ofisi's capital had been offered to public partially in Istanbul Stock Exchange. On July 21, 2000, Privatization Administration decided to sell 51% of Petrol Ofisi to Türkiye İş Bankası-Doğan Holding Consortium with a price of $1,3 billion. After these, Privatization Administration offered to public further 17% of Petrol Ofisi on March 6, 2002. Finally, the last remaining 26% of Petrol Ofisi was sold to Türkiye İş Bankası-Doğan Holding Consortium with a price of TL 387,5 trillion on July 16, 2002.

Petrol Ofisi's privatization process aroused public debates. Firstly, before privatization tender a "golden share" had been established in order to prevent possible negative results of privatization. This "golden share" would become effective for 5 years after the decline of public shares below 50%. As a result of sale of 51% of Petrol Ofisi to İş-Doğan Consortium, "golden share" became effective. Some sorts of decisions were subject to the approval of "golden share" owner (government) such as (Petrol-İş Union, 2005a);

- Shut down or significantly limit company's operations
- Arrangements resulting interrupting the distribution of petroleum products to Eastern Anatolia and Southeastern Anatolia
- Stopping distributing petroleum products to the Ministry of National Defense and NATO before the alternative arrangements accepted by government came into effect
- Amendments in Articles of Association and amendments changing the rights of shares.

On April 15, 2002 "golden share" was converted to standard-bearer share with the resolution of Privatization High Council numbered 25 (Petrol-İş Union, 2005a). In other words, government gave up rights arising from "golden share" three years before than usual. This was a violation of privatization tender. Companies having participated in Petrol Ofisi privatization tender have offered prices according to the tender's terms. That is to say entrants of the privatization tender offered a price by taking the "golden share" into account. Conversion of "golden share" to standard-bearer share three years before than usual created an unfair situation against to entrants of the privatization tender other than İş-Doğan Consortium.

Another controversial aspect of the Petrol Ofisi's privatization was the installment sale of remaining 26% of Petrol Ofisi to İş-Doğan Consortium on July 16, 2002. Since, at that time İş-Doğan Consortium had been controlling the company, government could have gained more income from a public sale in Istanbul Stock Exchange at that time or after then. Finally, the most controversial event in Petrol

Ofisi's privatization was the merger of Petrol Ofisi with İş-Doğan Petrol Yatırımları A.Ş.[14] on November 8, 2002. İş-Doğan Consortium paid the privatization amount by using loans. Thus, with the merger of İş-Doğan Petrol Yatırımları and Petrol Ofisi, loans of İş-Doğan amounted approximately $ 1,3 billion were burdened by Petrol Ofisi. In other words, merger of İş Doğan Petrol Yatırımları and Petrol Ofisi was the merger of a highly leveraged firm, İş-Doğan Petrol Yatırımları, and unleveraged firm, Petrol Ofisi. As a result of this merger, Petrol Ofisi's total financial liabilities increased to $ 1,4 billion as of December 31, 2002, which had been $ 80 million as of December 31, 2001 (Petrol Ofisi, 2002). Petrol Ofisi's financial expenses increased to TL 271 trillion in 2002, which had been TL 29 trillion as of 2001. Petrol Ofisi, paid TL 70 trillion corporate taxes in 2001, did not pay any corporate tax in 2002 due to increased financial expenses (Petrol Ofisi, 2002). İş-Doğan Consortium realized a purchase invitation to small investors in order to obey capital market legislations following the merger. The Turkish legal authority rejected suits against the merger of İş Doğan Petrol Yatırımları and Petrol Ofisi. However, if the government had not convert "golden share" to standard-bearer share, this merger could have not been realized without the approval of government.

As done at Petrol Ofisi case, the first step in TÜPRAŞ's privatization was that TÜPRAŞ, which had been a subsidiary of TPAO since 1984, was turned to a subsidiary of Privatization Administration in 1990. In 1991, initial public offering of TÜPRAŞ was realized by Privatization Administration by selling 3% of TÜPRAŞ in Istanbul Stock Exchange. At the end of 1999, 4% of TÜPRAŞ was floated in Istanbul Stock Exchange and London Stock Exchange. Later, in April 2000 additional 31% of TÜPRAŞ was sold in Istanbul Stock Exchange and public shares in TÜPRAŞ declined to 66%. On June 7, 2003, Privatization Administration put out to tender remaining 66%. Efremov Kautschuk GMBH won the tender in which only two groups participated, with a price of $ 1,3 million. However, the tender was cancelled by Turkish legal authorities for the reason that the tender violated the public interest. On March 4, 2005, Privatization Administration sold additional 15%

[14] İş Doğan Petrol Yatırımları A.Ş. was fully owned by T. İş Bankası and Doğan Holding and the main shareholder of the Petrol Ofisi before the merger.

of TÜPRAŞ's share to Offer Group, a foreign investor, with a price of $ 446 million. Finally, Privatization Administration put out to tender remaining 51% of TÜPRAŞ on April 2005. 12 different domestic and foreign companies and consortiums joined to tender on September 12, 2005 and Koç-Shell consortium won the tender with a price of $ 4,1 billion. Petrol-İş Union, brought a new suit against the TÜPRAŞ's second privatization tender. However, at the end of legal process TÜPRAŞ's privatization tender was approved by Turkish legal authorities. Currently, public has no shares in TÜPRAŞ except of a "golden share" with a nominal value of TL 1.000. Strategic decisions should be approved by "golden share" owner. Such strategic decisions are (Petrol-İş Union, 2005b);

- Amendments in Articles of Association aiming changing the rights of "golden share", changing the liability of TÜPRAŞ about delivering the petroleum products of Turkish Armed Force,
- Meeting the petroleum product needs of Turkish Armed Force with desired quality and amount on time
- Operations which limits supply of petroleum products to Turkish Armed Force, such as shut down or sale of one of the refineries of company, reduce the refining capacity of company up to 10%, split-off the company or merger of company with another company
- Settlement of the company

Like Petrol Ofisi privatization, TÜPRAŞ's privatization process was also problematic. The first tender was cancelled by legal authority. Efremov Kautschuk GMBH signed the privatization agreement with some conditions such as (Petrol-İş Union, 2005b);

- At the date of share transfer, TÜPRAŞ would be on a position of with no cash and no debt
- The Draft of the Petroleum Market Law which was presented by the Council of Ministers to Grand National Assembly of Turkey would become law without any change.

The government promised to Efromov Kautchuk that the Petroleum Market Law would pass from the Grand National Assembly of Turkey as Efromov Kautchuk desired. This can be evaluated as limiting the freedom of the Grand National Assembly of Turkey. As a result, Turkish legal authority called off the tender for two reasons; first the offer of Efromov-Kautchuk was conditional and second competition was not established in the tender. Considering the sale price of both tenders, a shocking offer price gap reveals itself. Namely, in the first tender, 66% of TÜPRAŞ was sold to $ 1,3 billion. However, in the second tender 51% of the TÜPRAŞ was sold to $ 4,1 billion. Although there was only two years between two tenders, the value of 51% of company was approximately four times higher in the second tender. If the first tender had not been canceled, Turkish government would have lost approximately $ 3,5 billion in TÜPRAŞ's privatization. In addition, cost of building a new refinery with a capacity of 10 million tons/year would cost approximately $ 3 billion (State Planning Organization (DPT), 2000). Granted that TÜPRAŞ's refining capacity which is $ 27,6 million tons/year, the price in the first tender seems very low. Hence, we can conclude that Turkish government had not determined a "right" price for TÜPRAŞ before the first tender and had left the price to only two groups' determination.

Second controversial aspect of the TÜPRAŞ's privatization process was the sale of 15% of TÜPRAŞ to 6 foreign funds all controlled by Ofer Group on March 4, 2005 with a price of $ 446 million. At that time, block sale of 66% of TÜPRAŞ was expected in local and international markets[15]. Thus, sudden sale of 15% of TÜPRAŞ to Ofer Group led to debates about the transparency of sale. Indeed, when 51% of TÜPRAŞ was sold to Koç-Shell Consortium on September 12, 2005 with a price of $ 4,1 billion, debates on sale of 15% of TÜPRAŞ to Ofer Group restarted. Ofer Group had bought 15% of TÜPRAŞ with a price $ 446 million. However, the value of 15% of TÜPRAŞ in tender dated September 12, 2005 was $ 1,2 billion. Thus Ofer Group had earned approximately $ 750 million in 5 months. Ankara 12th Administrative Court had canceled the sale of 15% of TÜPRAŞ to Ofer Group on May 23, 2006 for

[15] Milliyet Newspaper, http://www.milliyet.com/2006/06/05/yazar/munir.html, Accession: November 12, 2006

the reasons that sufficient competition was not established in sale and sale price had not been determined according to public interest. Finally, the Council of State rejected the objection of Privatization Administration against the decision of Ankara 12th Administrative Court on July 26, 2006[16]. However, as the sale had been realized in Istanbul Stock Exchange, cancellation of the sale is very difficult in practice.

Finally, there are also debates about the block sale of 51% of TÜPRAŞ to Koç-Shell Consortium, although sale price was approximately 80% higher than the market price of TÜPRAŞ at the date of sale. The Crude Oil Supply Service Agreement signed between Koç Holding and Shell supplied important privileges to Shell. According to this agreement, TÜPRAŞ has to purchase at least 40% of its crude oil needs from Shell for three years at international prices. In 2005, TÜPRAŞ imported 23,5 million tons crude oil. Thus, TÜPRAŞ will import approximately 9,5 million tons crude oil from Shell in following three years. Since, TÜPRAŞ is the sole refining company in Turkey, 40% of crude oil imports of Turkey will be purchased from Shell following three years which indicates an important supply risk for Turkey. In addition, according to the Export Agreement between Koç Holding and Shell, rights of the at least 50% of the annual export amount of TÜPRAŞ will be owned by Shell Group for three years. On the other hand, although the share of Shell in Koç-Shell Consortium is 2%, Shell has got one member in TÜPRAŞ's Board of Directors which has 5 members[17]. Moreover, TÜPRAŞ could not change its dividend policy without the approval of Shell. In short, Shell has disproportionate rights at TÜPRAŞ management compared to its shares.

Privatization of both Petrol Ofisi and TÜPRAŞ had some problematic legal aspects. Transparency of privatization had not been generally ensured. Another negative aspect of the privatization of Petrol Ofisi and TÜPRAŞ is that after the privatization employment levels in both companies have decreased. Petrol Ofisi had 1094 employee at the end of 2004 which was 3838 just before privatization in 2000

[16] Ntvmsnbc web portal, http://www.ntvmsnbc.com/news/380798.asp, Accession: November 12, 2006

[17] Petrol-İş Union website, http://www.petrol-is.org.tr/duyuru/duyuru2006/ocak_06/mrkz_27012006.htm, Accession: November 12, 2006

(Petrol-İş Union, 2005a). Moreover, TÜPRAŞ fired 828 full-time working employees and 330 temporary employees on July 26, 2006. Some of these workers were qualified for a pension and some of them would be hired in public sector. However, since workers in refining industry are considered to be skilled labor force, retirement of these workers or employment of these workers in public sector does not change the fact that refining industry has lost some of its skilled labor force. Indeed, since refining industry is a highly specified industry, employees in refining industry could not use their skills in a different sector. Kayıkçı (2005) maintains that privatization of TÜPRAŞ would result in unemployment. Thus, Kayıkçı's (2005) arguments became valid only a few moths after the accomplishment of privatization of TÜPRAŞ.

Turkish government decided to start the privatization processes of Petrol Ofisi and TÜPRAŞ suddenly rather than a planned process. The proof of this was the Sixth Five Years Development Plan Petroleum Products Specialization Commission Report of the State Planning Organization in April 1990. In this report, just published a few months ago from the decision of privatization of Petrol Ofisi and TÜPRAŞ, there was no policy recommendation for privatization of Petrol Ofisi and TÜPRAŞ. On the other hand, privatization method used in petroleum industry in Turkey differs widely from the experience of most countries. The vertically integrated structure of public oil companies was broken in 1990 and Petrol Ofisi and TÜPRAŞ were privatized separately. Vertical disintegration of oil companies generally results in increase in costs and uncertainty, which damages future performance of oil companies. Moreover, vertical disintegration of oil companies does not have economic benefits. From the historical experience, vertical disintegration is not an appropriate policy to increase competition in oil markets (Özel, 2003). On the other hand, vertical integration has a lot of benefits for the oil companies. Firstly, vertical integration decreases the transaction costs. Companies cannot always obtain goods they want at desired time and amount, which increases the transaction cost. However, in vertically integrated companies since company obtains desired goods within the company, transaction costs decrease. Secondly, vertical integration ensures security of raw material supply. Since supply of crude oil is very crucial for refineries,

vertically integrated oil companies which produce crude oil ensure security of supply. Thirdly, vertical integration decrease investment risks and promote investments. Since, vertically integrated oil companies have sufficient information about all processes including, exploration, production, refining and distribution of oil, risks on investments are lower compared to vertically disintegrated companies. Furthermore, vertical integration reduces capital cost and ensures profit stability. Vertically integrated oil companies could delegate risks among different activities. Thus, negative effect of volatility in one market does not affect vertically integrated company as much as vertically disintegrated company. Moreover, in a vertically integrated company, low capital costs due to the low risks reduce the consumer prices. However, vertical integration has some costs. Vertically integrated oil companies could prevent development of competition by raising the entry barriers to market which eliminates potential competitors. Since vertical integration increases the entry costs, new firms have to assume more cost while entering the market. Moreover, in a vertically integrated company internal control processes are more difficult. Internal control of companies becomes more complicated as companies' scale increase[18]. In short, benefits of vertical integration are more important compared to cost of vertical integration.

Investigation of privatization of public oil companies in the world reveals that before privatization, public oil companies are vertically integrated. For instance, in Spain, at the beginning of 1980s public oil companies were merged in Repsol, which was discussed in detail in Chapter 5. Following the vertical integration of public oil companies, Repsol was started to be privatized in 1989 and privatization process was completed in 1997. Today, Repsol is one of the biggest oil companies in the world, although Spain has scarce oil reserves. Repsol gained € 3,120 million in 2005 and currently, Repsol is exploring and producing oil and natural gas in countries such as Argentina, Trinidad Tobago, Bolivia, Venezuela, etc. (Repsol, 2005). Like Spain, in Poland, public oil companies were also vertically integrated before privatization which was also discussed in detail in Chapter 5. PKN Orlen was established in 1998

[18] This paragraph summarised from the Pınar Özel's (2003) study named "Petrol Sanayiinde Dikey Bütünleşme ve Türkiye'de Uygulanabilirliği".

with the merger of CPN (Central Distribution Company) and Plock Refinery. Moreover, Lotos Group, public oil company, was also vertically integrated. Currently, PKN Orlen is operating in Czech Republic and Germany as well as in Poland. In 2005, PKN Orlen purchased 63% of Unipetrol, the biggest refinery and chemical company in the Czech Republic with a price of $ 540 million[19]. Moreover, PKN Orlen has been operating in Germany since 2002 and currently has 475 outlets in there[20]. Finally, Petrobras of Brazil, a public-owned oil company which was established in 1953 is also vertically integrated. Petrobras established a petrochemical company in 1967, increased its distribution activities in 1970s and doubled its refining capacity in 1980s (Palacios, 2002). Petrobras, still controlled by government, ranked as the 13th largest oil company in the world by the Energy Intelligence Group in 1999 (Lewis, 2004). Moreover, according to Petroleum Intelligence Weekly, Petrobras was the 15th largest oil company in the world based on six operational criteria such as oil reserves and production, natural gas reserves and output, refinery capacity, and product sales volumes[21] in 2003. In short, vertical integration is very crucial for internationalization of oil companies.

In order to measure the vertical integration degree of oil companies Imbalance Index was developed. Imbalance Index = 100*(Crude Oil Production Amount - Refining Output)/ (Crude Oil Production Amount or Refining Output). For a company which only produce crude oil, Imbalance Index will be "100" and for a company which only has refining activity, Imbalance Index will be "-100". Finally, if a company's crude oil production amount and refining output amount are equal, Imbalance Index will be "0". Özel (2003) investigates the evolution of Imbalance Index of the 50th largest oil companies between 1990-2000. Imbalance Index of the largest 50 oil companies in 1990 was 53,7, in 1995 was 31,1 and in 2000 was 30,5. Özel's analysis

[19] Media Services for Central Europe website, http://www.monitorce.com/Monitor_CE_sample_newsletter.pdf, Accession, November 12, 2006

[20] PKN Orlen's website, www.orlen.pl, Accession: November 12, 2006

[21] Enegy Intelligence website, http://www.energyintel.com/DocumentDetail.asp?document_id=137158, Accession: November 12, 2006

shows that vertical integration of largest 50 oil companies in the world had increased substantially between 1990 and 2000.

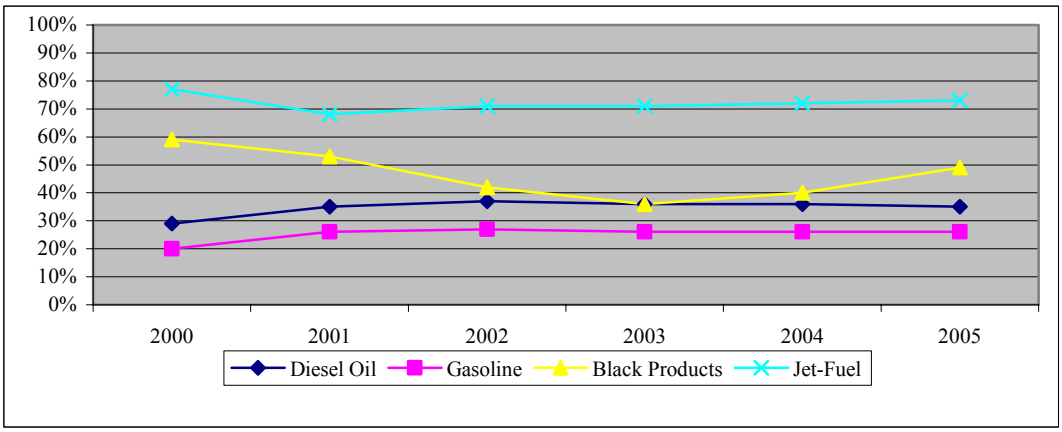
Vertical integration is not a new concept for Turkish oil industry. Combining public oil companies operating in exploration and production, refining and distribution sectors in a single company, which was achieved in 1984, was one of the main goals of the Five Years Development Plans of State Planning Organization before 1990. However, vertically integrated structure of public oil companies ended in 1990 with the beginning of privatization processes of Petrol Ofisi and TÜPRAŞ. Absence of vertical integration of oil industry in Turkey is the main obstacle for the emergence of an international Turkish oil company.

Currently, TÜPRAŞ can be evaluated at some degree, as vertically integrated. Koç Holding, the dominant owner of the TÜPRAŞ, also owns the 50% of OPET. On the other hand, Petrol Ofisi, leading distribution company, applied to EMRA on July 12, 2006 to get refining license in order to establish a new refinery with an annual capacity of 10 million tons in Ceyhan. Government still holds 100% of TPAO, public oil exploration and production company. Moreover, becoming an integrated energy company is one of the main goals of TPAO (TPAO, 2005). TPAO is one of the owners of BTC pipeline with a share of 7%. TPAO has to introduce refining industry immediately. For this purpose, TPAO can involve the refinery projects in Ceyhan or can establish another refinery in Ceyhan with domestic or foreign companies. However, TPAO should finance possible refinery investments by itself since Turkish government is reluctant to finance State Economic Enterprises due to application of neo-liberal economic policies.

Today, governments are still important actors in oil industry despite the deregulation trend. In 2000, 18 of the biggest 50 oil companies of the world were public companies which were fully owned by governments. In addition, governments had more than 50% shares in 6 companies and less than 50% shares in 6 companies which were in the biggest 50 oil companies list (Özel, 2003). In other words, governments had shares in different degrees in 30 of the biggest 50 oil companies in

2000. However in Turkish case, TÜPRAŞ and Petrol Ofisi were fully privatized and government only holds 100% of TPAO. Palacios (2002) argues that the level of openness of oil industry in Latin America is related to whether a country is a net oil exporter or net oil importer. Countries which are net oil exporter are reluctant to open their oil industries. On the other hand countries which are net oil importer are willing to liberalize their oil industries. Since Turkey is a net oil importer, liberalization of oil industry in Turkey is consistent with Palacios' (2002) arguments.

Another aspect of the privatization of Petrol Ofisi and TÜPRAŞ is that privatization of both companies did not result in a more competitive downstream oil industry in Turkey. In Figure 6.1, market shares of Petrol Ofisi since the privatization in 2000 is shown. Petrol Ofisi increased market shares in diesel oil and gasoline from 29% and 20% in 2000 to 35% and 26% in 2005. Petrol Ofisi's market share in black products and jet-fuel decreased by 10% and 4% between 2000-2005 respectively. Since white products have a share of 75% in downstream oil industry, it can be concluded that Petrol Ofisi increased its overall market shares since 2000. On the other hand, Repsol which started to be privatized in 1989 lost 12% market shares in gasoline between 1990-1996 period from 66% to 54% (Contin et al., 1999). However, Petrol Ofisi increased its market shares as opposed to Repsol following the privatization. Increase in the market share of Petrol Ofisi following the privatization is an evidence for the lack of sufficient competition in downstream oil industry in Turkey.



Source: Petrol Ofisi

Figure 6.1: Market shares of Petrol Ofisi

On the other hand, as TÜPRAŞ became sole refining company in Turkey following the shut down of Ataş refinery, TÜPRAŞ was transformed from a public monopoly to private monopoly. However, Turkish refining industry is becoming more attractive for the domestic and foreign investors. International Rating Institution Fitch describes the Turkish refining industry as attractive especially for the new entrants[22]. As well as Petrol Ofisi, Russian oil company Lukoil also applied to EMRA in order to establish a refinery with a capacity of 8-10 million tons/year[23] in Zonguldak. Furthermore, Çalık Holding and Indian Oil Corporation also applied jointly to EMRA to set up a refinery with a capacity of 15 million tons/year in Ceyhan[24]. Accomplishment of the Baku-Tblisi-Ceyhan Crude Oil Pipeline project in July 2006 made Turkey an attractive country for refinery investments. However, accomplishment of these refinery projects could be realized in medium term. Therefore, TÜPRAŞ seems to remain a private monopoly in Turkish refining sector in the near future. Petroleum products importation is the only competitive force in

[22] Dünya Newspaper website, http://www.dunyagazetesi.com.tr/news_display.asp?upsale_id=271494, Accession: November 12, 2006

[23] Ntvmsnbc web portal, http://www.ntvmsnbc.com/news/379301.asp, Accession: November 12, 2006

[24] Ntvmsnbc web portal, http://www.ntvmsnbc.com/news/381383.asp, Accession: November 12, 2006

refining sector for TÜPRAŞ. Distribution companies imported approximately 5 million tons petroleum products in 2004 and TÜPRAŞ's domestic sales were 20 million tons in 2004 (GDPA, 2004). Therefore, petroleum product importation is not a vital threat for TÜPRAŞ currently. Absence of competition in the refining industry is an obstacle for comparative decline in final consumer prices of petroleum products in Turkey.

6.2. Petroleum Product Prices and Price Liberalization

As discussed in Chapter 4, petroleum product prices have been determined by free market conditions since 1 January 2005. Price liberalization in petroleum products coincided with sharp rise in crude oil prices. As a result, petroleum product prices rose sharply in Turkey. Final consumer price of gasoline was YTL 2,97 and price of diesel oil was YTL 2,45 on June 15, 2006 of which price were YTL 2,33 and YTL 1,85 on January 15, 2005 respectively[25]. High petroleum product prices boomed public debates. In order to determine the real effect of price liberalization in Turkey, unleaded gasoline and diesel oil prices in Turkey and EU-15 countries will be compared below.

In Turkey, between 1 July 1998 and 1 January 2005 petroleum product prices had been determined according to Automatic Pricing Mechanism (APM) which was discussed in Chapter 4 in detail. According to APM, a ceiling price was determined considering the international petroleum prices and foreign exchange rate. If the last 7 days average price differs from the ceiling price by ± 3% , the ceiling price was re-determined. In APM, distribution companies and retailers got fixed portion for each unit of petroleum products. The distribution of fixed portion between distribution companies and retailers were left to free market conditions. Since January 1, 2005, petroleum product prices have been determined freely by refining companies and distribution companies.

[25] Average price of biggest eight distribution company

In Table 6.1 unleaded gasoline 95 RON final consumer prices in Turkey and EU-15 countries is compared. As seen in Table 6.1, between 1998/2 and 1999/1 unleaded gasoline 95 RON prices in Turkey were lower than EU-15 countries. Following the second half of 1999 unleaded gasoline 95 RON prices becomes to be higher in Turkey compared to EU-15 countries except between 2000/2 and 2001/2. Following the price liberalization in Turkey on 1 January 2005, difference between unleaded gasoline 95 RON prices in Turkey and EU-15 countries have increased dramatically from EURO 0,08 per liter in 2004/2 to EURO 0,40 per liter in 2005/1.

Table 6.1: Unleaded Gasoline 95 RON Final Consumer Prices (EURO per liter)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,83	0,80	0,88	0,93	1,04	0,97	0,99	0,92	0,98	0,99	0,97	0,97	1,08	1,03	1,18	1,19
Turkey	0,63	0,65	0,97	1,01	1,02	0,94	0,90	1,10	0,99	1,05	1,11	1,06	1,16	1,43	1,62	1,61
Difference	0,20	0,15	-0,09	-0,08	0,03	0,03	0,09	-0,18	-0,01	-0,07	-0,14	-0,08	-0,08	-0,40	-0,45	-0,43

Source: Eurostat, TÜPRAŞ, EMRA, Turcas

In Table 6.2 diesel oil prices in Turkey and EU-15 countries is compared. Diesel oil prices had been lower in Turkey compared to EU-15 countries up to 2002/1. Following the price liberalization, the difference between diesel oil prices in Turkey and EU-15 countries increased from EURO 0,11 per liter in 2004/2 to EURO 0,26 per liter in 2005/1. Increase in diesel oil prices following the price liberalization was lower compared to increase in unleaded gasoline 95 RON prices.

Table 6.2: Diesel Oil Final Consumer Prices (EURO per liter)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,63	0,62	0,68	0,77	0,81	0,82	0,81	0,76	0,77	0,81	0,77	0,79	0,86	0,90	1,04	1,07
Turkey	0,39	0,44	0,62	0,75	0,75	0,67	0,66	0,80	0,74	0,81	0,85	0,82	0,97	1,17	1,35	1,34
Difference	0,25	0,17	0,06	0,01	0,06	0,15	0,15	-0,04	0,03	-0,01	-0,09	-0,03	-0,11	-0,26	-0,31	-0,27

* 350 ppm diesel oil prices were used in 2004/2 and 50 ppm diesel oil pices were used in 2005 and 2006 for Turkish data.

Source: Eurostat, TÜPRAŞ, EMRA, Turcas

In order to determine the reason for the increase in final consumer prices in unleaded gasoline and diesel oil following the price liberalization, taxes on diesel oil and unleaded gasoline, and diesel oil and unleaded gasoline prices excluding tax will be discussed below. In Table 6.3, tax amount in unleaded gasoline 95 RON per liter in Turkey and EU-15 countries is compared. In Turkey, special consumption tax per liter for unleaded gasoline is YTL 1,36 and value added tax rate is 18%, which is the 18% of the sum of refining sale price, special consumption tax and EMRA share is YTL 0,001 per liter. As seen in Table 6.3, tax in unleaded gasoline has increased substantially in 1999/2. Following the price liberalization, the difference between tax in unleaded gasoline in Turkey and EU-15 countries increased from EURO 0,09 per liter to EURO 0,29 per liter. The main reason for this increase was that special consumption tax in unleaded gasoline has increased from YTL 1,21 per liter to YTL 1,36 in December 2004 before the price liberalization. In addition, increase in unleaded gasoline refining sale prices has also increased the VAT amount.

Table 6.3: Tax in Unleaded Gasoline 95 RON (EURO per liter)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,61	0,61	0,63	0,64	0,65	0,64	0,64	0,64	0,66	0,67	0,67	0,68	0,70	0,70	0,73	0,73
Turkey	0,43	0,45	0,68	0,65	0,61	0,54	0,57	0,78	0,66	0,74	0,77	0,70	0,78	0,99	1,06	1,02
Difference	0,18	0,16	-0,05	-0,01	0,05	0,10	0,07	-0,13	0,00	-0,06	-0,10	-0,02	-0,09	-0,29	-0,33	-0,30

Source: Eurostat, TÜPRAŞ

In Table 6.4 tax burden on unleaded gasoline 95 RON in Turkey and EU is compared. As opposed to public perception, difference between tax burden on unleaded gasoline in Turkey and EU-15 countries is very low, which was only 2% in 2006/1. Following the price liberalization, tax burden on unleaded gasoline did not increase. Indeed tax burden on unleaded gasoline was 4% lower in 2006/1 compared to 2004/2. In EU-15 countries tax burden on unleaded gasoline have decreased stably. However, as seen in Table 6.3 this difference did not result from decrease in tax amount. Indeed, tax amount has increased stably since 1998/2. Since taxes on unleaded gasoline in European countries are mostly lump-sum taxes, increase in

without tax prices does not increase tax amount substantially. As a result, tax burden on unleaded gasoline is decreasing.

Table 6.4: Tax Burden on Unleaded Gasoline 95 RON (%)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,73	0,76	0,72	0,68	0,63	0,66	0,65	0,70	0,68	0,68	0,69	0,70	0,65	0,69	0,61	0,61
Turkey	0,68	0,69	0,70	0,64	0,60	0,58	0,64	0,70	0,67	0,70	0,69	0,66	0,68	0,69	0,65	0,64
Difference	0,05	0,07	0,02	0,05	0,03	0,09	0,01	-0,01	0,01	-0,02	0,00	0,04	-0,03	-0,01	-0,04	-0,02

Source: Eurostat, TÜPRAŞ, EMRA, Turcas

In Table 6.5 tax amount in diesel oil per liter in Turkey and EU-15 countries is compared. In Turkey, special consumption tax per liter for diesel oil is YTL 0,93 and value added tax rate is 18%, which is calculated as in unleaded gasoline and EMRA share is YTL 0,001 per liter. As seen in Table 6.5, tax amount in diesel oil in Turkey has increased substantially from EURO 0,23 in 1998/2 to EURO 0,72 in 2006/1. Tax amount in diesel oil in EU-15 countries has also increased from EURO 0,43 in 1998/2 to EURO 0,57 in 2006/1. Following the price liberalization, tax amount in diesel oil has increased from 0,57 EURO in 2004/2 to EURO 0,70 in 2005/1 in Turkey. The main reason was the increase in special consumption tax from YTL 0,8 per liter in June 2006 to YTL 0,93 per liter on 1 January 2005. In addition, increase in refinery exit prices has also increased the VAT amount.

Table 6.5: Tax in Diesel Oil (EURO per liter)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,43	0,43	0,45	0,47	0,48	0,48	0,47	0,47	0,48	0,49	0,48	0,50	0,51	0,52	0,55	0,57
Turkey	0,23	0,27	0,39	0,46	0,36	0,35	0,36	0,52	0,45	0,52	0,54	0,51	0,57	0,70	0,75	0,72
Difference	0,20	0,16	0,06	0,01	0,12	0,13	0,11	-0,05	0,02	-0,03	-0,06	-0,01	-0,05	-0,18	-0,21	-0,16

Source: Eurostat, TÜPRAŞ

In Table 6.6 tax burden on unleaded gasoline 95 RON in Turkey and EU is compared. As seen in Table 6.6 tax burden on diesel oil in EU-15 countries have declined gradually from 68% in 1998/2 to 53% in 2006/1. Like unleaded gasoline, the main reason is the increase in without tax prices rather than decrease in tax amount. On the other hand, tax burden on diesel oil in Turkey did not differ substantially from EU-15 countries; the difference was only 1% in 2006/1. Following the price liberalization tax burden on diesel oil did not increase substantially. Tax burden on diesel oil was 4% lower in 2006/1 compared to 2004/2.

Table 6.6: Tax Burden on Diesel Oil (%)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,68	0,70	0,66	0,61	0,59	0,59	0,59	0,62	0,62	0,61	0,63	0,63	0,60	0,58	0,52	0,53
Turkey	0,60	0,62	0,62	0,61	0,48	0,52	0,55	0,65	0,61	0,64	0,64	0,62	0,58	0,60	0,56	0,54
Difference	0,08	0,08	0,04	0,00	0,11	0,07	0,03	-0,03	0,01	-0,03	-0,01	0,01	0,01	-0,02	-0,03	-0,01

Source: Eurostat, TÜPRAŞ, EMRA, Turcas

Finally, in order to understand the difference between unleaded gasoline prices and diesel oil prices between Turkey and European countries, unleaded gasoline prices excluding tax and diesel oil prices excluding tax will be investigated. In Table 6.7, unleaded gasoline 95 RON prices excluding tax in Turkey and EU-15 countries is compared. As seen in Table 6.7 unleaded gasoline prices excluding tax in Turkey have increased substantially following the price liberalization in January 2005. Indeed, while unleaded gasoline prices excluding tax in EU-15 countries decreased from EURO 0,38 per liter in 2004/2 to EURO 0,32 per liter in 2005/1, unleaded gasoline prices excluding tax in Turkey increased from EURO 0,37 in 2004/2 to EURO 0,44 in 2005/1. The difference between unleaded gasoline prices in Turkey and EU-15 countries was stable around EURO 0,12 per liter following the price liberalization.

Table 6.7: Unleaded Gasoline 95 RON Final Consumer Prices Without Tax (EURO per liter)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,22	0,19	0,25	0,29	0,39	0,33	0,35	0,28	0,31	0,32	0,30	0,29	0,38	0,32	0,45	0,46
Turkey	0,20	0,20	0,29	0,37	0,41	0,40	0,33	0,33	0,33	0,32	0,34	0,35	0,37	0,44	0,57	0,59
Difference	0,02	-0,01	-0,04	-0,07	-0,02	-0,07	0,02	-0,05	-0,02	0,00	-0,04	-0,07	0,01	-0,12	-0,11	-0,13

Source: Eurostat, TÜPRAŞ, EMRA, Turcas

In Table 6.8, diesel oil prices excluding tax in Turkey and EU-15 countries is compared. Like unleaded gasoline, following the price liberalization the difference between diesel oil prices in Turkey and EU-15 countries increased and reached to EURO 0,11 in 2006/1. However, this increase was moderate compared to increase in unleaded gasoline.

Table 6.8: Diesel Oil Final Consumer Prices Without Tax (EURO per liter)

	98/2	**99/1**	**99/2**	**00/1**	**00/2**	**01/1**	**01/2**	**02/1**	**02/2**	**03/1**	**03/2**	**04/1**	**04/2**	**05/1**	**05/2**	**06/1**
EU-15	0,20	0,19	0,23	0,30	0,33	0,34	0,33	0,29	0,30	0,32	0,28	0,29	0,35	0,38	0,50	0,50
Turkey	0,15	0,17	0,24	0,29	0,39	0,32	0,29	0,28	0,29	0,29	0,31	0,31	0,40	0,47	0,60	0,61
Difference	0,05	0,02	0,00	0,00	-0,06	0,02	0,04	0,01	0,01	0,02	-0,02	-0,02	-0,06	-0,09	-0,10	-0,11

* 350 ppm diesel oil prices were used in 2004/2 and 50 ppm diesel oil pices were used in 2005 and 2006 for Turkish data.

Source: Eurostat, TÜPRAŞ, EMRA, Turcas

Comparison of the diesel oil and unleaded gasoline prices in Turkey and EU-15 countries reveals that as opposed to public perception, tax burden on petroleum products in Turkey is not very high compared to EU-15 countries. Indeed, tax burden on diesel oil was nearly the same in Turkey and EU-15 countries in the first half of 2006. In addition, following the price liberalization unleaded gasoline and diesel oil prices excluding tax have increased more compared to EU-15 countries. Especially increase in unleaded gasoline prices excluding tax is remarkable. In short, price liberalization did not result in decrease in unleaded gasoline prices and diesel oil

prices. Unleaded gasoline and diesel oil price increased more compared to EU-15 countries following the price liberalization.

Increase in unleaded gasoline and diesel oil prices requires more investigation in order to determine main reasons. Prices excluding tax include all costs such as crude oil cost, transportation and distribution costs and also include refinery margins, distribution margins and retailer margins. Therefore, increase in prices excluding tax can result from increase in costs and/or increase in margins. As discussed above, TÜPRAŞ is the sole refining company in Turkey. Therefore, investigation of cost structure and profit margins of TÜPRAŞ following the price liberalization would help us in order to determine the main reasons of the increase in prices excluding tax. In addition, there are two companies in distribution sector of which shares are floated in İstanbul Stock Exchange, Petrol Ofisi and Turcas. Analyzing their financial performance following the price liberalization also give evidence about the reasons of the increase in prices excluding tax.

In refining sector crude oil cost composes approximately 90% of total cost (State Planning Organization, 2006). Therefore, analyzing the crude oil cost structure of TÜPRAŞ will give evidence whether TÜPRAŞ has a disadvantage in purchasing crude oil. Since TÜPRAŞ can process high sulphur, high gravity crude oil, TÜPRAŞ enjoys important cost advantage from the price gap between reference crude oil (Brent) and high sulphur, high gravity crude oil. TÜPRAŞ gained $ 4,98 per barrel from the gap between reference crude oil and high sulphur, high gravity crude oil in 2005 (TÜPRAŞ, 2005). In 2004, this advantage was $ 4,07 per barrel (TÜPRAŞ, 2004). Thus it is true that TÜPRAŞ enjoyed much from the gap between reference crude oil and high gravity crude oil in 2005 compared to 2004.

In refining sector, in order to measure the complexity of refineries, Nelson Complexity Index is used.

> *The Nelson Complexity Index assigns a complexity factor to each major piece of refinery equipment based on its complexity and cost in comparison to crude distillation, which is assigned a complexity factor of 1.0. The complexity of each*

piece of refinery equipment is then calculated by multiplying its complexity factor by its throughput ratio as a percentage of crude distillation capacity. Adding up the complexity values assigned to each piece of equipment, including crude distillation, determines a refinery's complexity on the Nelson Complexity Index. A refinery with a complexity of 10.0 on the Nelson Complexity Index is considered ten times more complex than crude distillation for the same amount of throughput[26].

TÜPRAŞ's Nelson complexity value in 2005 was 6,43 in 2005 and the average Nelson Complexity of Mediterranean Refineries was 5,67 in 2005. Therefore, TÜPRAŞ had a cost advantage compared to Mediterranean Refineries. In short, TÜPRAŞ has an important cost advantage rather than a cost disadvantage. In addition, TÜPRAŞ's refinery margin increased from $ 4,94 per barrel in 2004 to 5,70 in 2005. Average Mediterranean Ural Complex refinery margin was $ 5,31 per barrel in 2005. In 2004, average Mediterranean Ural Complex refinery margin was higher than TÜPRAŞ's refinery margin (TÜPRAŞ, 2005, 2006). Thus, TÜPRAŞ has increased significantly its refining margins in 2005. As a result, TÜPRAŞ's EBITDA increased from $ 768 million in 2004 to $ 800 million in 2005 (TÜPRAŞ, 2006). Briefly, TÜPRAŞ increased its profit margins substantially in 2005.

Investigation of distribution companies' prices between January 1, 2005, beginning of the price liberalization, and July 2006 reveals that there is no significant difference between prices of distribution countries. For instance, on July 31, 2006, eight biggest distribution countries'[27] average fuel oil-6 price was YTL 1,01250 per liter. Two distribution companies' fuel oil-6 prices were YTL 1,02 per liter and six companies' fuel oil-6 prices were YTL 1,01 per liter. In unleaded gasoline 95 RON, seven companies' prices were YTL 3,09 per liter and Total's price was YTL 3,11 per liter. Furthermore, in diesel oil 50 ppm, five companies' prices were YTL 2,53 per liter and two companies prices were YTL 2,52 per liter[28]. Thus, price differences between

[26] Neste Oil website, http://www.nesteoil.com/default.asp?path=1,41,540,2035,5196,5197, Accession: 30.10.2006

[27] Petrol Ofisi, Shell&Turcas, BP, Total, Opet, Aytemiz, Sunpet, Alpet

[28] EMRA's website, http://akaryakit.epdk.org.tr/Raporlar/RaporSekizfirma.aspx, Accession: November 12, 2006

distribution companies were negligible which could be a signal for oligopolistic pricing mechanism.

Secondly, on January 31, 2005, average unleaded gasoline price of 7 biggest distribution companies was YTL 2,37 per liter[29]. At the same date, TÜPRAŞ's refinery exit price was YTL 2,14 per liter. The difference between final consumer price and refinery exit price was YTL 0,23 per liter. On July 31, 2006, difference between final consumer price and refinery exit price was YTL 0,36 per liter. The difference was YTL 0,13 per liter between January 31, 2005 and July 31, 2006. In addition, the difference between consumer final price and refinery exit price in diesel oil 50 ppm was YTL 0,19 per liter on January 31, 2005. This difference has increased to YTL 0,37, which was a YTL 0,18 increase compared to July 31, 2005[30]. Since final prices are the price in Istanbul and refinery exit prices are the prices in İzmit refinery, transportation costs of the distribution companies must constitute a negligible share in final consumer prices. Thus, increase in the difference between final consumer prices and refinery exit prices could be an evidence for increase in the profit margins of distribution companies following price liberalization.

Since there are only two companies, Petrol Ofisi and Turcas, of which shares are floated in İstanbul Stock Exchange, it is possible to investigate their financial performance in order to determine the reasons of increase in the petroleum prices excluding tax in 2005. In order to find out the reasons of the increase in the difference between consumer final price and refinery exit price, financial performance of Petrol Ofisi and Turcas in 2004 and 2005 will be investigated below. As seen in Table 6.9, Petrol Ofisi has strengthened its financial performance in 2005. Petrol Ofisi increased its gross profit excluding Iraq sales, by 26% and increased its EBITDA excluding Iraq Sales by 25%. Moreover, Petrol Ofisi's operating profit increased by 89% in 2005 compared to 2004. Petrol Ofisi's net income decreased by 13% due to the absence of monetary gains in 2005. Capital Market Board has

[29] EMRA's website, http://akaryakit.epdk.org.tr/Raporlar/RaporSekizfirma.aspx, Accession: November 12, 2006

[30] Calculations made using price data obtained from EMRA's website and Tüpraş's website.

removed the application of inflation accounting due to decline in inflation rate in 2005. Therefore, Petrol Ofisi had no monetary gain in 2005 which was $ 135 million in 2004. Petrol Ofisi's net income excluding monetary gain increased by 222% in 2005. In short, Petrol Ofisi increased its margins substantially in 2005 following the price liberalization. Increase in profit margins was very high compared to increase in net sales. This situation was also emphasized in Petrol Ofisi's analyst presentation dated March 2006. In this presentation, it was stated that distribution margins of Petrol Ofisi increased in 2005 following the price liberalization.

Table 6.9: Financial Performance of Petrol Ofisi ($)

	2004	**2005**	**Change (%)**
Net Sales	**7.722**	**8.830**	**14%**
Gross Profit	423	490	16%
Gross Profit (Excluding Iraq Sales)	384	485	26%
Operating Profit	138	262	89%
EBITDA	**336**	**375**	**12%**
EBITDA (Excluding Iraq Sales)	297	371	25%
Income Before Monetary Gain and Taxes	155	230	48%
Income Before Taxes	289	229	-21%
Net Income	**185**	**161**	**-13%**
Net Income (Excluding Monetary Gain)	50	161	222%

Source: Petrol Ofisi (2006)

Turcas increased its gross profit only by 3% in 2005. The main reason in this low increase was that Turcas exported petroleum products (mostly to Iraq) amounted YTL 95 million in 2004 and Turcas had no export in 2005. Turcas increased its operating profit by 103% in 2005, thanks to sharp decline in operating expenses from YTL 73 million to YTL 46 million (Turcas, 2005). Finally, Turcas increased its net income by 147% in 2005. To sum up, Turcas increased its profit like Petrol Ofisi in 2005.

Table 6.10: Financial Performance of Turcas (YTL)

	2004	2005	Change (%)
Net Sales	**1.723**	**1.854**	**8%**
Gross Profit	98	101	3%
Operating Profit	33	67	103%
Income Before Taxes	32	67	109%
Net Income	**19**	**47**	**147%**

Source: Turcas (2005)

Analysis of TÜPRAŞ, Petrol Ofisi and Turcas reveals that companies operating in downstream oil industries increased their profits following the price liberalization. Distribution margins of the distribution companies increased by 60% in 20 months following the price liberalization and reached to 20 cents per liter for unleaded gasoline and 18 cents per liter for diesel oil (İş Yatırım, 2006). Therefore, price liberalization can be evaluated as pro-industry bias rather than pro-consumer bias. In other words, companies operating in downstream oil industry rather than consumers have enjoyed from price liberalization. This situation contradicts with the theory about deregulation. According to deregulation theory, since competition will increase following the deregulation, final consumer prices will decrease and consumer welfare will increase. Clarke and Edwards (1998) which investigates the deregulation in Japanese oil industry through simulation argues that deregulation will reduce petroleum product prices, thus will increase consumer welfare. However, as opposed to Clark and Edwards' (1998) view, comparative analysis of unleaded gasoline and diesel oil in Turkey and EU-15 countries reveals that petroleum product prices have increased instead of decreasing following the price liberalization. On the other hand, Contin et al. (2004) find that petroleum product prices behaved asymmetrically to change in crude oil prices following the price liberalization. Furthermore, Salas (2002) also finds that asymmetric pricing is a characteristic of retail gasoline sector in Philippines. Both Contin et al (2004) and Salas (2002) argue that asymmetric pricing is an evidence of lack of competition in downstream oil industry. In addition, Aldaba (2003) agrees with Salas about the absence of sufficient competition in

Philippines downstream oil industry following the deregulation. As discussed above, Turkish downstream oil industry is far from the desired level of competition. This could be resulted from asymmetric pricing. However, investigation of asymmetric pricing is beyond the scope of this study.

The Petroleum Market Law is aiming to create a competitive downstream oil industry. Price liberalization is an important step for creating a competitive market. In addition, in order to increase competition in distribution sector the new Petroleum Market Law made it easier to operate in distribution sector. With the new Law, any quantity limitations such as the number of retailers or storage capacity for any type of license could not be applied by the EMRA. The only condition for the distribution license is the distribution companies have to give at least 60.000 tons white products distribution projection to EMRA. Moreover, in the License Regulation of EMRA, the only restriction for the distribution license is to sell at least 60.000 tons white product annually. EMRA could terminate the license of the distributors if the distributor could not sell at least 60.000 tons of white products. In June 2006, EMRA amended the License regulation. With the new arrangement, in order to get distribution license, distribution companies' capital is to be at least YTL 5 million. Moreover, distribution companies, which already have license and capital less than YTL 5 million, has to increase their capital to YTL 5 million up to June 1, 2007.

Since the entrance to the distribution market became easier, number of distribution companies has increased to 49 which were 21 in 2004. Increase in the number of distribution companies, aggravated the smuggled oil problem, since the supervision of these companies became more difficult. The main logic of the Petroleum Market Law and License Regulation for distribution license is that increasing the number of company in distribution sector will similarly increase competition in the sector. However, this logic contradicts with the practice. Major distribution companies in the sector have long contracts with their retailers, between 10-20 years. Thus, new companies have to establish new retailers. However, the number of retailers is more than the needs of the sector. Moreover, with the License Regulation, the distance between two retailers at the same direction could not be less than 10 km. on

highways and 1 km. in the city. Therefore, increase in the number distribution companies could not increase competition in the sector, since new entrants could not steal the retailers of major distribution companies due to the long contracts and could not establish new retailers due to the restriction of the License regulation which restricts the establishment of new retailers. Moreover, the Petroleum Market Law gives EMRA the authority to intervene prices and determine prices for maximum 2 months in the case of market distortions. EMRA can use this power in order to force distribution companies to price competition.

Liberalizing petroleum product prices while crude oil prices rising was a mistake without developing a competitive environment. Okech and Nyoike (1999) discuss that price liberalization in Kenya led to enormously high margins in Kenyan oil market due to the absence of a comprehensive competition policy. They propose to arrange a legal framework to prevent market distortions. Like in Kenya, liberalizing prices led to high margins in Turkish downstream oil industry which raised consumer prices. Therefore, Turkish government should reconsider price liberalization carefully. Determination of petroleum product prices by government again is not a feasible method since all companies in refining sector and distribution sector are private companies. The feasible method is to develop policies forcing distribution companies to price competition. For instance, limiting contracts between distribution companies and retailers with maximum 5 years would be a useful method. In addition, limiting the leading distribution companies' establishment of new retailers for a specified period, like in Spain, could also be applied. In addition, as will be discussed below, without solving the smuggled oil problem, creating a competitive downstream oil industry is a difficult task. Moreover, EMRA could use its power to determine petroleum product prices for 2 months in the case of market distortions in order to force distribution companies to price competition.

6.3. Smuggled Oil Problem

Smuggled oil has been an important problem in Turkish oil industry since 1990s. Turkish government loses crucial tax revenue due to smuggled oil. In addition,

distribution companies are forced to unfair competition. Therefore, without solving the smuggled oil problem, creating a competitive downstream oil industry is very difficult in practice.

There is a lack of comprehensive studies about the dimension of smuggled oil in Turkey other than the projections of PETDER (Association of Petroleum Industry). According to PETDER, there are three different oil smuggling in Turkey. First one is the oil smuggling via borders in Eastern and Southeastern Anatolia. Second one is the smuggling by sea transport in Mersin-Antalya region. Third one is the smuggled oil used in fishing boats in Black Sea Region. PETDER made a projection considering the petroleum product demand and motor vehicle numbers (PETDER, 2004). As seen in Table 6.11, smuggled oil reached to 2,5 million tons in 2003. In addition, PETDER estimated 2,5 million tons smuggled oil in 2005 (PETDER, 2006). Therefore, smuggled oil problem did not diminish during the last years. Turkish government loses approximately $ 2,5 billion tax revenue due to the smuggled oil every year.

Table 6.11: Smuggled Oil (million tons/year)

	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Gasoline	0,04	0,27	0,31	0,43	0,12	0,74	0,96	1,10
Diesel Oil	0,00	1,41	2,95	2,02	1,54	1,70	1,55	1,37
Total	**0,04**	**1,68**	**3,26**	**2,44**	**1,66**	**2,44**	**2,51**	**2,46**

Source: PETDER (2004)

As stated in Chapter 4, The Petroleum Market Law is aiming to achieve the institutionalization of the market economy. Accomplishment of this aim is impossible without solving the smuggled oil problem. Smuggled oil forces economic actors in downstream oil industry to unfair competition. Profit margins in smuggled oil are very high compared to profit margins in downstream oil industry.

It is generally stated that the main reason of the smuggled oil problem is high tax burden on petroleum products. As discussed above, tax burden on petroleum products in Turkey is not very high compared to European countries. Countries which import most of their crude oil needs impose high tax burden on petroleum products. Governments in these countries collect substantial tax revenue from high tax burden on petroleum products and high tax burden decrease petroleum demand. Although, demand elasticity in petroleum products is very low due to absence of substitute products, high tax burden decreases petroleum demand in some degree. Therefore, high tax burden on petroleum products in Turkey is not a valid argument in order to explain smuggled oil problem. The main reason of the smuggled oil problem is the lack of effective supervision in downstream oil industry. The Petroleum Market Law made arrangements in order to solve smuggled oil problem. All activities in downstream oil industry is required a license with the Petroleum Market Law. In addition, the national marker was arranged. However, as will be discussed below, national marker arrangement has not been accomplished for three years. National marker arrangement should be realized immediately.

As discussed above, number of distribution companies in sector reached to 49 as of October 31, 2006[31]. Increase in the number of distribution companies does not increase competition in the sector. Indeed, increase in the number of distribution companies worsens smuggled oil problem since effective supervision of distribution companies and their retailers become difficult in practice. In addition as will be discussed below, EMRA has delegated its supervision authority to the Ministry of Industry and Trade and the Ministry of Internal Affairs. Effective supervision of downstream oil industry is the main duty of EMRA. Therefore, delegation of supervision authority to both Ministries created questions about the existence of EMRA. EMRA should employ enough staff to supervise downstream oil by itself. Without effective supervision smuggled oil problem could not be solved. Moreover, institutionalization of the market economy in downstream oil industry is very difficult without solving the smuggled oil problem.

[31] EMRA's web site, http://www.epdk.gov.tr/lisans/petrol/bayilik/dagitici.asp, Accession: November 5, 2006.

6.4. EMRA's Position in the Petroleum Industry

On March 3, 2001, Electricity Market Regulatory Authority was established with the Electricity Market Law in order to regulate and supervise electricity market. On May 2, 2001, through the Natural Gas Market Law, Electricity Market Regulatory Market was renamed as Energy Market Regulatory Authority and EMRA started to regulate and supervise natural gas market as well as electricity market. On December 20, 2003, downstream oil industry was also started to be regulated by EMRA with the Petroleum Market Law. Finally, on March 13, 2005, with the Liquefied Petroleum Gas Market Law, LPG market was also regulated by EMRA.

In the 8th Five Years Development Plan Petroleum Products Specialized Commission Report of State Planning Organization (2000), establishment of a Supreme Authority in petroleum product market was proposed. The Report argues that the new Supreme Authority should have wide authority and should be independent. The Report proposes that General Directorate of Petroleum Affairs, the public authority in petroleum industry at that time, can be reorganized as a supreme authority in petroleum product market. The Report argues that GDPA could solve the problems in petroleum market if reorganized and endowed with sufficient power. Moreover, in the draft version of the Petroleum Market Law, establishment of a Petroleum Market Authority, which will regulate downstream oil industry, was aimed. However, Grand National Assembly of Turkey granted the Energy Market Regulatory Authority to regulate petroleum product industry with the Petroleum Market Law.

EMRA published the License Regulation in 2004. With the License Regulation, all market activities require license. As of November 31, 2006, 14.500 retailers have retailer license, 11.500 of them have retailer with station license and 3.000 of them have retailer without station license. Moreover, 49 companies have distributor license[32]. Since the staff of EMRA, which is approximately 300 persons (Erdogdu, 2006), is not sufficient to supervise approximately 14.000 retailers, EMRA has

[32] EMRA's website, http://www.epdk.gov.tr/lisans/petrol/bayilik/bayilik.asp, Accession: November 12, 2006

signed protocols with the Ministry of Industry and Trade and the Ministry of Internal Affairs. With these protocols EMRA has delegated its supervision power to both Ministries. For this purpose, EMRA has trained the staffs in both Ministries (Ergi, 2006). However, since the supervision of petroleum products is not the main job of both Ministries, efficient supervision of the retailers is very difficult in practice. The supervision of petroleum sector has to be realized by the regulatory authority, not by Ministries which do not regulate the petroleum sector. Thus, EMRA should employ sufficient employees for the supervision of petroleum market.

National marker is one of the most important innovations in the Petroleum Market Law. With the national marker arrangement, refining companies and distribution companies should add a marker to the product they sold. The aim of the national marker is to determine the source of the petroleum products which are imported or which are produced in domestic refineries and also to determine how and in which ways petroleum products enter the country (Ergi, 2006). Although three years has passed from the enactment of the Petroleum Market Law, EMRA has failed to put in force national marker. Two tenders were canceled due to the insufficient application and one tender was canceled since the company which won the tender, could not realize its liabilities. Ultimately, EMRA and TUBITAK signed a cooperation protocol about national marker. With this protocol, national marker is being produced by TUBITAK at desired standards[33]. EMRA is planning to put in force the national marker before the end of 2006.

As discussed above, establishment of distribution company became easier with the Petroleum Market Law and License Regulation made it easier to operate in distribution sector. Increase in distribution company number aggravated the smuggled oil problem since the supervision of these companies became more difficult. EMRA realized this fact in 2006 and amended the License regulation in June 2006. With the new arrangement, in order to get distribution license, distribution companies' capital must be at least YTL 5 million. Moreover,

[33] Radikal newspaper, http://www.radikal.com.tr/haber.php?haberno=181798, Accession: November 12, 2006

distribution companies, which already have license and capital less than YTL 5 million, has to increase their capital to YTL 5 million up to June 1, 2007. However, capital requirement is still very low compared to previous legislation of GDPA. In the previous legislation, distribution companies must have at least YTL 15 million.

Three years experience of EMRA in petroleum markets reveals that EMRA does not have the sufficient experience, knowledge and staff to regulate petroleum market. EMRA could not achieve remarkable success in petroleum market; instead EMRA could create problems in sector which mentioned above. Erdogdu (2006) claims that EMRA's responsibilities in petroleum and LPG market should be removed and Erdogdu (2006) also implies that EMRA has already delegated most of its supervision responsibilities to the Ministry of Internal Affairs. Therefore, Erdogdu (2006) proposes that legislation in petroleum sector should be consistent with practice.

EMRA' responsibilities in petroleum sector should be removed immediately and a new legal structure in petroleum market should be established. For this purpose, GDPA could be again authorized to regulate downstream oil industry. GDPA has 50 years experience in Turkish oil industry. Moreover, GDPA still regulates upstream oil industry. The main problem of the GDPA before the Petroleum Market Law was the absence of a comprehensive Law regulating downstream oil industry. Therefore, GDPA could not take decisive actions in petroleum industry. GDPA could be re-organized in a semi-autonomous structure rather than fully independent. For this purpose, related parties in the sector, such as distribution companies, refining companies, retailers, unions etc., should be represented in GDPA. Representation of the related parties in GDPA, could make it easier to solve sector problems quickly and also contribute the consistency of legislation and sector needs.

In Turkish case, independent regulatory authorities' "independency" is not realized in practice. For instance, crisis in electricity sector last months is tried to be solved mostly by the Ministry of Energy and Natural Resources, rather than EMRA. Since most of the regulatory authorities were established by international pressure, mostly

by IMF, rather than domestic needs, these independent authorities do not fit with the Turkish political and economic atmosphere. Therefore, "independency" of these authorities remains mostly in laws and regulations. Furthermore, existence of these kinds of authorities creates two related authority in related markets; the related ministry and the related independent authority, which leads to chaos in regulation. On the other hand, enough staff should be employed in order to supervise the petroleum market. Supervision of petroleum market by the Ministry of Industry and Trade and Ministry of Internal Affairs should be terminated. Effective supervision of the petroleum market could only be realized by the related public authority.

6.5. Conclusion

Turkish downstream oil industry has experienced a radical liberalization process during the last two decades. Privatization processes of Petrol Ofisi and TÜPRAŞ was started in 1990 and completed in 2005. Privatization experience of Petrol Ofisi and TÜPRAŞ reveals that there were a lot of problems about the transparency of privatization of both companies. Moreover, beginning of privatization process was a sudden decision rather than a planned process. On the other hand, privatization methods of Petrol Ofisi and TÜPRAŞ widely differ from the privatization of oil companies in the world. Oil companies were mostly vertically integrated before privatization. However, in Turkey vertically integrated structure of public oil companies was broken before privatization. Public oil companies were privatized separately. This method prevented the emergence of "international" Turkish oil company. Although public oil companies are still important actors in oil industry, Turkish government currently just holds 100% of TPAO. Palacios (2002) says that countries which are net oil importers are willing to liberalize their oil industries. This argument is consistent with the deregulation process of Turkish downstream oil industry.

Privatization of Petrol Ofisi and TÜPRAŞ did not result a competitive environment in Turkish downstream oil industry. Petrol Ofisi, leading firm in distribution sector, strengthened its leading position following the privatization. Furthermore, TÜPRAŞ

was transformed from public monopoly to private monopoly. Although, Turkish refining industry has become attractive both for domestic and foreign investors nowadays TÜPRAŞ's monopoly position is expected to continue in the medium term. The only competitive force for TÜPRAŞ is the petroleum product importation. However, petroleum product imports of distribution companies were only one-fourth of the TÜPRAŞ's domestic sales in 2004. Briefly, monopolistic position of TÜPRAŞ in downstream oil industry is an obstacle for the establishment of competitive downstream oil market.

Liberalization of petroleum product prices on January 1, 2005 did not result price competition in downstream oil industry. Analysis of the unleaded gasoline and diesel oil prices in Turkey and EU-15 countries demonstrates that petroleum product prices increased in Turkey compared to EU-15 countries following the price liberalization. TÜPRAŞ, Petrol Ofisi and Turcas increased their profits after price liberalization. Indeed, distribution margins in distribution sector have increased by 60% after 20 months from the price liberalization. Thus, companies operating in downstream oil industry have enjoyed from price liberalization at the expense of consumers. Liberalizing petroleum product prices while crude oil prices were fluctuating, without developing a competitive environment was a crucial mistake. Although number of distribution companies has increased substantially, new companies could not steal the retailers of incumbent distributors and establishment of new retailer in metropolitan areas are restricted with the Petroleum Market Law and License Regulation. Policies forcing market actors to price competition must be arranged immediately. For instance, the leading companies' establishment of new retailers can be limited for a specified period and the duration of contracts between retailers and distribution companies can be limited with maximum 5 years. In addition, according to the Petroleum Market Law EMRA has the authority for intervening prices and determining prices for maximum 2 months in the case of market distortions. EMRA can use this power in order to force distribution companies to price competition.

Smuggled oil has been one of the main problems of Turkish downstream oil industry for approximately 15 years. Smuggled oil forces distribution companies to unfair

competition and prevent the institutionalization of market economy. As opposed to public perception the main reason of the smuggled oil is not high tax burden on petroleum products. Tax burden on petroleum products is not very high compared to European countries. The main reason of the smuggled oil problem is the lack of effective supervision mechanism in downstream oil market. The national marker arrangement has not been realized for three years and EMRA delegated its supervision authority to Ministry of Industry and Trade and Ministry of Internal Affairs. Effective supervision of downstream oil industry could only be realized by the related public authority.

EMRA has been supervising Turkish downstream oil industry for three years. Unfortunately, three years performance of EMRA can be evaluated as unsuccessful. EMRA does not have sufficient experience and staff in order to regulate and supervise Turkish downstream oil industry. EMRA's inability to realize national marker application is one of the proofs for unsuccessful performance. Moreover, EMRA has delegated its supervision authority to the Ministry of Industry and Trade, and the Ministry of Internal Affairs. Effective supervision could not be realized by both ministries since supervision of downstream oil industry is not the main jobs of both ministries. Thus, supervision of downstream oil industry should be realized by the related legal authority. Furthermore, since EMRA does not establish important criteria for distribution license, number of distribution companies has reached to 49 as of October 31, 2006. Rise in the number of distribution companies makes it difficult to supervise the sector which aggravates the smuggled oil problem EMRA made a new arrangement in June 2006 for license arrangements. With the new arrangement, distribution companies must have at least capital of YTL 5 million. However, this arrangement is insufficient to decrease the number of distribution companies.

EMRA's responsibilities in downstream oil industry should be removed immediately. Moreover, GDPA, which has a 50 years experience in downstream oil industry, should again be authorized to regulate downstream oil industry. For this purpose, GDPA should be re-organized in a semi-autonomous structure. Moreover,

related parties in the sector, such as distribution companies, refining companies, retailers, unions, should be represented in re-organized GDPA. Representation of related parties in GDPA will ensure the advantage of quick and efficient response of GPDA to sector problems. Moreover, GDPA should supervise the sector by itself rather than through the Ministry of Industry and Trade and the Ministry of Internal Affairs. For this purpose, sufficient employees must be hired for effective supervision.

CHAPTER 7

CONCLUSION

Oil is still the primary energy source in Turkey with a share of around 40%. Thus, international and domestic developments in oil industry affect Turkish economy profoundly. For instance, rise in crude oil prices during the last five years affected Turkish economy adversely since Turkey imports more than 90% of crude oil. Rise in crude oil prices exacerbates the foreign trade deficit of Turkey. In 2004, Turkey paid $ 6 billion for 23,8 million tons crude oil which was $ 2 billion for 23,7 million tons crude oil in 1998. Further, rise in crude oil prices raised the petroleum product prices. Final consumer price of one liter gasoline 95 RON exceeded YTL 3,00 in June 2006 and the price of one liter diesel oil 50 ppm exceeded YTL 2,5 million in June 2006.

Downstream oil industry in Turkey has been experiencing a deregulation process since 1989. The deregulation process having accelerated after 2000 has aimed to create a competitive downstream oil industry. In 2000, 51% of Petrol Ofisi was sold to Türkiye İş Bankası-Doğan Holing Consortium. Then, the Petroleum Market Law which dedicated to the institutionalization for market economy in downstream oil industry was enacted in 2003. TÜPRAŞ was sold to Koç Holding-Shell Consortium in 2005. Currently, petroleum product prices are determined freely by TÜPRAŞ and distribution companies and there is no limitation on imports of petroleum products. In addition, there is no public company in downstream oil industry. Public has only a golden share in TÜPRAŞ.

Public companies are still important players in oil industry in the world. Governments had shares in different degrees in 30 companies of the biggest 50 oil companies in the world in 2000. However, no public oil company has remained in downstream oil industry in Turkey and government merely holds 100% of TPAO

which is operating in upstream oil industry. Palacios (2002) claims that countries which are net oil importer are willing to liberalize their oil industries. Since, Turkey imports approximately 90% of crude oil, deregulation process of downstream oil industry is consistent with Palacios's (2002) argument.

The privatization of Petrol Ofisi and TÜPRAŞ was a problematic process. Transparency of privatization has not been ensured mostly. Lack of sufficient transparency has delayed the privatization of both companies. In addition, privatization has resulted in unemployment in both cases. Petrol Ofisi, which had approximately 4.000 employees in 2000 before privatization, has nearly 1.000 employees at present. Furthermore, more than 800 employees were fired just after the privatization in TÜPRAŞ. Privatization of public oil companies in Turkey widely differs form the privatization of public oil companies in world. Public oil companies in most countries were vertically integrated before privatization. Vertical integration of public companies before privatization enables the internationalization of these companies after privatization. Repsol in Spain and PKN Orlen in Poland are good examples for the internationalization of public companies after privatization. However, vertically integrated structure of public companies had been broken before the privatization in Turkey. Vertical disintegration of public oil companies in Turkey before privatization prevents the emergence of an "international" Turkish oil company.

Privatization of public companies did not arouse a competitive downstream oil industry. Petrol Ofisi has increased its market shares in diesel oil and unleaded gasoline remarkably since 2000. In addition, since TÜPRAŞ is the sole reining company in Turkey, TÜPRAŞ was transformed from a public monopoly to private monopoly. Turkish refining industry has become very attractive for foreign and domestic investors during the last years. The accomplishment of Baku-Tblisi-Ceyhan pipeline project in 2006 also makes Ceyhan attractive for refinery investment. Establishment of two refineries in Ceyhan and one refinery in Zonguldak is on the agenda. However, accomplishment of these projects could be realized in medium term. TÜPRAŞ seems to be a private monopoly in the near future too. Therefore,

achievement of a competitive refining industry is not possible in the near future. The petroleum product importation which was fully liberalized with the Petroleum Market Law is the only competitive force for TÜPRAŞ. However, the petroleum product imports of distribution companies were equal to one-fourth of TÜPRAŞ's domestic sales in 2004. Thus, petroleum product importation is not a crucial threat for TÜPRAŞ despite the expectation that the petroleum product importation will increase through the import liberalization.

The Petroleum Market Law allowed refining companies and distribution companies to set petroleum product prices freely. Petroleum product prices have been determined by free market conditions since January 1, 2005. Comparison of the unleaded gasoline and diesel oil prices in Turkey and EU-15 countries reveals that unleaded gasoline and diesel oil prices excluding tax have increased substantially since January 1, 2005. The difference between unleaded gasoline prices excluding tax in Turkey and EU-15 countries has increased by EURO 0,14 per liter between 2004/2 and 2006/1. The difference between diesel oil prices excluding tax in Turkey and EU-15 countries has increased by EURO 0,06 during the same period. Increase in diesel oil prices excluding tax in Turkey compared to EU-15 countries is modest compared to increase in unleaded gasoline prices excluding tax.

Investigation of taxes on unleaded gasoline and diesel oil reveals that although tax amount in unleaded gasoline and diesel oil in Turkey are high compared to EU-15 countries, tax burden on unleaded gasoline and diesel oil do not differ substantially in Turkey and EU-15 countries. The differences between tax burden on unleaded gasoline and diesel oil in Turkey and EU-15 countries were only 2% and 1% in 2006/1 respectively. In other words, tax burden on unleaded gasoline and diesel oil is not very high in Turkey compared to EU-15 countries contrary to common perception.

Increase in unleaded gasoline and diesel oil prices excluding tax in Turkey compared to EU-15 countries was resulted from increase in margins of TÜPRAŞ and distribution companies rather than increase in costs. Since TÜPRAŞ can process high

sulphur, high gravity crude oil, TÜPRAŞ enjoys important cost advantage from the price gap between reference crude oil and high sulphur, high gravity crude oil. This advantage increased from $ 4,07 per barrel in 2004 to $ 4,98 per barrel in 2005. In addition, TÜPRAŞ's refinery margin increased from $ 4,94 per barrel in 2004 to $ 5,70 per barrel in 2005. Average Mediterranean Ural Complex refinery Margin which was higher in 2004 compared to TÜPRAŞ was $ 5,31 in 2005. Thanks to increasing margins, TÜPRAŞ increased its EBITDA from $ 768 million in 2004 to $ 800 million in 2005.

Distribution companies' prices have not differed remarkably since the price liberalization. Price competition has not been realized, yet. Investigation of the financial performance of Petrol Ofisi and Turcas indicates that both companies have strengthened their financial positions situation since price deregulation. Especially, Petrol Ofisi increased its profit substantially. Petrol Ofisi's operating profit increased by 89%in 2005 compared to 2004. In addition, Petrol Ofisi's net income excluding monetary gain increased by 222% in 2005. Moreover, Turcas increased its operating profit and net income by 103% and 147% in 2005 respectively. Distribution margins of distribution companies increased by 60% since price liberalization. Distribution margin in unleaded gasoline and diesel oil reached to 20 cent per liter and 18 cent per liter respectively.

As opposed to expectation price liberalization did not result in price competition. TÜPRAŞ and distribution companies have increased their margins significantly following the price liberalization. Therefore, companies operating in downstream oil industry increased their profits at the expense of consumers. Liberalizing petroleum product prices without establishing a competitive market was an important mistake. In addition, timing of the price liberalization was also another mistake due to the sharp fluctuation in crude oil prices. Determination of petroleum product prices by government again is not a feasible method. All companies operating in downstream oil industry are private companies. Determination of petroleum product prices by government will lead to an inefficient market. The feasible method is to develop policies aiming to establish a competitive downstream oil industry. For example, the

duration of contracts between distribution companies and retailer could be limited with maximum 5 years. Moreover, establishment of new retailers of the leading distribution companies can be limited for a specified period like in Spain. In addition, EMRA could use its power to determine petroleum product prices for two months in the case of market distortions in order to force distribution companies to price competition.

The Petroleum Market Law aimed to solve the smuggled oil problem which has existed since 1990s. For this purpose, in order to operate in downstream oil industry getting a license from EMRA is required. In addition, adding a marker to petroleum products will be arranged. However, national marker has not been realized yet for three years. The amount of smuggled oil reached to 2,5 million tons in 2005. Existence of smuggled oil force distribution companies to unfair competition. Therefore, establishment of a competitive downstream oil industry is very difficult without solving the smuggled oil problem. EMRA has to realize national marker immediately. Moreover, EMRA has to establish an effective supervision mechanism in order to prevent smuggled oil.

EMRA started to regulate the downstream oil industry through the Petroleum Market Law. EMRA posted a lot of regulation about downstream oil industry. The most important regulation of EMRA is the License Regulation which regulates the rights and liabilities of each activity requiring a license. Three-years-performance of EMRA can be evaluated as unsuccessful. Firstly, EMRA has failed to realize national marker application, which is very important for solving smuggled oil problem, for three years. Secondly, EMRA has delegated its supervision authority to the Ministry of Industry and Trade and the Ministry of Internal Affairs. Effective supervision of downstream oil industry could not be achieved by both Ministries since the supervision of downstream oil industry is not the main job of both Ministries. Hence, delegation of supervision authority to the Ministry of Industry and Trade and the Ministry of Internal Affairs is an important mistake. Thirdly, license regulation of EMRA makes it easy to get distribution license. As a result of this, the number of distribution companies reached to 49 as of October 31, 2006 which makes

it difficult to supervise them. Since distribution companies have an important role in smuggled oil problems, increase in the number of distribution companies aggravates the smuggled oil problem. In June 2006, EMRA made an amendment in the License Regulation. Through the amendment, distribution companies must have at least capital of YTL 5 million. However, this amendment is not expected to decrease the number of distribution companies. Three-year-experience of EMRA reveals that, EMRA does not have the sufficient experience and staff to regulate the downstream oil industry. Therefore, EMRA's responsibilities in downstream oil industry should be removed immediately. GDPA should be authorized to regulate and supervise downstream oil industry. For this purpose, GDPA should be re-organized as a semi-autonomous public authority and related parties in the sector should be represented in GDPA. Moreover, sufficient employees must be hired in GDPA, in order to achieve effective supervision by itself.

The European Union membership process is also affecting the deregulation of downstream oil industry. As discussed in Chapter 5, establishment of a competitive energy market is one of the main objectives of European Union. The Petroleum Market Law meets the legal background of the establishment of a competitive downstream oil industry. The price liberalization, petroleum product imports liberalization, limiting the leading distribution company's market shares with 45% are the arrangements about establishment of a competitive market. However, despite the existence of legal background, Turkish downstream oil industry is far away from a competitive environment. Thus, Turkey should achieve sufficient competition level in downstream oil industry for EU membership.

Supply security is also another main objective of the EU energy policy. Keeping at least 90 days petroleum stock is one of the most important arrangement of EU energy policy. The Petroleum Market Law arranged 90 days petroleum stock in 2003. By means of this arrangement, at least 90 days amount of the net petroleum import has to be kept as national petroleum stock. In addition to EU legislation, IEA arrangements also oblige to keep at least 90 days national petroleum stock arrangement. Therefore, keeping national petroleum stock is also a necessity for

international obligations. However, the national petroleum stock arrangement has not been realized yet. National petroleum stock arrangement should be realized immediately in order to prevent possible supply risks. Moreover, diversification of crude oil imports is also vital for supply security in EU energy policies. The total share of four countries, Russia, Libya, Iran and Saudi Arabia, in Turkey's crude oil imports was 87% in 2004. Political instability in Middle East countries is increasing as time goes by. Thus, Turkey has to diversify its crude oil imports in order to decrease supply risks. For this purpose, crude oil imports from Former USSR countries such as Azerbaijan and Kazakhstan should be increased. The Baku-Tblisi-Ceyhan Pipeline Project is an important opportunity for Turkey to diversify crude oil imports.

Briefly, Turkish downstream oil industry has experienced a radical restructuring since 2000. Privatization of Petrol Ofisi and TÜPRAŞ and enactment of the Petroleum Market Law are the main steps for liberalizing the downstream oil industry. Although deregulation process aimed to create a competitive downstream oil industry, this aim has not been realized, yet. TÜPRAŞ became a private monopoly with the privatization and seems to remain a monopoly in the near future. Moreover, although the number of distribution companies reached nearly to 50, the total market shares of the biggest 11 companies was 95% in 2005. In addition, as discussed in Chapter 6, price liberalization leads to increase in petroleum product prices. Companies operating in downstream oil industry increased their profits thanks to the price liberalization at the expense of consumers. Moreover, the smuggled oil problem has not been solved yet. Existence of smuggled oil problem makes it difficult to create a competitive market due to unfair competition. In short, the arrangements aiming to create a competitive market seem to have failed. Turkish government has to ensure a competitive environment in downstream oil industry. For this purpose, the duration of contracts between retailers and distribution companies could be decreased. In addition, establishment of new retailers of the leading distribution companies could be restricted for a specified period. Finally, the last but not the least, a strong legal authority which is equipped with sufficient power and staff should be constituted in downstream oil industry.

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APPENDIX A

MAJOR DISTRIBUTION COMPANIES IN TURKISH PETROLEUM MARKET

PETROL OFİSİ

Petrol Ofisi was established in 1941 in order to solve the petroleum product shortness and distribution problems due to the World War II. Up to 1940, distribution of petroleum products was realized by Socony-Vacum Oil Company Inc., Steau Romana, British Ltd., The Shell Company of Turkey and Neft Sendikat. In 1940, a national company called "Petrol Limited Company" was founded through taking over of Neft Sendikat. On 18.2.1941, Petrol Limited Company was transformed to "General Directorate of Petrol Ofisi". Initial capital of Petrol Ofisi was TL 2,5 million and initial storage capacity of the company was 22.285m^3 (The Ministry of Energy and Natural Resources, 1973) .Petrol Ofisi became a joint-stock company in 1983. In 1983, Petrol Ofisi became a subsidiary of PETKUR (Association of Petroleum). In 1984, Petrol Ofisi became a subsidiary of TPAO since PETKUR was converted to the TPAO.

In 1990, Petrol Ofisi was decided to be privatized and for this purpose Petrol Ofisi became a subsidiary of Ö.İ.B (Privatization Administration). Until 1999, 7% of Petrol Ofisi's shares was sold in Istanbul Stock Exchange. On April 9, 1999 Ö.Y.K (Privatization High Council) delegated authority to Ö.İ.B to privatize Petrol Ofisi via block sales. Following the privatization tender, Ö.İ.B decided to sell 51% of Petrol Ofisi to Türkiye İş Bankası- Doğan Holding Consortium with a price of $ 1,26 billion on July 21, 2000. Ö.İ.B offered to public additional 17% of Petrol Ofisi shares on March 6, 2002. Finally, Ö.İ.B sold the last remaining 26% of Petrol Ofisi shares to Türkiye İş Bankası-Doğan Holding Consortium with a price of TL 387,5 trillion on July 16, 2002. Türkiye İş Bankası sold its shares to Doğan Holding for $

616 million on September 2, 2005. Finally, Doğan Holding and OMV have agreed on the sale of 34% of Petrol Ofisi A.Ş. shares to OMV with a price of $ 1,05 billion on March 13, 2006. Currently, 52% of Petrol Ofisi is owned by Doğan Holding, 34% of Petrol Ofisi s is owned by OMV and 13% of Petrol Ofisi is floated in Istanbul Stock Exchange.

BP

BP started to its operation in Turkey in 1912. BP had continued its operations under the name of Steaua Romana until 1949, then changed its name to Anglo Iranian Oil Company Limited and in 1953 again altered its name for BP Agean Limited. In 1957, BP was reorganized according to Turkish legislation and started to operate as a turkish company under the name of BP Petrolleri A.Ş. BP was one of the founders of the ATAŞ refinery. At present, BP continues operations in Turkey with approximately 600 stations[34].

SHELL

Shell started to its operations in Turkey in 1923. Main companies of Shell operating in Turkey are[35]:

- The Shell Company of Turkey Limited (distribution company)
- Raffinaderij Shell Mersin N.V. (Shell owns 27% of ATAŞ)
- Çekisan Depolama Hizmetleri Ltd. (storage company, Shell owns 50%)
- Shell Gas & Power Turkey BV
- Sihirgaz A.Ş (LPG distribution company)

[34] BP website, http://www.bp.com/sectiongenericarticle.do?categoryId=4005467&contentId=56043, Accession: November 12, 2006

[35]Shell website, http://www.shell.com/home/Framework?siteId=tr-tr&FC2=/tr-tr/html/iwgen/leftnavs/zzz_lhn2_0_0.html&FC3=/tr-tr/html/iwgen/shellturkiyehakkinda/shell_hakkinda_12141955.html, Accession: November 12, 2006

The Shell Company of Turkey Limited merged with Turcas Petrolcülük A.Ş. on July 1, 2006.

TOTAL

TOTAL started to operate in Turkey in 1992. Following the global merger of TOTAL and ELF in 1999, TOTAL and ELF merged in Turkey with the name of Total Oil Turkey A.Ş. In 2003, Totalgaz (LPG distribution company) joined to Total Oil Turkey A.Ş. TOTAL continues to its operation in Turkey with a single company.

OPET

Founded in 1992, OPET is operating with its 594 stations and with 330.00 cubic meters of storage capacity. Koç Holding bought 50% of OPET at the end of 2002. OPET has two brands in fuel distribution sector; OPET and SUNPET. Stations which have high sales volume is organized in OPET brand, and stations with low sales volume is organized in SUNPET brand. Through the completion of Marmara Ereğlisi terminal which is still under construction, OPET will have had the largest storage capacity among distribution companies[36].

TURCAS PETROL (TÜRKPETROL)

Türkpetrol was the first private and national fuel distribution company in Turkey. Türkpetrol was established in Turkey in 1931 with a capital of TL 200.000. In 1992 15% of the company was offered to the public in İstanbul Stock Exchange. In 1996, 82% of Türkpetrol was purchased by Conoco Inc. and by Tabas Petrolcülük A.Ş. In 1999, following the union of Tabas and Turcas Petrolcülük A.Ş., the company was renamed as Turcas Petrolcülük A.Ş. In 2005, 29% of Company's shares belonging to Conoco Inc was purchased by Aksoy Petrol Dağıtım Yatırımları A.Ş. The company

[36]Opet website, www.opet.com.tr, Accession: November 12, 2006

has approximately 700 stations in Turkey. As mentioned above, Turcas Petrolcülük A.Ş. merged with Shell Turkey on July 1, 2006.