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Country Economic Memorandum
Promoting Sustained Growth and Convergence with the European Union

(In Two Volumes) Volume II: Expanded Report

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CURRENCY AND EQUIVALENTS UNITS

Currency Equivalents

(Exchange Rate Effective February 22, 2006)

Currency Unit: New Turkish Lira

US$1 = 1.3245

Government Fiscal Year

January 1 - December 31

Weights and Measures

Metric System

ACRONYMS AND ABBREVIATIONS

ALMP	Active Labor Market Programs	AOD	Abuse of Dominant Position
BITT	Banking and Insurance Transaction Tax	BEEPS	Business Environment and Enterprise Performance Survey
CAP	Common Agricultural Policy	CBRT	Central Bank of the Republic of Turkey
CGG	Consolidated General Government	CITE	Centros de Innovacione Tecnologicas
EBF	Extra Budgetary Funds	ERA	European Research Area
ESS	Education Sector Study	ETT	Expenditure Tax Treatment
EU	European Union	FDI	Foreign Direct Investment
GFS	Government financial Statistics	ICS	Investment Climate Study
GIEC	Governmental European Integrated Commission	ICT	Information and Communication Technology
IPA	Investment Promotion Agency	ITA	Investment Tax Allowance
ITAF	Industrial Technical Assistance Fund	MARA	Ministry of Agriculture and Rural Affairs
MOLSS	Ministry of Labor and Social Security	MOPWS	Ministry of Public Works Settlements
MoT	Ministry of Transport	MOU	Memorandum of Understanding
MTEF	Medium-Term Expenditure Framework	NBFI	Non-Bank Financial Institutions
NIS	National Innovation System	NPAA	National Plan for the Adoption of the Acquis
PFMC	Public Financial Management Control	PMR	Product Market Regulations
RUSF	Resource Utilization Support Fund	SBA	Stand-By Arrangement
SGEI	Services of General Economic Interest	SME	Small and Medium Enterprise
SOE	State Owned Enterprises	SPO	State Planning Organization
TINA	Transport Information Needs Assessment	WEF	World Economic Forum

Vice President:	Shigeo Katsu
Country Director:	Andrew N. Vorkink
Sector Director	Cheryl Gray
Sector Manager	C. Felipe Jaramillo
Task Team Leader	Aristomene Varoudakis

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This report was prepared by a core team composed of: Mediha Agar, Michel Audige, Gordon Betcherman, Steen Byskov, Mukesh Chawla, Michael Edwards, Indira Konjhodzic, Mark Lundell, Marialisa Motta, Zafer Mustafaoglu, Kamer Karakurum-Ozdemir, and Aristomene Varoudakis (Task Team Leader).

Significant contributions were provided by: Gokhan Akinci; Enrique Blanco Armas, Nina Budina; Sirin Elci (consultant); John Innes; Bart Kaminski (consultant), Rughvir K Khemani, Robin Horn, Ranjit Lamech, Gareth Locksley; Koshy Mathai (IMF); Ebru Ocek (consultant); Marc Reichel (consultant), Selin Sayek (consultant); Sumter Lee Travers; Dominique Van Der Mensbrugghe, Charles Vuylsteke (consultant), and Sweder van Wijnbergen (consultant).

Contributions were also received by: Cecilia Briceno-Garmendia; Ferhat Emil (consultant); Edgardo Favaro; Isabel Sanchez Garcia; Vinod K. Goel; Itzhak Goldberg, Ufuk Guven, Mizuho Kida; Brian Levy; Richard Messick, Georgine Ann-Marie Newman-Alawode, Panagiota Panopoulou, Taras Pushak, Anita Schwarz.

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PART A. POLICY AND INSTITUIONAL FRAMEWORK FOR CONVERGENCE WITH THE EUROPE UNION

CHAPTER 1. UNLOCKING TURKEY'S POTENTIAL FOR GROWTH AND PREPARING FOR EU ACCESSION

1.1 ***Commitment of the Government to sound economic policies since 2001 has placed the Turkish economy in a good position to embark on a sustained path of faster economic growth.*** Turkey has significantly improved its macroeconomic situation through a determined implementation of the reform program. Important progress has been achieved in reducing inflation and real interest rates, improving public finances, restructuring the financial sector, improving the business environment, and reforming the public sector. In particular, strong fiscal discipline helped lower inflationary expectations and improve debt sustainability. Thus, stability has been restored, predictability has improved and market confidence has increased. The new Stand-By arrangement with the IMF and the ongoing process of European Union (EU) accession is expected to provide an anchor for the continuation of the reform process in the years ahead, and contribute to increasing Turkey's growth potential and improving convergence prospects to the EU average income level.

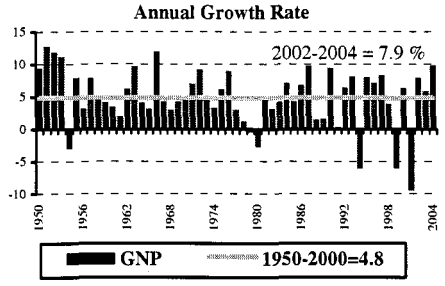
1.2 ***Sustained fast growth could be the virtuous outcome, and the precondition, for Turkey's EU accession.*** The strong recovery after the 2001 crisis has improved confidence and eased the burden of reforms to the society which in turn facilitated a consensus about their merits. Sustained high growth rates could further strengthen the consensus on these reform efforts. The EU accession can provide a strong anchor for the continuation of the reforms as well as helping high growth rates; while at the same time sustained high growth rates would enhance prospects for Turkey's eventual membership by accelerating income convergence between Turkey and the EU. This chapter looks into Turkey's prospects for achieving faster growth during a sustained period of time, so as to start closing the income gap with the EU-25 average and addresses overachieving policy coordination issues for EU accession. The first section evaluates the recent developments in key economic variables as well as the macroeconomic policy framework. The second section compares Turkey's long term growth performance relative to other countries. This section also analyses the main factors affecting labor productivity, total factor productivity and labor utilization in Turkey. Section three analyzes in more detail Turkey's trade performance—a powerful driver of productivity improvement and growth. The fourth section discusses how the challenge of accelerating growth is intertwined with the challenge of reducing regional disparities. The fifth section analyses the relative growth performance of Turkey with the EU countries and, building on the findings of previous sections, evaluates scenarios for sustained income convergence for Turkey. The last section discusses reform sequencing, including the agenda that goes beyond the acquis, and overarching issues in policy coordination for EU accession.

A. FROM CRISIS TO STABILITY—STRONG ECONOMIC PERFORMANCE POWERED BY FAR-REACHING POLICY REFORMS

A.1. A strong recovery has taken hold since 2002

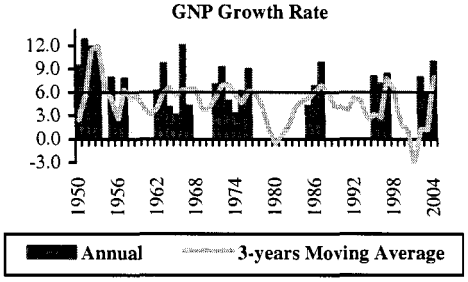
1.3 ***The recovery in the Turkish economy has been remarkable.*** Following the record contraction of GDP in 2001, the Turkish economy rebounded very strongly and was one of the fastest growing economies in the world in 2004. The annual growth rate averaged 8 percent during 2002-2004, considerably exceeding past performance (Figure 1.1). Turkey has managed to grow above 6 percent on average in three consecutive years many times over the last 55 years (Figure 1.2). However, the average growth rate over the last three years was the second highest since 1950. Per capita income growth, at an average of 6.3 percent during 2002-2004, significantly exceeded past trends and was strong enough to help Turkey achieve some convergence with higher income countries. The economy continued to grow strongly in 2005, albeit at a slower pace close to potential. Growth of GDP reached 5.5 percent in the first three quarters of 2005 compared to the same period in 2004. The official estimate of 5 percent growth rate for the whole year seems well in reach.

Figure: 1. 1 Annual GNP Growth



Source: SIS and own calculation

Figure: 1. 2 High Growth Episodes



Source: SIS and own calculation

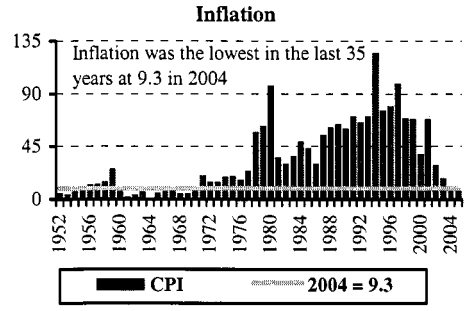
1.4 ***The recovery was mainly driven by the private sector.*** A noticeable change from the past during this period was that the strong growth mainly came from the private sector, while public sector consumption and investment expenditures shrank due to tight fiscal policies. The growth was mainly driven by private consumption, investment and exports on the demand side (Table 1.1). Domestic demand grew faster than real GDP in 2003-2004, causing a broadening of the current account deficit (see below), and this trend did not change much in the first three quarters of 2005, though consumption slowed down considerably and was aligned with real GDP growth. Strong investment activity brought about a significant increase in domestic demand since 2002. On the supply side, industry, trade, transportation and communication sectors have mainly contributed to growth.

Table: 1. 1 Components of Real GDP Growth
Annual Percentage Change

	1999	2000	2001	2002	2003	2004	2005Q3
Consumption	-1.7	6.3	-9.1	2.5	5.6	9.0	6.6
Private	-2.6	6.2	-9.2	2.1	6.6	10.1	6.9
Public	6.5	7.1	-8.5	5.4	-2.4	0.5	3.9
Investment	-15.7	16.9	-31.5	-1.1	10.0	32.4	18.1
Private	-17.8	16.0	-34.9	-5.3	20.3	45.5	15.9
Public	-8.7	19.6	-22.0	8.8	-11.5	-4.7	32.7
Change in Stocks*	2.0	1.1	-4.0	7.1	3.0	1.1	-1.3
Net Exports*	-0.9	-3.0	12.3	-0.9	-3.1	-4.9	-2.1
Exports	-7.0	19.2	7.4	11.1	16.0	12.5	5.8
Imports	-3.7	25.4	-24.8	15.8	27.1	24.7	10.1
Domestic Demand	-5.6	8.9	-15.1	1.7	6.5	14.1	9.5
GDP	-4.7	7.3	-7.5	7.9	5.8	9.0	5.5

*: Contributions to growth

Figure: 1. 3 Inflation



1.5 ***Inflation has come down to single digits, greatly facilitating the reduction in interest rates.*** Rising to around 70 percent during the crisis of 2001, inflation fell down to single digits in 2004 (9.3 percent) for the first time in the last 35 years and continued to decelerate in 2005 (7.7 percent). Continued slack in the labor market, rising productivity and an appreciating currency have kept inflationary pressures low despite the surging economy and rising oil prices. As a result, inflation expectations have remained tame and the CPI inflation in 2005 realized at 7.7 percent, below the year-end target of 8 percent.

1.6 ***Rapidly rising productivity has underpinned strong growth.*** Firms reacted to the severe crisis in 2001 by increasing efficiency and productivity as well as by penetrating new international markets. In doing so, they increased utilization of installed capacity and labor. Average capacity utilization and working hours in the economy rose significantly. The cumulative increase in labor productivity amounted to 23 percent during 2002-2004. The rise in productivity eased the pressures stemming from the appreciating currency. Although the real appreciation of the Turkish lira during this period almost completely eroded the sharp depreciation of 2001, unit labor costs in dollar terms remained 6.7 percent lower than in 2000. Wage moderation, due to labor market slack, also contributed to holding back growth in unit labor costs.

1.7 ***Exports of high value added products as well as new markets have gained importance.*** Exporters have not only kept a competitive position but have penetrated new markets. Exports to non-OECD countries, particularly in Europe and in the Middle East have gained weight. Thanks to improved competitiveness, the composition of exports has also changed towards more technology intensive products, such as automobile, electrical and electronic equipment and machinery, which in 2005

represented 30 percent of total exports, up from 21 percent in 2000. This bodes well for the sustainability of the growth in exports. Underlying trends in Turkey's trade are examined in more detail in section C. The appreciation of the euro against the dollar may have also benefited Turkey's exporters by supporting their profit margins. The majority of Turkish exports are euro-denominated while imported raw materials are mostly USD-denominated.[1] Therefore, the appreciation of Euro against the USD by almost 40 percent during the period of 2002-2004 must have eased substantially the pressures on competitiveness originating from the appreciation of the Turkish lira.

Table: 1. 2 Trade and Current Account Balance

(Million Dollars)

	1999	2000	2001	2002	2003	2004	2005
Exports (by ISIC)	26,587	27,775	31,334	36,059	47,253	63,167	73,122
Textile and Clothing	9,828	10,031	10,341	12,148	14,995	17,338	18,637
Machinery, Electric-Electronic and Vehicles	5,120	5,853	7,262	8,881	12,802	18,585	21,870
Machinery and Equipment	1,272	1,439	1,617	2,117	3,159	3,965	4,915
Electric-Electronic	1,463	1,787	2,041	2,632	3,168	4,459	5,076
Vehicles	2,386	2,627	3,605	4,132	6,474	10,161	11,879
Imports (by BEC)	40,671	54,503	41,399	51,554	69,340	97,540	116,048
Capital Goods	8,727	11,365	6,940	8,400	11,326	17,397	20,236
Intermediate Goods	26,854	36,010	30,301	37,656	49,735	67,549	81,320
Consumption Goods	4,820	6,928	3,813	4,898	7,813	12,100	13,926
Memo: energy imports *	5,375	9,529	8,339	9,204	11,575	14,407	21,164
Exports / Imports Ratio %	65.4	51.0	75.7	69.9	68.1	64.8	63.0
Trade Balance	-14,084	-26,728	-10,065	-15,495	-22,087	-34,373	-42,926
Trade Balance as a percentage of GDP	-7.6	-13.4	-6.9	-8.4	-9.2	-11.4	
Exports of Services	16,800	20,364	16,030	14,783	19,025	22,928	25,854
Transportation	2,900	2,955	2,854	2,795	2,184	3,267	4,016
Tourism	5,203	7,636	8,090	8,479	13,203	15,888	18,152
Others	8,697	9,773	5,086	3,509	3,638	3,773	3,686
Imports of Services	9,313	8,996	6,900	6,904	8,520	10,144	11,850
Transportation	2,101	2,463	2,021	1,934	2,707	4,331	5,313
Tourism	1,471	1,713	1,738	1,880	2,113	2,524	2,872
Others	5,741	4,820	3,141	3,090	3,700	3,289	3,665
Current Account Balance	-1,344	-9,819	3,390	-1,524	-8,036	-15,604	-22,852
Current Account Balance as a percentage of GDP	-0.7	-4.9	2.3	-0.8	-3.4	-5.2	

*: SITC Rev. 3, code which includes 32: coal, coke and briquettes; 33: petroleum, petroleum products and related materials; 34: gas, natural and manufactured; 35: electric current.

1.8 ***The current account deficit has also widened.*** The real appreciation of the lira and the strong recovery of the domestic demand led to widening trade and current account deficits in early 2004. The Turkish government was fairly quick in introducing measures to slow down consumption and consumer goods imports at the end of May 2004.[2] Those measures were effective in reducing imports of consumer goods, particularly automobiles, but the current account continued to widen albeit to a lesser extent than what it would have been if the government had not taken any

[1] Berument and Dincer (2005), Denomination Composition of Trade and Trade Balance: Evidence from Turkey, *Applied Economics*, vol.35.

[2] The measures included curbs on expansion of consumer credit by the state banks, reduction in tax credits for automobile purchases and raising taxes on consumer credit.

measure. The current account deficit amounted to 5.2 percent of GDP in 2004 and continues to remain a major cause of concern as it is projected to increase to 6 percent of GDP in 2005. Although the demand for imported automobiles has weakened significantly, the trade deficit in 2005 increased by 24.9 percent compared to 2004 and reached 42.9 billion dollars, mainly due to large increases in the imports of raw materials, particularly of energy related products as a reflection of high oil prices. The increase in the imported energy bill accounts for almost 1.5 percentage points of the projected current account deficit in proportion to GDP during 2005. The export coverage of imports declined from around 69 percent in January 2005 to around 62 percent in December 2005.

1.9 ***With generally favorable conditions in international capital markets, Turkey had no difficulty in financing the large current account deficit and foreign reserves rose in 2004 and 2005.*** However, a significant part of these flows continue to be short-term capital. Foreign investment in the stock exchange market, purchases of government bonds by non-residents in domestic markets and short term credit usage by banks (largely trade credits and inter-bank credits), increased substantially starting from mid-2003. About 53 percent of total net inflows (excluding IMF credits and official reserves) were in the form of short-term flows in 2004 and this ratio decreased to 41 percent in 2005. The official reserves of the Central Bank rose from around 19 billion dollars in 2001 to 36 billion at the end of 2004 and 50.5 billion at the end of 2005. The official reserves stood at 4.4 months of imports in 2004 and 5.2 months of imports in 2005. The same ratio was 4.9 months in 2000 and 5.4 months in 2001.

1.10 ***The large external current account deficit is of concern for the sustainability of fast growth.*** Although a high energy bill has inflated further the current account deficit in 2005, the continuing strong growth of domestic demand, and in particular of investment in the face of still weak domestic savings, underpins existing current account tensions. With strong fiscal consolidation achieved so far and a flexible exchange rate regime in place, Turkey is in a much better position to face current account imbalances than in the past. However, as strong growth of domestic demand is likely to characterize a fast-growth scenario in the years ahead (see section E.3), risks are also likely to persist. As further explained in chapter 2 (see section D.3), a sudden depreciation of the exchange rate—which might be triggered by capital flow reversals in the face of large current account deficits, insufficient amounts of FDI, and rising international interest rates—remains a source of vulnerability. Because of the still large foreign-exchange linked component of the public debt, and the increase in real interest rates that a significant depreciation of the exchange rate may entail, the currently declining path of the debt to GNP ratio could be interrupted. Such developments would not be consistent with sustained, fast medium-term growth.

1.11 ***Preserving current account sustainability raises a simultaneous challenge for both macroeconomic and structural policies.***

- On the macroeconomic front, it is important that fiscal discipline be continuously maintained through a high primary budget surplus to ensure needed mobilization of domestic savings for the financing of investment. Moreover, a sufficiently tight fiscal stance would be needed to support monetary policy in the context of the upcoming introduction of explicit inflation targeting (see next section). Without support from fiscal policy in forestalling domestic demand pressures, monetary policy would have to rely

on high short-term real interest rates to keep disinflation on track, with the risk of further appreciating the currency and damaging the external balance as well as increasing the cost of borrowing in domestic markets for the Treasury. On the other hand, managing monetary policy with a view to achieving a more competitive exchange rate would not be an option consistent with pursuing a strategy of inflation targeting and would risk undermining the credibility of disinflation.

- On the structural front, strengthening the investment climate, by complementary reforms further analyzed in chapters 3, 4, 5 and 7, is not only a condition for higher private investment and faster growth, but also for attracting foreign savings in the form of foreign direct investment and thus for ensuring the sustainability of growth. Better mobilization of domestic savings will be also needed—partly through sustaining the fiscal consolidation effort, and partly through greater mobilization of domestic private savings. Empirical analysis, based on a panel of 70 countries, including Turkey, suggests that fiscal policy, growth, financial sector development, and demographics are key factors that affect private savings (see section E.2). Continuing liberalization of product and service markets, through early alignment with the EU acquis and further strengthening of competition policy, would enable competitive cost reductions, especially in non traded services, which would accelerate the reduction of inflation. This would possibly allow a policy mix with an easier monetary policy stance, and would thus prevent currency appreciation induced by persistently high interest rates.

1.12 ***Bolstering the traditionally low levels of long term financing including foreign direct investment will improve the structure of capital flows and help preserve current account sustainability.*** FDI has picked up significantly in 2005. FDI in 2004 amounted to US$2.8 billion, and reached $9.6 billion (2.6 percent of GDP), based on transactions realized during the year. On a commitment basis, FDI is estimated at more than USD 19 billion in 2005, of which the great majority (72 percent) is related to privatization operations and sales of SDIF assets (Table 1.3). FDI related to acquisitions in the private sector accounts for the rest of commitments. On a cash-flow basis, however, FDI originating from private sector acquisitions accounts for the majority of expected inflows in 2005 (USD 5.2 billion out of USD 9 billion total—Table 1.3), consistent with an increasing appetite for Turkish companies and a significant rise in foreign interest in the Turkish banking sector. Moreover, 2005 represents a milestone in the history of privatization in Turkey. The Privatization Agency completed the ever biggest privatization, for Turk Telekom on July 1, raising US$ 6.6 billion for a sale of 55 percent shares of the company.[3] The total amount of privatization deals in 2005 is expected to yield close to US$ 26 billion (not including sales by the SDIF, see Table 1.3), although some of the sales are still in the legal process. By comparison, only US$ 9.4 billion of privatization deals were realized in the whole period 1986-2004. All these developments signal a strong confidence in the Turkish economy and confirm the government's commitment to the privatization program. Continuing efforts of privatization will help reduce public debt and, combined with greater greenfield FDI, will be particularly helpful in financing the

[3] The total amount will be paid in five annual installments and only an amount of 1.3 billion dollars was received in 2005. The strong privatization progress continued with big ticket items, such as the state refinery TUPRAS and the steel company Eregli Demir Celik.

widening current account deficit—especially in a context where short-term capital flows to emerging market economies may dry up with increasing interest rates in international capital markets.

Table: 1. 3 FDI commitments in 2005 and expected cash flow in 2005-06

(USD Billion)

	Sale Price (commitment based)	Cash Payment profile 2005	2006
Completed Privatization Tenders	25.63	6.86	4.50
of which FDI	**9.78**	**3.45**	**1.11**
Assest Sales by SDIF	5.96	1.66	4.00
of which FDI	**4.30**	**0.30**	**4.00**
Acquisitions in the Private Sector	7.86	7.76	0.10
of which FDI	**5.31**	**5.21**	**0.10**
Total FDI	**19.39**	**8.96**	**5.21**

Source: Barclays Capital—based on data from Privatization Agency and SDIF

1.13 ***The impressive economic growth did not reduce unemployment.*** Despite the strong growth performance for the three consecutive years in a row, unemployment remained high at 10.3 percent in 2004, declining only marginally from 10.5 in 2003. In urban areas, unemployment rate stayed at around 13 percent while unemployment of educated youth remained at around 25 percent. Although employment increased by 3 percent in 2004 and the rate of increases in agriculture, industry and construction sectors were significant, the increase in employment was just enough to cover the 2 percent increase in the working age population and 0.4 percentage point increase in the labor force participation ratio. Unemployment being realized at 10.1 percent, showed only slight declines in the first three quarters of 2005, compared to 10.4 percent in the same periods of 2004. Given the strong labor force growth and the potential for an increase in participation rates, Turkey needs to grow at very high rates even just to keep unemployment from rising.

1.14 ***The "jobs deficit" presents a particular challenge on the road towards EU accession.*** The European Council meeting in Lisbon in 2000 adopted an employment rate target of 70 percent to be met by 2010. With a still fast growing population and an employment rate of only 46 percent, Turkey will have to generate about 10 million jobs in 6 years to reach the current EU average employment rate in 2010, and would have to generate an additional 14 million jobs to reach the Lisbon target employment rate. Under current trends of GDP and employment growth, only around 2 million jobs will be created by 2010. The targets for female employment rate and employment for workers over 55 are even more difficult because women and older workers are particularly likely not to be employed in Turkey. The magnitude of the jobs deficit suggests that immediate action is needed (see below and also chapter 4).

A.2. The macroeconomic policy framework has been considerably strengthened

1.15 ***The policy mix has been effective in strengthening confidence in the economy.*** The policy mix followed since 2002, based on tight fiscal and monetary policies and a flexible exchange rate regime, has proven to be expansionary as it increased confidence in the markets and reduced risk premium on Treasury-bill interest rates. Ambitious structural reforms in financial markets, key infrastructure services, product markets and public sector as well as collaboration with the World Bank and the IMF have led to a radical improvement in policy framework and institutional set up, which boosted productivity and growth. The increased focus on the alignment with the EU acquis further strengthened the macroeconomic environment. In addition, the decision to start accession negotiations with Turkey by the European Council[4] in December 2004, followed by the effective start of negotiations on October 3 2005, and the signing of a new Stand-By arrangement with the IMF[5] in early 2005 have created twin anchors for economic policies in the years ahead. Nevertheless, a strong implementation of the reforms is necessary to maintain current high growth rates in the medium term.

1.16 ***Post crisis monetary policy focused on price stability under a floating exchange rate regime.*** The Central Bank of the Republic of Turkey (CBRT) gained independence in 2001 and price stability was set as its primary objective. The currency peg regime implemented in 2000 as an anchor of the stabilization program lost its credibility during the crisis and therefore a floating exchange rate regime was adopted. In this context, the exchange rate was set free to be determined by supply and demand conditions in the market. The advantage of the floating exchange rate regime was that it allowed the Central Bank to focus on price stability and freed it from the constraint of following many targets at the same time. However, the Central Bank occasionally intervenes in the foreign exchange market to dampen what are deemed to be excessive fluctuations in the exchange rate. The Central Bank intervenes directly in the markets by buying/selling foreign currency from time to time and holds currency buying auctions.

1.17 ***Confidence in the consistency of the policy framework with sustained disinflation was gradually strengthened.*** Monetary policy followed a path of implicit inflation targeting since 2002, facilitated by a resolute effort at fiscal consolidation that eased fiscal dominance over the conduct of monetary policy. The CBRT mainly concentrated on disinflation and used short term interest rates as a policy tool in guiding inflationary expectations. This monetary framework was also backed by establishing targets for monetary aggregates. Credit growth has been particularly strong in the last two years, and the process of reverse currency substitution has continued with foreign currency deposits falling to 40 percent of total deposits from 55 percent in 2001. Interest rates on Treasury bills continued to fall, particularly after December 2004. The recently achieved macroeconomic stability and strong fiscal performance have helped build confidence in the economy, which in turn decreased

[4] The European Council took a decision during the December 17, 2004 Summit to start negotiation talks with Turkey on October 3, 2005.

[5] Turkey signed a new Stand-By agreement with the IMF in May 2005, covering the period of 2005-2008.

the risk premium attached to Treasury's cost of borrowing (see chapter 2, section D.3, on public debt management).

1.18 ***The upcoming introduction of explicit inflation targeting has the potential to deliver superior results.*** The CBRT will be operating an explicit inflation targeting regime as of January 2006. Evidence from developing countries suggests that adoption of inflation targeting delivers better results in terms of lower and more stable inflation, as well as lower volatility of the nominal exchange rate and real interest rates (IMF, 2005). Although the fiscal position before the adoption of inflation targeting does not seem to affect the ability of inflation targeting to deliver lower and more stable inflation relative to other strategies, it is also true that most countries that have successfully moved to inflation targeting had made progress in fiscal consolidation with the aim of easing potentially destabilizing policy inconsistencies.

1.19 ***Fiscal consolidation has laid the groundwork for explicit inflation targeting in Turkey, as policy inconsistency is the main risk of failure in inflation targeting regimes.*** The traditional problem faced by inflation targeting regimes is a fiscal stance that is too expansionary to be compatible with stable debt-output ratios and low inflation. Inflation targeting may become a source of instability if higher real interest rates, which may be necessary to achieve the targets, trigger concerns of broadening fiscal imbalances and possibly default, thus entailing devaluation and higher inflation as a consequence. Such concerns could arise through the impact of higher interest rates on default risk premia.[6] Analysis has shown that the early period of the recent stabilization attempts (1999 and 2000) in Turkey was characterized by inconsistencies between fiscal policy parameters, levels of public debt on the one hand and inflation targets on the other. Although vulnerabilities remain—as further explained below and in chapter 2—the basic settings of macroeconomic policy have been brought in line with each other in 2004. If at least the primary surpluses of 2004/2005 can be maintained, policy inconsistency will not be an issue for switching from implicit to explicit inflation targeting.

1.20 ***Reasonable flexibility in the implementation of inflation targeting would be appropriate.*** Flexibility seems to be the preferred option in the implementation of inflation targeting, until the fiscal program is more firmly established and external imbalances are reduced.[7] According to the implementation framework of inflation targeting announced by the CBRT, the approach adopted allows for reasonable flexibility, by attaching an uncertainty band of plus or minus 2 percentage points around the headline CPI program target. Additional options may involve using an inflation target zone based on inflation forecasts over a longer time period (for example, 18 months to two years). Moreover, setting an appropriate *core inflation* target may help avoid reacting to excess volatility in case of recurrent supply-side shocks, in view of existing tensions in world energy markets. Although targeting the "headline" CPI has merits in terms of simplicity and communication, this could be coupled with an appropriate target range for "core" inflation forecasts. Developing

[6] Blanchard (2004) and van Wijnbergen and Budina (2005),

[7] For example, raising interest rates in the face of a temporary increase in inflation induced by exchange rate adjustment to current account imbalances may be counterproductive if it were to trigger debt sustainability concerns that may further add to interest rate tensions.

strong forecasting capacity for inflation over the medium term would be a pre-condition for successful implementation of a flexible targeting approach.

1.21 ***Strong fiscal performance has been the cornerstone of the economic programs implemented since 2000.*** As further explained in chapter 2, following the crisis in 2001, there has been an outstanding improvement in the public sector primary balance, which moved to a surplus of 7 percent of GNP by 2004 from a deficit of 1.6 percent in 1999. The fiscal performance showed no deterioration in 2005 with the consolidated budget primary surplus amounting to 132 percent of the target for the whole year at the end of 2005. The success in achieving the targeted primary surpluses has driven the market expectations and played a key role in the establishment of macroeconomic stability.

1.22 ***Resilience to shocks increased as public debt to GNP ratio declined.*** As a result of strong fiscal adjustment, but also helped by exchange rate appreciation, the net public debt to GNP ratio fell by 27 percentage points from its peak at 91 percent in 2001 to 64 percent in 2004 and to a projected 60 percent in 2005[8] (total public debt declined from 108 percent to 77 percent between 2001 and 2004 on a gross basis). With increasing capital inflows and growing appetite for the Turkish government's paper, the Treasury had no problem in servicing the debt, while the average maturity of new debt increased to 15 months in 2004 and 27 months in 2005 from under 10 months in 2003. Nevertheless, as further explained in section Chapter 2, risks continue to exist, albeit to a lesser extent, as the current level of debt is still high, its maturity is still relatively short and vulnerability to interest rate and foreign currency shocks is not negligible despite the increasing share of fixed rate debt in the total.

1.23 Improving the quality of fiscal adjustment is an important challenge for ensuring its sustainability and making room for growth-enhancing expenditures and lower taxes. As further explained in chapter 2, much of the burden of fiscal adjustment following the crisis in 2001 has been borne by increasing revenues, while primary spending as a ratio of GNP has remained broadly at 1999 levels. Taking into account that interest expenditures and public sector borrowing requirement are still high, an improvement in the quality of fiscal adjustment would boost growth and, by enhancing market confidence, lower interest rates which would allow a more rapid decline in the ratio of public debt to GNP. The patterns of fiscal adjustment and expenditure allocations in international comparison are examined in more detail in chapter 2.

B. ENGINES OF LONG TERM GROWTH IN TURKEY

B.1. Turkey's growth dynamics in international comparison

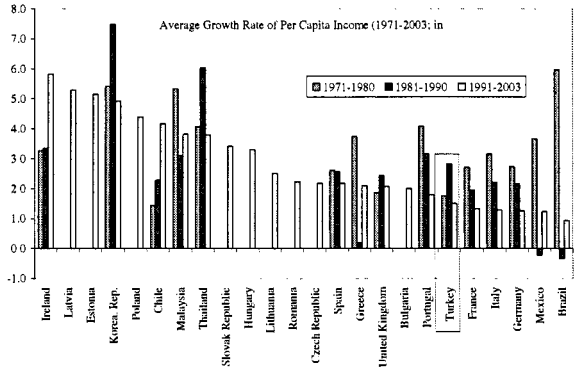
1.24 ***High and chronic inflation, large public deficits, frequent current account crisis, rising debt and high volatility characterized the Turkish economy for long periods in the past.*** The Turkish economy has been going through important structural reforms since the beginning of 1980s and important steps have been taken

[8] The government's latest estimate for 2005 is 56.9 percent.

to create a competitive and open economy in parallel to developments in other parts of the world. Despite the increasing liberalization of the economy, the 1990s were characterized by volatile growth, high and sustained inflation, continuing public deficits and high real interest rates. Macroeconomic instability hindered the functioning of markets by undermining confidence, heightening uncertainty, and raising concerns about the sustainability of macroeconomic policies.

1.25 ***Chronic instability has prevented Turkey from realizing its full growth potential.*** The Turkish economy has operated under a cloud of vulnerability and earlier attempts to stabilize the economy fell short, so that high growth has never been sustained for long. As a result, long-term growth has been relatively slow, with average annual per capita income growth in 1970-2003 at two percent—well below the emerging market economies of East Asia, which grew by 4.3 percent (excluding China), and closer to growth seen in Latin American countries. Growth was much healthier in the 1980s, boosted by a far-reaching program of economic reforms, while severe macroeconomic instability in the 1990s was reflected in slower growth (Figure 1.4). Transition economies in Eastern and Central Europe that joined the EU in 2004 have witnessed much stronger growth than Turkey in the period of 1993-2003.

Figure: 1.4 Per Capita Income Growth Rate



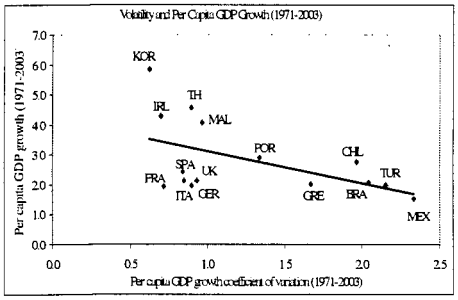
1.26 ***Volatility has been high in international comparison.*** Over 1971-2003, the coefficient of variation of annual per capita GDP growth was 2.2 in Turkey, compared to less than one in East Asia. Volatility has been exacerbated in the 1990s: The country plunged into three contractions in the last 10 years (1994, 1999, and 2001), with per capita GDP shrinking by more than 7 percent in each episode (-13, -7.5, and -14.5 percent, respectively). Volatility has been associated with high and persistent inflation, as in other countries where growth has been volatile. The average inflation rate for the last 30 years was 52 percent, increasing to 72 percent in the 1990s.

1.27 ***Volatility is generally associated with lower investment and slower growth.*** Evidence across countries, over 1971-2003, suggests that higher volatility, as measured by the coefficient of variation in per capita GDP growth, was associated with lower long-run growth (figure 1.5a). A main driver for lower growth seems to have been the negative association of volatility with average investment ratios (figure 1.5b). There are a number of reasons why volatility in key macroeconomic variables such as the terms of trade, inflation and real exchange rate, may lead to lower investment. Volatility heightens uncertainty, hence lowering the risk-adjusted returns on investment. Volatility also increases bank exposure to credit risks, so that banks are more inclined to supply short-term credit, at the expense of long-term financing. This potentially raises the cost of financing of long-term productive investment. High risks of financial intermediation also increase the level of collateral required by banks,

thus hampering access to finance by small and medium enterprises. International experience suggests that prudent fiscal policies help insulate the economy from external shocks, while strong prudential regulation of banks also greatly helps cushion the impact of volatility, by preventing the accumulation of bad loans as a result of structural transformation and external shocks. In Turkey, prior to 2001, lack of durable fiscal adjustment and weak supervision of the banking system have exacerbated macroeconomic volatility and its negative impact on growth.

Figure: 1. 5 Volatility, growth, and investment 1970-2003: Turkey in international comparison

a)



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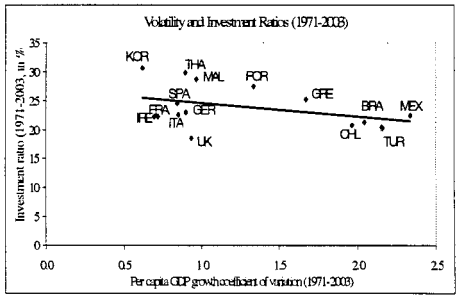


1.28 ***In Turkey, volatility has affected both productive efficiency and investment.*** The effect that lack of sustainability of economic policies may have had on economic performance has been investigated by estimating a time-varying conditional variance for the output growth (Annex 1.1).[9] The estimated conditional variance of output has been tested as an explanatory variable both in a growth equation and in the regressions for TFP, investment, employment and real exchange rate. The results indicate that higher output volatility adversely affects growth. Higher output volatility is also detrimental to both TFP growth and investment in proportion to GDP. In other words, higher volatility exerts a significantly negative impact on potential growth. Volatility of output also leads to real depreciation in the exchange rate, which might be triggered by increased uncertainty and resulting capital outflows. However, no significant effect has been found for employment.

B.2. Growth Decomposition: Labor Productivity and Employment Ratios

1.29 ***Lack of convergence across countries, or the differences in per capita income growth rates, can be explained by differences in average labor productivity and labor utilization rates.*** It is generally predicted that lower-income countries can grow faster than rich countries, and therefore eventually converge to the rich countries. However, cross country evidence is mixed and despite their low per capita income compared to high income countries, many countries do not still grow fast

[9] The conditional variability has been taken as an indicator of the sustainability of economic policies. In other words, the lower the conditional variability of the output, the higher is the sustainability of policies.

enough to achieve convergence.[10] Sources of differences in growth of GDP per capita can be better understood by breaking GDP growth down into contributions of labor utilization and labor productivity (Box 1.1). The advantage of breaking down the growth rate into labor utilization and labor productivity is that it facilitates measuring contributions of each component to growth and comparing across countries to understand where Turkey is lagging behind. It also allows to assess how much Turkey benefited from the so called demographic opportunity window, that is from the increasing working population in the total population.

Box: 1.1 Growth Decomposition

Per capita income can be divided into three components;

$$\frac{Y_t}{N_t} = \frac{Y_t}{L_t}\frac{L_t}{WAP_t}\frac{WAP_t}{N_t} = apl_t * er_t * wapr_t$$

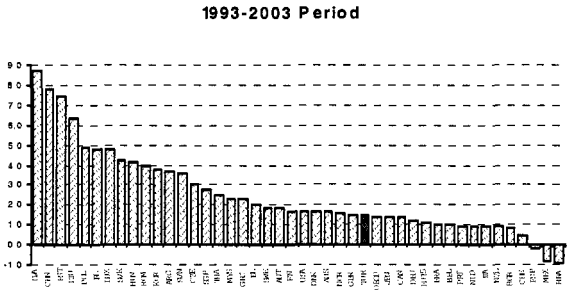
Where, Y is real income, N is total population, L is total employment, WAP is working age population, apl is average productivity of labor, er is employment ratio, $wapr$ is working age population as a ratio of total population and t is time subscript. Similarly, the growth in per capita income can be decomposed as;

$$\frac{y_t}{y_{t-1}} = \frac{alp_t}{alp_{t-1}}\frac{er_t}{er_{t-1}}\frac{wapr_t}{wapr_{t-1}}$$ where y is per capita income.

[10] OECD in its study "Going for Growth (2005)" shows that GDP per capita rose relative to that in the United States in over half of its member countries since 1993: English-speaking and Nordic countries, as well as Central European countries, Greece, Korea and Spain. The countries that grew fastest relative to the United States are mainly those where GDP per capita remains comparatively low (Hungary, Korea, Poland and Slovakia) with a notable exception of Ireland. In contrast, the gap in GDP per capita has either remained unchanged or widened in several continental European countries over the same period (Austria, Belgium, France, Germany, Italy and Switzerland) as well as in Japan. The most disappointing performance over the past decade in the OECD area has been registered in Mexico and Turkey, which combined the weakest (after Switzerland) growth rate and the lowest levels of GDP per capita.

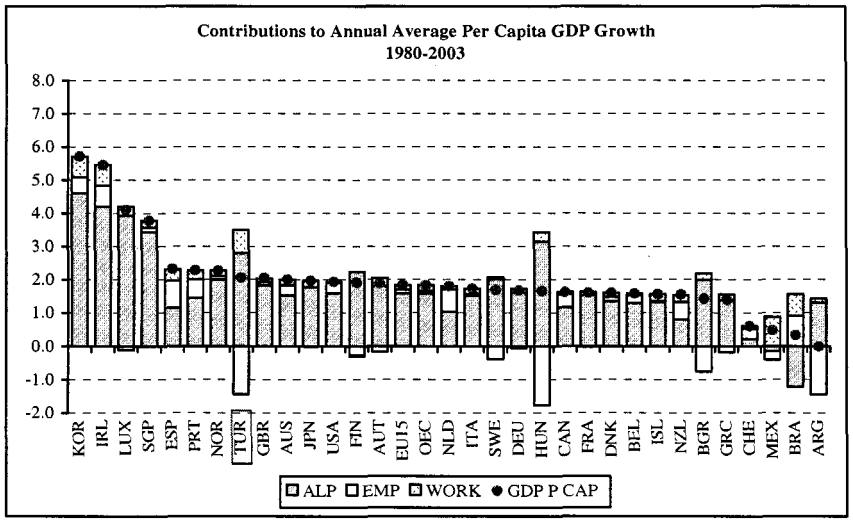
1.30 ***Labor productivity growth slowed particularly in the 1990s and Turkey fell behind many East European countries.*** The average growth in labor productivity in Turkey slowed to around 1.5 percent in the 1990s, mainly due to a series of crisis followed by sharp contractions in economic activity. Many East European countries (the new EU members) performed much better than Turkey during the same period, after pursuing ambitious reforms to liberalize their markets and reform their institutions (Figure 1.6).

Figure: 1. 6 Annual Average Growth in Labor Productivity



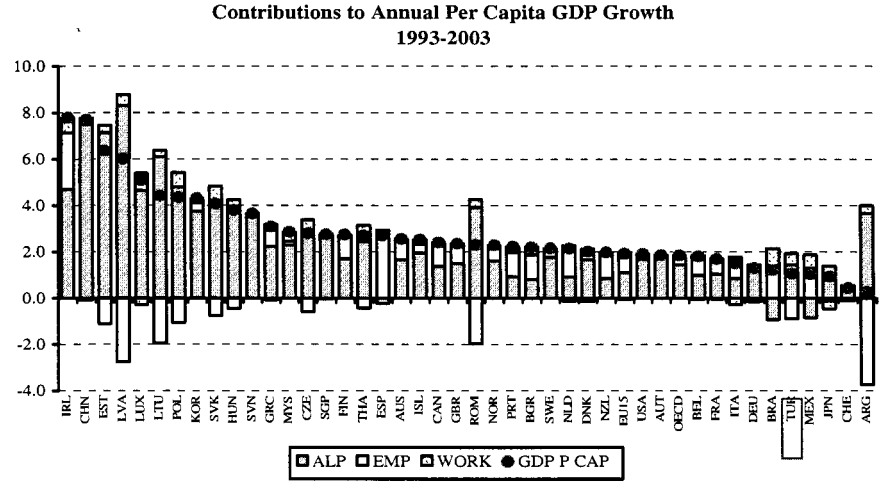
1.31 ***Low employment generation and declining employment ratios slowed per capita income growth despite a significant advantage of demographic changes.*** Turkey had a relatively higher increase in its population compared to many countries as well as in its working-age population. Known as the demographic opportunity window, the rising working age population should have allowed for higher per capita income growth if Turkey had been successful in generating higher employment. However, low employment generation combined with rapidly rising population during the period of 1980-2003 led to significant declines in the employment ratio. While average labor productivity and working age population to total population ratio increased by 2.8 percent and 0.7 percent on an annual basis respectively, the employment ratio declined by 1.4 percent per year during the period of 1980-2003. Poor performance in employment generation has put Turkey behind many fast growing countries.

Figure: 1. 7 Annual Average Per Capita GDP Growth and its Decomposition



1.32 ***Countries that experienced high per capita income growth also recorded an increase in labor utilization.*** All countries, except Thailand, in our sample that had higher per capita income growth rate than Turkey also increased their labor utilization during the period of 1980-2003. Turkey was one of the few countries that experienced a substantial decline in labor utilization in the sample of 33 countries (Figure 1.7). The situation further worsened in the 1990s as growth stagnated and Turkey witnessed deterioration in its per capita income growth (Figure 1.8).

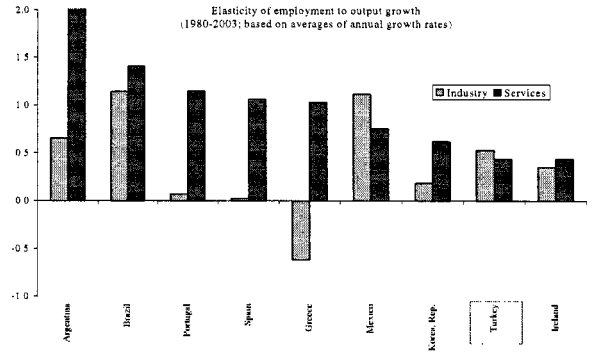
Figure: 1. 8 Annual Average Per Capita GDP Growth and its Decomposition, 1993-2003



1.33 ***The overall employment intensity of growth has been low partly due to the structural diversification of the economy out of agriculture and partly because employment generation in services has been weak.*** As further explained in chapter 4, the employment elasticity of growth in Turkey has been a mere 0.27 during 1972-2000, at the low end of comparator countries. One of the key factors is likely to have been the high starting employment share of agriculture—at 53 percent in 1980. Between 1980 and 2003 agriculture shed 1.25 million workers, while industry and services created 1.6 and 5.1 million jobs. However, net job creation of 5.4 million was far less than the large increase in working age population of 21.6 million during the same period, leading to falling employment ratios over time. In industry, the employment elasticity to growth has been low relative to other middle-income countries that have similar production and cost structures, such as Brazil and Mexico, indicating some missed employment generation potential (Figure 1.9).

Growth in services in Turkey has been less intensive in jobs than in both Southern European countries and other middle-income countries by almost half. With services now accounting for 48 percent of total employment, restoring a more labor-intensive pattern of growth in this sector would be key for increasing employment ratios in the economy as a whole. Reasons for slow employment generation, related to labor market regulations and institutions are further explored in chapter 4.

Figure: 1. 9 Elasticity of Employment to Output Growth



1.34 ***Employment remains widespread in the informal sector, with a detrimental impact on productivity growth.*** Turkey has a large informal economy and total employed persons who are not registered with any social security institution represent around 53 percent of the labor force (also see Chapter 4). Informality in various forms is mostly concentrated in the services sector and in small scale firms. This is hampering the productivity growth in the economy. The McKinsey Report (2004) shows that Turkey has a bi-modal economy with relatively productive modern segment and an almost equally large traditional segment with very low productivity. The traditional segment is heavily concentrated in the service sectors. According to the report, manufacturing sectors are relatively more productive at 64 percent of the labor productivity in the US, but service sectors stands at only 33 percent of the US and the productivity of utilities averages 48 percent of the US. Therefore, encouraging formalization as well as modernization in the economy, particularly in the service sectors can increase significantly the overall labor productivity in the Turkish economy.

1.35 ***Turkey faces a twin challenge—sustaining fast labor productivity growth, combined with accelerated employment generation.*** Achieving faster productivity growth than in the 1990s will provide the key underpinning to accelerated per capita income growth and convergence to the EU. But fast productivity growth will also have to be combined with stronger job creation than in the past, to achieve the required growth for accelerated convergence (see section E.3). Faster employment growth would help generate needed support for a prolonged reform effort during the period of EU accession. At the same time, although in the short term productivity gains may help firms economize on jobs, over the medium term, labor productivity growth is a main driver of employment generation. For a given level of labor costs, fast growth in labor productivity helps maintain competitive costs per unit of output, which improves firm profitability and helps expand output and investment. Strong output growth and investment is the precondition for employment growth. Employment generation at the expense of labor productivity growth would not be sustainable because Turkey will need to continuously improve competitiveness in the enlarged EU internal market and in increasingly globalized markets.

B.3. Sources of Labor Productivity Growth

(a) Total Factor Productivity, Capital, and Education

1.36 ***Drivers of labor productivity growth have varied over time depending on the policy regime.*** Contributions to measured labor productivity growth have been broken down into three components: (i) capital deepening (increases in the capital-to-labor ratio); (ii) human capital accumulation; and, (iii) total factor productivity growth. An estimated production function for the economy as a whole has provided the background for these calculations, with the exercise also conducted for the three main sectors of economic activity (Annex 1.2). There is a noticeable difference between the sources of growth in the years of import substitution, during the 1970s, and after trade liberalization in the 1980s. In the high protection environment of the 1970s, productivity growth was driven by fast capital accumulation, despite low production efficiency, as evidenced by the negative Total Factor Productivity growth. Patterns reversed in the 1980s, with much faster labor productivity growth driven by a surge in TFP growth, which more than offset slower capital accumulation. As documented earlier (Figure 1.6), the onset of macroeconomic instability in the 1990s has been associated with slower labor productivity growth. It is worth noting that the decrease in labor productivity growth (1.2 percentage points) during the 1990s is fully accounted for by slower TFP growth (1.3 percentage points—see Table 1.4).

Table: 1. 4 Sources of labor productivity Growth in Turkey, 1973-2003

	Growth in labor productivity	Contribution of capital deepening[11]	Contribution of Human capital	Contribution of TFP growth
1973-1980	1.89	2.15	0.36	-0.62
1981-1990	3.13	0.80	0.52	1.81
1991-2003	1.93	1.04	0.37	0.52

Source: own calculation

1.37 ***Investment in Turkey is not low but lagging behind fast growing countries.*** The investment to GDP ratio is not low in Turkey on average compared to many countries. Throughout the 1990s, investment averaged around 24 percent of GDP and this was slightly higher than the OECD average of 22 percent but well above the EU average of 20 percent. However, fast growing Asian countries had investment to GDP ratios at around 35 percent (Table 1.5).

[11] Capital stock data is taken from Cihan, Saygili and Yurtoglu (2005).

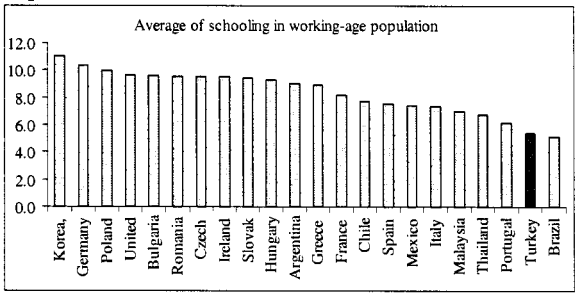
Table: 1. 5 Investment GDP Ratios

	Percent of GDP		
	1991-1995	1996-2000	2001-2004
New EU Members	20.4	24.4	22.2
Cohesion Countries	22.0	23.2	25.1
Candidate Countries	22.7	22.6	17.5
Turkey	23.7	23.7	16.3
Asia 4 [(1)]	35.7	34.1	36.0
Latin 3 [(2)]	18.8	19.5	18.6
OECD	21.7	21.5	20.3
EU15	20.5	20.0	19.5

[(1)]: China, South Korea, Malaysia, Singapore, Thailand
[(2)]: Argentina, Brazil, Mexico

1.38 ***Improving educational attainment has contributed to productivity growth but human capital indicators still remain below fast-growing comparators***. Turkey has one of the lowest average schooling in the working age population among a group of comparator countries (Figure 1.10). The low level of education among the working age population is a significant obstacle for increasing productivity as well as attracting FDI.

Figure: 1. 10 Average Schooling in Working Age Population



Source: World Bank, World Development Indicators

1.39 ***The pace of TFP growth in Turkey has been slower than in fast growing countries.*** Over the long run (1973-2003), Turkey achieved an average TFP growth of 0.6 percent per year. The long run average growth rate of TFP was comparable to that of slow-growing developing regions, such as Latin America or the Middle East. However, TFP growth has been much slower than in East Asia (less China) or South Asia where growth has been much faster.[12] Achieving much faster TFP growth would be a prerequisite for faster convergence to the EU average per capita income during accession.

1.40 ***Stronger TFP growth is the key to sustained growth and accelerated convergence in the years ahead.*** There is certainly room for faster labor productivity growth to be fuelled by increasing investment ratios, in view of Turkey's gap compared to other fast growing economies. Improved educational attainment will also contribute to stronger growth—especially as well-educated younger generations will be entering the labor force in the years ahead. However, there is a limit to the contribution of these two factors to growth. A stronger investment effort may lead to

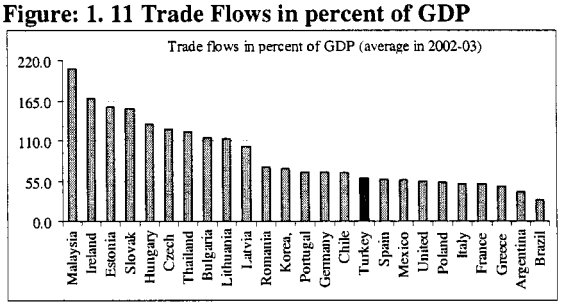
[12] Bosworth and Collins (2003) estimates TFP growth rates as 0.2 percent for Latin American countries, 0.5 percent for Middle East countries, 1.0 percent for South Asian countries and 1.0 percent for East Asian (excluding China) countries.

external current account pressures, unless higher domestic or foreign (non debt creating) savings are available to ensure financing. Improved educational attainment will contribute only slowly to productivity growth. Stronger TFP growth will thus be the prerequisite for accelerated growth in the future, as also suggested by the experience of other new EU members that have embarked on steep convergence paths (especially Hungary, Poland, and Slovenia).[13] Fast TFP growth will also be a condition for a sustained stronger investment effort, complementing the beneficial impact of the expected improvement in the investment climate as the EU accession process will be unfolding in the years ahead.

1.41 ***Enhanced macroeconomic stability, continuing trade expansion, and financial sector deepening are key requirements for stronger TFP growth.*** Empirical evidence reviewed previously suggests that macroeconomic instability has been associated with slower TFP growth in the past. Consolidating and further strengthening the sound macroeconomic foundations laid out over the past three years will thus be an overarching factor for faster TFP growth. Moreover, empirical evidence from Turkey points to two additional pillars for a strong TFP performance (Box 1.2): (i) Increased trade openness, as measured by trade flows over GDP, is found to be significantly associated with stronger TFP growth; (ii) greater financial depth, as measured by the broad money supply as a ratio to GDP, is also positively associated with TFP growth. Even though evidence based on macroeconomic time series is not strong enough for Turkey, there is significant international evidence that FDI inflows and R&D investment by local firms contribute to TFP growth.[14]

1.42 ***Strong trade performance has been an engine of TFP growth.*** Empirical evidence suggests that a 10 percent increase in Turkey's trade flows as a ratio to GDP leads to a 1.2 percent increase in the level of TFP over the long run (Box 1.2). Moreover, the potential impact of trade openness on TFP may be underestimated based on past performance. Macroeconomic instability, a distorted investment climate, and inefficient trade-related services are factors that may have limited the "quality" of Turkey's trade in the past, by discouraging export-oriented foreign direct investment. Turkey's trade openness, as measured by the sum of exports and imports over GDP, sharply increased between 1993 and 2003, from 33 to 59 percent. Greater trade openness was supported by the Customs Union with the EU and simultaneous multilateral (MFN) and regional liberalization, as a result of which Turkey's average applied tariff rates and non-tariff barriers on industrial imports were dramatically reduced (see chapter 3, section D). Trade openness still remains below that in most new EU members and some other emerging economies (Figure 1.11). However, Turkey ranks high in terms of trade in goods, in particular when country-specific characteristics are taken into account. According to a recent World Bank study on

Figure: 1. 11 Trade Flows in percent of GDP



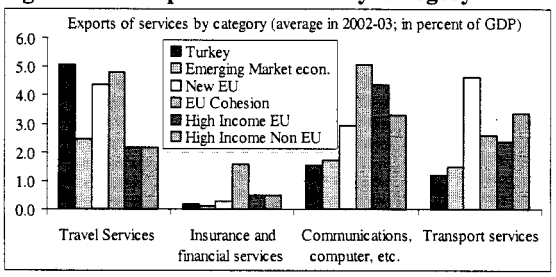
[13] Doyle Peter, Kuijs Louis. And Guorong Jiang (2001), Real Convergence to the EU Income Levels: central Europe from 1990 to the long term, IMF Working Papers 2001/146.

[14] The small amounts of both R&D and FDI in Turkey and the presence of considerable volatility in macroeconomic time series make it difficult to establish a strong empirical impact.

ECA trade developments, Turkey's trade in goods relative to GDP in 2003 was around 30 percent higher than that implied by the size of its population, distance to major markets and GDP per capita in comparison to other countries (World Bank 2005). The improvement in the composition of Turkey's trade towards higher value-added and technology-intensive goods has also been a factor of greater impact of trade on productivity growth, as further examined in section C below.

1.43 ***Turkey's trade is mainly driven by exports of goods.*** Turkey's exports of goods have grown much faster than exports of services. Exports of goods have increased from 9 percent of GDP in 1991-93 to 22.3 percent in 2001-03, while during the same period exports of services have increased from 5.8 to 9 percent of GDP. Turkey's overall export performance in services is good by emerging economies' standards, but heavily driven by exports of services related to tourism. Exports of travel services are the equivalent of 5 percent of GDP, higher than in new EU members and in EU cohesion countries on average (Figure 1.12). However, exports of other services remain low, as a percent of GDP, compared to new EU members and cohesion countries, and slightly below the average for emerging economy comparators.

Figure: 1. 12 Exports of Services by Category



Box 1.2 Drivers of Total Factor Productivity Growth in Turkey

The determinants of TFP in Turkey are believed to be affected by openness, and level of financial development. International openness is defined as the extent of barriers to the free movement of ideas, goods and services, and factors of production. The ratio of exports plus imports to GDP is used as a proxy for openness.

Financial development is proxied by the M2 to GDP ratio. There is cross-country empirical evidence in the literature of a generally positive relationship between financial development and growth. Use of M2/GDP is common in growth studies. Levine et al. (2000) use the ratio as proxy for the influence of financial intermediation on economic growth.

Granger causality tests, with annual series for Turkey for the 1972-2003 period, are provided first to see if there exist any statistical relation between productivity and openness and between productivity and financial deepness. The results show that the null hypothesis of "openness does not Granger cause productivity" can be rejected at 1 percent significance level. However, it is not possible to reject the null hypothesis of "productivity does not Granger cause openness". In other words, results indicate that while openness Granger cause productivity, the reverse is not true.

Table: Granger Causality Tests

	H_o: ***Openness*** does not Granger cause ***productivity***		H_o: ***Productivity*** does not Granger cause ***Openness***
Lag 1*	14.10[a]	Lag 1*	0.42
Lag 2	7.12[a]	Lag 2	0.12
Lag 3	4.57[a]	Lag 3	0.81

Lag 4	3.09[b]	Lag 4	1.82
	H_o: ***M2/GDP*** does not Granger cause ***productivity***		H_o: ***Productivity*** does not Granger cause ***M2/GDP***
Lag 1	7.08[a]	Lag 1	0.89
Lag 2*	4.89[a]	Lag 2*	1.20
Lag 3	3.91[a]	Lag 3	1.18
Lag 4	3.12[a]	Lag 4	0.92

a, b, c indicates significance at 1%, 5% and 10% level respectively.
*: Optimal lag choice according to AIC with in a VAR specification.

Similarly, the results show that the null hypothesis of "financial depth does not Granger cause productivity" can be rejected at 1 percent significance level. However, it is not possible to reject the null hypothesis of "productivity does not Granger cause financial depth". In other words, results indicate that while financial depth Granger cause productivity, the reverse is not true.

Granger causality tests strongly indicate that openness and financial depth affect productivity, though they do not show the direction of the relation. In order to see how openness and financial depth affect productivity, the equation below is estimated;

$$\ln(TFP) = \underset{(0.79)}{0.09} + \underset{(2.59)}{0.03}^{*}\ln(openness) + \underset{(2.17)}{0.05}^{*}\ln(M2/GDP) + \underset{(7.67)}{0.77}^{*}\ln(TFP_{-1}) - \underset{(-9.42)}{0.11}^{*}Dummy$$

R^2 = 0.86, Jarque-Bera Normality test: 2.59, ARCH-LM(1): 0.14, Serial Correlation LM(1): 0.57
Sample: 1972-2003, t-ratios are given in parenthesis, Openness = (exports + imports)/GDP.
In our estimates we observe that trade openness and financial development indeed positively affects TFP. It has also been observed that lagged values of TFP also account for the present value of TFP while economic recessions display a negative effect on it. The Dummy variable traces the effects of 1994, 1999, and 2001 crises.

1.44 ***In services there is still considerable unrealized potential for exports.*** There is thus considerable room for stronger growth of exports in these other categories of services that make an important contribution to exports of comparable EU members. In view of Turkey's favorable geographical position, the potential seems particularly strong in transport, where new EU members have also posted a strong performance. As further explained in chapter 6, this would call for better integration into Pan-European transport networks supported by early alignment with the EU acquis in this area. Improvement of productivity growth in services—which has been lagging behind as further discussed below—would be a key underpinning of better competitiveness and export performance.

1.45 ***Increasing level of financial development will enhance productivity and ensure smooth financing of productive investment.*** As further explained in chapter 5, Turkey has now a stronger banking system and better financial markets but still needs to increase financial depth. The financial sector provides a good payments system and mobilizes savings efficiently, but still lags behind in allocating efficiently credit to the private sector. In particular, bank credits to the private sector as a ratio of GDP is quite low and far below the EU averages, while the non-bank financial institutions sector remains small.

(b). Sector contributions to labor productivity growth

1.46 ***Analysis of sector contributions to economy-wide labor productivity growth reveals that services have been losing momentum.*** Further to the functional analysis of sources of labor productivity growth, analysis by sectors can also shed light to existing bottlenecks and prospects for stronger growth. Sectoral contributions to economy-wide labor productivity growth during the three distinct sub-periods identified above are shown in Table 1.6.[15] Relative contributions of services and industry to labor productivity growth are not out of line with the range seen in OECD countries[16]. Because of slow productivity growth and a declining share in total employment, the contribution of agriculture has been negligible over time. Most importantly, the contribution of services to economy-wide labor productivity growth has been losing momentum despite the increasing share of services in total employment—from 26 percent in 1972 to 48 percent in 2003. Thus, industry contributed more than services to the increase in productivity growth in 1981-90 compared to 1973-80. Moreover, for a comparable rate of overall productivity growth in 1973-80 and the 1991-03, and despite a much higher employment share in the latter period, services contributed less to productivity growth, with a relative increase in the contribution of industry. Note that in this breakdown, the contribution of sectors also depends on the relative size of each sector in the economy. Despite increasing size of services in the economy, its contribution, when adjusted for its size, shows a declining trend. This pattern suggests a slowing trend of labor productivity growth in the services sector compared to industry, and is further investigated below.

Table: 1. 6 Sectoral contributions to labor productivity growth in Turkey, (1973-2003 in %)[17]

	Total Economy	Industry	Services	Agriculture
1973-80	1.96	0.65	1.49	-0.15
1981-90	3.21	1.29	2.03	-0.11
1991-03	2.17	0.88	1.33	-0.03

1.47 ***Labor productivity in industry has benefited from sustained efficiency gains.*** Estimations of contributions to productivity growth in industry and services confirm that the improvement in economy-wide TFP growth during the 1980s spread over to both industry and services (Table 1.7). However, trade liberalization and companion reforms had a much stronger impact on industry, where efficiency gains and TFP growth became the single most important factor of labor productivity growth. Trade liberalization during the 1980s and the customs union with the EU in force since 1996, both limited the state support to industry and permanently lowered high customs barriers. Domestic manufactures faced stronger competition from imports that seems to have triggered efficiency gains.

[15] Contributions reflect both differences in sectoral productivity growth and changes in sector shares in total employment. Contributions are calculated according to the formula: $\Delta y_t / y_{t-1} = \left(\Delta(y_t^s \lambda_t^s) + \Delta(y_t^m \lambda_t^m) + \Delta(y_t^a \lambda_t^a)\right) / y_{t-1}$, where y^i stand for sectoral productivities and λ^i for shares in total employment. Slight differences in economy-wide growth rates in Table 1.4 compared to Table 1.3 are due to the calculation of logarithmic growth rates in the latter.

[16] Growth in Services (2005), OECD, Ministerial Level Meeting.

[17] Capital stock data is taken from Cihan, Saygili and Yurtoglu (2005).

Table: 1. 7 Contributions to labor productivity growth in Industry and Services, (1973-2003 in %)

	Labor productivity growth	TFP growth*	contribution of capital deepening
	Industry		
1973-1980	1.0	-2.5	3.6
1981-1990	4.7	4.6	0.1
1991-2003	1.5	2.0	-0.4
	Services		
1973-1980	0.1	-0.7	0.8
1981-1990	2.0	1.4	0.7
1991-2003	0.3	-0.5	0.8

(*) Contrary to the estimates reported in table 1.3, TFP growth in these calculations includes the contribution of human capital accumulation since the latter is not estimated separately in the sector production functions.

1.48 ***Labor productivity growth in services has turned almost stagnant, owing to low efficiency and negative Total Factor Productivity growth.*** During the 1990s TFP growth lost momentum in both services and industry. Recurrent balance-of-payments crises are likely to have been detrimental to efficiency, as suggested by the findings on the impact of volatility on TFP growth. Frequent devaluation of Turkish lira made imported inputs expensive and domestic producers faced rising costs of imported intermediate goods that may have impeded TFP growth. However, the decline of TFP growth was more dramatic in services, where it became negative and accounts for the entire slowdown in productivity growth in that sector. Slow liberalization in some key trade-related services during the 1990s (Transport, ICT) may have contributed to slow TFP growth. Moreover, as noted earlier, the high level of informality in services is holding back overall efficiency and TFP growth.[18]

1.49 ***Improving TFP performance in services would be a key underpinning of faster growth in the years ahead.*** With services now accounting for 57 percent of GDP (in constant prices) and 48 percent of total employment, it would be very difficult for Turkey to accelerate growth for the economy as a whole without a concomitant acceleration of TFP growth in services. Alignment with the EU Acquis on freedom to provide services would greatly contribute to better efficiency, but complementary reforms would also need to be considered. Of course, services cover a very heterogeneous set of firms, from large utilities and financial companies to small retailers and low-productivity informal economy service providers. Reform requirements are, therefore, very different for the various segments of the services sector. However, some cross-cutting initiatives, further examined in the following chapters, would facilitate efficiency gains across the sector. These include:

- Further regulatory reforms to open services market to competition—by reducing the degree of public ownership in competitive segments, such as air transport; addressing anticompetitive practices in professional services; and further reducing barriers to entrepreneurship;
- More widespread use of ICT in services has the potential to contribute to better TFP growth in the future. It will thus be important to remove any

[18] See McKinsey (2004).

obstacles to seizing the benefits of ICT for services, by continuing to encourage effective competition in ICT infrastructure and network services.

- Constant adaptation of education and training policies to changing requirements for new skills, because, especially in services, human resources are key to strong performance.
- Reform of labor market policies and regulations with a view to facilitating employment creation and adjustment in services where more flexible forms of work may be appropriate while promoting formalization.

1.50 ***A smother transition of labor from agriculture to other sectors can support productivity.*** Reallocation of labor from low productive sectors such as agriculture to high productive sectors such as industry and services can contribute significantly to overall productivity in an economy. Such productivity gains due to reallocation of factors across sectors would be more important in the case of Turkey since it still has a large employment in agriculture. The calculation of productivity gains due to labor reallocation shows a highly fluctuating structure in the 1990s. Although the average gain was considerable, the fluctuating structure points out to a need for better managing the transition of labor from agriculture to other sectors. The fluctuating structure could also be due to many crises in the Turkish economy throughout the 1990s since the agriculture acts like a buffer to absorb shocks in the labor market. Nevertheless, the labor in agriculture is low skilled and requires training as well as support for finding jobs in other sectors. Therefore, the government should invest in skill upgrading of the labor moving out of agriculture and consider active labor market policies for smoothing out such fluctuations.

C. TRADE PERFORMANCE AND CHANGING PATTERNS OF SPECIALIZATION ON THE WAY TO THE INTERNAL EU MARKET

1.51 ***Turkey's trade integration into global markets for goods has significantly expanded over the last two decades.*** This was mainly the result of expanding exports in the second half of the 1980s and in the 2000s. Turkey's share in world imports remained relatively unchanged in 1990-2003 at around 0.8 percent, although it displayed an upward trend in 2000-2003. Its share in world exports, however, increased rather dramatically, from 0.4 percent in 2000 to 0.6 percent in 2003, faster than that of EU-8. Only Romania, one of the top export performers among Pan-European economies during that period, matched Turkey's record. This was in a marked contrast to the developments in the 1990s when Turkey exports growth simply kept with the pace of the growth of world exports (Table 1.8).

Table: 1. 8 Turkey in the world trade in regional perspective in 1993, 1996 and 2003

	1993		1996		2000		2003		Change in percent 1993-2003		2000-2003	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
	(in percent of world trade)											
Turkey	0.4	0.8	0.4	0.8	0.4	0.8	0.6	0.9	52	15	50	13
EU-8	1.7	1.3	2.1	1.6	2.3	1.9	3.0	2.6	78	96	30	37
Bulgaria	0.10	0.14	0.08	0.09	0.07	0.09	0.09	0.14	-2	53	37	51
Romania	0.13	0.18	0.14	0.22	0.15	0.19	0.22	0.31	75	44	50	62

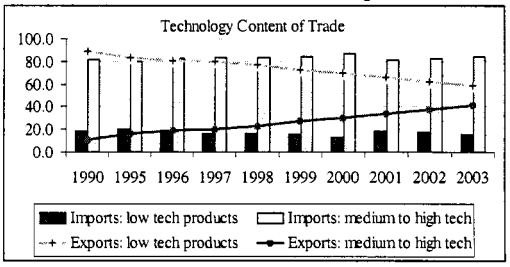
Notes: NMS-8 are: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, and Slovenia.
Source: IMF DOT Statistics.

1.52 ***The level of processing in Turkey's trade has been increasing.*** First, the shares of traditional inputs in Turkey's exports fell from 30 percent in 1990 to 24

percent in 1995 and 13 percent in 2002-03. Second, exports of capital and transportation equipment and automobile parts have dramatically expanded while their imports have kept up with the overall growth of total imports. Third, the expansion in exports of more processed goods took place in highly demanding and competitive Pan-European markets. Traditional industrial inputs accounted for a larger share in rest of the world oriented exports (15 percent) than in pan-European exports (11 percent).

1.53 ***Other indicators also point to growing technological sophistication in Turkish exports.*** The most visible change in Turkey's EU-oriented exports has been a dramatic shift away from low tech, unskilled labor intensive operations towards medium and high technology products (Figure 1.13). Although low technology and unskilled labor intensive products together with resource-based products still accounted in 2003 for more than half of Turkish exports to Pan-European preferential partners, if past growth rates continue until 2005, the value of exports of medium and high technology products will exceed that of low tech and unskilled labor intensive products by the end of 2005. Furthermore, the growth in exports of these products was not the result of expanding EU import demand for these products but was primarily due to stronger competitiveness of Turkish suppliers. They increased their share in EU external imports of these products from 0.6 percent in 1995 to 0.9 percent in 2000 and 2.1 percent in 2003.

Figure: 1. 13 Technology content' of Turkish trade with the EU in 1993-2003 (in percent)



Source: Computations based on EU25 data from UN COMTRADE Statistics

1.54 ***Exports of goods with higher content of capital and skilled labor have been expanding faster than those of products intensive in traditional inputs and unskilled labor.*** The aggregate share of skilled labor and capital intensive products in Turkish total exports increased 14 percentage points from 29 percent in 1996 to 43 percent in 2003. Skilled-labor and capital-intensive exports as a share of Turkey's total exports is now comparable to that of EU-8 before the start of their accession process in 1996 (Table 1.9). The share of skilled-labor products in total exports is now higher than that of EU acceding and candidate countries. Major levers of the increasing share in both cases have been skilled labor and capital intensive products manufactured in operations characterized by medium to high technology. If the average rates of export growth recorded in 2000-03 were sustained, the aggregate share of skilled labor and capital intensive products in total exports would exceed the fifty-percent threshold in 2007.

Table: 1. 9 Share of skilled labor and capital intensive products in total exports of EU candidate countries and EU-8 in 1996 and 2003 (in percent)

	1996		2003	
	Share in total exports	Of which: skilled labor	Share in total exports	Of which: skilled labor
Turkey	**29**	**20**	**43**	**32**
Bulgaria	45	28	34	15
Croatia	32	8	37	11
Romania	38	18	37	18
EU-8 (simple average)	47	24	56	28
Memorandum:				
SEE-3 (simple average)	21	10	24	15

SEE-3: Albania, Macedonia, Serbia and Montenegro
Source: Computations based on UN COMTRADE Statistics.

1.55 ***The shift towards exports embodying higher levels of technology and using skilled labor has been facilitated by the entry of Turkish-based firms into 'producer-driven' networks.*** The value of aggregate exports of parts and components from 'producer-driven' networks rose from US$ 2.1 billion in 2000 to 8.2 billion in 2003. Participation in automotive and information communication technology networks, which are capital- and skilled-labor-intensive industries, has been the main driver of this improvement (Table 1.10). Together with Hungary, Czech Republic, Slovak Republic, Slovenia, Estonia and Poland, Turkey—with the share of 'producer-driven' networks in exports of manufactures, excluding chemicals, exceeding 20 percent in 2003 and double-digit growth rates—has been identified in a recent World Bank study (World Bank 2005) as one of the seven "High Performers" among European and Central Asian countries. Turkey's share of 22.5 percent puts it on a par with Slovenia in 'producer-driven' network trade. At the same time, although 'buyer-driven' chains, mainly textiles and clothing, still dominate 'producer-driven' chains, their importance declined (Figure 1.14). The share of 'buyer-driven' chains, which dominate more traditional exports such as textiles and clothing, footwear and furniture, fell from 90 percent in 1996 to 40 percent.

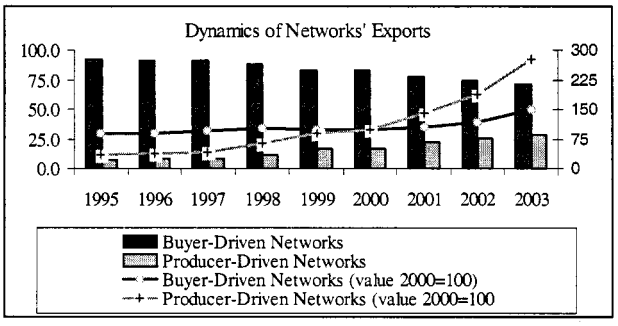
Table: 1. 10 ***Total automobile and ICT network trade and share of Pan-European free trade area in 1995, 2000 and 2003 (in million of US dollars and percent)***

	1995	2000	2003	1995	2000	2003
	Automobile Network			**ICT Network**		
Network exports: parts and final products ($ million)	954	2,125	6,201	255	1,008	1,980
Share of Pan-European area	60.9	66.3	73.6	83.4	83.2	89.3
Exports of final products (US$ million)	439	1,041	4,062	239	944	1,888
Share of Pan-European area	55.5	66.4	77.0	85.5	86.9	91.1
Share of Pan-European area in network imports of parts	80.8	71.4	80.5	60	63.5	64.4
Imports of parts as percent of network exports	135	135	57	253	174	100

Source: Computations based on UN COMTRADE Statistics.

1.56 ***Turkish firms operate within global networks organized around multinational corporations based mainly in the EU.*** Firms from automobile networks sent almost three-quarters of their total exports to Pan-European countries in 2003 and imported 80 percent of parts and other automotive products from these countries (Table 1.9). ICT producers' reliance on Pan-European networks is even higher regarding exports and relatively low in purchases of parts. The surge in automotive exports raised their share in EU external imports from 2.9 percent in 2000 to 7 percent in 2003. The surge in ICT exports resulted in an increase in their share in EU imports of these products from 0.7 percent in 2001 to 1.1 percent in 2002.

Figure: 1. 14 Shares and dynamics of total networks' exports in 1995-2003



Source: Computations based on data from UN COMTRADE database.

1.57 ***The shift towards products requiring more capital, better-trained labor force and more sophisticated technologies and participation in international 'producer-driven' networks has important consequences.***

- Industries intensive in skilled labor and capital tend to be more productive. It seems that the growth of exports in these sectors has boosted labor productivity and output growth. In contrast, exports of natural resource-based products that involve little processing do not have the similar effect on productivity and growth. Consolidating this improving trend in the quality of trade will further boost Turkey's potential for growth in the years ahead.
- The shift away from products embodying natural resources and unskilled labor competitive in global markets augurs well for future sustainability of exports. This will greatly contribute to preserving the sustainability of external balances as the economy continues to grow in the future.
- At the same time, growth of exports in industries intensive in skilled labor and capital fosters growth in wages. The growth of exports in these sectors has helped improve living standards. However, high wages in higher technology sectors lead also to higher wages in services (especially in nontradables) and unskilled labor-intensive sectors, such as textiles and footwear. Given the growing competition from low-wage countries in Asia and elsewhere, these exports may not be sustainable over a longer term. Improving formal labor market flexibility would facilitate structural adjustment in exporting industry according to changing competitive advantages, and also help align wage cost increases with differing productivity growth trends across sectors.
- Capital and skilled labor intensive products are less sensitive to changes in labor cost. Sustainability of their exports hinges critically on availability of high quality human capital to avoid bottlenecks from the supply side. It also depends on firms' absorptive capacity of new technologies, which is affected

by the overall regulatory framework in product markets.

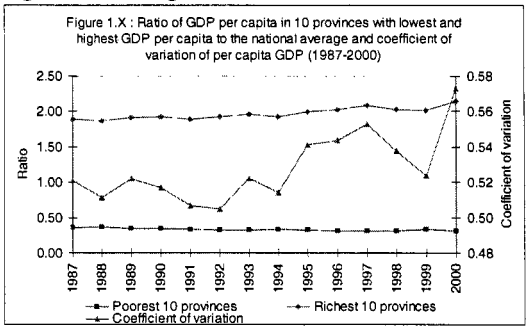
1.58 ***With the right framework in place, increasing trade openness could further boost growth in the years ahead.*** In view of Turkey's favorable geographical position and the performance of most other new EU members, there is potential for further increasing both the economy's trade openness and the "quality of trade". The challenge for policy makers is to sustain this healthy transformation reflecting Turkey's relative competitive strengths. The process of integration in the EU internal market and early adoption of the EU acquis on freedom of trade in goods and services is expected to further reinforce Turkey's trade performance. However, this process should be supported by complementary reforms, aimed at promoting alignment with EU product standards, while improving the efficiency and reducing the cost of trade-related infrastructure services (transport, ICT, energy). Early alignment with the EU acquis in these areas would thus merit particular attention, as further analyzed in chapters 4 and 6.

D. THE SIMULTANEOUS CHALLENGE OF FASTER GROWTH AND REGIONAL CONVERGENCE

1.59 ***Regional development is an important policy challenge particularly in Turkey.*** Balanced regional development is an important policy challenge on its own. Large regional disparities in development bring about a range of risks, from uncontrolled migration and socio-economic pressures in urban centers, to environmental issues. The issue is of particular relevance for Turkey for a number of reasons: (i) regional income disparities are broader in Turkey compared with new EU members and acceding/candidate countries; (ii) as further explained below, despite migration, past trends reveal absence of convergence in regional per capita income; (iii) because of persistence divergence of regional growth, faster growth of backward regions would contribute to faster growth of the economy as a whole; (iv) Turkey will benefit from significant amounts of "pre accession funds" during EU accession, and the challenge will be to make best possible use of these financing instruments to promote regional development. This section assesses regional growth trends in Turkey during 1987-2000 without, however, attempting an evaluation of policies and institutions for regional development. It is important that this broader task be undertaken in a future study.

1.60 ***Regional disparities in per capita income are comparatively large.*** Per capita income in the 10 richest provinces (in 1987 prices) was 2.1 times higher than the national average in 2000, up from 1.9 times in 1987 (Figure 1.15). At the same time, per capita income in the 10 poorest provinces was 31 percent of the national average, down from 36 percent in 1987. The 10 richest provinces were home to 22 percent of total population in 2001, while about 5.5 percent of the population was living in the 10 poorest provinces. With the ratio of per capita income in the richest provinces to that in the poorest at 6.9, Turkey stands out as a country with large regional disparities by international comparison. In the new EU members and acceding countries this same ratio was much lower, ranging from 1.7 in Bulgaria to 2.2-2.3 in Poland and Hungary, and 2.8-2.9 in the Czech Republic and Romania (Eurostat data). Significant regional disparities serve also as a useful angle to look at income disparities in Turkey relative to the EU average. In the richest 10 provinces, per capita income stands as high as 62 percent of average per capita income in EU-25 countries. However, in the 10 poorest provinces per capita income is at only 9 percent of the EU average, underscoring the urgency of the regional development challenge.

Figure: 1. 15 Regional Income Distribution



1.61 ***Disparities in province per capita income have persisted over time.*** Trends in the coefficient of variation (ratio of standard deviation to mean) of *per capita GDP* across provinces provide a more accurate indication as to the persistence of regional disparities over time. The coefficient of variation has remained broadly unchanged to around 0.51 from 1987 to 1994, and has increased to 0.55 in 1995-2000, confirming

that far from declining, regional income gaps have increased. However, it is worth noting that, owing to the creation of new administrative jurisdictions over time, the number of provinces has increased from 67 in 1987 to 81 in 2000. This, coupled with frequent alteration of administrative division, may somewhat affect disparity measures of province per capita income over time. To address this issue, regional disparities were also examined from a perspective of GDP accruing to population groups by income level of their home provinces. The time trend of this indicator can reveal if parts of population living in poorer provinces (regardless of changes in administrative divisions) are catching up with groups that live in richer regions.

1.62 ***The share of income accruing to the 25 percent of the population living in the poorest provinces has failed to increase.*** Table 1.10 summarizes average proportions of GDP accruing to 5 population groups.[19] Typically the lower 10 percent (25 percent) of population living in the poorest provinces shared in only 3 percent (11 percent) of GDP, while the upper 25 percent of population, living in the richest provinces, shared in more than 40 percent of national income. In addition to this significant disparity, the trend in income shares seems to have been unchanged for the lower 25 percent of population during 1987-2000. By contrast, the shares of income accruing to the lower-middle and upper-middle quartiles of population (25-50 and 50-75 percent) have increased, at the expense of the top 25 percent of population living in the richest provinces. Although the income share of the upper 50 percent of the population to the lower 50 percent (according to home province per capita income) has been slightly declining, the Gini coefficient, which is more sensitive to disparities across smaller population groups, suggests a trend of increasing inequality over time (Table 1.11).

Table: 1.11 Income shares of population groups by level of province per capita income (in percent of total GDP).

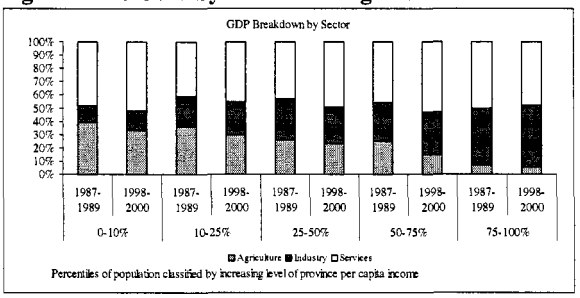
	Share of GDP accruing to each population group				
Population shares by increasing order of province per capita income	1987-1988	1989-1991	1992-1994	1995-1997	1998-2000
0-10%	3.0	2.9	3.1	2.9	3.1
10-25%	8.3	8.1	8.0	8.2	7.7
25-50%	18.2	19.1	19.4	18.8	20.2
50-75%	24.7	29.0	24.7	27.6	28.2
75-100%	46.0	40.9	44.8	42.6	40.8
Total	100.0	100.0	100.0	100.0	100.0
income share of upper 50% to lower 50%	2.41	2.32	2.28	2.35	2.23
Gini coefficient	0.275	0.279	0.282	0.299	0.298

Source: World Bank staff, based on SPO data

[19] To create these groups, provinces were ranked from poorest to richest according to GDP per capita. Then shares of GDP were calculated by respective population proportions.

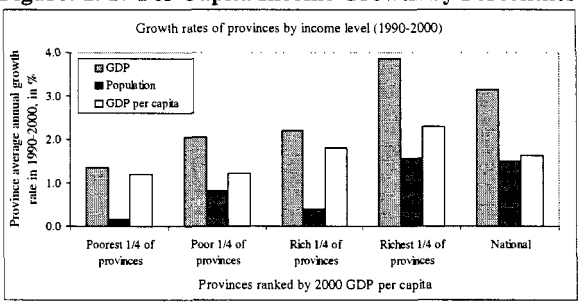
1.63 ***Industrial activity has been the main contributor to high regional incomes.*** Figure 1.16 further describes sources of income by population groups according to the per capita income of their home province (following the same classification as in Table 1.10). It is noticeable that industry generates a share of income at par with services for the upper 25 percent of the population living in the richest provinces. Agriculture generates a proportion of income much higher than the national average for the 50 percent of the population living in the poorer provinces. A decrease in the income share of agriculture was common for all groups, in keeping with the declining trend seen nationwide. Diversification of economic activity out of agriculture was stronger in the upper-middle 25 percent of the population that has seen the largest increase in its share in national income (Table 1.10 and Figure 1.16). By contrast, the share of agriculture in the income of the lowest 10 percent of population living in the poorest provinces was only slightly reduced, from 39 percent in 1987-89 to 33 percent in 1998-2000.

Figure: 1. 16 GDP by sectors in Regions



1.64 ***Regional income disparities have persisted despite extensive internal migration.*** As in other countries, regional differences in per capita income levels have given rise to internal migration. Thus, population in the poorest 16 (25 percent) of the 67 provinces existing in 1987 was almost stagnant from 1987 to 2000, growing by only 0.2 percent per year.[20] In general, population growth was faster in provinces with higher income, and population grew at the fastest pace in the upper 17 provinces by income level (Figure 1.17). Persistence—indeed, the slight increase—of regional disparities in per capita income in the face of steady migration from poor to rich provinces means that GDP grew much *faster* in rich than in poor regions. Indeed, in 1987-2000, GDP grew by 3.9 percent per year on average in the richest group of provinces, compared to around 2.1 percent in the upper- and lower-middle groups, and only 1.4 percent in the poorest group. Significant differences in GDP growth across regions suggests that promoting regional growth convergence is also relevant for growth of the economy as a whole. Faster income growth in the poorer provinces would boost overall growth and help accelerate convergence with the EU.

Figure: 1. 17 Per Capita Income Growth by Percentiles



[20] As mentioned above, the number of provinces has increased from 67 in 1987 to 81 in 2000. Omitting the new provinces from this comparative analysis of population and GDP growth over time involves a "loss" equivalent to 1.1 percent of GDP and 1.8 percent of total population in 1990, increasing to 3.9 percent of GDP and 5.5 percent of population in 2000. The size of the omitted information is not significant to affect the main findings.

1.65 ***Addressing the challenge of persistent regional disparities would call for an assessment of regional development policies and institutions.*** The Government has been implementing various programs to address regional disparities, through tax incentives and subsidies and public expenditure programs targeted on backward regions. For example, public investment (out of the central government budget) as a percentage of GDP has been on average during 1990-2000 3.5 times higher in the ten poorest regions compared to the ten richest ones. However, in view of the persistence of regional disparities despite extensive migration, a comprehensive assessment of the effectiveness of these interventions would be warranted. Issues that deserve particular attention include: (i) How to develop a coherent and efficient institutional mechanism for regional policy, to make the best use of the available and potential structural EU funds. (ii) What are the existing instruments for promoting regional development, how effective they are, and what influences their effectiveness. As part of the EU accession process, Turkey will need to establish policy frameworks, as well as management, control, monitoring and evaluation mechanisms for regional development. Chapter 8 reviews issues in strengthening policy coherence for rural development policies as part of the alignment process with the EU acquis. A more comprehensive analysis of institutions and policies should be planned as the EU accession process unfolds.

E. THE CHALLENGE OF PROMOTING FAST CONVERGENCE WITH THE EU

1.66 ***The challenge during the EU accession process is to achieve a rapid convergence to average EU per capita income.*** The EU accession negotiations have started on October 3, 2005 but are not expected to be completed soon and 2015 is often said to be the most likely date for membership. Although Turkey has the advantage of having custom union with the EU for a decade and considerable alignment with the EU Acquis in some of the negotiation chapters, there are significant per capita income differences between Turkey and the EU member countries and closing this gap will be one of the important challenges during the next ten years.

E.1. The speed of convergence will depend on the pace of structural reform

1.67 ***Convergence is not spontaneous and depends on many factors—especially on the quality of policies and institutions.*** The failure of many low income countries to achieve convergence with the high income countries have led to development of a large literature on the conditions of income convergence (see Box 1.3). The studies have both theoretically and empirically showed that the per capita income convergence is neither spontaneous nor automatic. Many economic policies such as taxation, provision of infrastructure services, market regulations as well as institutional setups and demographics can affect the accumulation or quality of factors of production and, therefore, per capita income growth.

1.68 ***The EU accession can provide opportunities to Turkey for speeding up its convergence with the EU.*** The neoclassical growth theory assumes that, among others, the factors of production are freely mobile and this mobility together with

trade in goods and services act as a convergence mechanism. Adoption of similar economic policies within the EU can further strengthen convergence. Therefore, a deeper economic integration into the EU single market can promote growth by improving mobilization of production factors and investment efforts in physical and human capital; by facilitating a faster absorption of technologies and accelerated productivity growth; and by improving the overall policy framework. Lagging countries are often short of capital as well as know-how and foreign direct investment from more advanced countries can be an important source for the diffusion of new technologies. Further integration with the EU can increase convergence as capital moves from capital abundant advanced countries to Turkey to take advantage of higher returns in the latter. However, faster growth presumes that there exists a well functioning legal, administrative and physical infrastructure and a stable macroeconomic and political environment. Also the experience of cohesion countries suggests that benefits of EU integration are not guaranteed and they are contingent on the quality of the policy framework as well as the reform momentum.[21]

Box: 1.3 Income Convergence

The standard neoclassical growth models suggest that rich countries grow slower than poor countries and therefore income levels of different countries would converge overtime. Known as the absolute convergence hypothesis, this prediction relies on the assumptions that production technologies are identical and exogenous among the countries and returns to capital diminishes as the stock of capital increases in an economy[1]. However, ***absolute convergence hypothesis*** finds little support in the literature[2] and therefore convergence is not automatic or spontaneous.

One major argument against absolute convergence hypothesis is that initial conditions of the countries are not the same and countries have different saving-investment rates, population growths, fiscal or monetary policies, production technologies and tastes. The list of differences relevant to growth can be extended to include political and macroeconomic stability and financial deepness but the basic idea is that initial conditions can lead to disparities in growth rates. For example, richer countries with higher saving rates and better human capital can grow faster than poor countries with lower saving rates and inferior human capital stock. Taking these points into account is known as the ***conditional convergence hypothesis*** in the literature and it suggests that the convergence relation still holds once the differences in endowments or environments are accounted. In other words, convergence holds among countries with similar endowments. Studies in empirical literature provides some support for conditional convergence and shows that differences in per capita growth rates relate systematically to a set of quantifiable variables[3]. These variables usually include international openness, government consumption, rule of law, democracy, investment to GDP ratio, human capital accumulation and fertility rates.

In neoclassical growth models, the long run per capita income growth rate depends on the exogenous technological progress. However, Romer (1986), Lucas (1988) and Grossman and Helpman (1991) have argued that growth may not slow down in rich countries because returns to investment broadly defined to include human capital do not necessarily diminish or technological advances resulting from R&D can make technological progress endogenous. Known as ***endogenous growth models***, this line of research opened a substantial role for government policies to influence long run growth. In these models, long term growth rate depends on variables such as taxation, rule of law, provision of infrastructure services, protection of intellectual property rights, regulations of international trade, financial markets and other areas in the economy.

[21] Reflecting such differences, EU accession did not have an automatic and equal impact across countries. For example, Ireland's convergence with EU accelerated only in the 1990s, 20 years after entry, while Greece's income gap widened in the 1980s, during the first decade of EU accession. By contrast, reflecting steady modernization efforts, Spain and Portugal experienced investment booms upon accession in 1986, and benefited from accelerated convergence to the EU—see also more detailed analysis below.

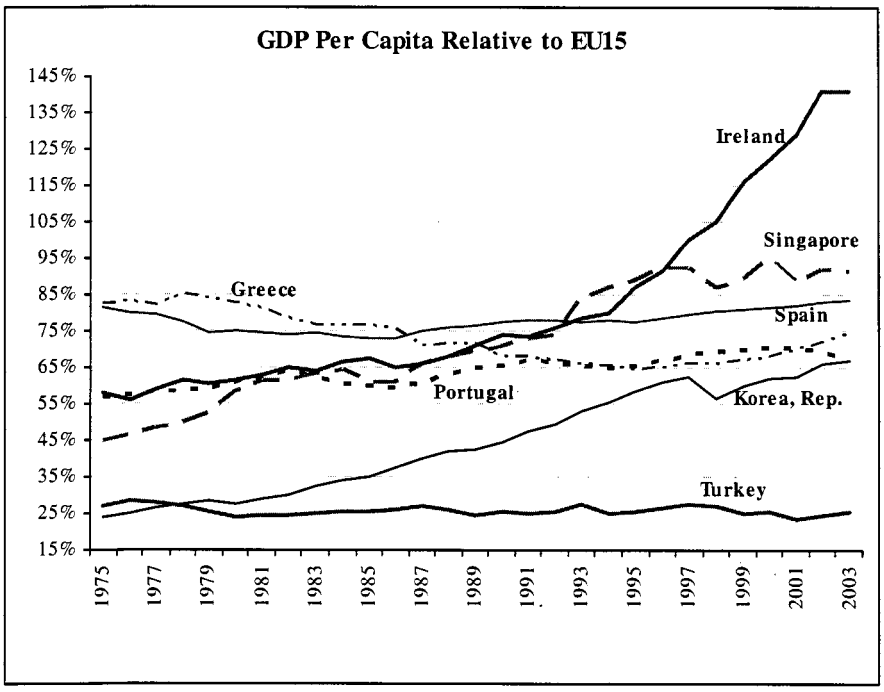
[1] For an extensive discussion of the issue see, Solow, R. (1956) A Contribution to the Theory of Economic Growth, Quarterly Journal of Economics, p.65-94, and Barro, R. and Sala-I Martin, X. (1995). Economic Growth. New York, McGraw-Hill

[2] Fuente, A. (1997). The empirics of growth and Convergence: A Selective Review, Journal of Economic Dynamics and Control, p. 23-73. Barro, R. and Sala-I Martin, X. (2003). Economic Growth (Second Edition). MIT Press.

[3] Barro and Sala-i-Martin (1995.2003) show that convergence occurs when environments are similar and differences in per capita income growth rates are large across countries but can be explained by a set of quantifiable variables.

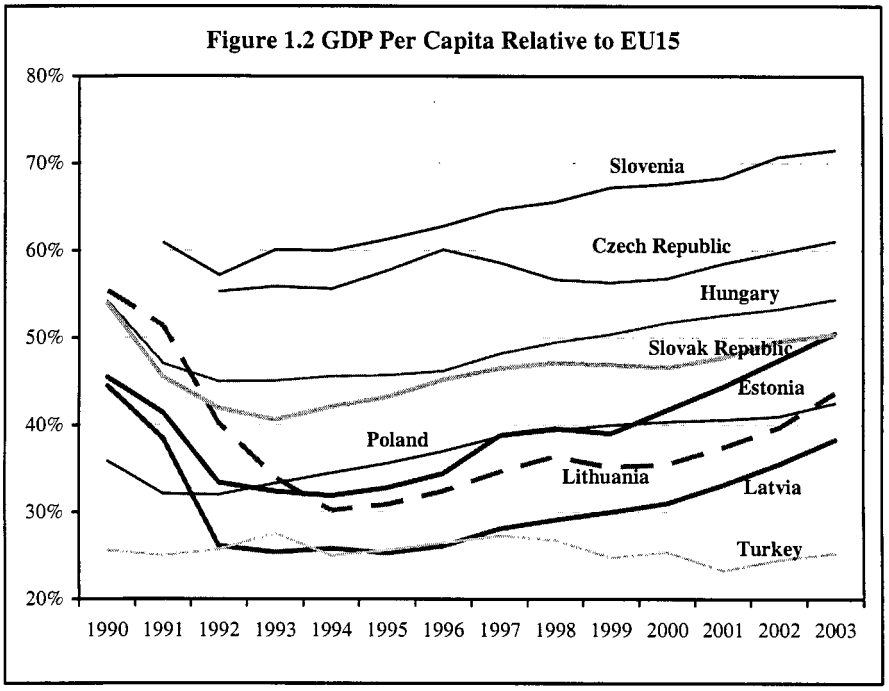
1.69 ***Turkey failed to achieve convergence over the past decades while other countries succeeded.*** Turkey did not show any convergence to the EU15 income levels over the past three decades. Per capita income in Turkey relative to the EU15 has hovered at around 25 percent since 1975. On the other hand, cohesion countries as well as some fast growing Asian countries achieved significant levels of per capita income convergence vis-à-vis the EU15 countries. The case of Ireland and South Korea are worth noticing. South Korea started from almost the same level or even less than Turkey in 1975 and converged to a level of 67 percent of the EU15. Ireland started from a level of 57 and astonishingly reached a level of 141, almost tripling its per capita income relative to the EU15.

Figure: 1. 18 Per Capita Income Convergence High Performing Countries



1.70 **The Eastern European transition countries that joined the EU in 2004 have also achieved significant convergence.** The new EU member countries have achieved substantial convergence with the EU15 since 1995, within a considerably short time period of a decade. The continuous strong efforts in Eastern European countries to liberalize their markets and the steps taken to align their institutions with the EU15 countries have facilitated a rapid convergence.

Figure: 1. 19 Per Capita Income Convergence New EU Member Countries



1.71 ***Creating a knowledge-based economy should be a main policy goal in the long run.*** Turkey can benefit from deeper integration with the EU and thereby from foreign technologies brought by exposure to trade and foreign direct investment. Migration of skilled labor, involvement in joint R&D activities or academic cooperation can further support technology transfers. However, international experience shows that diffusion of such technologies into the domestic markets is not always automatic. Existence of a well educated labor supply or a stock of human capital in general is important in the transfer of foreign technologies. R&D activities can further strengthen adaptation of such technologies. This requires Turkey to increase its expenditures on education, improve its quality of education at all levels, put more emphasis on job mismatch and arrange its curriculum accordingly to promote supply of skilled labor force needed by the growing modern sectors in the economy and finally to promote R&D activities to foster creation of new technologies as well as adaptation of foreign ones.

Table: 1. 12 ICT / GDP Ratio

Information & Communication Technologies			
	1991-1995	1996-2000	2001-2004
New EU Members	1.9	4.5	5.3
Cohesion Countries	2.1	3.4	3.0
Candidate Countries	1.1	2.2	2.5
Turkey	1.1	2.1	2.1
Asia 4 [1]	6.2	8.3	9.8
Latin 3 [2]	1.3	2.5	2.7
OECD	1.7	2.6	2.5
EU15	2.2	3.2	3.1

[1]: China, South Korea, Malaysia, Singapore, Thailand
[2]: Argentina, Brazil, Mexico

1.72 ***Level of competition as well as regulations in the product markets can affect diffusion of technologies.*** Benefits from FDI and technology spillovers usually depend on appropriateness of local conditions. Such conditions include the level of competition in the economy and the degree of product market regulations among

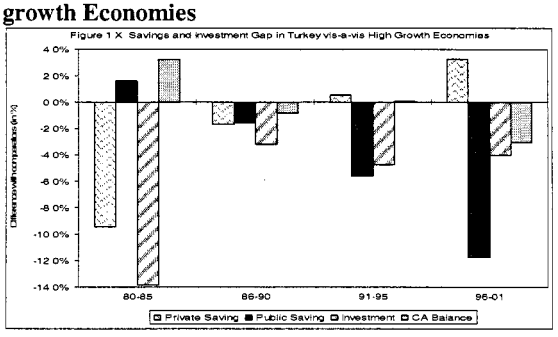
others. The OECD has heavily invested in identifying the degree of product market regulations in its member countries and effects of such regulations on growth and income convergence.[22] The empirical results from the OECD studies indicate a negative direct effect of product market regulations on productivity. Moreover, if the interaction of regulation with the technology gap is also considered, the results point to an even stronger indirect effect via the slower adoption of existing technologies. Strict regulations seem to have a particularly detrimental effect on productivity the further a country is from the technology frontier, possibly because they reduce the scope for knowledge spillovers. According to the OECD estimates of product market regulations[23], Turkey has still strictly regulated product markets. Issues in reducing rigidities in product markets in order to boost productivity and facilitate technological advances in the economy are examined in chapter 3.

E.2. Savings-Investment Balances and the Sustainability of High Growth

1.73 ***Convergence with Europe in terms of per capita income will depend on how well the economy can escape out of the boom-and-bust cycle of the past.*** A high investment rate is a necessary condition for long term accelerated growth, as well as healthy TFP growth. But sufficient domestic savings will also be needed to ensure financing of high investment levels. Experience from past boom-and-bust episodes suggests that Turkey does not generate enough domestic savings to finance the level of investment needed for fast growth and sustained convergence. Higher investment has been too often limited by savings shortages that triggered an increase in the external current account deficit, leading eventually to a balance of payments crisis.

1.74 ***Preserving external current account sustainability in a context of strong expected growth will be a key challenge for Turkey in the years ahead.*** In the absence of sufficient domestic savings, greater investment will be reflected into a larger current account deficit. Financing of a large current account could pose risks for external debt sustainability, unless non debt-creating foreign savings are available in the form of foreign direct investment. Enhanced macroeconomic stability, a stronger investment climate, and the prospect of EU accession should all work in this direction. Indeed, strengthening the investment climate is not only a precondition for higher private investment and faster growth, but also for attracting foreign savings in the form of foreign direct investment and thus for ensuring the sustainability of growth. However,

Figure: 1. 20 Saving-Investment Gap vis-à-vis High growth Economies



[22] The Sources of Economic Growth in OECD Countries (2003) and Going for Growth (2005), OECD, Paris.

[23] Paul Conway, Véronique Janod, Giuseppe Nicoletti (2005). Product Market Regulation in OECD Countries: 1998 To 2003, ECO/WKP (2005)6. OECD.

hedging existing risks would call for a better mobilization of domestic savings—partly through a sustained fiscal consolidation effort and partly through greater mobilization of private savings. The analysis in this section examines the determinants of private savings and prospects over the medium term.

1.75 ***In the past, Turkey has seen an increasing trend of private savings that mainly served to finance an increasing public sector borrowing requirement.*** Over the 1980s private savings in Turkey had remained lower than in other fast growing economies (Figure 1.20).[24] However, the trend has been on the upside, and private savings ratios in Turkey have been surpassing savings ratios in comparator countries since the early 1990s. But Figure 1.20 also illustrates that increasing private savings have mainly served to finance rising budget deficits, rather than higher levels of investment. The ensuing unsustainable current account imbalances have put a brake on growth.

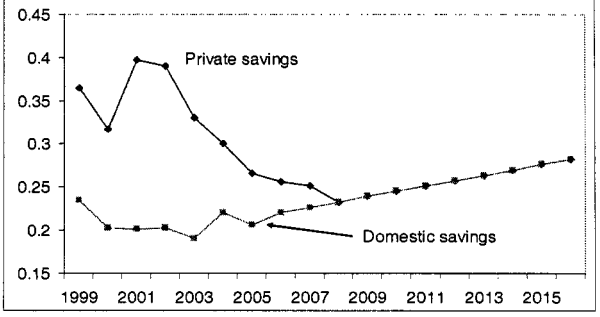
1.76 ***Empirical analysis across countries suggests that, fiscal policy, growth, financial sector development, and demographics are key factors that affect private savings.*** Empirical analysis of the determinants of private savings ratios was based on a panel of 70 countries, including Turkey, ranging from developing to industrial economies. Detailed results are presented in Annex 1.3.[25] In line with existing evidence, it is found that, due to "Ricardian equivalence", public and private savings partly offset each other: For every percentage point reduction in budget surplus, private saving will increase *on impact* by an approximate half percentage point. Consequently, national savings rate will decrease by a half percentage point. However, in the long run the offsetting effect is almost complete, with the change in the private savings ratio increasing up to 90 percent of the change in the budget surplus. In accordance with existing evidence, both income level and income growth have positive effect on private saving. An increase in income per capita by 10 percent raises the private saving rate by 0.7 percentage points. Similarly to the effect of increasing income, a jump in growth rate by 2.5 percent will increase the saving rate by 1 percentage point. Increasing financial sector depth, approximated by a larger money supply-to-GDP ratio, has a small yet positive influence on private saving. By contrast, relaxation of credit constraints, through an increase in credit to private sector, is expected to lower private savings. Finally, demographic variables negatively affect private saving. A 5 percent increase in urbanization; an 11 percent increase in young age dependency; or a 2 percent increase in old age dependency lowers private saving by 1 percentage point of GDP.

[24] Comparator countries are Chile, Ireland, Korea, Malaysia, Mauritius, Portugal, Singapore, Spain and Thailand. These countries are selected on the basis of their performances, marked by high growth and high savings.

[25] The empirical estimations follow the methodology developed by Loayza, N., Lopez, H., Schmidt-Hebbel, K. and Serven, L. 2000. "What Drives Private Saving Across the World?" The Review of Economics and Statistics 82(2):165-181.

1.77 ***Macroeconomic stability and sustained growth are key preconditions for better mobilization of domestic savings.*** With increasing public savings, private saving in Turkey is predicted to fall in the years ahead. However, as the predicted decline in private savings is smaller than the increase in public savings, domestic saving will increase, creating some room for the financing of increased private investment. However, although higher public savings, through "Ricardian equivalence" may restrain private savings in the future, maintaining fiscal discipline would have a much more favorable effect on private savings by ensuring macroeconomic stability—a precondition for faster growth and rising per capita incomes. These would be two key factors boosting the private savings rate in the future, as in other fast-growing comparators—especially in a high-growth scenario that would lead to faster convergence with the EU (see below).[26]

Figure 1.21 : Actual and predicted savings ratios



1.78 ***Structural factors will exert mutually compensating effects on private savings.*** Easing financing constraints, as a result of greater financial intermediation in a more stable economic environment, are likely to reduce private savings in the future. However, increased financial sector depth and diversification of financial instruments for savings would work in the opposite direction. Overall, demographic variables are anticipated to exert a neutral effect on the savings rate. As young population of the last decade are joining the working age population, the young age dependency is moving downwards and expected to boost the savings ratio. On the other hand, the old dependency ratio shows a slow upward movement, potentially reducing private savings.

1.79 ***In a conducive environment underpinned by continuing fiscal discipline, private savings could increase in tandem with fast income growth, generating the necessary financial resources for investment.*** Overall, as a result of these trends, private savings are predicted to decline and become aligned with domestic savings as of 2008, and begin moving together in an upward direction thereafter. Domestic savings are projected to increase from an estimated 22 percent of GDP in 2005 to around 28 percent by 2015 (Figure 1.21). The predicted increase in the savings ratio would match the projected increase in the investment ratio under the high-case growth scenario (6 percentage points of GDP—see below). With domestic savings projected to increase in step with investment in the base-case scenario pressures on the current account deficit would subside. The projected decline in the public sector deficit in the years ahead—as a result of continuing fiscal discipline and lower interest payments on public debt—is a key pre-condition in this scenario. If the decline in the public sector

[26] The projection is based on a 6 percent growth per year over 2006-2015—in-between the baseline and high-case growth scenarios discussed bellow—and a balanced budget after 2008. Similarly, the recent sharp declines in inflation rate with ongoing efforts to keep it low will eventually remove distortions that boosted precautionary savings in the past. Even though this may seem like a drawback, a more stable economy will boost investment, so that its indirect effect through stronger growth will sufficiently compensate for the decline.

deficit failed to materialize, growth in domestic savings would fail to match the increase in domestic investment, and the current account deficit would increase to unsustainable levels—inconsistent with stable growth. It is thus important that fiscal discipline be preserved by maintaining a high primary budget surplus in the years ahead. Despite the projected decline in public debt as a proportion to GDP (see chapter 2), the fiscal room from lower interest payments on the public debt should not be used for increasing spending or lowering taxes until conditions for current account sustainability have been secured.

E.3. Convergence Scenarios for Turkey

1.80 ***Turkey is now in a better position to break free from the past stop and go growth cycles and achieve convergence with the EU.*** The recent consolidation of the fiscal balances, the reduction in inflation, the improvements in macroeconomic stability and the wide ranging structural reforms put Turkey in a better position to take advantage of the EU accession process and accelerate growth on a sustained basis. Favorable demographic trends will increase the share of working-age population in total population—contrary to EU15 members and most new members—allowing Turkey to grow more rapidly. Turkey can also rely for faster growth on the absorption of sizeable underutilized labor—especially from agriculture and among working-age women who do not participate in the labor force—into an expanding, high productivity modern sector. Modernization of the large informal sector, which provides jobs to about half of the labor force, can also significantly promote growth, given the large productivity gaps between formal and informal segments in all activity sectors. Turkey can also take advantage of better mobilization of investment—especially through higher FDI, which still remains well below levels seen in other emerging market economies. This will further enhance Turkey's trade performance, which—as discussed above—has constituted a powerful factor of productivity improvement and is crucial for the sustainability of growth. How much and how quickly Turkey can actually benefit from EU integration will depend on how much efforts Turkey will put in continuing to implement reforms as well as extending the scope of structural reforms.

1.81 ***There could be a broad range of possible convergence outcomes.*** Turkey can achieve different levels of convergence under different economic policies or structural reforms. Neither convergence is automatic nor the EU accession negotiations are uniquely structured to ensure convergence. The experience of the past shows that convergence among the EU member countries is common but not a unique outcome. Similarly, accession negotiations can take many different shapes and every country had its own way. Also, in the case of Turkey, the negotiations are expected to take longer. Therefore, one has to consider a broad range of possibilities for how much and how quickly Turkey can achieve in converging with the EU. These have been summarized in three main growth scenarios analyzed below. The assumptions concerning the underpinning sources of growth in each scenario are laid out in annex

1.82 ***Turkey can secure considerable per capita income convergence with the EU25 countries by implementing sound economic policies backed by structural***

reforms. The fact that Turkey could not achieve convergence with the EU countries in the past clearly shows that Turkey has to break away from the instabilities and inefficiencies of the past. Convergence over a sustained period of time requires sound economic policies and broad-ranging reforms in many areas of the economy. Assuming that Turkey continues to implement current sound macroeconomic policies envisaged in the latest IMF Stand-By arrangement and Pre-Accession Economic Program of the government, secure strong fiscal balances and consolidate the structural reforms initiated so far, potential GDP could grow at a rate of around 5 percent under a ***base case scenario.*** This would generate some convergence with the EU25 countries.

1.83 ***Turkey can do more by implementing more ambitious and mutually reinforcing structural reforms.*** The path of accession negotiations is not unique and so are its outcomes. Turkey can have different preferences and strategies for the accession negotiations. Differences in preferences or strategies may result from many considerations, but from the perspective of sustaining a high economic growth, the strategy should prioritize growth enhancing and mutually reinforcing structural reforms starting from the early phases in the negotiation period. Assuming that Turkey broadens the scope of structural reforms in a number of priority areas further reviewed in the following chapters—including labor markets, public sector governance and public service delivery, corporate governance and commercial judiciary; reinforces the implementation of the reforms; supports productivity enhancing and technology creating activities such as research and development, FDI inflows and competition in the product and factor markets particularly in the services sector; and preserves macroeconomic stability—potential GDP could grow at rates around 6-7 percent under the ***high case scenario***. This would allow Turkey to close a substantial amount of the per capita income gap vis-à-vis the EU25 countries over a 10-year period.

1.84 ***However, failure to consolidate reforms and take advantage of opportunities opened by EU accession could perpetuate historical trends of slow growth.*** Turkey has been reforming its economy since 1980s and past experience in Turkey, as well as in other countries, show that the governments can easily fall into reform fatigue and the reform process might be suspended. Moreover, the accession negotiations are expected to continue for a long time and can have ups and downs during the process. Despite strong improvements and the resilience of the Turkish economy to shocks, the existing high public debt as well as its structure and the widening current account deficit can magnify the effects of such ups and downs. Under such circumstances, characterizing a ***low case scenario***, Turkey may barely achieve a growth rate of between 3.5-4 percent, compatible with the past trend but away from generating any income convergence.

1.85 ***In the base case scenario, it is assumed that the recent achievements in the Turkish economy and further integration with the EU can enhance productivity, employment generation and investment compared to past trends.*** The growth of GDP in the past has been mainly driven by the increase in the capital stock with low contributions from productivity and employment. However, the recent reforms generated outstanding increases in total productivity, in parallel with relatively slow employment creation. Total factor productivity grew by 6.6 percent on average

annually during 2002-2004 in comparison to 1.1 percent during 1972-2000.[27] In the base case scenario, it is assumed that the increase in total factor productivity would slow down since a part of it came from the restructuring in the economy in the wake of the slump, but it still would remain at a higher rate than in the past due to better macro stability, structural reforms initiated since 2001 and continuing alignment with the EU acquis throughout the accession period. Continuous improvement in Turkey's trade integration with the EU single market and the quality of trade will be strong drivers of TFP growth as established in the previous sections. Therefore, total factor productivity is projected to grow by 2 percent annually during the period of 2005-2015. Similarly, it is assumed that the current low investment to GDP ratios would recover and reach an average of 24.6 percent of GDP during the negotiation periods as Turkey attracts more funds for greenfield investment and improves the business environment and financing conditions for domestic investment. Employment generation is also assumed to accelerate to 2 percent annually as Turkey reforms its labor market. As a result, real GDP growth is estimated to be slightly above 5 percent under the base case scenario. With a population increase declining gradually from 1.5 in 2005 to 1 percent in 2015, this would generate a per capita real income increase of around 4 percent, which is almost double what Turkey achieved during the last three decades.

1.86 ***Growth in the EU25 countries is estimated to reach the potential level of 2.5 percent by 2006 and stay at this level thereafter.*** Growth in the EU25 countries is estimated to be around 2 percent in 2005 and 2006 by the EU Commission. Over the long run, the OECD has recently forecasted that the potential growth rate for the EU15 countries would be around 2 percent until 2020. The European Central Bank (ECB) has also recently estimated potential output growth rates for the euro area around 2 percent or close to 2 percent.[28] Combined with the higher potential growth in the new member countries, it is assumed that the EU25 countries would grow by 2.5 percent annually during 2006-2015. With almost stagnant population in these countries, per capita income is projected to grow by around 2.4 percent per year.

1.87 ***Turkey can achieve only a limited convergence in per capita GDP under the base case scenario.*** It is estimated that the per capita income in Turkey would increase from 29.1 percent of the EU25 in 2004 to 34.2 percent of the EU25 by 2015, giving rise to some but not substantial convergence.

1.88 ***For a better convergence outcome, Turkey would have to aim for an ambitious reform program.*** Under the high case scenario, it is assumed that with ambitious and wide-ranging reforms, Turkey can sustain higher total factor productivity increases of around 2.5 percent (see Annex 1.4). Employment generation may also further accelerate to around 3 percent, thanks to strong TFP growth and higher investment, provided that non wage costs are kept competitive and all existing bottlenecks to job creation in the formal labor market are removed (see chapter 4). The investment ratio could further increase as Turkey attracts more FDI. An investment to GDP ratio of around 25.7 percent would be feasible under the high case scenario. This would allow GDP growth rates close to 7 percent and per capita GDP

[27] The TFP growth rate is different from the figures provided in Table 1.3 since human capital is not included as a factor in the production function.

[28] Alberto Musso and Thomas Westermann (2005), Assessing Potential Output Growth in the Euro Area, ECB Occasional Papers No. 22.

growth rates of around 5.5 percent. Keeping the same assumptions for the EU25 countries, Turkey can achieve significant amount of income convergence. Per capita income in Turkey would increase from 29.1 percent of the EU25 in 2004 to 40.4 percent of the EU25 by 2015.

1.89 ***However, if Turkey fails to capitalize on reform opportunities opened by EU accession, the convergence path would be a mere reflection of the past.*** The low case scenario can be seen as an extrapolation of past trends. If Turkey falls into reform fatigue or negotiations stalls temporarily for any reason so that implementation of reforms slows down, then growth in the production factors would be much slower than in the base- or the high-case scenarios. It is assumed that the factors of production increase at rates compatible with the past trends in the low-case scenario. TFP growth is estimated to be somewhat above the past trends due to achieved stability and structural reforms and forecasted around 1.5 percent. Employment generation is also estimated to be lower at around 1.3 percent. Similarly, investment to GDP ratio is estimated to be at 24 percent. This would allow for Turkey to grow at around 4 percent, with per capita income growing at around 3 percent. However, with per capita income growing at around 2.4 percent in the EU25 countries, Turkey would achieve almost no convergence. The per capita income in Turkey would merely increase from 29.1 percent of the EU25 in 2004 to 30.1 percent of the EU25 by 2015. In this low-case scenario the economy would remain fragile, so that growth blips due to volatility from domestic policies or external factors could easily bring the economy even to a lower end-point by 2015.

1.90 ***The analysis presented above abstracts from any price or exchange rate movements but variations in the purchasing powers of currencies are also relevant for convergence.*** For the sake of clarity, the above discussions were based on real GDP growth rates at constant Purchasing Power Parities (PPP) of 2003. However, both the cohesion countries and particularly the new member countries experienced significant appreciations in their currencies. The amount of cumulative real appreciation averaged around 60 percent for the 8 new member countries for the period of 1995-2004.[29] Therefore, prospects for changes in PPP rates are also relevant in order to complete the convergence picture.

1.91 ***Income convergence could be accelerated by productivity-driven real exchange rate appreciation during the accession period.*** Healthy productivity increases, especially in the traded goods sectors, under the base- and high-case scenarios would be expected to lead to real exchange rate appreciation during accession.[30] However, it would be very difficult to forecast how much exactly the

[29] The real exchange rates are taken from the Eurostat and defined vis-à-vis the 12 trading partners.

[30] Fast-growing open economies typically experience fast productivity and wage growth in the traded goods sector owing to catch-up with the productivity level of higher-income trade partners. This is very likely to happen during Turkey's integration in the single EU market. To keep up with more rapidly rising labor costs, prices in the non-traded goods sector (mostly non-traded services and construction), where productivity growth is slower, need to rise faster than in the traded goods sector. This is reflected into real exchange rate appreciation, with the real exchange rate approximately measured as the relative price of non-traded to traded goods (the Balassa-Samuelson hypothesis). The increase in the relative price of non-traded goods prevents profitability from falling in that sector and is also reflected in higher overall consumer price inflation. Along with real exchange rate appreciation, lower-income countries can thus be expected to experience higher-than-average CPI inflation, mirrored by more rapidly increasing prices in services, owing to catching up of productivity in industry and other traded goods sectors. Balassa, Bela, (1964), "The Purchasing Power Parity Doctrine: A reappraisal," *Journal of*

real exchange rate would appreciate vis-à-vis the EU25 countries. Nevertheless, for the sake of the analysis, it is assumed that the real exchange rate could appreciate by 2 percent annually under the high case scenario and by 1 percent under the base case scenario. No appreciation is foreseen under the low case scenario as this would not be very likely outcome due to low productivity increases. Projected appreciations are much lower than trends seen in new EU members since the start of their accession process. Under the base case scenario, per capita income relative to EU25 would reach 38.1 percent by 2015 with 1 percent annual real appreciation compared to 34.2 percent with no real appreciation. Under the high case scenario, the per capita income would reach 50.1 percent with 2 percent annual real appreciation compared to 40.4 percent with no appreciation.

1.92 ***However, real appreciations can be sustainable only to the extent they are productivity driven.*** Productivity gains would ensure that real exchange rate appreciation remains consistent with maintaining competitiveness and preserving external current account sustainability. If the real appreciations are not supported by productivity increases, then current account would widen sooner or later and the situation would not be sustainable but on the contrary could even worsen in case of large correcting alignments in the exchange rates.

Box 1.4: Speed of Convergence

Starting from neoclassical growth models and assuming that the production technology is Cobb-Douglas, the production function can be written as; $Y = AK^{\alpha}L^{1-\alpha}$ or as $y = Ak^{\alpha}$ in intensive form with y=Y/L and k=K/L. With labor augmenting technological progress and assumption about how capital and labor augments over time, the per capita income can be written as[1];

$$Log[y(t)] = (1-e^{-\beta t})Log(y^{*}) + e^{-\beta t}Log[y(0)]$$

Where β is the speed of convergence, t stands for time, y(o) is the starting value of y and y* is the level to be converged in the steady state. The time t for which log[y(t)] is half way between log[y(0)] and log(y*) satisfies the condition $e^{-\beta t} = 1/2$. Therefore the half life is log(2)/β or 0.69/β.

[1]: See Barro and Sala-i-Martin (2003), Economic Growth, Second Edition, p.58. The MIT Press.

1.93 ***The experiences of the European countries show that the above results are feasible.*** Both the cohesion countries and the new member countries achieved significant levels of convergence speeds. The speed of convergence can be defined as the amount of the income gap closed per year. Table 1.13 below summarizes the experience of the cohesion countries and new member countries. It also presents implied speeds of convergence for Turkey under each scenario. The speeds of convergences vary significantly among countries. Excluding Ireland, as it not only closed the gap but also surpassed the EU average, Spain, among cohesion countries and Estonia and Slovenia among new member countries had high convergence speeds. The estimated convergence speeds for Turkey are in line with the past experience of the European countries. Although estimated speeds of convergence for Turkey are at the middle or lower bound of the observed speeds for other countries, it must be taken into account that Turkey has faster population growth relative to others.

Political Economy, Vol. 72, No.6, pp.584-589. and Samuelson, Paul, (1964), "Theoretical Notes on Trade Problems," Review of Economics and Statistics, Vol. 46, No. 2, pp. 145-154.

Table: 1. 13 Income gaps to EU average and speed of Convergence

	1995	2003	
New EU Members	Per capita income in % of EU15 average with constant 2000 PPP rates		β = Speed of Convergence
Czech Republic	57.7	61.1	1.1
Estonia	32.8	50.5	3.8
Hungary	45.7	54.4	2.2
Latvia	25.3	38.3	2.4
Lithuania	30.9	43.7	2.5
Poland	35.6	42.5	1.4
Slovak Republic	43.2	50.4	1.7
Slovenia	61.3	71.5	3.8

	Cohesion Countries (with constant 2000 PPP rates) Per capita income in % of EU15 average with constant 2000 PPP rates			
	Greece	Ireland	Portugal	Spain
1975		57.8		
1981	80.8			
1986			59.6	73.0
1995	64.7			
2003	74.5	141.0	67.7	83.6
β = Speed of Convergence	-1.2[1], -4.2[2], 4.0[3]	-na	1.3	2.9

	Turkey (Per capita income in % of EU25 average with constant 2003 PPP rates)		
	2004	2015	β = Speed of Convergence
Base Case	29.1	34.2	0.8
High Case	29.1	40.4	1.5
Low Case	29.1	30.1	0.1
	The number of years required for Turkey to close half of the income gap would be 86 years under the base-case and 46 years under the high-case scenarios		

	Turkey (with real exchange rate appreciation)		
	2004	2015	β = Speed of Convergence
Base Case	29.1	38.1	1.0
High Case	29.1	50.1	2.6
Low Case	29.1	30.1	0.1
	The number of years required for Turkey to close half of the income gap would be 69 years under the base-case and 27 years under the high-case scenarios		

Source: World Bank Staff
[1]: 1981-2003 [2]: 1981-1995 [3]: 1995-2003

F. POLICY COORDINATION FOR ENHANCED GROWTH AND MANAGEMENT OF EU ACCESSION: THE ACQUIS AND BEYOND

F.1 Policy prioritization during EU accession

1.94 ***Turkey could take advantage of the EU accession process as an anchor for reform and macroeconomic stability*** Some of the challenges facing Turkey are long-term in nature, but because the reform agenda is complex, the efforts have to begin early on. Other challenges, especially related to the quality of the business environment, could be met over the medium term by strong efforts to align early on with the EU Acquis. It is in Turkey's interest to place particular emphasis during the accession period on the many areas where the alignment to the *Acquis* can strongly contribute to reinforcing the economic management framework. In areas where the EU *Acquis* is less complementary with economic management, or compliance costs are significant (such as, for example, in harmonization of environmental regulations), reforms could be delayed until an advanced stage of the accession process is reached and faster, sustained growth has taken hold.

1.95 ***—but it is also important that the broader reform agenda—beyond alignment with the Acquis—be appropriately prioritized.*** Despite their different time dimensions due to the policies and institutions that need to be changed, many reform areas are highly complementary and mutually reinforcing.[31] Reform areas where policy complementarities are strongest should be prioritized, to maximize the benefits from the reform process and avoid the pitfalls of a piecemeal approach. In addition, to take advantage of policy complementarities, reforms that go beyond the EU *Acquis,* yet are important underpinnings of Turkey's medium-term growth prospects and broadening of social inclusion, should become prominent in the reform agenda. The cost of reforms (fiscal and social) should also be appropriately factored in the prioritization of the agenda as the social consensus to reform would need to be maintained over a long time. Structural reforms with low fiscal cost, and public finance reforms that create needed fiscal space for more costly initiatives in the future, would merit to be prioritized.

1.96 ***The experience of the new EU members could provide useful insights on the prioritization of reforms to successfully manage the accession process.*** The amount of time spent for negotiating each of the 29 Acquis chapters, and the selection of chapters to begin with, was not uniformly distributed among EU acceding countries (see Box 1.5 on the structure of the negotiation process). Moreover, the whole process took longer in some countries than in others.[32] For the purposes of the analysis, negotiation of the EU

[31] For example: reforms of product market regulations to strengthen the investment climate may not yield full benefits in terms of job creation unless complemented by reforms to improve labor market flexibility; reforms to ensure financial sustainability of the pension system usually underpin initiatives to reduce the non wage costs of labor, which in turn helps combat informality and further strengthen the viability of the social security system. For further analysis see J. Braga de Macedo and J. Oliveira Martins, (2005).

[32] The analysis is based on the timetable for the negotiation of the Acquis chapters by the Czech Republic, Estonia, Hungary, Poland, Slovenia, Latvia, Lithuania, and Slovakia. The first five countries started

Acquis chapters has been categorized into "up-front", "medium term", and "deferred", based on the average length of time between the opening of EU accession negotiations and the closing of each chapter—as a percent of the length of the negotiation period for each new EU member (Table 1.14, based on individual country data reported in Annex 1.5). Differences in the negotiation pattern of the various chapters could partly reflect the approach adopted by the parties, and partly difficulties inherent in the respective policy areas. In addition, some chapters require more financing efforts for alignment than others. It must be underscored that the observed pattern does not necessarily reflect any strategically optimal prioritization in terms of economic or other type of return to the adjustment.

Box 1.5: How negotiations were conducted with the new member states

First step was the **screening** of legislation for each chapter, carried out at the meetings of national experts and experts from the European Commission, or in writing. The screening was conducted for each negotiating chapter in two stages. The purpose of **multilateral screenings** was to inform all candidate-countries about the whole acquis in individual chapters - the Commission's experts presented the acquis and its implementation in practice. The purpose of **bilateral screenings** was to examine in greater detail the existing degree of harmonization of candidates' legislation with the acquis. The experts from a candidate-country presented the existing legislation and put substantive solutions forward and, together with the experts from the Commission, identified the areas of non-compliance. The **screening results** are a document agreed between both sides.

Based on the screenings and an assessment of the actual capacity to implement the acquis, the working group, a member of the negotiating team, with the support from external experts and independent institutions, prepared a **draft negotiating position**. In some countries, such as Slovenia, the draft was presented to non-governmental organizations for their eventual comments. The proposed negotiating position was prepared, depending on a country practice, in co-operation with the editing group of the negotiating team, and then put into the Government procedure. Since the **proposed negotiating position** was also a proposal for the conclusion of an international treaty it had to be discussed and adopted by the Government. Thereafter, the proposal was usually discussed by the relevant bodies of the national parliament. Subsequently, the English translation of the negotiating position was submitted to the European Council (the Council), and the copy provided to the Commission.

The European Commission wrote down its position in the **Draft Common Position of the EU**, for submission to the Council. On the basis of that position, the Enlargement Working Group operating within the Council prepared the **Common Position of the EU** which was then discussed at the Conference on Accession. It set out the position of the Council (i.e. all the Member States) concerning the negotiating position of a candidate-country and invited it to provide some additional clarifications with respect to individual issues.

The formal part of negotiations on individual negotiating chapters was conducted in the Intergovernmental Conferences on Accession at the Deputies Level (heads of the negotiating teams of candidate-countries); and in the Intergovernmental Conferences on Accession at the Ministerial Level (foreign ministers of candidate-countries).

At these Conferences, the Committee of Permanent Representatives (COREPER) of the Council and a candidate-country discussed the negotiating positions on both sides, brought their positions on the substance of individual negotiating chapters into line and - provided there are no outstanding issues regarding a given chapter - established that negotiations on that chapter might be temporarily closed. Since

negotiations in March 1998, while the last three in February 2000. Negotiations were completed for all countries by December 2002.

the principle that "nothing is agreed until everything is agreed" applied to negotiations, the temporarily closed chapters could have still been reopened by the conference on accession.

The negotiating positions of each candidate-country had to be adopted unanimously by all Member States, forming the basis for drafting of the **Accession Treaty**. The Accession Treaty incorporates the results of negotiations: concerning harmonization of legislation with the Agreements of the European Union with third countries; harmonization of legislation with the acquis; transitional periods; derogations; technical adaptations; and other measures.

The Council and the European Parliament have to give consent to the accession of a new country. The Accession Treaty has to be signed and ratified by all Member States and the candidate-country involved.

Source: Office for European Integration, Republic of Slovenia.

Table 1.14: Negotiation of the Acquis—experience from the new EU members

Up-front	Medium term	Deferred
Small and medium-sized enterprises	Telecommunications	Energy
Science and research	Economic and monetary union	Competition policy
Education and training	External relations	Taxation
Statistics	Fisheries	Transport policy
Industrial policy	Free movement of goods	Justice and home affairs
Consumers and health protection	Culture and audio-visual policy	Regional policy and coordination of structural instruments
Common foreign and security policy	Company law	Agriculture
	Social policy and employment	Financial and budgetary provisions
	Freedom to provide services	
	Free movement of capital	
	Financial control	
	Customs union	
	Freedom of movement for persons	
	Environment	

Note: The chapters in the "up front" category are those negotiated, on average, within the first one-third of the total negotiation period of each new EU member; those in the "medium-term" group have been closed within the first two-thirds; and those categorized as "deferred" have been closed in more than two-thirds of the total negotiation period.

1.97 ***However, Turkey's priorities for accession will be affected by different starting conditions, country-specific factors, and the need to ensure effective compliance with the EU Acquis.*** Turkey is in a different position than the new member countries when they started negotiations, because a Custom Union with the EU has been in place since 1996; a longer relation with the EU has been effective since the 1960s, while the economy is not facing the challenges of the transition to the market that new EU members were still facing in the mid-1990s. Turkey has already achieved significant alignment in some chapters, so that under normal circumstances negotiation of these chapters could be quickly completed. However, Turkey can still draw lessons from the recent accession experience of the new member countries. In addition, some chapters involve economic, political or technical difficulties and there fore are likely to stay at the negotiation table longer irrespective of the level of current alignment. In the case of Turkey, the negotiation pattern will also be influenced by the need to demonstrate effective compliance with the Acquis before each chapter could be declared closed.

F.2. Policy coordination on the way to the EU

1.98 ***Strengthening policy coordination is a precondition for successfully managing a multi-faceted reform agenda during EU accession.*** Managing the process of EU accession and ensuring effective compliance with the Acquis will critically hinge on the quality of policy coordination across various parts of the public administration. Because implementation of the Acquis will be a prerequisite for EU accession, strengthening vertical and horizontal coordination, within and across line ministries and agencies and between sectors at local level, would deserve special attention. The challenge is even taller because Turkey needs to pursue the broader development agenda for growth and social inclusion in parallel with the EU accession agenda.

1.99 ***Management of the EU accession process necessitates the creation of inter-ministerial structures to coordinate cross cutting issues and to act as a counterbalance to the fragmentation of policy making.*** Moreover, the accession countries are expected to establish 'a mechanism for collective ministerial strategic supervision, inter-ministerial working arrangements with the capacity and authority to co-ordinate EU integration work internally and externally, and to monitor progress, and administrative unit or units to support those coordinating arrangements, and adequate European integration capacity in ministries'.[33]

1.100 ***Turkey has made good progress in establishing such arrangements, but complementary steps would be needed.*** Initiatives taken so far include: setting up the coordinating body for EU affairs (European Union General Secretariat), EU Units in public institutions, and the Internal Coordination and Harmonization Committee (for legal approximation with the EU acquis), as well as the framework for the EU financial assistance, comprising the National Aid Coordinator, National Fund and National Authorizing Officer, Financial Coordination Committee, Joint Monitoring Committee, and Central Finance and Contracts Units. However, the scope of work of the Internal Coordination and Harmonization Committee and of the Financial Coordination Committee do not seem to cover the management of cross-cutting policy issues, and the coordination between the policy making, legal approximation, and the planning and monitoring of enforcement. Directions for complementary action would involve:

i) Harmonizing national plans and programs, as envisaged by the Article 357 of the 8ht Development Plan,

ii) Strengthening the link between the planning of National Plan for the Adoption of the Acquis (NPAA) measures with the planning of budget, based on an all-encompassing strategy for entry into the EU and the dynamics of a cost-benefit and impact analysis of EU membership, and

[33] Sigma Baselines, OECD, October 1999. The baselines, prepared upon the request of the European Commission, provide a basis for conducting assessment of civil service, external audit, financial control, public expenditure management systems, policy-making and co-ordination machinery and public procurement management systems.

iii) Defining the appropriate coordination system.

1.101 ***Overlapping and fragmented competences would complicate the accession process.*** The capacity of the government to drive through the EU-related, but also other reforms, is influenced by the horizontal division of tasks and responsibilities. A situation of overlapping and fragmented competences is observed in some rather important policy areas such as economic policy, environmental policy, trade related issues, energy or transport. Moreover, the combination of fragmented competences and of weak horizontal coordination has resulted in a number of national plans and programs which are not harmonized. This is indirectly reflected in what appears to be a certain lack of clarity regarding the selection of investment projects to be proposed for EU funding and included in investment programs.

1.102 ***Defining the appropriate coordination system involves assigning roles and responsibilities, but also deciding whether to opt for more or less formalized system.*** The general trend across countries seems to be to position the system close to the centre of the government (see Box 1.6), and to establish regular structures as compared to ad hoc arrangements. The experience of the new member states suggests the critical importance of horizontal coordination at inter-ministerial level for managing EU-related activities. This is particularly true for the negotiations, as any unresolved differences are almost certain to come to the surface when commitments to irrevocable national positions have to be made. The lesson learnt is also that establishing a top political committee for European Integration helps in expediting the decision making process, and reduces the risk of overloading the Cabinet with issues that may be competently dealt by such committee. For instance, Lithuania established the Governmental European Integration Commission (GEIC). Its work was less restricted by the government coordination procedures, mandating that proposed new regulations presented to the Cabinet be coordinated with the interested institutions. Although it would appear that the GEIC would not be an effective coordinator due to its broad composition and the principle of ministerial autonomy, it used the above advantage and was able to accept important EU related documents, resolve the problems of coordination between ministries and make decisions which obligated the separate institutions to implement certain important assignments for integration into the EU.[34]

[34] *Lithuania's administrative and political adaptation to the European Union.* Vitalis Nakrosis.

Box 1.6. Summary of Structures for Managing EU Affairs in Selected Countries

	Ireland	Greece	Finland	Hungary	Slovenia	Estonia	Czech R.	Slovakia	Poland
PM Office Special EU Secretariat/Office	No	No	Yes	No	Yes	Yes	No	No	No
PM Office Special EU/International Unit	Yes	No	No	No	No	No	Yes	Yes	Yes (reporting to the PM)
EU Cabinet Sub-Committee	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
High Level Inter-ministerial Committee	Yes	No	Yes	Yes	Yes	Yes	Yes	yes	Yes

1.103 ***The start of the accession negotiations will call for strong efforts of line ministries in Turkey to organize internal coordination of the preparation of position papers, but also of all other EU related activities.*** Internal coordination and control of EU-related issues has proved to be a challenge in every accession country, largely because of barriers to exchange of information that followed from the vertical structures of ministries. Based on experience from other EU accession countries, an option could be to assign the role of coordinating the preparations of the position papers to the Strategy Development Boards, which are planned to be established in line ministries, under the draft Law on Public Administration. Their work may be assisted by the EU units, which need to be fully integrated in the daily routine of ministries, including policy development processes. Additionally, it would seem of advantage to establish a core group of senior officials, responsible for coordinating and monitoring all other accession related activities, and reporting on those to the head of administration.

1.104 ***Ensuring sectoral coordination at local level is equally important.*** The OECD SIGMA report from 2002 points towards weak co-ordination between ministries and agencies at local level. Apparently, there is a significant degree of overlapping between inspection and enforcement services, such as in the area of environment and physical planning. This is an area calling for urgent attention, not least because the issue of enforcement will be at the heart of the negotiations but also because the Government plans to grant greater policy implementation competences to sub-national levels of government. It would be advisable to develop the strategy for reducing the overlapping between inspection and enforcement services at local level and promoting their coordination.

1.105 ***Efforts should be deployed towards improving the procedural efficiency of policy processes*** — The technical aspects of how policy proposals and draft laws move through the government influence the overall procedural efficiency of the policy processes. Yet, the procedural framework in Turkey does not provide formal guidance regarding time within which certain stages of the policy-making process are to be

completed. Specifically, the Principles on Preparation of Laws, Decrees Having Force of Law, Regulation and Draft By-Laws do not formally specify timeframe for intra-agency consultation process. The current practice is for a proponent ministry to specify the deadline for receiving comments, and that could be subject to negotiations and there is no formal mechanism for ensuring that opinions are provided within the given time. That creates opportunities for procedural delays, and could be a significant bottleneck as the number of changes to be implemented increases.

1.106 ***—in particular at the level of line ministries and agencies.*** In Turkey, the speed of action of central government agencies is in part influenced by their large size. Large ministries and agencies are more complex and have stronger needs to ensure coordination and control, which may lead to procedural delays. It is advisable to explore options for reducing such delays in ministries and agencies. The first step would be to establish how the work gets done, focusing on processes for developing policy across ministry, and its implementation, monitoring and evaluation. That would help in sorting out components of 'reasonable' procedural delay versus 'excessive' or 'unreasonable' delays. The next step would be for the heads of central agencies and their respective teams to develop an action plan for eliminating or minimizing those 'excessive' or 'unreasonable' delays, with clearly specified tasks and responsibilities at the agency level and the timetable for completing necessary actions. Providing strong commitment of the government and the heads of administrations, it is possible to achieve improvements in a relatively short period of time.

1.107 ***Strong control of new regulations for consistency with EU acquis is important for successfully managing the accession process.*** Control of new regulations is needed for ensuring correct alignment with the acquis, which is one of the factors that will influence the pace of the negotiations. Further, poor quality of regulations does not help improve the business environment. Consistency control will be significantly enhanced if there is one single unit entrusted with coordination. In Turkey, however, such responsibility is actually fragmented.

1.108 ***Impact assessment mechanism is instrumental for improving the quality of policy-making, ultimately facilitating strategic policy coordination.*** As other accession countries, Turkey is also expected to start developing a mechanism for impact assessment (budgetary, economic, social and environmental impact, and efficiency and practicability in implementation)[35]. Such mechanism helps to improve the quality of policy-making by assessing the impact that a particular policy option may have on the budget or on other policy areas. For all these reasons, Turkey is strongly encouraged to introduce the impact assessment mechanisms, starting with the development of a standardized format or guideline for the preparation of budgetary impact assessment, and making that exercise a mandatory part of the quality control of new laws and regulations. In addition, there is an urgent need to organize and provide training in impact assessment to those that will be involved in preparing the position papers for the purposes of the accession negotiations. The preparation for negotiations includes assessing the implications of different policy options before determining national negotiating objectives, strategies and tactics (Box

[35] The SIGMA baselines include the mechanism for impact assessment of policy options.

1.7). This requires people skilled in impact assessment, such as in impact assessments technique, such as social impact assessment, budgetary impact assessment, and environmental impact assessment.

Box 1.7: Impact assessment of adjustment in the area of Health and Safety at Work on enterprises in Slovenia

The Republic of Slovenia must implement 33 EU directives together with amendments in the field of health and safety at work. At the bilateral screening of legislation's harmonization with the *acquis*, it had been established that requirements arising from EU directives relating to work with physical, chemical and biological agents will be difficult to meet, which is why research on the impacts of the approximation of directives in Slovenian legislation was carried out. The research sought to establish:
(a) consequences of implementing these directives for employees and jobs,
(b) the time period required for enterprises to be capable of adjusting to EU directives, and
(c) costs of harmonization.

The research was based on special questionnaires devised by the Office of the Republic of Slovenia for Safety and Health at Work. The questionnaires were divided in two areas: noise, chemical and biological agents, taking into account the basic requirements of EU directives in this field. Workshops organized by the Chamber of Commerce and Industry of Slovenia were intended to present the problem to organizations concerned. The entire project was carried out under the auspices of the Institute of Economic Research, which also prepared an overview of the situation in this area in the form of tables.
In order to ensure the participation of enterprises in the research, summaries of individual directives were prepared and discussions on the most important requirements were organized at workshops. During the period of making the research, professional advice was available to enterprises covering both technical requirements and economic aspects of introducing new requirements and changes, particularly in verifying economic cost assessments. The largest number of problems was found by the research in members of the Association of Employers in Slovenia's Small Businesses Sector (GIZ). These enterprises responded poorly owing to weak staff and other capacities, which is why technical and economic advisory work for these enterprises was most intensive.

Source: Office for European Integration. Republic of Slovenia.

CHAPTER 2. PUBLIC FINANCE MANAGEMENT ON THE WAY TO THE EU

2.1 ***Improving the quality of fiscal adjustment is a key challenge.*** The Turkish economy in the 1990s has been characterized by persistent fiscal imbalances and fiscal dominance, a pattern that has contributed to growth volatility, chronic inflation, and continuous macroeconomic instability. As high public sector borrowing requirements became unsustainable and structural problems mounted up, it became inevitable for Turkey to embark on an ambitious reform program aiming at macroeconomic stability and fundamental restructuring of the economy following the 2001 financial crisis. The analysis in this chapter focuses on the quality and sustainability of the strong fiscal adjustment, since maintaining hard-won macroeconomic stability is a pre-requisite for promoting faster growth on a sustained basis, as discussed in the previous chapter. At the same time, Turkey would need to achieve efficiency gains in public expenditures, by determining the low value programs that should be retrenched, in order to make appropriate room in the budget for growth-enhancing public expenditures and lower taxes. The first section reviews the patterns of fiscal adjustment since 1999 and benchmarks public expenditure allocations in international comparison. Section two examines horizontal issues in public expenditure reform—which are relevant for expenditure savings across all functional areas—focusing on personnel compensation and the investment program. The third section examines tax reform options, with particular emphasis on the personal and corporate income taxes. Section four provides an assessment of debt dynamics and sustainability in the face of surrounding risks. Finally, section five provides a summary of reform options for further strengthening the fiscal framework and creating fiscal space for growth-enhancing expenditures and lower taxes.

A. QUALITY OF FISCAL ADJUSTMENT AND THE SIZE OF GOVERNMENT IN TURKEY

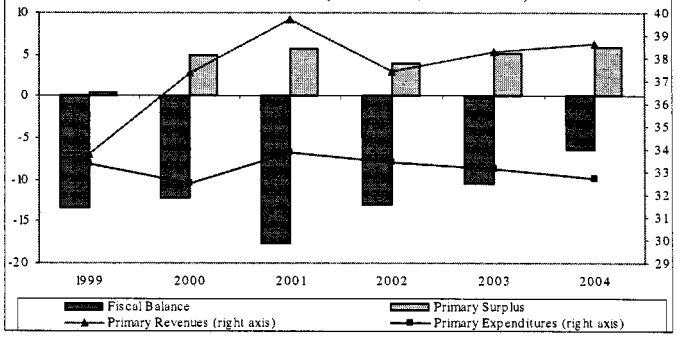
A.1. Patterns of Fiscal Consolidation in 1999-2004

2.2 ***Turkey has gone through an impressive fiscal adjustment during 1999-2004.*** In the aftermath of the 2000 and 2001 crises, Turkey had to generate a sizeable primary surplus to reduce its public debt stock. Turkey's fiscal position improved dramatically between 1999 and 2004, as reflected in the improvements in the primary balance of the Consolidated General Government (CGG), from a negligible primary surplus of 0.5

percent of GDP in 1999 to a surplus of 5.9 percent in 2004 (Figure 2.1).[36] (See Box 2.1 for the conversion from the SPO-based consolidated general government primary surplus to IMF program definition of public sector primary surplus). The CGG borrowing requirement decreased by 7.1 percentage points of GDP between 1999 and 2004, driven by the increase in the primary surplus and the gradual decline of interest payments on public debt. Turkey's public sector—comprising the consolidated general government plus the State Owned Enterprises (SOEs)—achieved even a bigger fiscal consolidation in 1999-2004, from a primary deficit of 1.6 percent of GDP in 1999 to a primary surplus of 6.9 percent in 2004.[37] Fiscal adjustment at the CGG level was mainly driven by a substantial tax effort achieved from 1999 to 2001 and maintained thereafter (Figure 2.1). Primary expenditures have been reduced more gradually, from 33.9 percent of GDP in 2001 to 32.7 percent in 2004. In 2004 primary expenditures in percent of GDP still remained marginally above their level in 2000.

2.3 ***Reflecting a sound fiscal framework, interest payments on public debt have declined significantly.*** Strong fiscal adjustment helped Turkey reduce its net public debt to GDP ratio to 63.5 percent in 2004 from 90.5 percent in 2001. Declining debt ratios and lower interest rates—thanks to receding inflation and stronger confidence in the ability of the Government to restore macroeconomic stability—have led to sharp declines in interest payments on public debt: Interest payments, which had peaked at 25.4 percent of GDP in 2001, up from 14.6 percent in 1999, declined to 13.5 percent of GDP in 2004. However, interest payments still represented the equivalent of 41 percent of total primary expenditures of CGG in 2004.

Figure 2.1: Fiscal balances and primary expenditures and revenues of the General Government (1999-2004; in % of GDP)



[36] While Annex 2.1 presents detailed data sources and methodology, it should be noted that the definition of general government used in this report includes the (i) consolidated budget, (ii) social security institutions (SSI), (iii) a subset of budgetary and extra budgetary funds (EBFs), (iv) local administrations, and (v) off-budget revolving funds created by public entities. The analysis does not include the revenues and expenditures of the Central Bank and other public depository institutions, 45 non-financial state economic enterprises (SOEs), nine regulatory and supervisory agencies, and 45 out of a total of 50 special budget institutions listed in the Public Financial Management and Control Law (PFMC). Special budget institutions refer to 50 public entities established as affiliated or related to a ministry to provide certain public services. These special budget institutions receive revenues and are authorized to spend them. The analysis includes the net subsidies and transfers between these institutions and the consolidated budget.

[37] The IMF's Stand-By Arrangement (SBA) program target of 6.5 percent of GNP primary surplus for 2005-2007, includes primary surplus of a subset of SOEs together with the general government. The primary surplus data for the SOEs provided in Table 2.1 are from IMF staff reports.

Box 2.1. Conversion between SPO definition of CGG primary surplus to IMF's program definition of public sector primary surplus:

The backbone of the Government's Stand–By Arrangements (SBA) with the IMF has been continued and strong fiscal discipline monitored through program definition of the public sector primary balance. A detailed definition of the program primary surplus methodology can be found in the Fiscal Targets annex of the April 2005 SBA with Turkey.

The objective of the IMF methodology is not to monitor the consolidated public sector revenues and expenditures according to Government Financial Statistics (GFS) definition and the underlying primary surplus, but rather to focus on the fiscal balance measured through the primary surplus. Moreover, the program definition also does not account the revenues and expenditures that are not of continues and regular nature.

In order to reach the program definition of the public sector primary surplus the following adjustments should be made to the SPO definition of the primary surplus.

Table: Public Sector Primary Surplus; conversion from the SPO to the IMF Program definition

(% of GDP)	1999	2000	2001	2002	2003	2004
Primary Surplus (SPO definition of General Governn	0.5	4.9	5.8	4.0	5.1	5.9
Adjustments on revenues						
(-) CB profit	0.1	0.2	0.3	1.1	0.0	
(-) Transfer of special revenues						0.1
(-) Dividend revenues from state banks						0.3
(+) Tax arrears interest				0.1		
(-) Revaluation difference			0.5	0.0	0.0	
(+) Support Price Stabilization Fund repayment	0.0	0.0	0.0	0.0		
(+) Interest revenues of the SSIs	0.0	0.0	0.1	0.0	0.0	0.0
Adjustments on Expenditures						
(-) Retirement bonus				0.1		
(+) Mandatory savings	0.7	0.5				
(-) Expenditures due to privatization activities	0.0	0.0	0.0	0.0	0.0	0.0
(+) Privatization Fund net lending	0.1	0.1	0.1	0.1	0.1	0.0
(+) Defense Fund net lending	(0.0)		(0.0)	0.1	0.0	(0.0)
(+) Mass Housing Fund net lending	(0.0)	0.0	(0.0)			
(+) Interest expenditures of SSIs	0.1	0.1	0.0			
(-) Risk Account					0.3	0.1
Program adjusted general government primary surplu	(0.4)	4.1	5.0	2.9	5.3	5.7
SOEs primary surplus (program definition)	(2.1)	(1.5)	0.1	1.1	0.7	1.1
Program adjusted public sector primary surplus	(2.5)	2.6	5.1	4.1	6.0	6.8

Note: Plus and minus signs reflects additions and substractrions from the related revenues and expenditures categori

2.4 ***At the same time, fiscal transparency and accountability have considerably improved.*** Turkey has aligned, to a great extent, its legislation of public procurement, financial management and financial control with international standards. A public procurement agency and an office for debt and risk management have been established; most of the extra budgetary funds have been integrated into the budget; the duty losses of state banks have been accounted in a more transparent manner while generation of new duty losses without an appropriation in the budget have been legally prohibited. More

importantly, a new Public Financial Management and Control Law (PFMC) has been enacted as of December 2003. The PFMC Law aims at establishing a public financial management and control system compatible with international standards and EU norms. It extends the scope of the budget; provides budgetary unity, increase effectiveness, fiscal transparency, and accountability during the process of preparation and implementations of budgets; ensures transparency in financial management; and restores the balance between authorizations and responsibilities in the spending process by establishing an efficient accountability mechanism. Therefore, a more transparent and close management of the fiscal stance is now achieved and quasi-fiscal activities are much harder to undertake.

2.5 ***Consolidated budget (CB) and extra budgetary funds (EBFs) contributed most to fiscal adjustment at the General Government level.*** The consolidated budget (Central Government budget, accounting for 61 percent of CGG expenditures in 2004) by itself created a fiscal adjustment of more than 5 percentage point of GDP (Table 2.1). With the primary surplus of 9.1 percent of GDP, the CB more than doubled its primary surplus compared to 1999. Controlling the extensive off-budget activities of the past by eliminating the earmarked revenue system through the closure of numerous Extra-budgetary Funds (EBFs) contributed to fiscal consolidation. Abolishment of all budgetary funds, with the exception of Support Price Stabilization Fund (DFIF), and all but five extra budgetary Funds (Social Solidarity Fund, Defense Fund, Promotion Fund, SDIF, Privatization Fund) improved the fiscal discipline and brought the deficit of the EBFs close to zero in 2004.[38]

Table 2.1: Institutional breakdown of Consolidated General Government Primary Balance

(% of GDP)	1999	2000	2001	2002	2003	2004
Consolidated Budget	3.8	6.2	6.2	6.6	8.8	9.1
SSIs	-3.0	-1.9	-2.6	-3.1	-3.8	-3.8
Local Administrations	0.3	0.5	0.7	0.1	-0.3	0.0
Revolving funds	0.0	0.1	0.1	0.2	0.3	0.4
EBFs	-0.6	-0.3	0.8	-0.2	-0.2	-0.2
UI	0.0	0.3	0.6	0.3	0.3	0.4
Total Primary Surplus	0.5	4.9	5.8	4.0	5.1	5.9
Memo Item:						
SOEs	-2.1	-1.5	0.1	1.1	0.7	1.1

Source: World Bank staff calculations based on SPO data

2.6 ***Fiscal adjustment has been impeded by a growing social security deficit, which reached 3.8 percent of GDP in 2004.***[39] The fiscal situation would have been much better if Turkey had managed to contain the social security deficit after the 1999 reform. The

[38] The number of EBFs has been reduced in 2000 and 2001, and the related earmarked revenue system was abolished in 2004.

[39] The deficit of the social security institutions does not include payments made on behalf of the consolidated budget since those expenditures are treated as part of the consolidated budget expenditures. Therefore the deficit of 3.8 percent of GDP is consistent with the more commonly used definition, (including payments made on behalf of the consolidated budget) which corresponds to 4.5 percent of GNP in 2004.

overall deficit of the SSIs increased from 1.9 percent of GDP in 2000 to 3.8 percent in 2004. The deficit may further grow to above 4.1 percent of GDP in 2005. Given the favorable demographic profile of Turkey, the currently high deficits pose a bigger challenge in the long run considering that the number of elderly will start to increase as the demographic shift starts to kick in. The projected deficit of the system is expected to reach 6.7 percent of GDP in the long term, under a no-reform scenario (see Box 2.2).

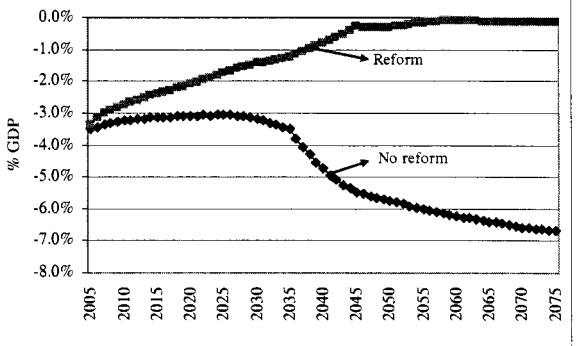
2.7 ***Social security reform currently under way will help contain the deficits over the long term, but more ambitious steps will be needed to ensure financial sustainability with lower payroll taxes.*** With the help of reform currently planned by the Government, the pension system deficit is expected to decline by 1 percent below the baseline projection of "no reform" by 2020. However, the beneficial impact of these measures is expected to be rather limited over the medium run, thus creating little fiscal space for growth-enhancing expenditures. Moreover, long-run financial sustainability will be secured under a high level of payroll taxes by international standards. Indeed, as further explained in chapter 4, high social security contributions, combined with other income taxes, create a high "tax wedge" on labor income in Turkey, which is an impediment to job creation in the formal labor market. More ambitious reforms would be needed to generate medium-term savings and also create room for a reduction in payroll taxes in the future (see Box 2.2).

Box 2.2. Turkish Pension System – The Need for a Reform

The social security system in Turkey started to incur deficits in early 90s. Gradually increasing, the required transfers from the budget became a major fiscal problem by the late 90s. Increased public transfers to the social security system have been crowding out investments in other sectors like education, health or infrastructure. The fiscal deficits have been mainly due to low retirement age, the weak link between benefits and contributions and the inefficiencies in the system that led to low coverage and compliance. Recognizing the deficits were unsustainable, the Government planned a two phase reform the first phase of which included the parametric redesign of the social security system to respond to the most urgent need of reducing fiscal deficits. The objectives of the second phase were improving the efficiency, coverage and compliance and introduction of voluntary private pensions.

1999 reform was partial and did not prove to be effective. As a result of the parametric changes introduced with the Social Security Reform Law legislated in 1999, the social security deficits accounting for 3.75% of GNP in 1999 decreased to 2.57% of GNP in 2000. However, from 2001, the fiscal balances of the social security system started to deteriorate, mainly due to the economic crisis in 2001 that led to revenue reduction and because of the fact that Emekli Sandigi (ES, social security system for civil servants) was excluded from the 1999 parametric reform. Also ad-hoc increases in benefits above the inflation in 2003 and 2004, several amnesties for contribution arrears and the inability to implement the planned administrative reforms highly contributed to the increase in deficits, which, by 2004, reached 4.5% of GNP and is projected to be at about the same level in 2005.

Figure 1. Fiscal Balance of the Pension System



The Turkish pension system is a large fiscal drain. Main reasons for this are: (i) high number of young pensioners due to the transition period until 2034 when the minimum retirement age of 58/60 will kick-in; (ii) higher period for collection of benefits than the contribution periods; (iii) high replacement rates

compared to ILO target; (iv) underreporting of earnings and (v) fragmented structure of social security institutions.

Continued commitment to overhaul of the social security system is key for achieving long-term sustainability. The new social security reform package initiated by the government envisages separating pensions, health and social assistance functions and unification of the social security institutions for increased efficiency and transparency. While the draft legislation on the pensions and health components are in the Parliament and are expected to be enacted in the first quarter of 2006, the complementary institutional law and the social assistance law are still under preparation. On the pension front[1], the reform introduces parametric changes including the retirement age, replacement rate, valorization rate and pension indexation. The reform also introduces a state contribution of 5 percent, which is expected to put on the government an additional burden of about 0.1 percent of GDP starting in 2040. A significant improvement included in the draft law is that Emekli Sandigi contributions will be based on the total remuneration (as opposed to the existing base of only salaries). In addition, Bag-Kur income steps will be removed and contributors will be allowed to declare their own earnings level. With the help of the reform, the pension deficit is expected to decline by 1 percent below the baseline projection of "no reform" by 2012 and reach a balanced position by 2045. (Figure 1)

Generating significant medium-term savings and reducing payroll taxes would require additional steps. On current reform plans, medium-term savings will be rather limited, while payroll taxes will remain high, hampering activity in the formal sector and depriving the pension system from significant revenues. Further reducing the generosity of the PAYGO pension system will be required to generate needed savings in the medium term. Options may include, for example: raising the retirement age immediately; paying no pensions for those under the age of 58/60; phasing out indexation of current pensions to inflation. Additional options may involve broadening the tax base to generate needed fiscal space for lower social security contributions by taxing pension benefits above a threshold, or removing the deductibility of pension contributions from taxable income. It should be noted that some measures, such as increasing the retirement age immediately, would face legal obstacles, and could be implemented only gradually for current employees.

[1] For a discussion of the health sector issues and reform, see chapter 9.

2.8 ***The primary balance of State-Owned Enterprises has significantly improved since 1999.*** The SOEs covered under the IMF program have been generating a deficit of 2.1 percent of GDP in 1999 but their fiscal situation improved substantially, generating a surplus of 1.1 percent of GDP in 2004 (Table 2.1).[40] This improvement was mainly generated by a close to 2 percentage points of GDP reduction in their investment expenditures, and 1 percentage point cut in their personnel compensation (see sections B.1 and B.2 below). The personnel retrenchment of the SOEs has been supported by the PFPSAL program of the World Bank.

2.9 ***With the privatization of profitable SOEs, like Turk Telekom and Tupras, the contribution of the SOEs to the public sector primary surplus will decrease, but foregone revenues may be offset from other sources.*** These SOEs were also helping the fiscal position of the consolidated budget through their net transfer to the budget. In 2004, the net transfer from the SOEs to the budget was YTL 1.4 billion or 0.3 percent of GDP. [41] Revenue losses for the consolidated budget will be mitigated by corporate tax receipts from privatized SOEs. International experience suggests that additional tax receipts may

[40] The number of SOEs covered in the program was eight in 1999, and this number increased to 26 in 2004.
[41] Turk Telekom's contribution to the budget has been secured for the year 2005 even if the privatization of 55% is completed in this year.

offset foregone fiscal revenues from profitable SOEs as a result of growing business activity in liberalized sectors. In addition, with privatization revenues used to pay down public debt, there will be room for expenditure savings as a result of lower interest payments on the public debt stock.

2.10 ***Fiscal adjustment at the general government level was mainly revenue-driven in 1999-2001.*** As shown in Figure 2.1 and Tables 2.1 and 2.2, the effort of fiscal consolidation until 2001 reflects predominantly an increase in general government revenues, excluding SSI, and an improvement in the primary balance of the SOEs—the latter up until 2002.[42] During 1999-2001 primary revenues increased by 5.2 percentage points of GDP, driven by an increase in indirect taxes of 3.2 percentage points of GDP (Table 2.2). By contrast, primary expenditure of the general government remained almost constant in percent of GDP.

2.11 ***In 2001-04 fiscal consolidation was also supported by reductions in primary general government expenditures.*** In 2001-2004 the pattern of fiscal adjustment has somewhat changed with respect to 1999-2001. Total primary expenditures were reduced by an estimated 1.2 percentage points of GDP. This was mainly driven by reduced investment spending (1.3 percentage points of GDP), which was needed to offset the increasing deficit of the SSIs (Table 2.1). By contrast, compensation of personnel, which accounts for 31 percent of primary CGG expenditures, has been constant as a share of GDP since 2001, and has even edged upwards when measured over 2002-2004 (Table 2.2). The reasons for the apparent rigidity in the wage bill are further examined in section B.1 below. General government tax revenues decreased by 2.1 percentage points of GDP over 2001-2004. However, measured from 2002 onwards, the tax burden continued to increase by 1.4 percentage points of GDP, owing to further increases in indirect taxes, estimated at 1.7 percentage points of GDP.

Table 2.2: Fiscal Consolidation in Turkey, 1999-2004 and sub-periods[1]

(differences between two periods as % of GDP)	1999-2004	1999-2001	2001-2004	Memo: 2002-2004
Taxes 2/	1.8	3.9	-2.1	1.4
Direct	-2.4	0.7	-3.2	-0.5
Indirect	4.0	3.2	0.9	1.7
Wealth	0.2	0.0	0.2	0.2
Non-Tax Revenues	0.2	-0.2	0.3	-0.4
Factor Incomes	2.1	1.5	0.6	-0.5
Interest revenues	0.9	0.3	0.6	0.2
Social Funds	1.6	1.0	0.6	0.9
Total Revenues	5.7	6.2	-0.5	1.4
Primary Revenues	4.8	5.9	-1.1	1.2

[42] Although tax revenues in percent of GDP have peaked in 2001, for the whole 1999-2004 period, this partly reflects the sharp drop in GDP in this crisis year. For this same reason, expenditure items appear also artificially inflated in 2001 when measured in percent of GDP. To account for this distortion, a different breakdown, using 2002 as reference year, is also shown in Table 2.2.

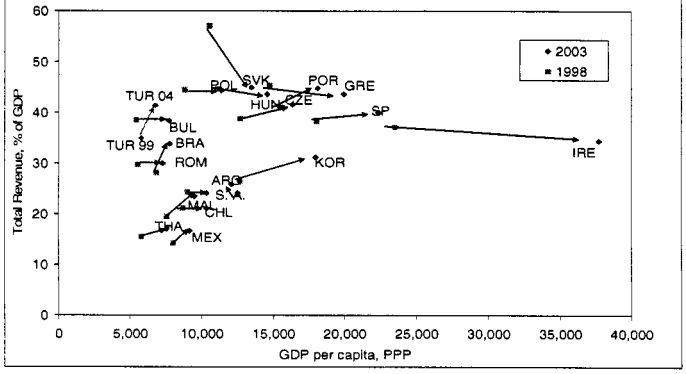
Current Expenditures	-0.1	-0.2	0.1	0.0
of which personnel	-0.5	-0.5	-0.1	0.3
Investment Expenditures	-1.0	0.3	-1.3	-1.2
Transfer Expenditures	-0.6	11.3	-11.9	-4.2
Current Transfers	0.0	11.4	-11.4	-3.9
of which interest payments	-1.1	10.8	-12.0	-4.7
Capital Transfers	-0.6	-0.1	-0.5	-0.3
Net Lending				
Total Expenditures	-0.6	0.5	-1.2	-0.7
Primary Expenditures	**-0.6**	**0.5**	**-1.2**	**-0.7**
Borrowing Requirement	-7.1	4.3	-11.4	-6.6
Primary Surplus	**5.4**	**5.3**	**0.1**	**1.9**

[1] Changes, over the periods indicated, in percent of GDP
Source: SPO and Staff estimate

2.12 ***Overall, fiscal consolidation came primarily from the revenue side, with heavy reliance on indirect taxes, although initiatives have been taken to improve the quality and limit the growth of spending.*** Despite the partial shift in the adjustment pattern since 2002, Turkey's focus for achieving fiscal consolidation has been on revenue-increasing measures rather than expenditure rationalization. From 1999 to 2004, *90 percent* of the 5.4 percentage points of GDP increase in the CGG primary surplus came from revenue-increasing measures—especially from higher indirect taxes. Indirect tax revenues increased from 11.7 percent of GDP in 1999 to 15.7 percent of GDP in 2004. In contrast to primary revenues, non-interest expenditures reflect no major changes during the period, with expenditures for personnel, goods and services and current transfers largely unaffected by fiscal consolidation. Primary expenditures hovered at around 33 percent of GDP, reflecting no major expenditure rationalization. It should be noted, however, that initiatives have been taken to prevent wasting in expenditures, improve spending quality, and set expenditure priorities—for example, annual budget ceilings are set to recruitments in the public sector (with priority to education, health care, and justice), while non-priority investment projects have been excluded from the investment program. Although more steps are needed, as further explained below, these measures have supported a better control of expenditure growth than in the past.

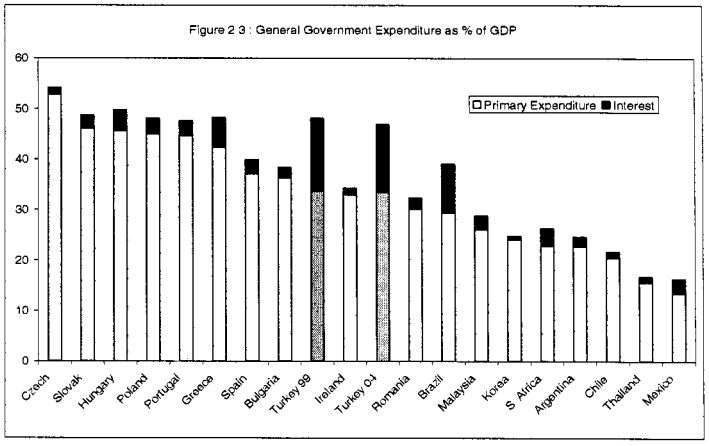
2.13 ***Fiscal revenues have increased to levels comparable to EU countries and much higher than in emerging market economies.*** In most EU cohesion countries and new EU members the tax burden has remained constant, or has even decreased in percentage of GDP, as a result of initiatives to contain the increase in the size of Government (Figure 2.2). But contrary to this trend, and as a result of the pattern of fiscal adjustment since 1999, fiscal revenues in Turkey stood at 40 percent of GDP in 2004, a level that is now similar to EU countries. The increase in the fiscal burden in 1999-2004 was the largest among the comparator countries—similar only to Brazil. With a fiscal burden higher than in other emerging economies, further increases in tax rates would risk hindering competitiveness, bolstering informality, and eventually compromising growth. There is, however, considerable room for broadening the tax bases, as further explained in section 2.3 below. Initiatives in the years ahead should focus on two goals: (i) In the short term, promoting tax rationalization, with the aim of reducing the distortions associated with a given level of the tax burden and broadening the tax bases; (ii) Over the medium term, making fiscal room for lower taxes, by taking advantage of the reduction in the debt ratio and pursuing public expenditure reforms aimed at containing expenditure pressures.

Figure 2.2: General Government Revenue in % of GDP vs per capita GDP in PPP



A.2. Expenditure allocations in international comparison

2.14 ***Turkey's primary expenditures are still at the low end of EU countries but much higher than in other emerging economies.*** Turkey's public expenditure allocations have been benchmarked against a set of countries comprising cohesion EU countries, new EU members, and emerging market economies. Reflecting still high interest payments on public debt, total expenditures of the Consolidated General Government (CGG) are among the highest of the comparison group (Figure 2.3). However, at 32.7 percent of GDP in 2004, primary expenditure is much lower, and compares favorably with the average size of government seen in cohesion countries of the EU and new EU members—although Turkey's primary expenditure in percent of GDP is at par with Ireland's and higher than Romania's. The size of government is nevertheless much higher than in other comparable emerging economies in East Asia, Latin America, and Southern Africa. Primary expenditure in the comparison group of emerging economies (excluding Mexico where available data do not capture properly spending by subnational governments) represented 23 percent of GDP in 2003, about ten percentage points of GDP lower than in Turkey. As primary expenditure was only marginally reduced in percent of GDP between 1999 and 2004, Turkey's relative position remained pretty much stable within the benchmark group.

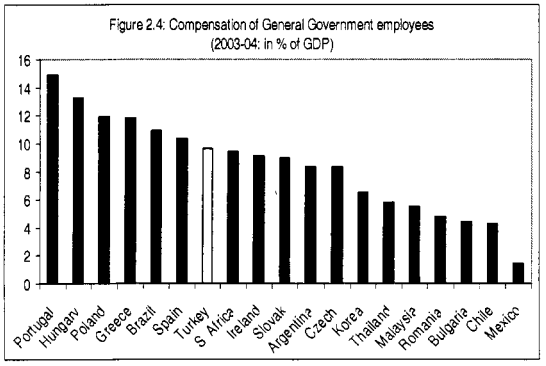


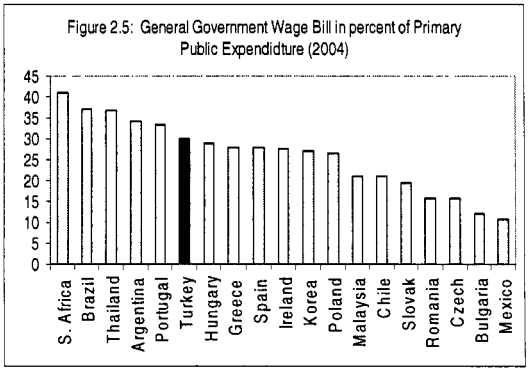
(a) Public expenditure by economic category[43]

2.15 ***The Government wage bill is high compared to other emerging economies and some new EU members.*** At 10 per cent of GDP in 2004, Turkey's expenditure on wages and salaries at the level of the General Government is relatively high. It is still lower than in Southern EU countries (Greece, Portugal, Spain) or in some new EU members with a tradition of bloated public service (Poland, Hungary—see Figure 2.4). However, personnel compensation is significantly higher than in other fast-growing emerging economies (Chile, Korea, Malaysia, Thailand) or in some new and acceding EU countries

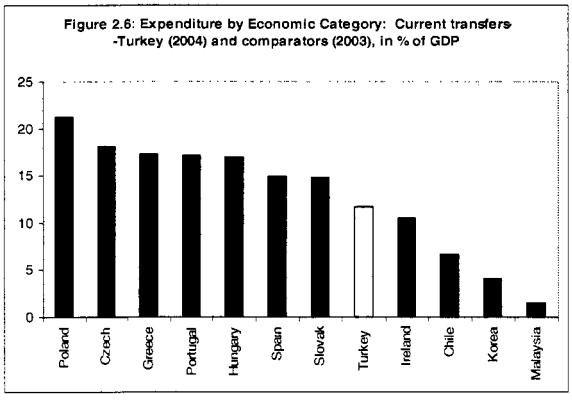
[43] This section briefly examines, in international comparison, Turkey's expenditures for personnel compensation, current transfers, and public investment at the CGG level. These three categories comprised the bulk (75.4 percent) of primary CGG expenditures in 2004, or the equivalent of 24.6 percent of GDP. Remaining primary expenditures (the equivalent of 8 percent of GDP) are allocated for purchases of goods and services (7.3 percent of GDP) and capital transfers. The bulk of purchases of goods and services are allocated to health (3.8 percent of GDP) and Defense, Public order and safety (1.8 percent of GDP combined). A detailed cross-classification (i.e., economic and functional) of CGG expenditures is provided in Annex 2.1.

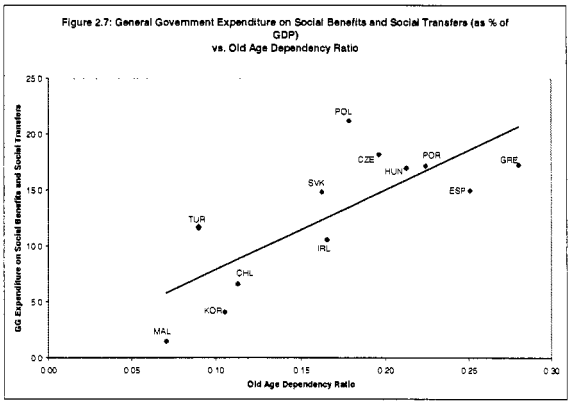
that have streamlined the public sector (Czech Republic, Bulgaria, Romania). At 30 percent of total General Government primary expenditure in 2004, up from 28.6 percent in 2000, the wage bill represents a large fraction of public spending by international comparison (Figure 2.5). This imparts rigidity in the budget at a time when more fiscal space is needed.





2.16 ***Expenditures for current transfers, mainly comprising social benefits, are oversized by international standards, in view of Turkey's favorable demographics.*** At 11.7 percent of GDP in 2004, expenditure on current transfers is lower than in most EU comparator countries (15 percent and up, with the exception of Ireland), but higher than emerging market economies such as Chile, Korea and Malasia (Figure 2.6). Current transfers in their majority (8.5 percent of GDP) are for social protection, so that spending in this category is better analyzed in the context of the age distribution of population. Given that Turkey has a very young population and the lowest old age dependency ratio among a selected group of comparators, its social protection expenditures are oversized by international comparison (Figure 2.7). In addition, the proportion of Turkey's population aged 65 and over to the labor force will increase by 10 percentage points between 2000 and 2020, according to OECD projections.[44] Therefore, despite the current favorable demographic situation, in the future, Turkey is likely to face an upward pressure on social spending in order to expand the social safety net.

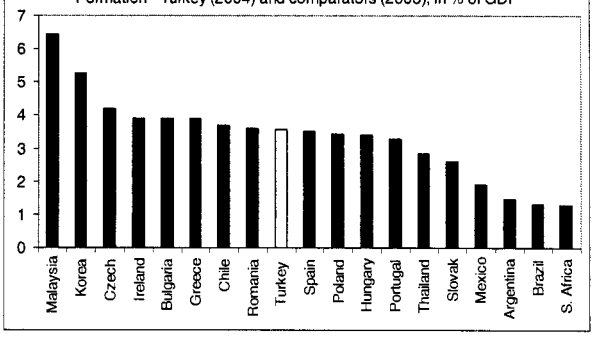




[44] OECD Factbook 2005 – ISBN 92-64-01869-7 – © OECD 2005. See Section "Population and migration - demographic trends - ageing societies".

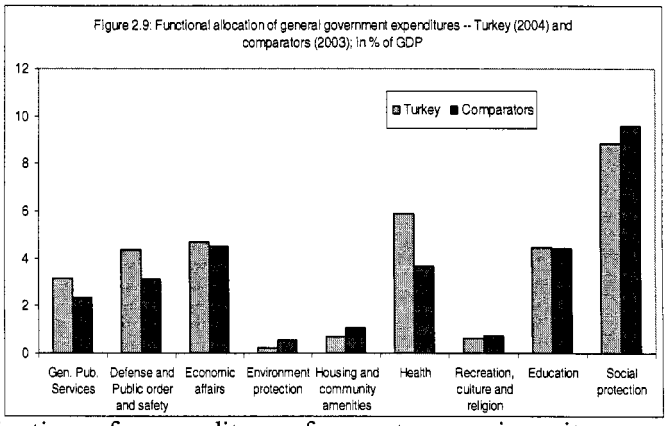
2.17 ***Turkey's domestic investment level is close to the average of comparator countries.*** Despite significant downsizing since 2001, public investment remains comparable to levels seen in other EU members, and higher than in other emerging economies (with the exception of Malaysia and Korea—see Figure 2.8). Although infrastructure gaps in Turkey may be larger than in cohesion countries or in some new EU members, careful consideration should be given to increasing the size of the PIP based on sound cost/benefit assessment of investment projects. The large portfolio of frozen projects suggests that the PIP has been oversized in the past, including projects of questionable priority. Issues in the management of the public investment program are reviewed in section B.2.

Figure 2.8: Consolidated General Government Gross Fixed Capital Formation-- Turkey (2004) and comparators (2003), in % of GDP



(b) Public expenditure by Government function

2.18 ***Implementation of functional classification of expenditures is very recent in Turkey.*** Turkey initiated the GFS 2001 consistent functional classification for the consolidated budget institutions in 2004, and central government budget and SSIs are planned to be prepared according to the functional classification in 2006 and local government budgets in 2007. There have been some partial efforts to estimate the functional classification of social sector expenditures.[45] The cross functional and economic classification for 2003 and 2004 used in this study is a first attempt to estimate the general government functional expenditures, and draws on ongoing work by the World Bank for a Public Expenditure Review. Completing a functional classification of expenditures for past years is quite important to analyze the sectoral impact of the fiscal adjustment. Turkey's functional distribution of consolidated general government expenditure has been benchmarked against a set of comparators for which a similar functional classification is available.[46] Main findings are summarized below (also see Figure 2.9):



2.19 ***Expenditure for the provision of public goods (general public services, defense, public order and safety) is relatively high in international comparison.*** Spending levels in general public services and in defense and public order and safety are oversized by 0.8 and 1.2 percentage points of GDP respectively with respect to comparators.

2.20 ***Expenditure on economic affairs (comprising mainly investment in infrastructure and various subsidies) is broadly in line with average levels in comparator countries.*** As already mentioned, this mainly reflects drastic downsizing of the investment budget and continuing reform of subsidies to agriculture since 1999.

2.21 ***Expenditure on health care is relatively high in international comparison.*** At 5.9 percent of GDP in 2004 (including Hospital Revolving Funds), CGG expenditure on health care is 2.2 percentage points of GDP higher than in the average of comparator countries. Public expenditure on health care depends of course on many factors, such as the structure of the health care system, demographics, and per capita GDP. Further

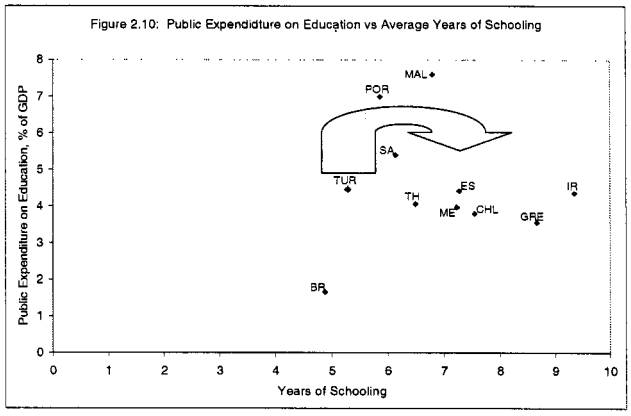
[45] General Government social expenditures first initiated under the PEIR 2001 study of the World Bank. The coverage has been expanded under the PFPSAL program.

[46] Comparators include: Russia, Portugal, Greece, Czech Republic, Spain, Ireland, S. Africa, Romania, Malasia, Mexico, Thailand, Brazil, and Chile. Turkey's size of government, as measured by primary expenditure in percent of GDP (32.6 percent in 2004), was broadly comparable to the average of these countries (30 percent of GDP in 2003).

analysis is provided in chapter 9. Turkey's favorable demographics should work towards containing health care spending for the elder relative to comparators. The high level of health care spending may conceal inefficiencies and provide room for expenditure savings. A cross-country examination of per capita health care spending (both by the public sector and including out-of-pocket, private expenditures) in relation to per capita GDP also corroborates this point (see Chapter 9).

2.22 ***Expenditure on education is in line with comparators but educational attainment remains weak.*** Turkey spends more on education than other emerging economies with similar educational attainment, such as for example Brazil. Public expenditure on education in percent of GDP is similar to other EU countries and comparable to emerging economies, but educational attainment in Turkey is still lagging behind with respect to these comparators (Figure 2.10).[47]

2.23 ***Increases in education expenditures should go in tandem with improved efficiency of spending.*** As in other countries experiencing educational gaps (Portugal, South Africa, Malaysia), public expenditure on education would need to increase in the future to promote the closing of these gaps (also see Box 2.3). This would be a pre-requisite for faster long-term growth (chapter 1). However, in view of current levels of public spending, existing educational gaps also suggest some potential for efficiency improvements. Reforming the curricula at all levels; better targeting of public schooling efforts to groups really in need; better management of teacher's wage bill; could be examples of areas where efficiency gains could generate resources for new investments.



Box 2.3 Education Reform on the way to the EU – Fiscal Impact

Improving the quality of education and promoting access and equity are key challenges for convergence. One of Turkey's biggest challenges in preparing for EU membership and European integration is to ensure that it provides high-quality education for all of its young citizens in order to close the gap between the country's level of educational attainment in comparison with EU standards. Improving the quality of the human capital stock is crucial in promoting faster per capita income convergence through increased productivity and competitiveness. Although Turkey made significant progress with a program of education reforms beginning in 1997 that expanded the length of compulsory schooling from five to eight years and boosted enrolment in and completion of basic education, recent international assessments of learning achievement show that the majority of Turkey's primary and secondary school students perform considerably below the performance of their European counterparts, and Turkey graduates significantly fewer students from secondary schools and higher education when compared to European countries.

Although education is not under-funded as a percentage of GDP, efficiency and effectiveness is low. Turkey will need to build on the success of its 1997 education reform by better concentrating the sector's

[47] Public expenditure on education should be assessed in a broader framework, also comprising private expenditure, as they complement each other. See box 2.3 and Education Sector Study – ESS 2005.

significant financial, human, and material resources on ensuring the enrollment, attendance and completion of basic education for all students, upgrading the quality of learning, increasing secondary school enrollment and completion rates, and improving students' transition from schooling to employment. The ratio of total spending on education (including private as well as public spending) to GDP was 7 percent as of 2002 (the latest year for which data are available). This level of spending, which well exceeds the OECD average of 5.2 percent, is only surpassed by education spending in the United States and Denmark. Nonetheless, as reported in a recent World Bank study (Education Sector Study – ESS 2005[48]), these resources are not providing the kind of results that Turkey needs for effective convergence with European standards. The majority of Turkish students perform at or below the bottom rung of OECD's six-point learning proficiency scale as measured by its Program for International Student Assessment. The inability of Turkey's schools to provide knowledge and competencies to all students appears to derive in part from the structure of the system, which is driven by selection exams, not results-based accountability.

Increased expenditure pressures in the near future seem to be due to three factors: (i) postponement of the expenditures, including public investments in education and maintenance of the existing capital stock, during the recent years of fiscal adjustment; (ii) the rapid growth of the school-age population; (iii) the need to improve educational results in order to narrow the human capital gap in comparison with the EU. ESS research finds that among the recommended policy options for education reform, expanding access to early childhood education and using information and communication technology to integrate new curriculum into classroom practice have high estimated cost impacts, particularly due to additional investment requirements. In addition, estimates suggest for example, that solely the construction of new classrooms that will be required to reduce the number of students per class to 30 in primary education in 2006 is at 0.2 percent of GNP.

Public resources may need to be boosted. The development of a coherent national education strategy, guided by the broader national strategy of educational development stated in the eighth five-year development plan, will be crucial in promoting effective resource allocation. The policies required to achieve the strategic objectives in the emerging strategy are expected to have fiscal consequences. In order to expand access to education, promote equity in access to education, improve the quality of education (with the ultimate goal of increasing the employability of young graduates), Turkey needs to devote sufficient public resources to education while at the same time improve the distribution and efficiency of available resources.

The government could also make more efficient use of the massive funding provided by private sources. Private funding could contribute enormously to Turkey's ability to provide educational services to all citizens as it reduces the burden on the public budget, allowing the government to redeploy scarce public resources towards children from less well-off families. In Turkey, most private funding goes to universities (35 percent of total private expenditures), wealthier families subsidizing the education of their children who are enrolled in public primary (32 percent) and public secondary (15 percent) schools, and private tutoring to prepare for secondary and higher education entrance and selection examinations (11.4 percent). Government should consider ways of leveraging these private resources to help improve public education for those who cannot afford to pay out-of-pocket.

2.24 ***Expenditure on social protection is high by international comparison in view of Turkey's favorable demographics.*** As noted earlier, although Turkey's expenditure in percent of GDP is on par with the average of comparator countries, favorable demographics suggest considerable room for savings through more ambitious pension reform.

2.25 ***Expenditure on environmental protection is comparatively low and may need to increase on the way to the EU.*** Alignment with the EU Acquis on environmental protection will place a burden on public expenditure for control of air pollution, quality of water supply, wastewater and waste management. Although considerable uncertainty

[48] Forthcoming, following final review by the Government for dissemination.

surrounds the cost estimates of necessary investments, it should be noted that costs of meeting the Acquis requirements will also depend on policy choices and reforms in infrastructure services, while there is considerable room for participation of the private sector (see A. Markandya, 2005).

2.26 ***Downsizing low-value expenditure programs, to make room for growth-enhancing expenditures and lower taxes, would deserve particular attention in the years ahead.*** Turkey has accomplished a remarkable effort of fiscal consolidation since 1999 but ensuring a high-quality fiscal adjustment will be a key challenge on the way to the EU. This is important for a number of reasons: (i) international experience suggests that the quality of fiscal adjustment is a key factor for sustainability and is closely associated with stronger growth performance (Box 2.4); (ii) expenditure pressures are likely to be felt over the medium term, either as a result of past policy commitments—such as in education and access to universal health insurance, or owing to a still pending reform agenda (such as in the pension system or in civil service pay); (iii) infrastructure investment may need to increase in less developed regions, given the persistence of regional disparities reviewed in the previous chapter, while maintenance needs to be up scaled (see below); (iv) Government will have to make room in later stages of EU accession for expenditures in areas, such as environmental protection, where harmonization with the EU Acquis is costly—even though the cost will be, to some extent, offset by EU pre-accession funds; (v) civil service pay for highly qualified personnel may also need to increase to support the EU accession process.

Box 2.4: The quality of fiscal adjustment and economic performance[49]

There is evidence, especially from OECD countries, that fiscal consolidations that have relied primarily on tax increases and cuts in public investment have not been sustainable because higher tax revenues sooner or later boosted expenditures, while maintenance and expenditures on backbone infrastructure could not be postponed forever. By contrast, fiscal consolidations underpinned by structural public expenditures cuts—by downsizing public employment and the wage bill and cutting back transfers—have had more lasting effects because they tackled the main types of expenditures that show a strong upward drift. Countries that implemented sustained fiscal adjustments enjoyed fast growth over the medium term because measures perceived as lasting have led to strong reductions in real interest rates that stimulated investment. Moreover, such measures may have been perceived as implying a reduction in the future tax burden, thus generating positive wealth effects, while also reducing precautionary savings by resolving uncertainties about the future course of fiscal policy.

2.27 ***Trade offs in expenditure allocations would need to be considered to meet Turkey's development challenges.*** As public expenditures are already high compared to other emerging economies and some new EU members there is little room for Turkey to further increase expenditure in order to meet pressing development challenges. Expenditure should also be contained in order to make room for lower taxes in the long run while preserving a sound fiscal framework. Policy would thus need to focus on trade-

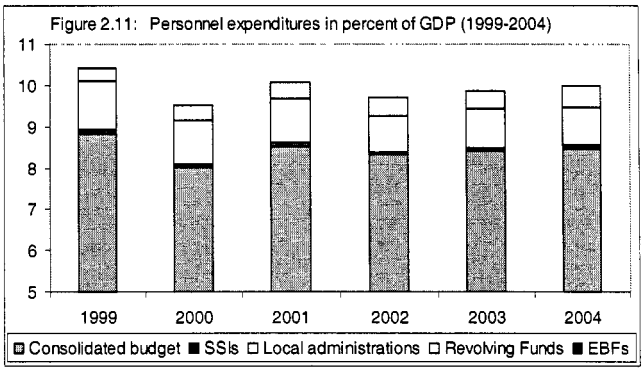
[49] Sources: A. Alesina and R. Peroti, "Fiscal Adjustments in OECD Countries: Composition and Macroeconomic Effects", IMF Staff Papers, 1997; A. Alesina and S. Ardagna, "Tales of Fiscal Adjustment", Economic Policy, 1998; R. Peroti, "Fiscal Consolidation in Europe: Composition Matters", American Economic Review, 1996.

offs in expenditure allocations, possibly by reducing spending in functional areas where it appears to be oversized in international comparison (such as general public services and defense, public order and safety). At the same time, reforms should be implemented with the aim of improving the efficiency of expenditure programs in areas where expenditure pressures are being felt—such as health care, education, social protection (see chapter 9 for options in cost containment in health care). *Horizontal* reforms, focused on the modernization of civil service pay and employment system and the rationalization of the investment program, would also help contain pressures on the wage bill and investment spending and thus better control public expenditure across functional areas. These are briefly reviewed below.

B. HORIZONTAL ISSUES IN PUBLIC EXPENDITURE REFORM

B.1. Public sector pay and employment

2.28 ***The Government wage bill has been bypassed by fiscal consolidation.*** Since 1999 total compensation for General Government employees has hovered at around 10 percent of GDP, growing from 9.5 percent to 10 percent between 2000 and 2004 (Figure 2.11).[50] The lion's share of personnel expenditures, about 80 percent, is incurred by consolidated budget agencies. Local administrations and revolving funds account for 9 and 7 percent of total personnel expenditure. These shares have remained stable over time.



2.29 ***Personnel expenditures are concentrated on education, security, and health care.*** These three functional categories absorbed more than two-thirds of the wage bill in 2004 (Table 2.3).[51] The fourth major category of personnel expenditure is in economic affairs, accounting for the provision of infrastructure services, rural development, and services to agriculture. The share of this functional category in total personnel expenditure is equal to that of Public order and safety and higher than Defense. Provision of general public services is the fifth largest category of personnel spending for the General Government as a whole. It is relatively oversized at the level of local administrations, representing the largest component of their wage bill.

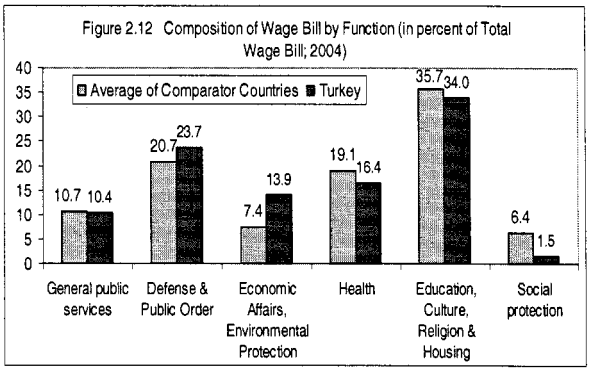
[50] Steep increases in the wage bill in 1999 and 2001 reflect the sharp drop in GDP in these two crisis years.
[51] Personnel expenditure in education and security is incurred by the consolidated budget, but more than half of the wage bill for health care is borne by Revolving Funds and Social Security Institutions.

Table 2.3 : Personnel expenditures by government function and level of General Government (2004; in percent).

	Consolidated budget	Social Security Institutions	Local administrations	Revolving Funds	**Total**
General Public Services	7.9	0.1	2.4	0.1	**10.4**
Defense	10.1			...	**10.2**
Public Order and Safety	12.7		0.8	...	**13.5**
Economic Affairs	10.5	...	1.6	1.1	**13.2**
Environmental Protection	0.1		0.5	...	**0.7**
Housing and Community Amenities	...		1.7	...	**1.8**
Health	7.7	3.0	0.6	5.3	**16.4**
Recreation, Culture and Religion	2.5	...	0.6	...	**3.1**
Education	27.6		1.0	0.5	**29.1**
Social Protection	0.3	0.9	0.3	...	**1.5**
Total	**79.6**	**3.9**	**9.4**	**7.0**	**100.0**

Source: World Bank staff

2.30 ***The wage bill in economic affairs and security is oversized by international comparison.*** The functional breakdown of General Government personnel compensation in Turkey was compared to the average of seven other new EU members, cohesion countries, and emerging economies for which similar information is available: Czech Republic, Greece, Ireland, Mexico, Portugal, Spain, and South Africa. The share of personnel compensation in security spending (Defense and Public Order and safety combined) is somewhat above the average of comparators (Figure 2.12). In particular, the share of personnel expenditures on economic affairs is twice as high. An example of oversized wage bill with possible room for savings is that of the rural agencies budget (Box 2.5).



Box 2.5. The wage bill in rural agencies budget

The rural consolidated non-transfer budget is dominated by recurrent expenditures leaving limited funds for investment. Budget allocations for recurrent expenditures (excluding agricultural transfers) in 1999-2004 have been on average close to 70 percent of the rural consolidated budget. As much as 90 percent of recurrent spending of rural agencies is allocated for salaries alone. Therefore, there is limited funding (only 2-3 percent of recurrent budget) for logistical and operational spending, which is extremely vital for effective service delivery. There is room for fiscal savings in rationalizing the personnel in rural agencies. Most pressing issues are: (i) State Hydraulic Works(DSI) turned approximately 90 percent of the management of irrigation schemes to Waters Users Associations, but cut only 10 percent of its work force and still continues to allocate 25-30 percent of its budget for personnel; (ii) Ministry of Agriculture and Rural Affairs (MARA) budget is soaked up by personnel expenditures (70-75 percent of total budget) which could be tackled by for example, contracting out mainly extension activities while reducing such personnel, and (iii) GDRS budget was also largely taken up by wages (75 percent of total), and after its closure in March 2005, the overstaffing problem has been passed on to Ministry of Agriculture and Rural Affairs and the Special Provincial Administrations.

2.31 ***Public sector employment has been significantly downsized, mostly in State Economic Enterprises.*** Total public sector employment (excluding Revolving Funds) was 2,460,740 in 2004—about 10 percent of the economically active population. Three quarters of public sector employees are in consolidated budget agencies. Civil servants comprise the bulk of public employment, while public workers—concentrated in SEEs and State banks—represent about 22 percent, and contracted personnel only 5 percent of total (Table 2.4).[52] Overall, there has been a decreasing tendency in employment of all categories of public sector employees. Sector-wise, employment in consolidated budget agencies increased until 2000, and then shrank by 4.5 percent up until 2004 (Figure 2.13). The most significant employment downsizing has occurred in state economic enterprises, of around 30 percent from 1997 to 2004. Employment in municipalities has remained pretty much stable. However, a significant change in the composition of municipal employment has occurred, with the share of temporary workers increasing to 45 percent of total in 2004, from 25 percent in 1995.

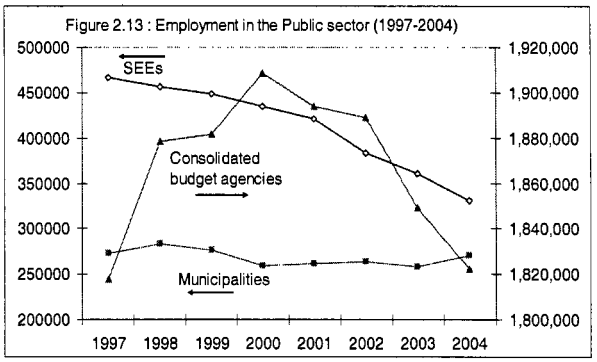


Table 2.4: Total employment in Turkey's public sector [(1)], September 2004

	Civil servants	Contracted Personnel	Workers	Total	% of Total Public Sector
Consolidated budget	1,620,341	17,182	184,621	1,822,144	74.0
Municipalities	92,487	2,178	106,700	201,365	8.2
Special provincial administrations	3,924	87	762	4,773	0.2
Social Security institutions	74,391	349	3,728	78,468	3.2
State economic enterprises,	7,880	106,670	209,614	324,264	13.2
State banks	58	29	29,639	29,726	1.2
Total	1,799,081	126,495	534,892	2,460,740	
Percent of total	73.1	5.1	21.7		100

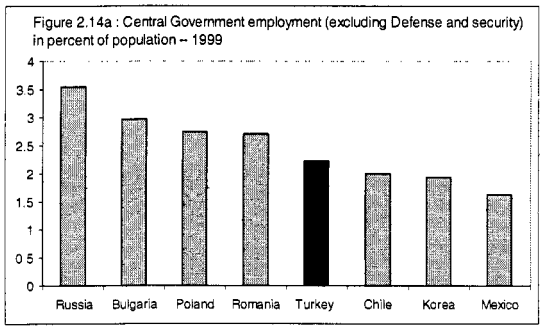
(1): Excluding Revolving Funds and Extra budgetary Funds
Source: Ministry of Finance

2.32 ***Civilian public sector employment is not exceptionally high by international standards.*** Using only central government employment data (consolidated budget agencies for Turkey), and excluding the functions of defense and public order and safety, public sector employment in Turkey amounted to 2.2 percent of population in 1999. This

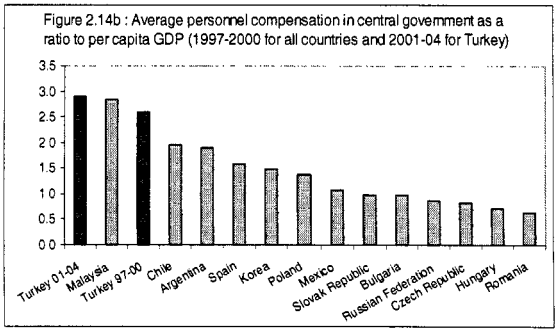
[52] *Civil servants* are defined as those public employees carrying out public services of a primary and continuous nature. They enjoy constitutional protections which effectively provide a lifetime job guarantee. *Contracted personnel* in theory are employed to fill temporary needs (typically unfilled civil service positions), and are hired on one-year, renewable contracts. In practice, Turkey's courts have ruled that they enjoy all benefits and protections of civil servants. *Public workers* have a contract but do not occupy a civil service position. They do not enjoy the same job protections as the other categories but, unlike civil servants, they are both allowed collective bargaining and have a right to strike.

is somewhat above the scale of public employment in other emerging economies such as Chile, Korea, and Mexico. However, it is below the figures seen in other Eastern European and Central Asian countries—including new EU members (Figure 2.14a). Excessive employment in the public sector does not thus seem to be the main reason for the relatively large wage bill by international comparison.

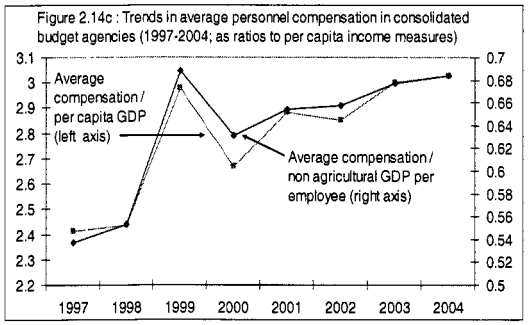
Figure 2.14: Employment and average wage cost in the public sector



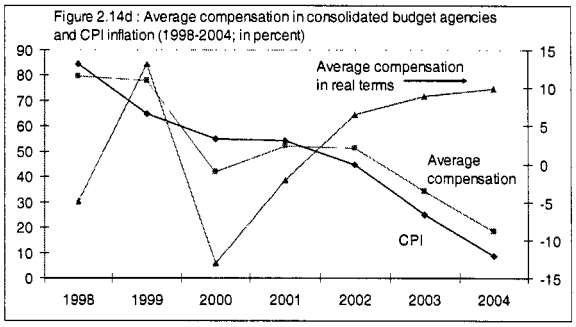
Public sector employment is not oversized...



...but average compensation is high by international standards...



...and has been growing faster than per capita income...



...because nominal compensation increases have by far exceeded inflation

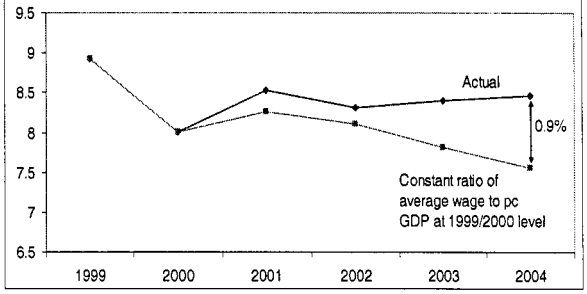
2.33 ***Average compensation of Central Government employees is high by international comparison and has grown fast in recent years.*** High average compensation has been the main factor driving up the wage bill and largely accounts for differences with comparator countries. Indeed, the average wage in consolidated budget agencies in Turkey was in 1997-2000 2.6 times higher than per capita GDP. This ratio was the second highest among the group of comparators for which similar data are available (Figure 2.14b). At the same time, since 2000, average compensation in consolidated budget agencies has grown faster than various measures of per capita income for the economy as a whole. Average compensation has thus increased to 2.9 times of per capita GDP in 2001-2004 (Figure 2.14c).[53] Measured as a percentage of

[53] In this calculation, per capita GDP and compensation are measured in constant 1987 prices. A similar picture emerges from nominal GDP and compensation figures, with the ratio of average wage to per capita GDP increasing from 2.8 in 2000 to 3.4 in 2004.

GDP per worker in the non agricultural sector, average compensation has followed a very similar path, increasing from 54 percent in 1997 to 68 percent in 2004. Fast growth in average compensation has occurred despite the government's policy of restricting nominal compensation in the public sector so as not to exceed the annual change in the CPI. Further to large, offsetting fluctuations in 1999-2001, *real* average compensation surged by more than 6 percent in 2002 and by close to 10 percent in 2003 and 2004, as nominal increases by far surpassed CPI inflation (Figure 2.14d).

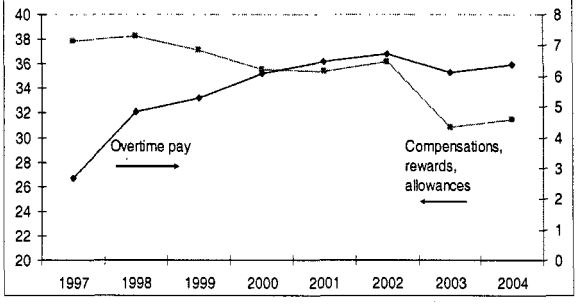
2.34 ***Slower growth in average compensation would have created considerable room for fiscal savings.*** From 2000 to 2004 personnel compensation in consolidated budget agencies has increased from 8 to 8.5 percent of GDP despite downsizing of employment by about 90,000 employees (see Figures 2.11 and 2.13). The evidence summarized above suggests that the increase in the wage bill is largely driven by the increase in average compensation. For example, had the ratio of average compensation to per capita GDP remained constant at its average level in 1999-2000, the wage bill of consolidated budget agencies would have fallen to around 7.6 percent of GDP in 2004—that is, about 1 percentage point lower than its actual level (Figure 2.15). Better management of wage increases in the public sector would thus create significant scope for savings in the budget. Linking wage increases to inflation has not proven enough to contain the growth in the wage bill, probably because other forms of compensation have increased higher than the inflation rate. Moving to a simpler and more transparent compensation system would contribute to containing pressures in the wage bill. Compensation increases will also need to be more strongly anchored on expected inflation to contain pressures on the wage bill.

Figure 2.15 : Wage bill in consolidated budget agencies -- actual and alternative scenario (1999-2004; in % of GDP)



2.35 ***The compensation system is dominated by a multitude of side benefits.*** In 2004, about 32 percent of personnel compensation in consolidated budget agencies was composed of various allowances, compensations, and rewards on top of the basic salary of employees. Moreover, overtime pay represented 6.5 percent of total compensation. While wages are calculated on a transparent basis (driven by a combination of grade and years in service), allowances and overtime pay seem complicated, seemingly offering substantial opportunities for discretion. Allowances and other rewards have been somewhat reduced in 2003 and 2004, by about 4 percentage points of total pay (Figure 2.16). Overtime pay has been on an upward trend since 1997, but has been stabilized in the past two years. Overtime pay (0.5 percent of GDP) is a more expensive form of compensation in the civil service and would need to be reduced more aggressively to contain pressures on the wage bill. This would call for an appropriate redefinition of basic civil service obligations.

Figure 2.16 : Compensations, Rewards, Allowances, and overtime pay in percent of total personnel expenditures of consolidated budget agencies (1997-2004)



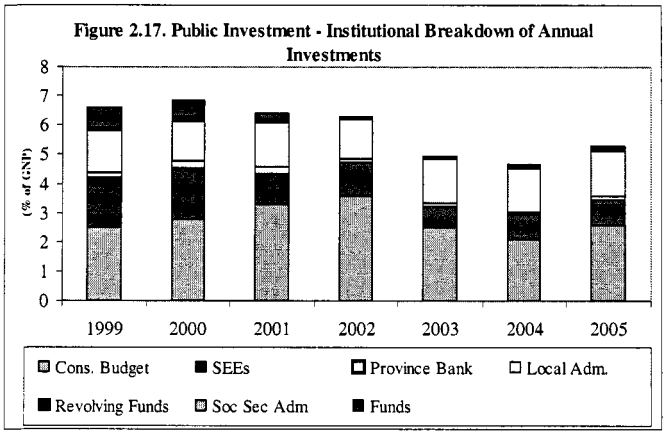
2.36 ***Many allowances are exempt from the income tax.*** Examples include "horizontal" allowances, such as those for representation; foreign service; housing; university allowance; or allowance for knowledge of foreign language. Several allowances for specific duties and overtime payments are also exempt from the income tax. Although a precise breakdown of the amount of non taxable allowances is not available, in view of the substantial size of allowances and overtime pay (3.3 percent of GDP for consolidated budget agencies), their cost in terms of foregone tax revenue is likely to be significant. Assuming that 70 percent of allowances and overtime pay are non taxable, and based on a 20 percent effective marginal tax rate, foregone tax revenue could be around 0.5 percent of GDP.

2.37 ***Sizable side benefits reduce transparency and may be distorting incentives in the civil service compensation system.*** The share of allowances is disproportionately large for the highest grades. For the highest grade of civil servants, wages (including basic seniority and indicator salary plus side payment) account for only 15 percent of total compensation. For the lowest grade, wages typically account for about 75 percent of compensation. The exceedingly high role of allowances among the highest grades is cause for concern for transparency and incentives in the civil service, and warrants further analysis. Moreover, as allowances represent a much larger share of income for higher-grade civil servants, exemptions from the income tax are detrimental to vertical taxpayer equity. One plausible hypothesis is that these more discretionary forms of pay are the means via which Turkey achieves de facto decompression of what is otherwise an excessively compressed set of pay differentials between more and less skilled civil servants. But further detailed analysis of opportunities for modernizing the rules governing civil service pay—and any related opportunities for budgetary savings—is warranted.

2.38 ***Towards performance-oriented pay and civil service reform.*** The Government is considering plans for civil service reform to address some of the deficiencies of the existing system. The reform aims to reduce the complexity of the system, improve transparency and incentives in the civil system, and remove horizontal and vertical inequities arising from non taxable allowances. Achieving decompression in compensation scales will have to be an important part of civil service pay reform.[54] Without decompression, taxation of allowances would reduce pay differentials and may have unintended effects on incentives. At the same time, decompression of earnings would be necessary to respond to the need to attract highly qualified civil servants to support the EU negotiation and accession process. Civil service reform would also need to address issues related to the deployment of a number of public employees to the special provincial administration as a result of the recent reform. The majority of those employees are still associated with the consolidated budget in terms of their status and wages, even though centrally determined compensation is often not directly related to their performance, and does not reflect differences in regional living standards.

B.2. The Public Investment Program

2.39 ***Public Investment was cut significantly as part of the fiscal adjustment efforts during 2001-2004.*** Total public investment level (inclusive of local administrations and SOEs investment), stood at 4.7 percent of GNP in 2004, down from 6.8 percent in 2000 (Figure 2.17). In 2001-2002, fiscal adjustment fell primarily on public investment by SEEs while investment by the consolidated budget increased. In 2003-2004 however, the cut was predominantly from the investment budgets of both the consolidated budget agencies and SEEs.



2.40 ***In the past the investment program seems to have been overloaded with low-priority projects.*** Unclear criteria and processing rules had resulted in many more

[54] Adequate data does not exist to assess the compression of wage scales in civil service in international comparison. While the distribution of wages can be assessed by grade for basic pay, similar information is not available for allowances and other side benefits.

projects being "pushed" into the PIP than there is funding for. As a result, the stock of approved but unfinished projects grew to an average of more than 5,000 during the latter half of the 1990's, and the average completion time increased to about 10 years. Many projects received "trace" allocations, i.e. amounts nowhere near enough to implement the project, but assigned merely to keep it in the PIP. While in 2001, one-third of the projects with trace allocations were in the health sector, agriculture and education and other social sectors also had a sizeable share in the stock of these "inactive" projects". Similarly, many projects had stayed in the program, and remained unfinished, for 30 years or longer.

2.41 ***Rationalization of the PIP in 2001 has been quite effective.*** In 2001, the government initiated a rationalization process, with support from the Bank, in order to allocate the reduced amounts of appropriation and improve the average project completion time (Table 2.5). The SPO rationalized the investment portfolio by eliminating about 1000 projects in the 2001 program consisting mostly of transport, energy and agriculture projects and by reducing the number of multi-year projects. In addition, the program included new feasibility studies for some projects. As a result the total cost of projects in the PIP was reduced and average completion time was cut by 32 percent.

2.42 **Rationalization efforts continued in 2002-2005.** The total number of projects declined from 5239 in 2001 to 2627 in 2005. While the average completion times (based on actual annual investment spending) are higher in 2003 and 2004, this reflected more the decline in the budgetary allocation, than the composition of the portfolio. Energy and transportation investments were hit the hardest, since jointly they constitute about 40-50 percent of total public sector investments.

Table2.5: Public Sector Investment, 1996-2005 1/
(current prices, trillion TL)

	Number of Projects	Total Value of Projects	Actual Investment 2/	Actual Investment (in % of GNP)	Average Time of Completion 3/	Average Time of Completion 5/	New Projects	
							Total	Multiyear
1997	5332	16,597	1,298	4.4	10.7	8.1	1428	577
1998	5556	34,084	2,378	4.4	10.4	9.3	1,574	714
1999	5458	57,126	3,649	4.7	10.2	9.9	1,186	305
2000	5321	86,219	6,183	4.9	9.2	8.7	1,176	249
2001 4/	5047	142,919	7,570	4.3	12.5	11.8	1,234	286
2002	4414	166,797	12,223	4.4	8.5	7.2	1,066	128
2003	3851	187,110	10,386	2.9	7.6	9.7	1,032	134
2004	3555	196,113	11,625	2.7	8.1	8.6	1,079	149
2005	2627	206,684	15,875	3.3	6.6		985	137

1/ Excludes local administrations.

2/ 2004 figure is provisional. 2005 figure is program projection.

3/ Average time of completion is calculated as the amount of time required to finish up the remaining stock completely, assuming that no other projects are taken into the investment program in the following years and an appropriation and expenditure is made of the magnitude of the current year level.

4/ Includes supplementary budget allocation of TL 280 trillion and TL 555 trillion from Law 3418 revenues.

5/ Based on actual investment.

Source: SPO

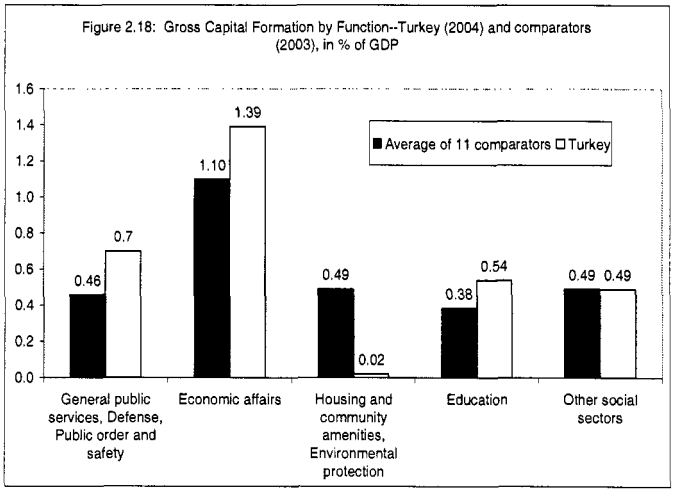
2.43 ***The brunt of adjustment was borne by investment in infrastructure.*** Table 2.6 gives the annual investment spending for public sector excluding local administrations for the period 1999-2005. The annual allocations for infrastructure investment came down from above 3 percent of GNP in 1999-2000 to below 2 percent in 2004. This was the main source of adjustment in public investment program, although education investments also declined. As a result of adjustment, trace allocation projects accounted on average for about 10 percent of total value of projects in 2003-04, a significant rise from the 1999-2000 average of only 3 percent.

Table2.6. Annual Investment Spending (% of GNP) 1/

	1999	2000	2001	2002	2003	2004	2005 2/
Economic Infrastructure	**3.1**	**3.4**	**2.6**	**3.2**	**1.8**	**1.7**	**1.9**
Water Resources-Irrigation	0.3	0.4	0.3	0.4	0.2	0.2	0.1
Energy	0.9	0.9	0.8	1.3	0.7	0.5	0.6
Transport and Communication	1.7	1.8	1.2	1.2	0.6	0.9	1.1
Drinkable Water,Sanitation	0.3	0.3	0.3	0.2	0.2	0.1	0.2
Social Infrastructure	**0.9**	**0.8**	**0.9**	**0.6**	**0.7**	**0.5**	**0.7**
Education	0.7	0.6	0.7	0.4	0.5	0.4	0.4
Health	0.2	0.2	0.3	0.2	0.2	0.2	0.2
Economic Sector	**0.3**	**0.4**	**0.4**	**0.3**	**0.2**	**0.3**	**0.5**
Others	**0.3**	**0.4**	**0.3**	**0.3**	**0.2**	**0.2**	**0.2**
TOTAL	**4.6**	**4.9**	**4.3**	**4.4**	**2.9**	**2.7**	**3.3**

1/ Excluding local administrations
2/ Budget allocation.
Source: SPO

2.44 ***Public investment is geared more towards general public services, public order and safety and infrastructure, but may need to further increase in education.*** The composition of CGG gross fixed capital formation by function reveals that public investment allocations in Turkey differ somewhat from the group of comparators (Figure 2.18).[55] As a percentage of GDP, public investment in Turkey exceeds the average of comparators for the provision of public goods (general public services, defense and public order and safety) and infrastructure services (included in economic affairs). It also marginally exceeds that of comparators in education.



[55] Due to limited data availability on functional breakdown of investment spending, only the following countries have been included in the sample: Ireland, the Netherlands, Greece, Spain, Portugal, Sweden, Finland, Czech Republic, Belgium, Austria, South Africa.

However, in view of the need to rapidly fill Turkey's gap in educational attainment, public investment allocations in education may need to be significantly enhanced, by reconsidering priorities in the public investment program in areas that may be still oversized. Investment for environmental protection remains negligible and may need to increase soon to levels comparable with benchmark countries (Figure 2.18).

2.45 ***The apparently large share of infrastructure investment mirrors what is observed in other countries.*** The share of annual investment spending for infrastructure in total investment spending (slightly above 60 percent in 2003-04) is similar to those in comparator countries. It is very similar to what was observed for infrastructure public investment in Latin America countries particularly during the 1980s, before the introduction of major private participation in infrastructure services but – most importantly – before major fiscal adjustments were undertaken.[56] The private sector could be more actively involved in the financing of infrastructure in Turkey, with careful design of Government commitments to private operators to minimize the risk of contingent liabilities.

2.46 ***Appropriate allocations for operation and maintenance of public capital need to be ensured.*** This is an important requirement not only for improving the quality of services, but also for restricting the cost of the projects. Whilst the investment budget is under SPO oversight, maintenance expenditures below a certain threshold, as defined in annual budget laws, are recorded in the current budget, in the "purchases of goods and services" line. Total maintenance expenditures including this line item, declined from 0.4 percent of GNP in 2000-2001 to 0.2 percent in 2003-04[57]. Appropriation for maintenance expenditures declined particularly for transportation sector as well as for education and health sectors. Such reductions in O&M expenses should be avoided since they are not sustainable while they reduce the contribution of public capital to efficiency and growth.[58]

2.47 ***Inappropriate maintenance and accelerated decay of capital goods may unduly burden the investment program in the future.*** The existing structure of budget preparation—with separate guidelines for current and investment expenditures—poses a risk of misallocation of resources. Agencies may not necessarily strategically allocate resources between investing in new assets and maintenance of existing assets. The

[56] That was the case of Argentina, Brazil and Bolivia. For details, refer to Easterly and Serven (2003).

[57] The total maintenance expenditure is estimated as the sum of the small amounts of expenditure recorded in the recurrent budget and the expenditure that is part of the investment budget. There is a potential drawback for using the latter series. It is obtained by extracting from the investment program database those projects having as part of its title or characteristics, words like maintenance, repair, renovation. However, other projects that do involve a maintenance component are not picked up by this method if the names or characteristics specified in the database do not involve the relevant words. General Directorate of State Highways is reported to have many projects involving maintenance work. As more reliable and refined data becomes available, the data could be updated.

[58] Evidence of lower than expected capacity utilization and shorter than planed economic life of some projects points to problematic maintenance, especially in the road network, where indicators of physical condition point to deteriorating quality—see chapter 7 (Figure 7.3). However, the relative roles of inadequate budget allocations and lack of appropriate incentives/culture for maintenance seems difficult to establish.

importance of timely maintenance is more prominent in the infrastructure sector and thus proper accounting of the actual amounts spent for maintenance is needed. For example, for a road with a 20-year life, GD of State Highways (KGM) research shows that if maintenance is not done at the end of the 12th year, the road would start deteriorating at a rate 8 times faster than in the first years of its lifetime. This, in practical terms, means that if the cost of capital is the same for maintenance as it is for investing in new roads, undertaking investment for rebuilding an existing road is up to 2.5 times more expensive than providing timely maintenance.

2.48 ***The quality of infrastructure needs to be improved.*** While the size of the investment portfolio in infrastructure sector may not be low with respect to selected comparators, the existing quality is perceived to be poor by investors. This reflects gaps in infrastructure that will need to be filled in the future, but may also reflect inadequate maintenance and inefficient operation. Chapter 7 further elaborates on these issues—especially regulatory reform in infrastructure services that can play a significant part in improving efficiency. As the total value of infrastructure projects in the investment program adds up to over 80 percent of total public investment it deserves particular attention, especially because future growth will depend on the quality of Turkey's infrastructure.

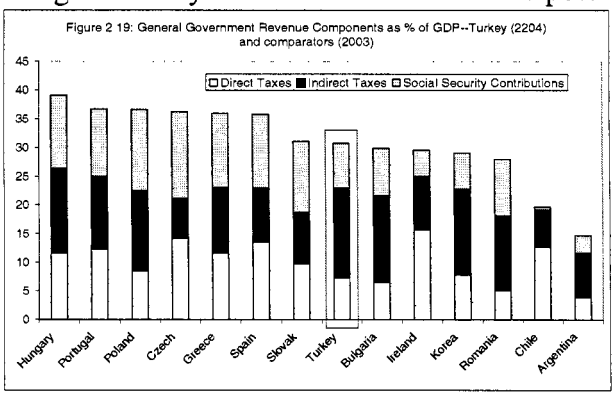
2.49 ***Expenditure pressures in investment will only rise further as alignment with the EU accelerates.*** Although the government recognizes these infrastructure needs and further states in the Preliminary National Development Plan that improving infrastructure services is not only a strategic priority unto itself but also a key element for achieving sustainable growth and better quality of life, much needs to be done towards faster convergence with EU. When additional investment requirements are taken in to account, for example for alignment with the environmental acquis, effectiveness of investment spending and better project selection and monitoring will be even more urgently needed. In the 2005 annual investment program guidelines, the government has committed to further reducing the average completion time, which is one of the available indicators of the quality of the PIP, from an estimated 6.6 years in 2005 to 5 years in 2006, an almost 25 percent reduction. The reduction in completion times alone does not certainly ensure the rationalization of the PIP. Structural measures are bound to complement the rationalization of the investment stock, by enhancing management of the public investments.

2.50 ***There are several potential measures towards reaching a more effective investment program.*** In the recent past, volatility of annual investment allocations has hampered implementation in line with strategic priorities, total costs and average completion times of projects. A prerequisite to achieve stable and foreseeable annual allocations is macroeconomic stability and sustained fiscal discipline. This is needed to better link the resource allocation process and actual investment needs. In addition, in order to close the quality gap in infrastructure described above, and improve the quality of its investments, Turkey further needs to (i) effectively utilize the newly introduced medium-term expenditure framework; (ii) as part of the ongoing introduction of performance based budgeting, strengthen the consistency of investment and recurrent

budgets to facilitate the achievement of sectoral policy objectives; (iii) improve the PIP management by strengthening the project selection process as well as monitoring and evaluation of ongoing projects. Promoting private sector participation in infrastructure will also help fill existing financing gaps for priority investments.

C. STRUCTURE OF FISCAL REVENUES AND OPTIONS FOR TAX POLICY REFORM[59]

2.51 ***The composition of revenues has shifted markedly toward indirect taxation over the last few years.*** Hikes in excise rates along with buoyant VAT collections in the post-crisis years combined, as shown in Annex 2.2, to increase indirect tax revenues from 11.6 percent of GNP in 1999 to 15,8 percent of GNP in 2004. During the same period, personal income tax (PIT) revenue fell from 6,5 percent of GNP in 2001 to only 4,5 percent GNP in 2004, while corporate income tax (CIT) revenue remained broadly stable. As a result of these trends, Turkey is one of the countries with the heaviest reliance on indirect taxes among EU cohesion countries, new EU members, and comparable emerging economies (Figure 2.19).



2.52 ***Reliance on indirect taxation offers some advantages that should be taken into account in the design of the tax system.*** Reliance on indirect taxes is often criticized on equity grounds, as the tax burden is indiscriminately distributed across all income groups. Nevertheless, given pervasive informality, in the short term, reliance on indirect taxes appears to be a reasonable way of ensuring some degree of compliance of those who would have otherwise escaped taxes altogether. Moreover, indirect taxes offer a more symmetrical treatment of labor, transfer, and capital income, thus meeting some criteria for horizontal taxpayer equity better than income taxes that discriminate against some types of income or are subject to considerable evasion. These factors tend to alleviate the distributional consequences of indirect taxes. In addition, indirect taxes uniformly levied on consumption offer advantages on efficiency grounds: (i) they are relatively neutral towards saving and investment decisions; (ii) they do not distort incentives to work. Hence, all else equal, a tax mix relying more on indirect taxes may be more conducive to growth. Caveats apply, however, to these considerations, if greater reliance on indirect taxes is accompanied by proliferation of special regimes and exemptions, which may boost tax evasion and feed informality, thus being counterproductive for growth.

2.53 ***High excises, narrow tax bases, and high labor income taxes are main features of the tax system.*** Annex 2.2 compares the level and structure of revenues of the consolidated budget to those in other OECD countries. While such comparisons need to

[59] This section draws on a background note for the CEM contributed by IMF Staff.

be interpreted with care, three features of the tax structure in Turkey are especially noteworthy:

- ***A very heavy reliance on excises***, which account for nearly one-third of all tax receipts and raise at least twice as much, relative to GDP, as in any other country in the sample.[60] Heavy reliance on excises is of concern as it may encourage activity in the informal sector, which would further undermine the tax bases and impede efficiency for the economy as a whole. Reducing this high level of excise taxation does not appear, however, to be seen as a priority: the 2005 budget included several excise increases (of which only the increase in Special Consumption Tax was implemented during the year) in order to attain the primary surplus target while meeting spending needs.
- ***Low receipts from, and reliance on, income taxation.*** Although the PIT yield in percent of GDP is significantly lower than the OECD average, the top marginal rate was a substantial 40 percent in 2005 for non-wage earners (planned to be reduced to 35 percent in 2006). One reason for this pattern may be the existence of a large informal sector. Similarly, Corporate Income Tax (CIT) revenues are somewhat lower than the OECD average, despite the fact that the CIT rate in 2004 was a substantial 33 percent (though reduced in 2005 to 30 percent). This indicates that the base of the tax is narrow, owing to substantial tax expenditures as further discussed below.
- ***A high tax wedge on labor income.*** When the PIT, employer and employee social security contributions, and the stamp duty on wages are combined, total payments to the government out of labor income can approach 43 percent of the gross wage for some workers (see chapter 4). Indeed, according to the OECD's *Taxing Wages* study, Turkey emerges as the country with the highest labor tax wedge for the married "average production worker" with a non-working spouse and two children. The implications of high labor income taxation for employment generation are further discussed in chapter 4.

2.54 ***Reducing the burden of indirect taxes would call for careful study and long-term design.*** Although the balance between direct and indirect taxation in Turkey is considerably out of line with that in comparator countries, options are limited in the short to medium term because revenue cuts in one area must—given the continued macroeconomic need to achieve large primary surpluses—be offset by gains in another. If excises and VAT collections are cut, then income taxes will likely need to be raised. However, such a substitution of direct for indirect taxes would not be advisable in view of the above-mentioned considerations regarding the efficiency benefits of indirect taxes and their equity-improving incidence when significant informality is present, as in the case of Turkey. Appropriate fiscal space for lower indirect taxation will thus have to be created over the long term. Fiscal space could come from three main sources: (i) Continuous fiscal discipline to reduce the level of the debt ratio and create room for a

[60] This appears to mainly reflect high rates on 'traditional' excisable goods: around half is from petroleum products alone—indeed, at about $8/gallon, pump prices for gasoline are about the highest in Europe. In addition, the taxes on "luxury goods" raise revenue of about 0.1 percent of GDP.

lower primary surplus in percent of GDP; (ii) better control of primary expenditures in low-value programs; (iii) tax base broadening and reduction in the size of the informal sector. The analysis that follows presents options for income tax reform with the aim of improving efficiency and broadening the tax base. Eventually, these initiatives will also facilitate a shift in the balance of the tax burden between direct and indirect taxation.

2.55 ***The tax landscape is changing fast.*** The authorities are currently in the process of reviewing and rewriting each of their major tax laws, also following commitments taken in the last Stand-By Arrangement with the IMF. The authorities eliminated stamp duties on financial transactions in 2004, and in April 2005 announced their intention to eliminate the two remaining financial intermediation taxes—the Banking and Insurance Transaction Tax (BITT) in 2006 and Resource Utilization Support Fund (RUSF) within the program period. A new regime for capital income taxation will subject interest and capital gains, including on previously exempt government securities, to final withholding at 15 percent. This will move Turkey closer to an explicit *"dual income tax"* (DIT) model of the sort employed in the Nordic countries. Labor will remain subject to progressive taxation, while capital income will be subject to a flat and relatively modest rate—in recognition of the futility of trying to tax a highly mobile base like capital.

2.56 ***The 2006 budget and draft legislation to amend the existing PIT and CIT laws incorporate significant reforms of the Corporate Income Tax and the Personal Income Tax.*** They include: (i) a reduction of the CIT rate from 30 to 20 percent, with a parallel elimination of the Investment Tax Allowance (ITA); and, (ii) a reduction of the top personal income tax rate from 40 to 35 percent for non-wage earners, accompanied by a reduction in the number of tax brackets from 5 to 4 and a unification of the tax regimes for wage and non-wage income.[61] As a result of tax base broadening, due to the elimination of the ITA, ongoing tax administration reforms, and broader strengthening of the CIT code (regarding, for example, transfer pricing and thin capitalization), the Government does not expect a significant impact of these measures on CIT collections, and stands ready to take offsetting expenditure measures if necessary to keep the primary surplus on target. The CIT tax reforms have the potential to promote investment on a sound basis and stimulate job creation, especially in the formal sector. The PIT reform will improve the efficiency of the tax system, as the dual tax system for wages and non wage income created complication and incentives for income recharacterization, and was unduly generous to highly paid wage earners. Unifying the rate schedules is consistent with movement towards a Dual Income Tax system. PIT and CIT reforms could be complemented with measures outlined below.

C.1. Reform Priorities for the Personal Income Tax

2.57 ***The consumption credit (CC) has outlived its purposes.*** Turkey operates a system where taxpayers may claim tax credit for certain kinds of expenditures (such as

[61] By the new reform, it is also planned to reduce the lowest tax rate for income components other than wages from 20 percent to 15. The highest and the lowest tax rates on wages will be maintained at 35 percent and 15 percent respectively, thus effectively unifying the two tax schedules.

certain types of food, health, education, rent, and clothing) on the basis of receipts issued by enterprises liable for the VAT. Different rules for the calculation of the tax credit apply to different types of taxpayers (wage earners, non-wage incomes, pensioners). The purpose of the CC is twofold: to strengthen VAT compliance, and to support the consumption of certain goods likely to be of particular importance in the budgets of the less well-off. It seems doubtful that the CC has greatly strengthened the VAT. Tax auditors typically do not actively use the submitted receipts to audit VAT compliance, while the system creates an incentive to issue false invoices, posing further difficulties for tax administration. The CC also imposes additional and unusual costs of compliance on employers—not only in collecting invoices but, perhaps even more burdensome, in adjusting withholding—and requires that taxpayers go to the trouble of storing invoices for many small purchases.

2.58 ***The equity rationale for the credit is also questionable:*** it does not favor the less well-off but rather it favors all those who buy the particular commodities for which the credit is available. Those who gain most, in terms of a reduced PIT bill, are those with the highest level of consumption—who will tend to be the better off.

2.59 ***There are better alternatives to the consumption credit.*** The two main options involve:

- A standard deduction (or allowance, or threshold), meaning some fixed monetary amount that is deducted from income before calculating tax liability;
- A (non-refundable) credit, meaning some fixed monetary amount by which all taxpayers' liability schedule would be reduced (with no refund paid when final tax so calculated is negative).

A key feature of both approaches is that they exclude some minimum level of income from PIT, as against the current system in Turkey, which subjects the very first lira of income to taxation. In this sense, both are more pro-poor than the CC.[62]

2.60 ***Turkey's PIT is unusual in providing no explicit tax reduction for dependents.*** In Turkey the PIT is levied on a personal basis. Most PITs provide an explicit tax reduction for those with dependent spouse and children, on the equity argument that their presence reduces ability to pay. Turkey, unlike most other countries, does not offer any general deduction or credit for dependents, although a tax credit exists for some categories of workers. As a result, the tax wedge for the married "average production worker" with a non-working spouse and two children is amongst the highest in the OECD zone.

2.61 ***Elimination of the consumption credit should go in tandem with the introduction of some explicit reduction for spouse and children.*** The question arises as to whether the additional credit for the spouse should be available only if the spouse does not work. On equity grounds, one could argue that this should be the case. On efficiency grounds, however, withdrawal of the additional credit would imply an undesirable

[62] For a given progressive rate schedule, a deduction is worth more to those facing a higher marginal rate, whereas a credit has the same value to all. For this reason, a credit is generally regarded as more progressive than a deduction.

disincentive for secondary workers to enter the labor market—since the net income gained by doing so would be reduced by withdrawal of the credit, making part-time work, in particular, potentially much less attractive. This would be unwelcome given Turkey's very low labor force participation by women.

2.62 ***The tax treatment of pensions, a key aspect of any income tax, is extremely generous in Turkey.*** Social security contributions for old age (disability, and death), charged at different rates for different schemes, are fully deductible against PIT, up to caps that also appear to vary across schemes. Public pensions are PIT-exempt and pensioners also qualify for the CC scheme described above.[63] Most countries treat pension saving in a way more generous than income taxation. The most common form of treatment in OECD countries is the so called "expenditure tax treatment" (EET), with contributions deductible but pensions—including any lump sum at retirement—fully taxed. In Turkey, however, not only are contributions deductible, at least up to some cap, but the return is also exempted from tax. This goes beyond a standard exemption—it is a substantial subsidy. In the case of private pensions in particular, it is highly questionable why fiscal revenues should be foregone in order to encourage private pensions, to the benefit mainly of the better off.

C.2. Reform Priorities for the Corporate Income Tax

2.63 ***Before the recent reform, the Corporate Income Tax rate was relatively high and the tax base was unduly narrow.*** At 30 percent, the statutory CIT rate in Turkey was quite high compared to levels in most new EU members. The ordinary depreciation allowances in Turkey do not stand out from those offered by other countries. But when accounting for the 40 percent ITA, the overall level of allowances was quite generous in Turkey. Tax evasion from the sizeable informal economy, but also generous tax allowances, help explain why the ratio of CIT revenue is relatively modest in Turkey, despite the relatively high statutory tax rate.

2.64 ***The reduction in the CIT rate will bring about multiple benefits***:

- It will align Turkey's corporate tax regime with that of new EU members, thus increasing Turkey's attractiveness to FDI. A low and uniform "headline" CIT rate will be attractive to investors seeking simplicity and stability.
- It will level the playing field, mitigating differences in effective tax rates across different assets, modes of finance, and levels of firm profitability.
- Elimination of the ITA, although it could slightly reduce overall investment, since effective tax rates and the cost of capital could rise somewhat, it would also eliminate low-yielding investments that are profitable for the private sector only

[63] Regarding private pensions, which are a small but potentially important part of the market: (i) contributions are deductible subject to caps; (ii) with the reform of capital income taxation on January 1, 2006 private pension funds will be exempt; (iii) at retirement, if payments have been made for 10 years and the retirement age reached, 25 percent of the lump sum payment is exempt, and the rest subject to a final 5 percent withholding tax.

because of heavy tax subsidies. The reform will therefore likely improve economic efficiency and boost Total Factor Productivity growth.

- Related to the previous point, the reform could eliminate current inducements to overly capital intensive methods of production and thus help promote employment generation.
- The cut in the statutory tax rate will have the beneficial effect of reducing the incentive for companies to shift taxable income out of Turkey via transfer pricing and thin capitalization, just as it would reduce the incentive for income-shifting from taxable to tax-exempt companies operating within Turkey.

2.65 ***Regional and sectoral incentives should be avoided.*** Turkey has provided various tax incentives since the mid-1960s. There is little sign that these have had much effect, as regional disparities remain unabated (chapter 1) and investment in targeted activities, such as R&D, remains below levels seen in comparators. The efficiency of incentives may also have been hindered by pervasive macroeconomic instability in the past. The system has undergone considerable rationalization, but there are still incentives for investments in specific sectors or regions, described in Annex 2.3. A reduction in the statutory CIT rate will reduce the need for (and effectiveness of) special incentives, while securing revenue in the face of such a reduction would call for measures to widen the corporate tax base, not to reduce it. Policy should take advantage of the likely presence of instruments better targeted on the underlying objective for CIT incentives: supporting regional development, for example, by spending measures to improve infrastructure and the quality of the workforce. Moreover, survey evidence stresses the importance that foreign investors, in particular, place on stability and predictability of tax rules, as opposed to the availability of incentives. Before sinking their funds in a long-term investment, they want to be sure of how it will be taxed; and they are averse to the risk that competitors, entering the market later, will benefit from incentives unavailable at the time of their own investment. The form and extent of permissible incentives is in any event constrained by Turkey's obligations to the WTO, OECD, and, prospectively, the EU regulations on state aid (see chapter 3).

2.66 ***Dividends should be incorporated into new regime for capital income taxation.*** Dividends are subject to withholding PIT at 10 percent. For those who file, half of the dividend is included in taxable income, with the tax withheld credited against the ultimate liability. Turkey thus applies a system of double taxation of dividends, since the underlying profit has already been taxed at the CIT rate. Towards the aim of leveling the playing field for business activity, it would be desirable to eliminate the double taxation of dividends currently in place. This would put finance by new equity, so important to young firms, on an even footing with finance by retained earnings, which is the typical source of equity finance for older and more well-established firms.[64] A first step in

[64] Retained earnings are subject only to corporate income taxation. They entail an increase in company capitalization and since capital gains on long-term shareholdings are tax exempt, there is virtually no double taxation of investment financed by retained earnings. On equity grounds, it can be argued that eliminating the taxation of dividend income accruing to shareholders would be detrimental to horizontal taxpayer equity. However, if double taxation of dividends boosts capital gains by encouraging reinvestment of earnings, it also affects taxpayer equity to the extent capital gains accrue to wealthier taxpayers and are less taxed than personal income. In Turkey capital gains are untaxed.

dividend tax reform would be include dividends in the base for the new harmonized capital income tax to be launched in 2006, subjecting them to the same final flat 15 percent withholding tax as will apply to interest income and certain capital gains.

2.67 ***Double taxation of dividends should be progressively phased out.*** For the longer term, Turkey might consider moving towards a more consistent Dual Income Tax, with the corporate income tax rate aligned with the capital income tax rate. It would then seem natural to fully eliminate the double taxation of dividends to achieve full tax neutrality between debt and equity finance. One way of doing so would be to simply exempt dividend income, since the underlying profit has already been taxed at a CIT rate equal to the capital income tax rate. Thus dividends would be treated in parallel with (long-term) capital gains on shares, which are also exempt, eliminating the tax bias in favor of retentions. Exempting dividends from tax would require, however, an effective broad-based corporation tax to ensure that the underlying profit is indeed taxed at the corporate level.

C.3. Tax Expenditures

2.68 ***Turkey has a complex and extensive range of tax provisions that could be classified as tax expenditures.***[65] There are some 290 tax provisions which are set forth in the laws and regulations pertaining to the PIT, CIT, Value Added Tax and Special Consumption Tax. Out of these 290 tax provisions, 186 provisions are potentially eligible as tax expenditures, defined as revenues foregone in the form of tax incentives and other tax concessions.[66] The most significant ones could be grouped in seven categories: (1) Free Zones; (2) Investment Incentives; (3) Financial instruments; (4) Regional employment incentives; (5) Agricultural sector support; (6) Social insurance and pension contributions; and (7) Assistance to low-income and disadvantaged persons. These categories are not exhaustive and sometimes overlap.

2.69 ***Establishing an adequate tax expenditure framework would promote fiscal accountability and transparency.*** Tax expenditures are a concern from the standpoint of fiscal accountability and the transparency of governance in tax expenditures. Establishing a tax expenditure framework to report these expenditures will help bring the level of scrutiny of tax expenditure closer to that of direct (cash) government expenditures, which is desirable because tax expenditures have the near equivalent impact on public deficits. In Turkey, some tax expenditures are of potentially broad scope, while multiple tax expenditures, which were created for a single objective, sometimes overlap. A systematic evaluation of the effectiveness and efficiency in using these fiscal resources has yet to be completed, because of gaps in the framework to estimate and to evaluate these tax expenditures. However, the Government is undertaking steps towards better transparency

[65] This section is based on a recent Bank study on tax expenditures in Turkey, which will be discussed more extensively in the upcoming PER.

[66] See definitions in: OECD, "Best practice Guidelines—Off Budget and Tax expenditures", Public Governance and territorial development Directorate, May 2004, Paris.

of tax expenditures, as mandated by the PFMC law.[67] The estimated potential cost of tax expenditures in the 2006 budget is YTL 8.3 billion (equivalent to 6.9 percent of total primary expenditure). This estimation is very preliminary as the coverage of the eligible provisions in the tax code is still partial, while it also includes the cost of the ITA that will be phased out. Benefits of establishing a comprehensive tax expenditure framework would include: (a) coordinating and monitoring the authorization procedures; (b) managing the estimates and projections of costs of tax expenditures; (c) evaluating the cost-benefit of tax expenditures; (d) providing analyses and proposals to policymakers for prioritizing budget allocation (such as trade-offs between direct expenditures and tax expenditures); and (e) publishing the regulations, authorization procedures, beneficiaries, and analytical reports relating tax expenditures activities, to enhance transparency and better governance.

D. DEBT SUSTAINABILITY

D.1. Recent Developments in Public Debt Management

2.70 ***Debt dynamics considerably improved in the post-2001 period.*** Since the peak of the crisis in 2001, when the net debt to GNP ratio was at the historical high of 90.5, debt ratios have been falling steadily. As of end-2004 the ratio had come down to 63.5 percent of GNP, of which 46 percentage points of GNP was domestic debt (Table 2.7). Gross debt, as defined by the Turkish Treasury, which differs from the EU definition, declined from the record 2001 level of 108 percent to 77 percent of GNP in 2004. While the net debt-to-GNP figures are the most commonly used definition, the Maastricht criterion of public debt is defined in gross terms. Box 2.6 provides the latest estimates reported to the EU under fiscal notification required for all candidate countries and describes the methodology used in these calculations. Turkey would benefit from further improving the implementation of ESA 95 methodology in measuring and reporting public debt and deficit figures to promote tractability of these figures towards meeting the Maastricht criteria.

[67] A list of the tax expenditures for the four main categories of taxes (CIT, PIT, VAT, SCT) was attached to the budget for the first time together with their projected amounts for the 2006-2008 period.

Table 2.7: Breakdown of Public Sector Debt Stock as defined by Turkish Treasury, 2001 vs 2004

(% of GNP)	2001	2004
Total Public Sector Net Debt (I-II-III-IV)	**90.5%**	**63.5%**
Net External Debt Stock	37.8%	17.5%
Net Domestic Debt Stock	52.8%	45.9%
I- Total Public Sector Debt Stock (Gross)	107.5%	77.4%
A-Domestic Debt	71.1%	54.5%
Central Government	69.2%	52.3%
Rest of the Public Sector	1.9%	2.2%
B- External Debt	36.4%	22.9%
Central Government	31.6%	21.5%
Rest of the Public Sector	4.8%	1.4%
II- Central Bank Net Assets	12.9%	6.5%
Net Foreign Assets	-1.3%	5.4%
Other Asset and Obligations (Net)	14.3%	1.1%
III- Public Sector Deposits	2.8%	4.4%
Central Government	0.7%	2.4%
Rest of the Public Sector	2.1%	1.9%
IV-Unemployment Insurance Fund Net Assets	1.2%	3.1%

Source: Treasury

Box 2.6: ESA 95 Definition of the Change in General Government Gross Debt*

Starting in 2001, all candidate countries have been required to submit annual fiscal notifications to the European Commission as part of the pre-accession fiscal surveillance procedure. The fiscal notification consists of reports on the government deficit and debt levels in accordance with the EU legal and methodological principles. ESA 95 accounting and definitional requirements used for the fiscal surveillance of EU member states are taken into account in calculations, to the extent possible. In effect, the aim for the candidate country notification tables is to reconcile the national budget and the balance used in EU fiscal surveillance.

The debt level in a given year is calculated by adding to previous year's debt stock the change in general government consolidated gross debt. The change in gross debt is in turn, derived as illustrated in the attached table, starting from net borrowing/lending of general government.

Calculation of the change in general government gross debt

I. Net borrowing/lending of general government
II. Net acquisition of financial assets
Currency and deposits
Securities other than shares
Loans
Shares and other equity
Other financial assets
III. Adjustments
IV. Statistical Discrepancies
V. Change in general government consolidated gross debt (I+II+III+IV)

The transposition from the national budget concept of "net borrowing/lending" into ESA95 requires a number of adjustments, including;

(i) *the treatment of financial transactions* – main change is due to the appropriations for guarantee payment and expected privatization revenues

(ii) the accounting of accrued receivables and payables such as revenues and interest payments

(iii) *institutional coverage* – refers to adding the net borrowing/lending of other central government bodies, namely extra-budgetary funds and revolving funds

(iv) *adjustments for other transactions* – for example, the transfers related to the duty losses of state banks.

Following these adjustments, central government net lending/borrowing in ESA 95 standards is reached. Adding to this balance the local government and social security institutions net borrowing/lending, net borrowing/lending of general government (item I in the table) can be calculated.

The biggest item in the "Net acquisition of financial assets" category is the loans to the Savings Deposit and Insurance Fund, especially in 2001 and 2003 figures. This is the result of massive bank recapitalization—both state banks and private banks taken over by SDIF and more recently the cost of additional loans to SDIF to cover the losses due to the failure of Imar Bank. The "Adjustments" accounts for the changes in the value of existing assets and loans, or foreign exchange fluctuations. Statistical discrepancies arise from the difference between financial and capital accounts.

Accordingly, the 2005 fiscal notification to the European Commission reported the following numbers, which are not directly comparable to the numbers referred to in Table 2.7 and elsewhere in the text.

(% of GDP)	2001	2002	2003	2004	2005 (planned)
Gross Debt	105.2	94.3	87.2	80.1	77.2

Source: The methodological explanation in this box draws on the European Commission Enlargement Papers No:25, August 2005 on "2005 fiscal notifications of acceding and candidate countries: overview and assessment" by DG for Economic and Financial Affairs.

2.71 ***Improved fundamentals have been the major drivers of the reduction in the debt ratio.*** While in the initial years of reform following the 2001 crisis, the adjustment came mostly from inflation and the exchange rate movement, by 2004, economic growth and fiscal adjustment have started to dominate (Table 2.8).[68] An estimated two thirds of the debt reduction (the total reduction due to all items listed in Table 2.8 that counteract the interest payments) is attributable to high growth and primary surplus in 2004. The reduction in the borrowing cost as reflected in the reduced interest payments as a share of GNP and lengthening of domestic borrowing maturities clearly played an important role in the reduction of debt ratio. In 2001 and 2003, the most significant debt creating item was the issuance of recapitalization bonds for state banks and the SDIF banks. Although financial sector restructuring was well underway by 2003, the failure of a medium sized private bank (Imar Bank) in mid-2003 was a setback. The estimated burden on the Treasury through payments to individual depositors was 1.9 percent of GNP.

[68] This analysis follows the methodology used in Turkey CEM (2003).

Table 2.8 Composition of the change in Debt/GNP, 1999-2004 1/

	2001	2002	2003	2004
TOTAL debt	**90.5**	**78.5**	**70.4**	**63.5**
Change in debt	**33.4**	**-12.0**	**-8.2**	**-6.9**
Interest payments	21.8	16.7	15.9	11.9
Primary balance	5.1	4.1	6.1	6.8
Growth effect	-3.9	4.6	3.6	5.8
Inflation effect	13.2	9.4	5.5	3.2
Revaluation effect	-12.6	10.0	11.9	3.0
Seigniorage	1.1	1.0	1.2	1.2
Other items (sum of below)	-18.1	-1.6	-1.8	-0.1
Privatization	1.9	0.3	0.1	0.4
Cost of financial sector bailc	-20.0	-1.9	-1.9	-0.5
Errors and discrepancy	**-3.5**	**-1.3**	**2.4**	**1.0**

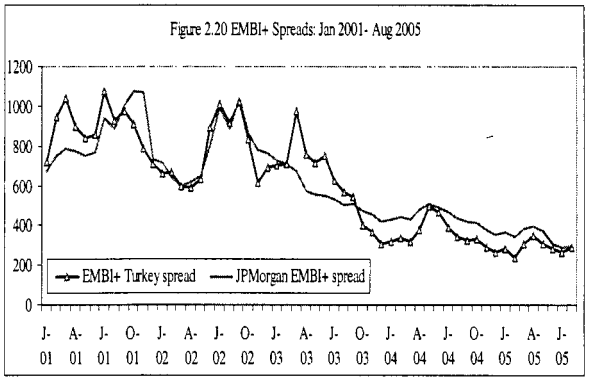
Source: Official data and own calculations.
1/ With the exception of interest rates, items with a positive sign reduce the debt-to GNP ratio, while those with a negative sign increase it.

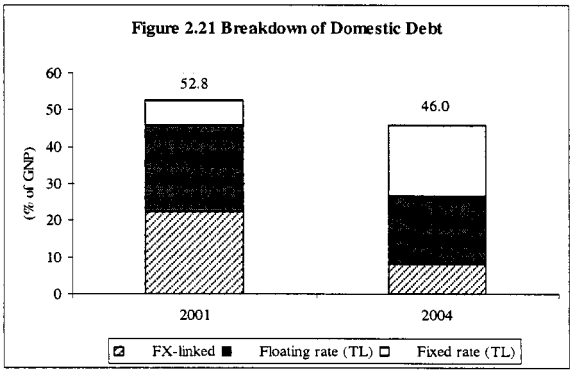
2.72 ***Cost of borrowing has been declining.*** The maturity of borrowing from domestic markets lengthened to almost 28 months in 2005, from 9 months in 2002 and about 15 months in 2004, while the cost of borrowing declined sharply, from 63 percent in 2002 to 46 percent in 2003 and 25 percent in 2004 and further to 16 percent in 2005.[69] The fall in the rates is expected to continue in the next few years, albeit at a slower rate. In 2005, the parameters of domestic borrowing continue to improved further. The domestic debt rollover ratio came down from 93 percent in 2003 to 88 percent in 2004 and 89 percent in 2005, and is expected to fall to 77 percent in 2006. External borrowing indicators also improved, JP Morgan's EMBI+ spread for Turkey fell below the overall EMBI+ index (Figure 2.20) starting at the end of 2003, although the gap narrowed in mid-2005. Increased creditworthiness of Turkish sovereign bonds and newly achieved stability of the domestic currency led to an increased appetite for lira-denominated bonds. Several international institutions, including IBRD, issued YTL denominated bonds in 2005. In the first quarter of 2005, the total issuance amounted to YTL3.9 billion.

2.73 ***The composition of public debt has also improved significantly as the foreign exchange and interest rate exposure of Turkey declined.*** The FX-linked part of the consolidated budget domestic debt stock, including floating rate notes, shrank from 42 percent in 2001 to below 20 percent in 2004 (Figure 2.21) of which almost half was in

[69] Average interest rate on *new* domestic borrowing weighted by the amount of issuance. The real cost of domestic borrowing, calculated by deflating the nominal rate by the inflation expectations for the next 12-months, dropped from about 30 percent in 2002-03 to about 14 percent in 2004 and further to about 9 percent in mid-2005.

floating rate.[70,71] This was accompanied by an increase in the fixed-rate TL debt, reaching, at end-2004, 42 percent of total domestic debt. As a result, the share of total foreign exchange linked consolidated budget debt (including external debt) in total declined to 41.5 percent at end-2004 from 58 percent at end-2002.





2.74 ***Non-marketable debt stock is slowly phased out.*** The share of non-cash debt in the total domestic debt stock fell from 52 percent in 2001 to 26 percent in 2004. The decline reflects the maturing of the non-marketable Treasury bonds that were issued for recapitalization of the state banks and SDIF banks. However, this also represents increased vulnerability to market conditions since more debt is now held by the market.

2.75 ***Debt management practices progressed considerably.*** The enactment of the law on Public Finance and Debt Management in March 2002 was a milestone in Turkey's move towards prudent debt and risk management. The law and the follow-up secondary regulations established the basis for a more effective management of the government liability portfolio. A high-level Debt Management Committee was established to formulate policies for borrowing and debt management. The Middle Office (Deputy General Directorate within Treasury that is in charge of risk management) acts as the secretariat for the committee. The unit became fully operational at the beginning of 2004 and continues to build capacity supported by the Bank. The middle office has been conducting public debt analysis and monitoring fiscal risks. As required by the relevant legislation, it reports to the senior management and the Turkish Grand National Assembly as well as to the general public including lenders and investors, particularly through the quarterly public debt management reports, which has been a significant improvement in transparency of liability management. The introduction of quantitative benchmarks for direct debt (for instance, on the maturity and composition of the debt) facilitated better analysis of refinancing, currency and interest rate risks.

2.76 ***The guarantee issuance mechanism has also been improved.*** The scope of the limit imposed on Treasury guarantees since 1998, was extended to cover Build-Operate and Build-Operate-Transfer projects through the Public Finance and Debt Management

[70] Consolidated budget domestic debt stock constituted, at end-2004, 96 percent of the total public sector domestic debt stock.

[71] The fixed vs. floating rate breakdown for FX-linked debt is not available for 2001.

Law and risk-sharing was introduced by a communiqué that set a 95 percent guarantee ceiling. A risk account was created to finance the obligations arising from guarantees. The revenues of the risk account consist of a budgetary allocation along with the loan fees, guarantee fees, repayments made by institutions and interest earned on the balance of the account.

2.77 ***Contingent liabilities continue to decline.*** Treasury guaranteed external debt stock came down to $5.2 billion (1.7 percent of GNP) at end-2004 from $6.1 billion (4.2 percent) in 2001. This represented a decline in the share of guaranteed debt in *total* external debt from above 5 percent to about 3 percent. As a result of the improved debt and risk management practices and the overall improvement in the economy, the amounts of guaranteed debt undertaken by the Treasury was also cut down to 0.1 percent in 2004, from a peak of 0.9 percent of GNP in 2001, while collections from receivables increased in 2004 and 2005. Treasury guaranteed debt stock decreased by about 30 percent from 2001 to mid-2005. The risk inherent in the energy projects did not materialize and there was no payment from the risk account for these projects.

D.2. Projected Debt Dynamics

2.78 ***Debt-to-GNP ratio is projected to decline further.*** In a base-case scenario, sound macroeconomic fundamentals will lead to a further reduction in the debt ratio over the medium term.[72] Table 2.9 below presents the debt projections for 2005-2008 based on a set of macro projections broadly consistent with the government's medium-term program supported by an IMF stand-by. In the next three years, the primary surplus target is kept at 6.5 percent of GNP indicating the commitment to maintain the fiscal adjustment path and also to forestall pressures on the external current account (see chapter 1). The CPI inflation and nominal interest rate are expected to continue to decline, albeit at a slower pace. The model assumes about an annual 0.5 percentage points decline in the real interest rate during this period, reaching 8 percent in 2008, while the real exchange rate stays relatively stable. Following the strong growth performance in 2002-2004, growth rates are expected to stabilize at 5 percent, closer to the potential growth rate under the base-line scenario examined in chapter 1. As a result, in this baseline estimation, the net debt-to-GNP level continues to decline, falling below 60 percent in 2005 (74.5 percent in gross terms) and further below 50 percent in 2008 (60.2 percent in gross terms).

[72] In this exercise, IMF definition of the primary surplus and debt figures are used.

Table 2.9 Baseline Debt Projections

Public Debt Forecasts (in % of GNP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Debt Stock	57.1	90.5	78.5	70.4	63.5	59.9	56.7	52.8	48.0
Domestic Debt Stock	38.0	52.8	46.2	48.3	46.0	43.9	42.7	40.4	37.1
Domestic Interest Payments 2/	14.9	23.0	15.9	14.8	11.7	8.6	6.2	5.5	5.1
Dom Debt Amortization	12.9	23.2	24.6	24.1	28.0	27.4	23.8	21.2	17.7
PSBR 3/	13.2	16.7	12.6	9.8	5.1	3.4	2.0	0.8	-0.2

Macroeconomic Indicators

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Nominal Interest Rate (%)	38.0	99.1	63.5	44.1	24.9	16.5	13.8	12.8	12.3
CPI Inflation (%, Dec/Dec)	39.0	68.5	29.7	18.4	9.3	8.0	5.0	4.0	4.0
Real Interest Rate 1/	-9.5	35.5	30.3	30.2	14.2	9.5	9.0	8.5	8.0
Depreciation (Dec/Dec)	24.4	114.3	13.5	-14.6	-3.8	5.5	2.5	1.4	1.4
REER (Dec/Dec)	13.7	-23.6	10.9	34.6	10.4	-0.6	-0.5	-0.4	-0.4
GNP growth rate (%)	6.3	-9.5	7.9	5.9	9.9	5.0	5.0	5.0	5.0
Primary Balance (% of GNP)	2.6	5.1	4.1	6.1	6.8	6.5	6.5	6.5	6.5

2.79 ***Fiscal adjustment and strong growth will gain additional importance in debt reduction.*** Based on the projected debt-to-GNP ratios and macroeconomic scenario, the composition of the change in these ratios for 2005-08 is presented in Table 2.10. The contribution of fiscal adjustment (primary surplus) in the reduction of the debt ratio increases from an average of 27 percent in 2003-04 to 48 percent of all debt reducing items in 2006-08, while continuing healthy growth also plays a significant role. On the contrary, in the medium term, the expectation is that inflation and seigniorage impact dies off as macroeconomic stability becomes more sustainable.[73]

TABLE 2.10 Projected composition of the change in Debt/GNP, 2005-2008

	2005	2006	2007	2008
TOTAL debt	**59.9**	**56.7**	**52.8**	**48.0**
Change in debt	**-3.5**	**-3.2**	**-4.0**	**-4.8**
Interest payments	9.9	8.6	7.4	6.3
Primary balance	6.5	6.5	6.5	6.5
Growth effect	2.8	2.7	2.6	2.4
Inflation effect	2.8	1.7	1.4	1.3
Revaluation effect	0.7	0.6	0.6	0.5
Seigniorage	1.3	0.9	1.0	1.1
Other items (privatization)	0.4	0.4	0.4	0.4
Errors and discrepancy	**1.0**	**1.1**	**1.1**	**1.1**

Source: Official data and own calculations.

[73] The reduction in debt-to-GNP ratio seems to be getting bigger after 2006; however, this reflects the increased relative contribution of the primary surplus (since primary surplus target is kept at 6.5 percent of GNP) to debt reduction.

D.3. Analysis of Risks

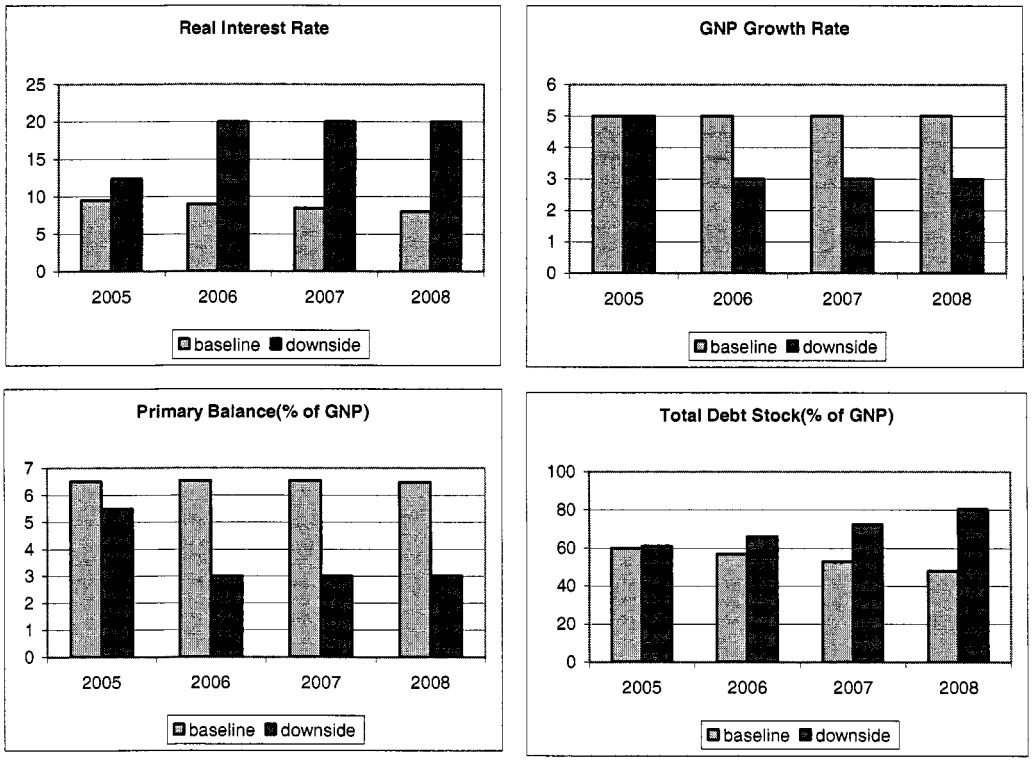
2.80 ***Debt levels are still high with respect to EU members and candidates.*** In 2004, Turkey's significantly reduced gross debt level, at 80 percent, as defined in ESA 95, was much higher than all of the new member states (EU-10) which are below the 60 percent threshold and the EU-15 average.[74] In addition, although much improved debt dynamics and sound fiscal performance have contributed to mitigating risks in the last few years, the Maastricht criteria may not be strong enough to ensure a sound fiscal framework in the face of Turkey's vulnerabilities: First, the sustainability of a given debt-to-GDP ratio depends not only on its level, but also on the composition of the public debt portfolio, in particular with regard to maturity. Despite recent improvements, the average maturity of Turkey's public debt remains much lower compared to EU-8, and especially EU-15 countries, making refinancing more challenging, but also posing important liquidity risks that should be hedged by a lower debt ratio. Second, Turkey's public debt ratio remains higher than in other comparable emerging economies, with a similar or slightly higher sovereign debt ranking. On average, the debt-to-GDP ratio of these comparators is below the Maastricht benchmark.[75]

2.81 ***A sensitivity analysis of public debt dynamics demonstrates the central role of credible policies that maintain a robust fiscal framework in building confidence.*** Despite recent improvements, the level and structure of Turkey's public debt still represent important challenges for debt management. The short average maturity of domestic debt leads to high monthly rollover requirements. Foreign exchange exposure is another important risk. To illustrate the potential risks for debt sustainability, a downside scenario can be formulated where the political will to continue the fiscal program falters and the primary surplus undershoots the 2005 target by 1 percentage point in 2005 and does not exceed 3 percent of GNP in 2006-08 (Figure 2.22). As a result, real interest rates could be in the 20 percent range, i.e., well above the projected program path. Growth performance is expected to weaken under the burden of high real interest rates, with the growth rate falling to 3 percent per year. A reversal in the strong growth pattern and deterioration in the public debt dynamics could lead to capital account outflows and exchange rate instability which would exacerbate the impact on the debt burden. Under these hypothetical conditions, the public debt burden could begin to rise and the currently declining path of the debt to GNP ratio could be interrupted.

[74] In 2004, gross public debt in proportion to GDP was, on average, 31.3 percent in EU-8 and 64.7 percent in EU-15—although significant disparities persist within the EU-15 group.

[75] Comparators include (by increasing S&P's sovereign debt rating): Brazil, Philippines, Ukraine, South Africa, Thailand, Tunisia, Mexico, Kazakhstan, Russian Federation, Egypt, India, Morocco, and Colombia. On average, the public debt-to-GDP ratio of these countries was 46.1 percent in 2003.

Figure 2.22 Downside scenario assumptions and projected debt/GNP ratios



2.82 ***A sudden depreciation of the exchange rate remains a major source of risk.*** The vulnerability of public debt to exchange rate can be demonstrated by an illustrative simulation. A 20 percent depreciated nominal exchange rate (compared to the baseline) would imply a 4 percent increase in the 2005 net public debt-to-GNP level. The actual impact is likely to be even higher taking into account the increase in the overall borrowing cost that will result from an environment with higher inflation, higher financing requirement and associated weak credibility. In order to measure Turkey's exposure to a potential foreign exchange shock, either triggered by a sudden loss of confidence in the domestic markets or an external event, total external debt needs to be consolidated with the FX-linked part of the domestic debt.[76] This amount, which can be referred to as Turkey's total FX-linked debt, stood at 63 percent of GNP at end-2004. Although this is substantially lower than the 2002 level of close to 87 percent, it still remains high.

2.83 ***Turkey faces an external financing challenge over the medium-term.*** The risks relate to both the magnitude and the composition of external financing. Annual financing requirement increased from US$ 39 billion in 2001 to US$62 billion in 2004 as a result of

[76] The level of external debt at $160 billion at the end of first quarter of 2005 consists mostly of long-term debt (80 percent of total). The share of public external debt declined from 66 percentin 2002 to 54 percent by September 2005, as the share of private sector debt increased from 34 to 46 percent during the same period.

the widening current account deficit and the amortization of short-term trade credits. Assuming that imports will stay at high levels as a result of strong growth, trade credit is expected to continue increasing, putting pressure on the gross financing requirement for 2006-08 (Table 2.11). Turkey needs to generate enough medium and long term capital inflows to: (a) finance an annual current account deficit of close to $22-23 billion in 2005-06 and somewhat lower levels in 2007-08 (assuming subsiding pressures on the current account); (b) service sizeable long-term loan repayments despite recent easing out of repayments to the IMF; and, (c) keep the short-term debt inflows at prudent levels. A potential mitigating factor is better prospects for attracting much higher levels of FDI than the 2004 realization of 0.9 percent of GNP[77], given Turkey's location, size, and expected EU accession. The improving level of Central Bank gross reserves could provide some additional cushion in case of a severe external shock. Looking forward, the extent to which Turkey will be able to attract much higher levels of foreign, non-debt creating savings in the form of FDI will remain an important determinant for the success of the economic program.

2.84 ***To sum up, debt dynamics have considerably improved but vulnerabilities still remain and should be managed carefully.*** The relatively appreciated real exchange rate and large current account deficit constitute a potential risk Turkey will need to cope with throughout the EU accession process. EU accession negotiations may boost capital inflows, providing relief from balance-of-payments pressures but also contributing to some real exchange rate appreciation. However, Turkey might also be exposed to capital flow reversals, in case the EU accession process were to occasionally stumble, with potentially destabilizing effects on the exchange rate, interest rates, debt dynamics, and the overall macroeconomic framework. Preserving a tight fiscal stance as needed to accelerate the reduction of the debt ratio and forestall current account pressures, and using projected large privatization proceeds to further reduce public debt, would be the best course to mitigate surrounding risks while making needed fiscal room for growth-enhancing expenditures and lower taxes.

[77] The table reflects the estimates at the time the analysis was carried out. However, the recently announced balance of payments statistics showed that 2005 net FDI inflow amounted to $8.6 billion.

Table 2.11 Turkey: External Financing Requirements and Sources, 2003 –2008 (billion $)

	Actual		Estimate		Projection	
	2003	2004	2005	2006	2007	2008
Gross financing requirements	47.4	62.2	75.8	79.7	84.0	87.0
Current account deficit (excl. official transfers)	8.3	15.9	21.9	22.8	21.4	20.6
Amortization on debt securities	3.9	3.8	3.6	2.8	3.7	3.7
o/w Public Sector						
Medium and long-term debt amortization	15.0	14.7	17.5	18.7	19.6	20.6
Public sector 1/	3.2	3.2	4.1	3.9	3.4	3.3
Private sector	10.4	10.4	11.7	12.8	14.0	15.0
Deposit money banks	1.4	1.1	1.7	2.0	2.2	2.4
Short-term debt amortization	20.1	27.8	32.8	35.4	39.3	42.2
Public sector (net)1/	0.0	0.0	0.0	0.0	0.0	0.0
Trade credits 2/	22.4	31.4	35.2	38.5	41.4	44.2
Banks and other private (net)	-2.3	-3.6	-2.4	-3.1	-2.0	-2.0
Available financing	47.4	62.2	75.8	79.7	84.0	87.0
Foreign direct investment (net)	1.2	1.9	3.7	8.2	5.3	4.0
Portfolio flows	7.9	13.2	14.5	13.4	10.3	10.7
Public sector	5.3	5.8	6.0	5.5	5.5	5.8
Deposit money banks	0.0	0.0	0.0	0.0	0.0	0.0
Private sector (net)	2.6	7.5	8.5	7.9	4.8	4.9
Medium and long-term debt financing	14.1	20.7	25.7	25.5	26.1	26.6
Public sector 1/	0.7	1.7	2.7	3.2	3.0	2.1
Private sector	12.0	15.5	16.5	16.8	16.9	17.6
Deposit money banks	1.4	3.4	6.5	5.6	6.3	6.8
Short-term trade credits, currency and deposits	23.0	27.6	37.4	41.1	42.6	45.3
Official transfers	0.3	0.3	0.6	0.8	0.6	0.6
Other 3/	5.0	2.8	5.3	0.0	0.0	0.0
Net reserves (+/- = decrease/increase)	-4.1	-4.3	-11.4	-9.3	-0.9	-0.2
Accumulation of gross reserves	-4.0	-0.8	-7.1	-5.0	2.1	1.6
IMF (net)	-0.1	-3.5	-4.3	-4.3	-3.0	-1.8
Purchases	1.7	1.2	3.3	3.3	2.5	0.8
Repurchases	-1.7	-4.7	-7.6	-7.6	-5.5	-2.7

Source: CBT, IMF and WB estimates.

1/ General government and Central Bank of Turkey.
2/ Series reflects gross flows of short term trade credits, and stocks of credits to the banking sector.
3/ Errors and omissions.
4/ Interest plus medium- and long-term debt repayments as percent of current account receipts (excluding official transfers).

E. OPTIONS FOR REFORM

2.85 ***Hedging risks for debt sustainability and making fiscal room for growth-enhancing expenditures and lower taxes is the main policy challenge.*** The challenge for the government is to enhance the quality of fiscal adjustment to meet multiple goals: (i) achieving a continuing reduction in the debt ratio; (ii) making room for growth-enhancing expenditures; and (iii) laying the groundwork for lower taxes to promote

growth and reduce existing distortions. Meeting this challenge would call for a three-pronged approach:

- Promote structural reforms in public expenditures (horizontal or sectoral) that would free up resources over the medium term, which would be reallocated from low-value to high-value and growth-promoting programs;
- Promote tax reforms with the aim of broadening the tax bases and rationalizing the tax system, which would also create some medium-term room for lowering the tax rates.
- In the long term, use the fiscal space that will be created through the reduction of the debt ratio and associated lower interest payments on public debt to lower the tax burden—conditional on external current account sustainability. Using this fiscal space to increase expenditures may be a missed opportunity for growth-promoting tax reform. It may also be counterproductive, as Turkey's public expenditure at the General Government level is already above levels seen in other fast-growing emerging economies.

PART B: STRUCTURAL POLICIES – IMPROVING THE FUNCTIONING OF KEY MARKETS AND EFFICIENCY OF PRODUCTION FACTORS

CHAPTER 3. PRODUCT-MARKET REGULATIONS TO IMPROVE THE INVESTMENT CLIMATE[78]

A. PRODUCT MARKET REGULATIONS – AN AREA IN NEED OF REFORM

3.1 ***Improving product market regulations (PMRs) would strengthen the investment climate, in turn fostering productivity and sustainable economic growth.*** Product market regulations — including administrative barriers, barriers to trade, state control and competition — together with elements addressed in other chapters of this report (such as macroeconomic stability, access to infrastructure, access to finance and the adequate functioning of labor markets) are critical determinants of productivity and investment, which can unleash private sector potential, help firms grow, generate new opportunities for employment, and reduce informality.[79] Box 3.1 presents a brief summary of key findings from international evidence on the links between PMRs and growth.

3.2 ***Several features of the Turkish economy indicate that PMRs have an important role to play in promoting investment and productivity.*** These include: (a) low FDI— though the boom observed in 2005 may signal better outcomes in the future, (b) the dual structure of the economy, which comprises a few modern and dynamic firms together with a segment of laggards, (c) limited contributions to the country's value added by Small and Medium Enterprises (SMEs), and (d) high informality.

3.3 ***Until 2005 FDI has remained low, especially for green-field investment*** (Figure 3.1). Initial econometric evidence shows that key determinants of FDI include large market size, openness to foreign trade and institutional quality, including control of corruption, administrative barriers and contract enforcement.[80] Improving these elements is important for increasing on a sustained basis Turkey's capacity to attract FDI, which would in turn improve competition in the local market, facilitate integration with the global economy, bring in new technologies, and generate new employment.

3.4 ***Sector productivity is highly uneven.*** While some Turkish sectors are highly modern and productive (labor productivity of the apparel and automotive industries are

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[78] The findings of this chapter will be further explored through — and complemented by — the results of an Investment Climate Study (ICS) based on a survey of 1,300 Turkish firms and 200 hotels, which the World Bank and EPRI are jointly preparing. The ICS will be completed in the spring of 2006.

[79] *World Development Report* (World Bank, 2005).

[80] See S. Sayek "FDI in Turkey: The Investment Climate and EU Effects" (background paper prepared for the CEM, 2005). The econometric analysis is based on empirical modeling of FDI determinants for Central and Eastern European countries and the cohesion countries, as well as Turkey. The analysis uses data covering 1992-2003, and the model is estimated using panel estimation techniques.

estimated at more than 80 percent of US levels, for example[81]) others (such as the electricity, retail and dairy sectors) have strikingly low productivity, hampered by lack of competition (electricity), or presence of traditional (often small- and medium-size) players —see Figure 3.2.

3.5 ***The contribution of SMEs to the economy is unbalanced.*** Turkish SMEs (roughly defined as firms with fewer than 250 employees) constitute 61 percent of total employment in Turkey, but contribute only 26.5 percent to the economy's value added, significantly less than SMEs in comparator countries — see Figure 3.3.[82] Figures from the Turkish Foreign Investor Association indicate that Turkish SMEs' contributions to investment and exports are about 7 percent and 8 percent respectively, versus 36 percent and 20 percent in South Korea, for example.[83] SMEs' low contribution to economic activity is related to scarce market competition, barriers to entry, operation and exit, together with lack of integration with larger firms (except in a few specific sectors).[84]

3.6 ***The informal sector is oversized.*** By some estimates, the informal sector in Turkey produces 31 percent of GNI, more than in most comparator countries, and absorbs as much as 51 percent of the labor force (also see chapter 4).[85] High informality has a significant impact on the government's fiscal revenues, competition levels, and the overall productivity of the Turkish private sector. The high level of informality is also related to the disincentives firms face when operating in the formal market, including administrative barriers.

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[81] Productivity is defined as output per worker (McKinsey).

[82] The Turkish State Planning Organization (SPO) reports that Turkish SMEs constitute 99.8 percent of total enterprises and 76.7 percent of total employment (*SME Strategy and Action Plan,* 2004, page 8). The differences between these numbers and those reported in the text are due to different definitions of SMEs and formal employment, as well as on the different years of the analysis.

[83] YASED (mimeo, 2003).

[84] Other factors include SMEs' low use of advanced technologies and quality standards and the lack of a skilled labor force (see the chapter on Innovation, Technology and Skills).

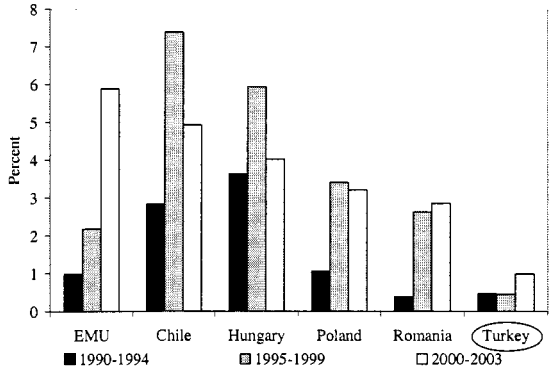
[85] OECD, *Economic Survey of Turkey* (Paris, 2004).

Box 3.1: Theory and Evidence on the links between Product Market Regulations and Growth

Improvements in Product Market Regulations foster productivity growth through three channels: (i) by reducing market power and monopolistic pricing behavior, shifting production from less productive to more productive firms, and thereby increasing efficiency (allocative efficiency); (ii) by improving utilization of inputs — that is, labor and capital — in individual firms (productive efficiency); and (iii) by creating an incentive to innovate and thereby raising total factor productivity (dynamic efficiency). While the first two effects are one-time gains, the third effect is persistent over time and likely to be more important in the long run.

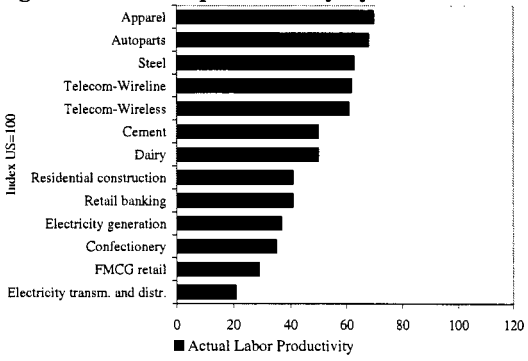
Evidence on the allocative efficiency channel is strong. Negative association between market openness and profitability was first shown by Bain (1951) for the American manufacturing industry, and the findings have been confirmed by many others. Based in part on the OECD PMR indicators, Griffith and Harrison (2004) showed that improvements in the product market regulatory regime (broadly defined to include, for instance, state ownership in the enterprise sector) have a negative impact on economic rents, thus empirically supporting the allocative efficiency channel. Improvements in productive efficiency within firms appear to be more important than production shifts from less productive to more productive firms, although both effects are found — see for instance Barnes et al. (2001). Nicoletti and Scarpetta (2003) found that regulations promoting competition and private sector governance boost productivity. They also found that lowering entry barriers promotes productivity, and of particular interest for Turkey, that the further a country is from the technology leader, the greater is the impact of lowering barriers to entry. More broadly, competitive product markets have been shown to have a positive impact on both per capita GDP and employment (Blanchard and Giavazzi, 2003). Research has also found that the higher entry costs and lower degree of turnover in Europe compared to the US are an important factor in explaining Europe's weaker growth performance over the past decade (Aghion and Howitt, 2005).[86] According to Aghion and Howitt, the fact that competition policy in the EU has placed relatively more emphasis on competition among incumbent firms than entry may explain, to some extent, that exit and turnover are more important in the US than Europe. Thus, 12 percent of the largest US firms by market capitalization at the end of the 1990s had been founded less than twenty years before, against only 4 percent in Europe. Emphasizing policies that facilitate business entry would deserve particular attention, especially as the EU acquis is less elaborate in this area.

Figure 3.1: Foreign direct investment



Note: EMU denotes European Monetary Union countries.
Source: World Bank, WDI.

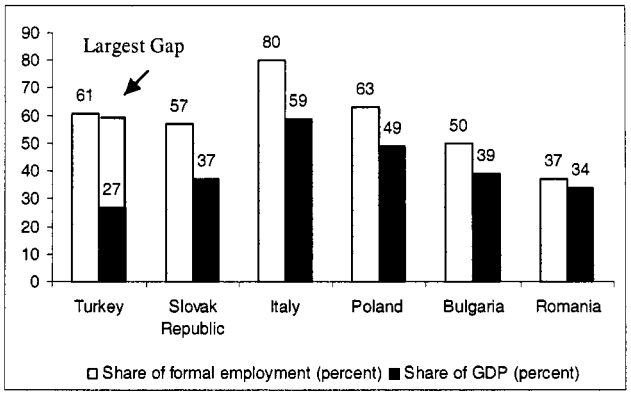
Figure 3.2: Labor productivity by sector



Source: McKinsey Global Institute (2004).

[86] "Appropriate Growth Policy: A Unifying Framework", Mimeo, Harvard University, August 2005.

Figure 3.3: SMEs' share of employment and GDP

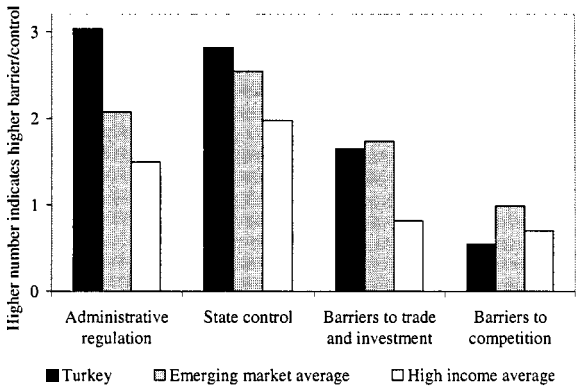


Source: Ayyagari, Beck & Demirguc-Kunt (2003)
Note: SMEs as firms with fewer than 250 employees.

3.7 ***Improving Turkey's mixed performance on PMRs is critical for EU accession and facilitating rapid and sustained growth.*** Surveys by the OECD convey a sense of Turkey's mixed performance on PMRs — see Figure 3.4.[87] While barriers to trade and competition policy have improved significantly in the past few years, administrative barriers and state control remain significant constraints on investment and productivity. The EU Progress Report also highlights the need for Turkey to improve several aspects of its PMRs, including: (a) registration procedures and costs of establishing a business (*Acquis* Chapter 20 on Enterprise and Industrial Policy); (b) state aid with a distortive effect on competition (Chapter 8 on competition policy); (c) technical trade barriers (Chapter 1 on free movement of goods), which are overdue to be addressed under the Customs Union agreement; and (d) restrictions on foreign ownership (Chapter 4 on free movement of capital). The sections below analyze Turkey's performance on key PMR factors and provide policy recommendations for improvement.

[87] OECD PMR database (2005). The OECD developed a methodology to evaluate countries' PMR performance based on surveys across member countries covering more than 800 data points. Current data reflect 1998 and 2003 and are available for 30 countries of which 6 (including Turkey) are considered emerging markets. The survey covers a wide range of topics that are important for the efficient functioning of product and service markets, such as state ownership and control over businesses (for instance, price controls), regulatory burdens and licensing, legal barriers constraining competition in certain sectors, the antitrust regime, and barriers to international trade and investment. The data points are weighted and combined into indicators at different levels of aggregation, allowing countries to evaluate their overall PMR regime as well as its components, all the way down to the 800+ specific data points.

Figure 3.4: Turkey's performance on key PMR indicators



Source: OECD database on PMR, 2005.

Note:

- *Administrative regulation refers to administrative burdens placed on firms, such as licensing and permits required to open, operate and close a business.*
- *State Control refers to public ownership and other state involvement in the business sector, such as provision of state aid, price control and command and control regulations.*
- *Barriers to trade and investment refers to tariffs and restrictions on foreign ownership, including regulatory practices against foreign firms.*
- *Barriers to competition refers to sector exemptions from antitrust legislation and regulatory limits on competition in specific sectors.*

B. ADMINISTRATIVE BARRIERS

3.8 ***Reducing administrative barriers would strengthen Turkey's business environment, increase investment levels and facilitate alignment with EU requirements on enterprise and industrial policy.*** Streamlined registration, operation and closure procedures encourage entrepreneurs to open new firms and banks to move capital to the most productive uses, in turn fostering (local and foreign) investment, competition and productivity. Effective resolution of commercial disputes also ensures that firms interact smoothly, reducing inefficiencies and costs. Simplified procedures and contract enforcement also help reduce informality and facilitate SME growth. As indicated by the evaluation of Turkey's compliance with *Acquis* requirements in the 2005 EU Progress Report, while the Government has made some progress to reduce administrative and business judiciary hurdles, several procedures are still an impediment for business operation and should be reduced.[88]

[88] See 2005 Turkey EU Progress Report, Chapter 20, page 98.

B.1. Firms' Entry, Operation and Exit[89]

3.9 ***Turkey has significantly reduced the time for business registration, but the cost is still high.*** Business registration in Turkey has been simplified since 2003, when a modern investment law was implemented and additional legislation affecting registration procedures was adopted.[90] Legislative changes have been coupled with administrative changes, including: (a) transformation of the regional offices of the Chamber of Commerce into hubs responsible for communicating firm registrations to other institutions (such as the Treasury, the Statistical Institute and the Tax Administration), reducing the time that entrepreneurs spend visiting various agencies; (b) full computerization of the Chambers' entry archives; (c) elimination of superfluous steps (e.g., registration with the Ministry of Industry and Commerce); and (d) equal treatment for foreign investors, who can now open a business in Turkey without approval from the Treasury and regardless of the firm's assets (the minimum threshold of US$50,000 has been eliminated). According to the 2006 Doing Business report, starting a firm in Turkey now takes only 9 days, one of the shortest times among comparator countries (see Table 3.1), below the OECD average and close to EU best practice. The Turkish Government indicates that starting a fim takes even less time (only about two days)[91]. However registration cost is still high at Turkish Lira 1,600 (US$1,000),[92] equivalent to 28 percent of GNI per capita, versus 5 percent of GNI in Romania, for example, and 8 percent on average for OECD countries. The main reasons for Turkey's high startup costs are fees for notarizing the company's articles and accounting books (US$250) and fees related to the trade registry (US$750), both well above the administrative costs that notaries and the trade registry incur for these procedures.

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[89] For a more detailed discussion, see M. Reichel, "Administrative Barriers" (prepared as a background paper for the Investment Climate Study, 2005)

[90] The Law on Amendments on Turkish Commercial Code No. 4884, Tax Procedural Law, Stamp Tax Law, Labor Act and Securities Law, all of which were adopted on June 17, 2003, as well as the Communique Concerning the Principles of Procedures for the Establishment and Amendments in Articles of Associations of Joint Stock Companies and Limited Liability Companies (Domestic Trade 2003/3).

[91] Indicated by the General Directorate of Foreign Investment, Undersecretariat of Treasury. The World Bank will revise the procedures and times needed to set up a business included in the Doing Business report in order to ensure consistency between the two analyses.

[92] *Doing Business* (World Bank, 2006). The figure refers to a Limited Liability Company.

Table 3.1. Entry and Exit, Turkey and comparator countries, 2004.

	Starting a Business		Closing a business in case of bankruptcy	
	Time (days)	Cost (% GNI per capita)	Time (years)	Recovery rate (cents on 1 US$)
Turkey	9	28	5.9	7.2
International best practice	2 (Australia)	0 (Denmark)	0.4 (Ireland)	92.6 (Japan)
EU best practice	5 (Denmark)	0 (Denmark)	0.4 (Ireland)	91.0 (Norway)
Bulgaria	32	10	3.3	33.5
China	48	14	2.4	31.5
Croatia	49	13	3.1	28.4
Poland	31	22	1.4	64.0
Portugal	54	13	2.0	74.7
Romania	11	5	4.6	17.5
Slovak Rep.	25	5	4.8	38.6
Spain	47	17	1.0	77.8
Thailand	33	6	2.7	43.9

Source: World Bank, Doing Business Report, 2006.
Note: Data refers to the countries' most populous cities.

3.10 ***Changes to exit procedures are currently underway.*** Closing a company in Turkey can be initiated by the owner and the managing director if the company is insolvent. The closing is formalized and supervised by a judge of the commercial court. Rights and obligations of the two parties (owner and creditors) are set in the bankruptcy law. According to the most recent World Bank data, closing a business in Turkey is still very difficult — the insolvency procedures take about 6 years, and the recovery rate is extremely low at 7 percent. However, these statistics do not yet reflect reforms of the bankruptcy law that were undertaken in 2003 and 2004, aimed at strengthening creditors' rights, streamlining court processes and enforcement, and ensuring compliance with EU requirements. Unfortunately, it is too early to estimate the effect of these legislative changes, particularly since the courts are currently processing a backlog that was built up over many years with a slow, inadequate system and is still clogging the pipeline.

3.11 ***Licensing procedures increase firms' start up times and operating costs.*** Firms often need licenses to become fully operational after registering, as well as to remain in business. Licensing obligations put a considerable burden on both the private sector (in terms of time, human and financial resources) and the public agencies responsible for granting licenses and carrying out inspections. To obtain a license, a firm must collect and prepare documents, gather information, and fill out applications, which often must be submitted in person. It must also pay license fees and, at times, procure costly professional assistance from lawyers or consultants. Licenses must also be monitored and renewed in time to avoid negative consequences. During the duration of the license, random and routine inspections are often carried out, requiring the license holder to assist inspectors, explain issues and submit documents, in turn increasing firms' costs and decreasing productivity.

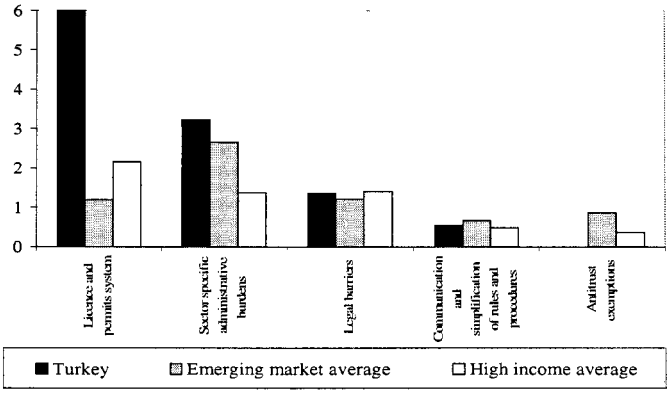
3.12 ***Licensing remains a major bottleneck for doing business in Turkey.*** Some administrative procedures to operate a business have been simplified during the past year, for instance permits required to open and set up a work place, specific permits required in the mining sector and, to a lesser extent, the food processing industry, and the procedures for certificating tourism establishments have been streamlined. However, licenses and

regulations are still the most cumbersome procedure in Turkey –see Figure 3.5. Factors that complicate the licensing process in Turkey include:

a. An excessive number of licenses required from firms, coupled with an excessive number of agencies involved in granting them. Mandatory licenses are also often required, even for purposes beyond health, safety and environmental protection. The excessive number of licenses is coupled with an excessive number of agencies involved in the licensing process, such as (among others) Chambers of Commerce, the Ministries of Environment and Health, Fire Departments, the State Hydraulic Works Department, and the State Railways Administration. The excessive number of agencies involved significantly complicates and convolutes firms' start up and operating procedures.

b. The unclear role of the municipalities. In most countries, municipalities are responsible for ensuring that firms' locations comply with urban plans, fire and other safety-related issues. In Turkey, on the other hand, municipalities are often responsible for examining other authorities' approvals in several areas[93] (e.g., urban planning, safety, health and environment). This increases bureaucratic costs for the firms and results in an unclear and often discretionary decision-making process.

Figure 3.5: Administrative barriers, selected indicators, 2003



Source: OECD database on PMR, 2005.

*3.13 **A partial licensing reform is currently underway.*** The licensing system is currently being revised, with a bill in Parliament establishing a centralized system that will create "one-stop-facilities" for licensing at the municipality level.[94] Under the reform, the municipality will obtain all the inputs necessary to grant a license internally, after the applicant submits the application. The reform should be evaluated, as international experience shows that mandatory one stop facilities often add another bureaucratic step to –rather than helping speeding up—the process.

[93] For all firms located within municipal boundaries.

[94] Draft Law on Regional Agents.

*3.14 **Administrative procedures should be further streamlined, with a specific focus on reducing cost of entry and simplifying licensing processes. Progress on simplifying exit procedures should also be closely monitored.***

Key measures to improve the ***registration process*** include:

- Reducing start up costs, by reviewing current fees and ensuring closer alignment with the effective costs incurred by the notaries and the trade registry, and possibly by making notarization a service offered by the Trade Registry.
- Establishing an integrated registration system that includes a unified business number for both registration and taxation, making the information exchange between these two agencies more efficient.
- Establishing an integrated registration and licensing system. The existing exchange of information between the Chambers of Commerce and the tax authorities could serve as a model for further integration with the municipalities.
- Ensuring that the ongoing review of the Turkish commercial code covers compliance with EU disclosure requirements for company registration.
- Introducing an online registration service to streamline business registration in all parts of the country. This will in turn require updating the software in the municipalities and ensuring recognition of electronic signatures.

Key measures to reduce the ***time and costs of licensing***, both for general and for sector-specific licenses, include:

- Continuing the ongoing effort by the Undersecretariat of Treasury to create an inventory of existing licenses, which will allow identifying overlapping and duplicating requirements, documentations and approvals, in turn laying the ground for streamlining the existing licensing process.
- Re-assessing the proposal to introduce a one-stop facility to acquire a license. As mentioned above, international experience shows that this may further complicate the licensing procedure by adding another layer of bureaucracy.
- Assigning each licensing task to a specialized authority, with municipalities concentrating on urban planning, construction requirements and specific safety issues only. The licensing systems of best practice countries (e.g., Germany) should be taken as a reference for carrying out these reforms.
- Developing less burdensome ways to regulate businesses, including using mandatory licenses as *ultima ratio* only (i.e., for health, safety and environmental standards) and, whenever possible, replacing licensing with a system of inspections or reporting requirements coupled with an effective enforcement system (fines and penalties).

Further policy options to improve ***exit procedures*** should be reviewed after evaluating the results of the ongoing bankruptcy reform, since recent interviews with several judges from commercial courts indicate that considerable streamlining of exit procedures is

expected[95] — estimates of about six months for completing a bankruptcy case appear to be a realistic forecast among the experts.

B.2. Resolving Commercial Disputes

3.13 ***Improving efficiency and transparency of the commercial judiciary increases predictability of the business environment in which firms operate, in turn increasing investments and reducing business costs.*** Better performing courts increase firms' willingness to contract with new customers and suppliers, and increase firms' efficiency. As World Development Report '05 showed, when courts perform better, firms invest more and enjoy greater access to credit. Court inefficiencies, on the other hand, reduce the potential for investment and increase transaction costs, particularly for SMEs, which incur proportionally higher costs when involving the judiciary in resolving a business dispute. Court inefficiencies are also often exacerbated by lack of confidence in the impartiality and quality of the commercial courts and by the risk of corruption.

3.14 ***Resolution mechanisms for commercial disputes have improved in Turkey.*** Since 2000 Turkish authorities and the Turkish judiciary have taken important steps to speed the resolution of commercial disputes. Following the necessary constitutional changes, the legislature approved in 2001 a new statute governing arbitration proceedings when one disputant is not Turkish. Reflecting best practice, the parties are now free to choose where the arbitration will be held and what procedures will control it. The courts' ability to intervene in the proceeding or second guess the arbiter's award is sharply limited too, again in accordance with international norms, and a 2004 court decision made it clear that the law applies regardless of when the contract was made or the dispute arose. Measures aimed at improving the overall efficiency of the judiciary are also beginning to produce results. The judicial holiday was cut from 45 to 36 days in 2004. The first stage of the National Judicial Network Project (UYAP), automating the central units of the Ministry of Justice, is complete, and field units are now being linked to the center. Establishment of Intermediate Appeal Courts is underway and, following the changes in the Criminal Code and Criminal Procedure Code, the Civil Procedure Code is being revised to enable civil courts to operate more effectively and efficiently. All courts and prosecutors have been supplied with computers and received initial training in their use.

3.15 ***The impact of these and other reforms are reflected in Turkey's key indicators on contract enforcement.*** By and large Turkish courts compare well with those of EU8 and accession countries, with days and procedures needed to complete a simple debt case lower than the average across the EU8 and those in Bulgaria and Romania (Table 3.2). Turkey's figures also do not compare particularly unfavorably with the 225 days and 19 procedures that are the norm in the high income OECD.

[95] Estimates indicate that ongoing reforms should lead to completion of a bankruptcy case in six months.

Table 3.2. Contract Enforcement

Country	Days to enforce a contract	Number of procedures	Cost as percentage of overdue debt
Turkey	330	22	12.5%
International and	27 (Tunisia)	11 (Australia)	4.2% (Norway)
EU best practice	48 (Netherlands)	14 (Greece)	
Bulgaria	440	34	14.0%
Romania	335	43	12.4%
EU8	450	27	10.8%
OECD	225	19	10.6%

Source: World Bank, Doing Business Report, 2006.

3.16 ***However, the cost of litigation, backlogs in the commercial courts and enforcement proceedings has room for improvement.*** The cost of litigation is still relatively high in Turkey, at 12.5 percent of the amount owed — see Table 3.2. By one estimate, a person paid the minimum wage must work 6.1 days to pay for one hour of oral advice and 10.7 days to have a lease reviewed. Two additional areas of concern include backlogs in the commercial courts (*Asliye Ticaret*) and enforcement proceedings without judgments (*ilamsiz takip*). Data from the Ministry of Justice web site shows that during 2002 and 2003 *Asliye Ticaret* received roughly 95,000 cases per year, yet decided only half that number each year. The average time to decide a case is 417 days, without counting time for appeals. Times to disposition across all chambers of the Court of Cassation (Yargitay) are also on the rise.[96] The data also show difficulties with enforcement proceedings without judgments (*ilamsiz takip).* At the beginning of 2003, some 7.4 million actions were pending, and while just over 3 million were resolved, leaving 4.4 million unresolved at the close of the year. Although more recent data are not yet available, the Turkish Ministry of Justice indicates that several initiatives in the meantime have improved the efficiency of the system. Further improvements are underway. For instance, a commission is currently studying the draft law on Uncontroversial Jurisdiction and Alternative Dispute Resolution Methods with the objective of allowing for faster and simpler trials with minimum expenses as well as increased use of methods such as late performance, peace and conciliation. While recognizing that recent improvements are not reflected in the data, the magnitude of the figures suggests that this procedure is being abused. Private banks and others who lend against collateral report that it can take as long as six months to foreclose on moveable property and even longer on real estate.

3.17 ***Turkey needs to continue reforming its commercial and civil justice systems to trim the time and cost required to resolve disputes***. Key measures to improve resolution mechanisms include:

- *Adopting a case management system and associated alternative dispute resolution mechanisms.* Case management includes the entire set of actions a court takes to monitor and control the progress of cases, from initiation through trial or other initial disposition to the completion of all post-disposition matters. Time standards are set,

[96] In the 11th chamber, which hears commercial cases, processing time rose from 152 days in 2002 to 202 days in 2003, the latest year for which data is available.

judges monitor the progress of each case, and their success in meeting the standards serves as a key measure of their performance. As litigants and their attorneys realize that they cannot avoid resolution through delay, their incentive to resolve cases through mediation or other forms of alternative dispute resolution increases. The combined effect is thus to reduce both delays and the caseload.

- *Reforming the system for choosing experts.* Turkish judges routinely call on university professors and even lawyers to decide cases by hiring them to submit expert reports on issues in dispute in a case. The result is greater cost and often more delay. One way to streamline proceedings and cut costs is reduce the use of experts in civil litigation. In the United Kingdom, France, and the United States, reforms covering when to use experts, how to select and compensate them, and the weight the experts' opinions are entitled to receive have all been recently proposed or enacted. The commission now reviewing the expert law should review these reforms and see how they can be adapted to the Turkish setting.

- *Applying to domestic arbitrations the same rules that govern international arbitrations.* When both parties to a dispute are Turkish, an arbitration proceeding is governed by the Turkish Code of Civil Procedure. The code and the decisions interpreting it do not give the parties as much autonomy as the 2001 international arbitration law, nor do they as effectively limit the courts' right to interfere with the proceedings or second-guess an award. There is no reason why domestic arbitrations should be treated differently than international ones, and according to them the same treatment will encourage more litigants to choose arbitration over a lawsuit.

- *Providing competitive restraints on fees for legal professionals.* Some reports suggest that litigants are discouraged from turning to domestic arbitration, let alone litigation, because legal fees are very high. Lawyers' fees are set by the bar association and are widely considered to be quite high. By one estimate, a person paid the minimum wage must work 6.1 days to pay for one hour of oral advice and 10.7 days to have a lease reviewed. Supra-competitive legal fees can be a drag on the entire legal system, discouraging firms and citizens alike from seeking legal advice or pursuing legal remedies. As part of its effort to make the European Union more competitive, the Commission has launched an initiative to bring the fees for lawyers, notaries, and other liberal professions more in line with those that would be charged in a competitive market. In April 2004, the Competition Authority and Competition Board ruled that the setting of prices by professional bodies was anticompetitive. This decision should be fully implemented and other measures considered to ensure Turkish policy respecting legal services conforms to the Commission's initiative.

- *Evaluating the courts' caseload to observe the principle of proportionality.* As the courts in many OECD countries began to tackle the problems of delay and cost the Turkish courts now face, their leaders considered whether, given existing resource constraints and alternatives, their caseloads and the procedures for dealing with their cases were appropriate. In the United Kingdom the Woolf reforms introduced the principle that the resources devoted to a case must be proportionate to the value, importance, and complexity of the dispute. In civil law jurisdictions, these considerations translated into a rethinking of the automatic right to appeal by way of a complete rehearing. In Ontario and New Zealand, it led to replacing the system of

court-adjudicated liability with social insurance schemes. In every case, such reforms were initiated by a searching analysis of the courts' caseload and the costs it imposed on the parties and society as a whole.

C. STATE AID[97]

3.18 ***Monitoring — and eliminating distorting — state aid is required by the EU and is essential to guaranteeing a level playing field among firms, in turn increasing competition, innovation and productivity.*** State aid refers to government policies that are "a form of state support to promote a certain economic activity and discriminate between beneficiaries and non-beneficiaries." The term "discriminate" is essential to the identification of state aid, which covers not only subsidies and tax exemptions, but also, for instance, equity participations by the government and exclusive rights granted to certain firms. State aid can be classified as either horizontal or vertical. Horizontal aid is aimed at broad development objectives, such as SME growth, R&D, environmental protection, employment and training. In contrast, vertical aid targets specific sectors or individual firms. Since the launch of the Lisbon Strategy in 2000, the EU has focused on reducing overall state aid and on shifting the aid towards horizontal objectives in all member and candidate countries, because vertical aid is not compatible with the EU *Acquis*. In addition to ensuring compliance with EU requirements, monitoring and reducing state aid levels the playing field among firms, ensure that the market economy works efficiently and thereby fosters lower prices, efficiency, innovation and growth.

3.19 ***State aid in Turkey lacks sufficient monitorable disclosure.*** Turkey has made initial efforts to improve monitoring of State Aid, including preparation of a bill on the monitoring and audit of government assistance. However –and in contrast to the EU, including the new member countries—Turkey does not systematically monitor its state aid[98]. This may have a deterring effect on FDI and contestability in domestic markets in general. State Aid is granted by several institutions, including the Undersecretariats of Treasury and Foreign Trade, Ministry of Finance (Revenue Administration), Ministry of Industry and Trade, Ministry of Culture and Turism, KOSGEB, Turk Eximbank, and TUBITAK.

3.20 ***Although Turkey has made progress towards horizontal objectives, there is need for applying formal procedures for monitoring and control as to State Aid's potentially distortive effect or compatibility with the Acquis.*** Vertical aid, targeting specific beneficiaries, sectors or products, includes support to state banks and other state-owned enterprises, public service institutions, and specific provisions for certain sectors, including agriculture, fisheries, cultural activities, and (most aspects of) transport. Financial transfers to SOEs are intended to cover investment and operating deficits of loss-making companies. These transfers are estimated at around YTL 2.4 billion in

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[97] This report does not specifically address the issue of privatization, which will be covered in the Investment Climate Study and in subsequent CEMs.

[98] The European Commission's 2005 Progress Report notes that Turkey has not yet fulfilled its obligation under the Customs Union to establish a state aid monitoring authority and to align and ensure full transparency of its existing and new state aid schemes.

2005[99]. On the positive side, privatizations picked up substantially in 2005 and thereby contributed to reducing the scope of state aid.

3.21 ***A broad array of instruments is being used.*** Examples of instruments used are grants; state guarantees; exemptions from customs duties; exemptions from VAT, energy support through reduced electricity tariffs; credit allocations from the budget; and free land allocation. Energy support through electricity consumption subsidies granted to firms established in less developed areas are likely to be distorting as they constitute operating aid. These subsidies are considered by the Government as a means to promote employment generation in less-developed areas as they are linked to the level of firm employment.[100] Under state aid rules in general investment aid would be considered to be eligible as non distorting intervention. Aid to the ongoing production would be compatible with competition rules only in exceptional circumstances and under tight restrictions.

3.22 ***Turkey has committed to implementing reforms of the state aid regime to bring it in line with the Acquis since 1996, when the final phase of the Customs Union became effective, but it has not yet complied with the Customs Union requirements.*** Under the *Acquis*, an advantage conferred by the State is regarded as state aid if it is granted by a Member State or through State resources, it distorts or threatens to distort competition, it favors certain undertakings or the production of certain goods, and it affects trade between Member States. The Customs Union requirements include making Turkish State Aid legislation compatible with the EU *Acquis*, as well as notifying the EC of all aid schemes in force and of any individual aid to be granted that would be notifiable were Turkey a Member State. Turkey has yet to fulfill these commitments. The State Planning Organization, which is responsible for drafting the legislation, has submitted draft state aid control legislation to the Prime Minister's office. The screening required by the EU state aid regime[101] as to the compatibility of instruments used with the EU acquis has been initiated.

3.23 ***State aid reforms in Turkey should include legislative and policy changes, institutional development, and the introduction of a regime for Services of General Economic Interest (SGEI).*** First, Turkey needs to adopt state aid control legislation aligned with EU directives. Second, a state aid monitoring agency must be set up with adequate capacity to effectively monitor and supervise state aid. As indicated by the 2005 EU Progress Report, no developments can be reported with regard to either the adoption of state aid legislation or the establishment of an operationally independent state aid monitoring authority. Third, distorting or state aid that is not in compliance with the Acquis should be properly identified and eliminated. Turkey will be under pressure to

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[99] Presentation by the Republic of Turkey on State Aid for the screening meeting of Chapter 8, 1-2 December 2005.

[100] To be eligible for energy support, companies operating in less-developed areas should employ at least 30 workers (10 workers in agricultural activities). Energy support ranges from 20 to 40 percent of energy cost (50 percent for companies in industrial zones) depending on the number of company employees.

[101] The EC Treaty provides that State Aid is illegal unless there is: (a) prior EC approval; or (b) an exemption given by the EC or the Council. A general exception to the above is de minimis aid. However, de minimis support is required to be closely monitored. The Treaty also contains four key "distortion tests" to ascertain if a measure is State Aid, namely: economic advantage for the recipient, selectivity to certain beneficiaries, distortion of competition, and effect on trade between Member States.

demonstrate a strong start to enforcement well ahead of accession, because alignment with EU directives is considered a complement of the Customs Union. Fourth, the state aid reform package should include the transfer of state enterprises to a regime of "Services of General Economic Interest" as defined by the EU (possible sectors include electricity, water and broadcasting) while state enterprises outside such a regime will not be eligible for state aid. Minimum requirements for eligibility under the SGEI regime include the following: (a) the public services obligations must be clearly defined; (b) the parameters on the basis of which public services compensation will be paid must be established in advance; (c) all elements of compensation must be documented; and (d) an analysis of the costs must be prepared on a comparative competitive basis. If this option is used, Turkey must establish an SGEI regime in accordance with EU requirements.

D. BARRIERS TO TRADE

3.24 ***Decreases in tariff barriers and in the incidence and pervasiveness of non-tariff barriers have greatly improved the contestability of markets for industrial goods in Turkey.*** In the past few years, Turkey has significantly reduced tariff and non-tariff barriers for industrial goods, and improved the quality of services facilitating trade, including customs. Turkey's performance in some essential areas of trade facilitation, such as customs environment, is no different from that of new EU members.

3.25 ***Thanks to the implementation of the Customs Union, Turkey has one of the lowest levels of MFN tariff protection among economies at a similar level of economic development.*** As a result of simultaneous multilateral (MFN) and regional liberalization, Turkey's average applied tariff rates on industrial imports from non-preferential partners fell from an average of 26.7 percent in 1994 to 4.3 percent in 2003. The average tariff rate on industrial imports from the EU was 22 percent in 1994, and the tariff rate for industrial products zeroed following the implementation of the CUD in 1996. Last but not least, by virtue of the CUD, Turkey's tariff commitments under the WTO agreements have been considerably extended and bound rates lowered to EU levels.

3.26 ***Competitive conditions in Turkish markets have also substantially improved as a result of progress in transitioning to the EU technical standards regime and establishing a competition infrastructure, with most components already in place***. The progress achieved in alignment with the EU system of technical standards (see Chapter 6) has increased the competitiveness of Turkish products not only in the EU and European Economic Area, but also in other world markets because simultaneously meeting domestic and international standards reduces costs. Similarly, on the import side, there has been significant improvement in market access with the 'hassle' cost of meeting technical requirements going down thanks to Turkey's adopting CE marking and reducing the number of mandatory technical standards. The Competition Infrastructure has also improved significantly and is now characterized by a satisfactory antitrust legal framework and an efficient Competition Authority (see section 3.D.).

3.27 ***Liberalization in conditions of access to Turkish markets has demonstrated the capacity of Turkish firms to withstand competitive pressures from imports and to compete successfully in global markets***. Despite strong competition from imports, industrial sectors have recorded strong growth, while export expansion has intensified. Moreover, as further explained in chapter 1, in some sectors, producers have shifted successfully to more value added and skilled labor intensive lines of production. In a nutshell, liberalization of foreign trade complemented by the progress achieved in establishing — in line with the *Acquis* — an enabling environment to support investment and employment creation in new activities has produced tangible results.

3.28 ***While overall barriers to trade have decreased significantly, the use of antidumping measures has also intensified.*** While one would expect that, with the passage of time, the demand for measures limiting competition from imports would fall, this has not happened so far. Turkey ranked seventh in the world after India, US, EU, Argentina, South Africa and Canada on the total number of antidumping measures implemented in 1995-2004. Although Turkey's imports are around sixteen times lower than those of the EU, the number of antidumping investigations (54) over the period 2002-2004 was close to that by the EU (57). The major sectors where antidumping measures have been initiated are textiles (fibers and fabrics), iron, steel and metal products, and plastics and rubber. Since these are mostly intermediate products, higher import costs might have impeded resources moving to higher stages of processing in some sectors where they are used as inputs. The Government considers this situation as reflecting the increased unfair trade practices by certain countries and existing differences and vulnerabilities in the structure of the Turkish economy compared to the EU.

3.29 ***High frequency of antidumping investigations ending with implementation of antidumping measures calls for the review of institutional and procedural arrangements.*** Although subject to multilateral WTO disciplines, antidumping mechanisms are susceptible to bureaucratic abuse and capture by private industrial interests. Among the top 15 worldwide users of antidumping mechanisms, Turkey shares the first position with Mexico in terms of the percentage of initiations resulting in the imposition of antidumping measures. For both, 87 percent of initiations ended up with a positive finding of dumping. Australia was at the bottom, with 31 percent of investigations resulting in dumping measures. Australia also has antidumping processes acknowledged as best international practice. The Australian Industries Assistance Commission is regarded as the best designed institution to handle antidumping cases. It is an independent institution responsible for evaluating and monitoring the economic effects of proposed and subsequently implemented trade measures on competition (concentration and market structure) and national welfare, taking into account both consumers' and producers' interests. The Australian experience could serve as a useful example in reviewing the functioning of the two boards in charge with antidumping in Turkey.

3.30 ***Although the resort to antidumping measures was an infrequent occurrence in Turkish-EU commercial interaction, there are reasons to expedite its removal from the box of policy tools available to CUD signatories***. The EU record of the use of antidumping measures against former candidate countries suggests that preferential arrangements including the CUD do not fend off a country's exporters from the punitive reach of antidumping duties. There are justifiable fears that EU antidumping measures

may strike any time, destroying successful exports from Turkey. Turkish producers are particularly vulnerable to EU "contingent protection" as long as the EU competition and state aid *Acquis* is not satisfactorily transposed into Turkish legislation and practice. Implementation and effective enforcement of the competition, state aid control, and other relevant parts of the Acquis related to the internal market will allow suspension of application of trade defense measures in the Customs Union between Turkey and the EU, and a progressive alignment towards a common anti-dumping policy with the EU before accession.

E. COMPETITION POLICY [102]

3.31 ***An effective competition policy encompasses instruments that address government economic and regulatory policies, as well as restrictive private sector business practices that significantly distort the competitive process, thereby undermining the efficient functioning of markets and consumer welfare.*** Against the background of a concentrated industrial sector and a history of state owned enterprises in the productive sector, there is ample scope for dominant players to undermine effective competition in Turkey. In 2005, the process of privatizing state owned enterprises was significantly accelerated thus improving the scope for effective competition. The Turkish Competition Authority is charged with the responsibility of administering competition or antitrust law (No.4054). It not only investigates complaints and market situations giving rise to anticompetitive behavior and industry structures, but also engages in advocating pro-competition public policies. By protecting and promoting competition, firms are encouraged to reduce costs, increase their productivity, expand output, innovate, and offer a greater choice and quality of products and services at lower prices.

3.32 ***Turkey's antitrust regime is in line with international best practice, but several sectors of the economy remain highly concentrated.*** Turkey rates favorably relative to its comparators on "barriers to competition" (see Figure 3.5 above) mostly reflecting a very high rating on its antitrust regime. A more thorough assessment[103] confirms that indeed the antitrust regime is well functioning in Turkey, while at the same time indicating that sectoral policies tend to undermine effective competition in several areas. This is due to a combination of: still large portfolio of state owned enterprises despite the recent acceleration in the privatization process, legal barriers to entry in sectors such as electricity, gas, water, and telecom; exclusive rights historically given to individual firms; low levels of credit to the private sector despite recent credit growth to the corporate sector; and other investment climate barriers to effective competition. Consistent with this assessment, the EU emphasizes the need for Turkey to make "major efforts concerning alignment in the adjustment of state monopolies and companies having exclusive and special rights".[104]

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[102] For more information on Competition Policy and the Competition Agency in Turkey, including activities, cases reviewed and decisions made, see R.K. Khemani, "Competitiveness, Investment Climate and Role of Competition Policy in Turkey" (Foreign Investment Advisory Services (FIAS), World Bank, 2005)

[103] R.K. Khemani, Op. Cit.

[104] Turkey EU 2005 Progress Report. Op. Cit.

3.33 ***The legal framework for antitrust is comprehensive and aligned with EU requirements.*** Turkey established an independent Competition Authority and Competition Board to implement a new competition law in 1997. The competition law addresses issues such as agreements on price fixing and bid-rigging, abuse of dominant position (AOD), and mergers and acquisitions (M&A) and joint ventures (JVs), which could potentially distort competition. The law is considered to be closely aligned with EU requirements, as well as with the broader objective of ensuring effective product market competition.[105]

3.34 ***The Turkish Competition Authority is efficiently implementing the antitrust law.*** The Competition Authority is widely viewed as an effectively managed government body that is implementing the law efficiently and well. OECD noted in 2004 that the agency had gained a reputation as "one of Turkey's most effective and best administered agencies", and a recent World Bank assessment concurs with this view.[106] The authority is reasonably well funded and has qualified staff. The appointment process for the board has safeguards against capture by influential groups and appears to be independent of undue influence.

3.35 ***The Competition Authority is also successfully exercising its competition advocacy role.*** The Competition Law provides for the Competition Authority to engage in competition advocacy by reviewing and commenting on public policy, regulatory decisions and institutional arrangements unnecessarily limiting competition. As part of its advocacy role, the authority issued 25 such opinions in 2004 and 33 in the first three quarters of 2005. The opinions covered policies in sectors such as energy, telecommunication, broadcasting, the press, banking, tobacco, sugar, transportation, and insurance. Such opinions are particularly useful in sectors where state owned or controlled monopolies remain prevalent and in sectors with one or a few dominating firms. As Turkey is emerging from a legacy of state intervention, it is expected that such advocacy, combined with opening the foreign trade and investment regime, will prove instrumental in reinvigorating competition in the Turkish business sector.

3.36 ***Further strengthening competition in Turkey requires enhancing the antitrust regime as well as expanding the Competition Authority's engagement in competition advocacy.***

Suggested reforms to further improve the ***antitrust regime*** include:

- Eliminating legal uncertainty and speeding up the adjudication of cases under appeal;
- Reducing reliance on adjudication by expanding the Competition Authority's use of consent orders and business advisory opinions and improving its communication on fines and remedies for anti-competitive behavior to the business community; and
- Reducing compliance burdens for small firms by establishing *de minimis* principles for exempting agreements involving only small companies.

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[105] R.K. Khemani, Op. Cit.

[106] 2005 Turkey EU Progress Report, Op. Cit., page 68 ; and R.K. Khemani, Op. Cit.

- Initiate an enhanced program of compliance and information dissemination to foster greater understanding of the competition law-policy and reduce unnecessary litigation.

Suggested reforms to further strengthen the ***Competition Agency's advocacy role*** include:

- Clearly delineating the roles, responsibilities and powers of the Competition Authority and sector-specific regulatory bodies on competition matters (as well as on monitoring of state aid), especially in the telecommunication, electricity and transportation sectors — by expanding and clarifying the competition advisory role of the Competition Authority, the scope and impact of its efforts will be improved; and
- Safeguard competition in sectors where state enterprises are being privatized. Developing a framework to encourage competition in the markets being served by SOEs would be most important, as competitive bidding for SOEs does not mean there will necessary be competition in the market post privatization. Indicating a plan for SOEs or sectors being considered for privatization, available for advance consultation and with input from the Competition Authority, would help take into account existing competition concerns.

F. COMPLEMENTARY MEASURES TO IMPROVE ATTRACTIVENESS TO FDI

3.37 ***An improved legal framework to increase FDI attraction, coupled with macroeconomic and political stability, and positive signals for EU accession, are expected to increase FDI inflows to Turkey.*** Turkey's extremely low FDI levels (see chapter 1) are likely to improve in the next few years, thanks to (a) a new Foreign Direct Investment Law (2003) that has established a liberal FDI regime in line with international best practice by eliminating additional permits and procedures that were originally required to foreign investors and by streamlining the foreign investment process, (b) improved macroeconomic stability, (c) progress in EU accession discussions and (d) expected microeconomic investment climate reforms.

3.38 ***However, specific additional measures are required to improve FDI attraction through FDI promotion and foreign investment policy advocacy.*** Further reforms to improve the FDI regime include ensuring implementation of existing FDI legislation and reducing FDI restrictions in some sectors, including civil aviation, maritime transport, radio and TV broadcasting, while restrictions to foreign ownership in the telecommunications and mining sectors were removed in 2004.[107] Ensuring effective investment promotion is also essential. The General Directorate of Foreign Investment within the Undersecretariat of Treasury is currently the main Turkish authority responsible for FDI promotion. Before the 2003 reform, the Undersecretariat's main task was to approve and administer the FDI inflow. Since FDI approval was abolished in

[107] 2005 Turkey EU Progress Report, Op. Cit.

2003, the responsibilities of the Undersecretary have been centered on coordination of the private sector development reform program to improve the country's investment climate. The Undersecretariat's results in attracting FDI should be evaluated against international best practice and follow up measures taken to ensure that the Agency operates effectively. As part of a public body, the current Investment Promotion Agency (IPA) currently lacks funds of its own, has little experience with the core functions of investment promotion, and is not exclusively dedicated to promoting FDI.

3.39 ***International experience indicates that several aspects need to be in place for an IPA to operate effectively.*** General reference criteria for an effective IPA include:

- A clear strategy and sufficient independence from the Government
- Policy advocacy on foreign investment as a key mandate
- Staff with advanced skills and staffing policies. One of the most important elements of a successful IPA is hiring of skilled marketing professionals who understand how business people think. Given the private sector demand for these professionals, regular civil service salaries are not sufficiently competitive to attract such skilled people to government service.
- Private sector involvement in key decisions. Working closely with the private sector enables an IPA to identify constraints that investors face and help them overcome these constraints.
- Sufficient initial budget and adequate financing to ensure long-term sustainability, which is usually provided by the government.
- Mandate to provide the government with continuous and reliable feedback about potential difficulties or shortcomings in the policy, legal and administrative framework related to FDI.

G. CONCLUSIONS

3.40 ***This chapter has made the case that improving product market regulations in Turkey would strengthen the investment climate and thereby increase productivity, generate employment, and help Turkey achieve sustained, long-term economic growth.*** Although Turkey has made progress on improving product market regulations in recent years, there is still much to be done, particularly in reducing start up costs and licensing procedures, streamlining the resolution of commercial disputes, monitoring and eliminating state aid with a distortive effect on competition, refraining from the use of antidumping measures, enhancing the antitrust regime and advocacy for competition, and attracting more FDI through promotion of foreign investment. Table A1 summarizes short- and medium-term recommendations for product market regulations and the investment climate. As in other areas, continued progress requires firm commitments from and cooperation between the Turkish government and the private sector. The rewards, however, are great — strengthening the investment climate by optimizing product market regulations will not only help Turkey align itself to the Acquis and other EU recommendations, it will also enhance competition and raise productivity. As part of

a comprehensive strategy, these changes will help Turkey achieve consistent economic growth over the long term and ultimately result in social welfare improvements.

CHAPTER 4. EXPANDING EMPLOYMENT – THE LABOR MARKET REFORM AGENDA

4.1 ***Labor market performance is a concern as Turkey prepares for EU Accession.*** Employment grew by less than 1% on an annual basis over the past decade. The employment rate in 2004 was 46%, well below any EU member country and far from the Lisbon target for 2010 of 70%. The unemployment rate was 10.6% in 2004 and this does not capture the substantial underemployment in the large informal sector.[108] As noted in chapter 1, low employment generation and declining employment ratios have slowed per capita income growth in the past, so that increasing labor utilization will be a key factor for stronger growth and accelerated convergence with the EU in the years ahead. Moreover, in a context of free labor mobility, existing EU member countries will be more at ease with Turkey's candidacy if Turkey is creating jobs for its citizens and does not have a large pool of unemployed workers whose best work options are elsewhere in Europe.

4.2 ***Job creation will remain a high-priority issue through the accession period.*** The working-age population will increase by over 800,000 annually between 2005 and 2015. Moreover, it is reasonable to expect an increase in the labor force participation of women, currently at 27%, one of the lowest rates in the world. The ongoing structural shift out of agriculture will continue to add new workers to the urban labor force. And creating opportunities for the increasingly well-educated youth – a group that now has very high unemployment rates – will only add to the task. However, while all of these are challenges, they also present opportunities to increase the productive capacity of the Turkish economy.

4.3 ***The ability to create jobs will be critical if Turkey is to converge to EU living standards.*** However, this convergence will not happen simply through the creation of low-productivity jobs. The process must be based on increases in productivity through better allocation of resources including labor, technological change, and a more skilled workforce. This will establish the conditions for the creation of good jobs and higher wages while promoting competitiveness in view of Turkey's deeper integration into EU and world markets.

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[108] This is the OECD-standardized unemployment rate, which covers the working age population (15-64 years of age). SIS typically reports employment data for those 15 years and older which results in slightly different numbers. For example, the SIS unemployment rate for 2004 was 10.3%. In this chapter, we generally use the 15-64 year definition where possible in order to provide international comparability. In some cases, however, only figures for the 15+ year population are available.

4.4 ***The challenge for decision-makers will be to further establish and implement a policy framework that supports a development path focusing on job creation with productivity growth.*** Certainly, essential elements in such a framework rest outside the labor market, including the macroeconomic environment and the investment climate. However, a number of critical factors fall within the labor market, including regulation, labor institutions, active and passive programs, labor costs, and workforce development. These are the issues that provide the focus for this chapter.

4.5 ***Turkey entered the new century with labor market policies and institutions that were not suitable for an open, private-sector led economy; however, in the last few years, policy-makers have responded by introducing some important modernizing reforms.*** These include a new Labor Code and an unemployment insurance system. But further reforms are still needed to support job creation, enhance productivity growth, better protect workers, and broaden inclusion in the labor market.[109] These reforms, coupled with continued economic growth, should result in an increasingly favorable climate for job creation and wage growth as Turkey moves through the accession period.

4.6 ***While the labor market reform agenda goes well beyond the Acquis, Turkey must also implement a number of specific legal and institutional changes to meet EU requirements.*** In its 2005 progress report, the European Commission has recognized the advances that Turkey has made in the area of labor law but has noted a number of shortcomings that still exist. In general, the issues highlighted by the Commission (e.g., worker representation, child labor, enforcement) represent important reforms for achieving a more efficient and equitable labor market. However, some of the regulatory changes that will need to be made will be costly for firms, at least in the short-run. As a consequence, how they are implemented, including the timing, will be very important to minimize any possible negative impact on the job creation objective.

4.7 The next section summarizes the current situation with respect to EU accession and employment. Section B presents a statistical review of Turkey's labor market performance, benchmarking it against EU members and also briefly addresses the issue of informal employment which is an important feature of the Turkish labor market. Section C addresses labor market policies that are relevant for meeting the Lisbon employment targets, for accelerating growth, creating higher-productivity, higher-wage jobs, and for helping Turkey's workers to adjust to a more dynamic economic environment. The section looks at two aspects of labor market policy – payroll taxes and employment protection – that are constraining job creation, especially in the formal sector. A reform agenda is presented including a more effective unemployment insurance system and better skills training and active labor market programs. Finally, conclusions and recommendations are presented in Section D.

A. EMPLOYMENT AND EU ACCESSION

[109] Detailed analysis on many of the reform proposals included in this chapter was carried out by the World Bank in its recent study of the labor market in Turkey. See World Bank (2005).

4.8 ***Turkey is still far from meeting the EU employment targets***. The EU agreed at Lisbon in 2000 (with additions at Stockholm in 2001) to the following targets for 2010: an overall employment rate of 70% (intermediate target of 67% in 2005); a female employment rate of 60% (57% in 2005); and a 50% employment rate for older workers (aged 55-64). As is explained in the next section, neither Turkey nor most of the existing EU members are on track to meet these targets. These targets are part of the European Employment Strategy that also sets guidelines for member countries in the areas of social protection for workers and inclusion and equity in the labor market.[110] As well, members must implement legislation and regulations in a number of areas related to employment in order to comply with the directives that are part of the *Acquis*.

4.9 ***As part of the EU accession process Turkey is now engaged in drawing up a national action plan to implement the European Employment Strategy guidelines***. Turkey, with ISKUR as the coordinating agency, began this process with the completion of a background study (ISKUR 2003) which provided a comprehensive analysis of the labor market. The next step, currently underway, is the preparation of a joint assessment paper to identify what needs to be done to prepare for accession and to fulfill EU requirements. The Government and the European Commission expect this paper will be finalized in early 2006. Following the joint assessment paper, the national action plan for employment will be formulated. The EU will provide support to the Government to implement this plan through an instrument for pre-accession and a capacity-building roadmap. In fact, EU assistance is already being provided through project financing to build capacity on active labor market programs, child labor, social dialogue, and occupational health and safety.

A.1. General Employment Issues

The European Commission has identified areas where further reforms are required to implement the European Employment Strategy guidelines.[111]

4.10 ***Less restrictive worker representation and collective bargaining.*** This is probably the single most important accession issue in the labor market area. Turkey's legal arrangements and practices are too restrictive to meet EU standards, which are based on ILO conventions. The European Commission expects reforms to both public sector and private sector industrial relations legislation. The Law on Public Employees' Trade Union (Law 4688) limits the rights of public employees to organize and does not include the right to collective bargaining. In the private sector, the Collective Labor Agreements, Strikes, and Lockouts Act (Law 2822) imposes dual criteria on workers' organizations to qualify as the authorized bargaining agent – they must represent at least 50% of the employees in the workplace and at least 10% of the total workforce in the

[110] For the latest guidelines, adopted in July 2005, see http://europa.eu.int/comm/employment_social/employment_strategy/prop_2005/guide_2005_en.pdf

[111] See European Commission (2005).

relevant industry.[112] In these (and some other respects) Turkey's legislation does not comply with two of the ILO core conventions – No. 87 on Freedom of Association and Protection of the Right to Organize and No. 98 on the Right to Organize and to Bargain Collectively.[113]

4.11 ***Stronger social dialogue***. The Commission has called on Turkey to strengthen social dialogue, establishing a culture of bipartite dialogue (i.e., an improved framework for collective bargaining, as noted above) in the private sector and making tripartite dialogue more meaningful. It has recommended that the predominant position of the Government's representatives on the tripartite Economic and Social Council be amended.

4.12 ***Efforts against child labor***. Turkey has adopted the ILO Convention on the Worst Forms of Child Labor and had made legislative progress in the area, including increasing the compulsory schooling age to 15 years. According to the ILO, the number of working children has decreased. However, the rights to education, especially for girls, and the issue of street children remain serious in some regions. As well, Turkey has not yet accepted some articles of the European Social Charter related to children's rights to social and economic protection.

4.13 ***Promoting equal treatment/anti-discrimination***. The new Labor Code and implementing regulations address a number of issues relating to equal treatment and non-discrimination and, in terms of gender, an equal rights constitutional amendment was adopted by Parliament in 2004. However, there are a still a number of EU directives where alignment is still required to meet equal treatment standards.

4.14 ***Better implementation and enforcement***. The Commission report emphasizes that Turkey faces a major challenge to fully implement and enforce its labor laws on the ground. The need to further strengthen administrative capacity is explicitly noted. The report also refers to the exclusion of certain sectors and categories of businesses from the coverage of the Labor Code.

4.15 ***It is important that the reform process continue in all of these areas.*** Reducing and eventually eliminating child labor and discrimination will have positive economic as well as social benefits. Reforms to the collective bargaining legislation will align Turkey with the ILO core conventions and broaden the choices workers have for effective representation in the workplace. Finally, as the Bank's recent labor market study concluded, strengthening the capacity to effectively enforce labor legislation is an important element in an overall strategy to reduce informality.

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[112] There are 28 industries (or "economic activities") defined under the Trade Unions Act (Law 2821). The primary sector (agriculture, forestry, hunting, and fishing) is exempt from this requirement.

[113] Although its legislation does not comply, Turkey has ratified these conventions, as well as all of the other ILO core conventions. On various occasions, the ILO supervisory body has noted the non-conformity of Turkey's legislation with Conventions 87 and 98 and has recommended that the Government take remedial steps to properly implement the conventions. For the latest observations of the ILO, see http://www.ilo.org/ilolex/gbe/ceacr2005.htm.

A.2. Compliance with EU Directives

4.16 ***With the 2003 Labor Code, Turkey has brought its labor legislation into closer conformity with the Acquis directives; however, further reforms are still needed.*** These directives bind member states to the relevant objectives but leave national authorities to work out the means to be used. Accession candidates negotiate how directives will be met, including the transitional period required. The new Labor Code has more closely aligned Turkey's laws to EU directives regarding fixed-term work, part-time work, protection of employees in the event of insolvency, and the protection of young people at work (Taymaz and Ozler 2005). However, further reforms will be needed to fully conform to directives regarding organization of working time, some aspects of fixed-term work, employees' rights in the event of transfers, information for employees, and consultation and employee representation (see Annex Table A).[114]

4.17 ***Turkey's negotiations with the EU should recognize that, in certain cases, needed changes could require a long transition period.*** Some of the reforms that are still outstanding will be costly, at least in the short-run. For example, the EU directive on the organization of working time states that each worker is entitled to four weeks of paid leave annually. Under the Labor Code, only employees with tenure of at least six years are entitled to this amount of leave. Meeting the EU standard may be socially desirable but, given the cost structure of Turkey's economy, it would create disincentives for job creation and for labor law compliance. In some other cases, getting agreement from the social partners on the objectives of directives, on means for compliance, and on implementation will be difficult. Reforming the dual criteria for authorized bargaining representation is a case in point.

B. TURKEY'S EMPLOYMENT PERFORMANCE IN A EUROPEAN AND INTERNATIONAL CONTEXT

4.18 ***This section provides an overview of Turkey's employment performance.*** Trends over the past 15 years are presented and compared with EU members, distinguishing between the new members (EU-10) and pre-2004 members (EU-15), Bulgaria and Romania, and a selection of comparable middle-income countries.[115]

B.1. Working Age Population

4.19 ***Turkey already has a larger working-age population than any current member of the EU.*** Moreover, it is still in a phase of population growth in this age category while most EU members are aging rapidly. As a result, by 2015 Turkey's working age

[114] In principle, countries can conform with directives through laws, regulations, administrative procedures, or bipartite agreements. According to Taymaz and Ozler (2005), Turkey has relied on the new labor law rather than through non-legislative means. Note that the review by Taymaz and Ozler (2005) focuses on employment directives narrowly defined and does not address related issues such as discrimination, mobility of workers, and health and safety.

[115] The middle-income countries have been selected on their basis of their similarity with Turkey in terms of size, GDP per capita, and GDP growth performance.

population will be larger than that in the 10 new Accession countries combined and it would represent 18.3% of the total working age population in the EU.

4.20 ***This situation has a number of implications, both positive and negative.*** First, there are opportunities. With a dependency ratio that will continue to decline for another two decades, Turkey has the possibility of benefiting from what has been called the "demographic gift" – i.e., a population structure that is weighted towards potentially productive, independent age groups. This could be a benefit for potential growth and the mobilization of domestic savings for growth financing (see chapter 1). Moreover, in a region where other countries are facing increases in their dependency ratios because of aging, Turkey can offer an important source of labor.

4.21 ***On the other hand, the productive potential of Turkey's large and growing working-age population will only be realized if adequate employment opportunities are created.*** Between 2005 and 2015, the number of people in the 15-64 year age category is projected to increase from 47.8 million to 56.2 million. This means that the potential workforce will increase by 840,000 annually during this period. Even at the currently low labor force participation rate of about 40% for the 15-24 year age group (where the new entrants will come from), about 335,000 new jobs would need to be created just to address this new labor supply. If Turkey were to achieve the EU-15 participation rate of 48% for this age group, the annual job target for new entrants would rise to over 400,000.

4.22 ***While in an optimistic scenario of strong job creation, Turkey could provide a useful (and selective) source of labor for an aging Europe, the context would be quite different if job creation is slow and unable to accommodate the supply of new entrants into the Turkish labor market.*** In that event, the prospect of labor flows out of Turkey seeking work in Europe because of scarce opportunities at home may raise concerns in existing EU members. The extent of this concern would presumably depend on the labor mobility conditions that were to apply to Turkey's accession, as well as the labor market situation in existing EU countries.

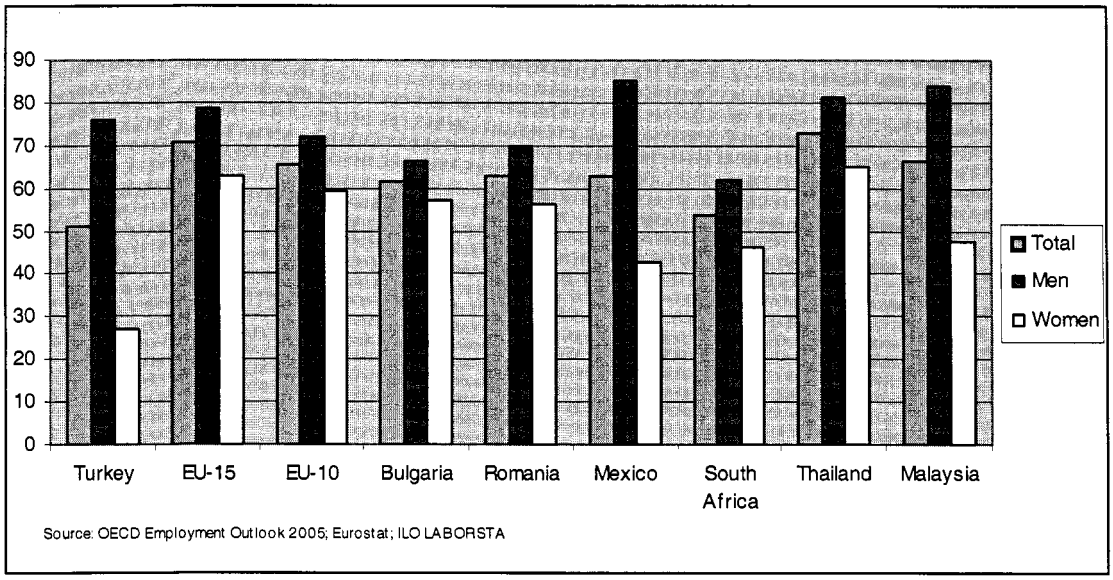
4.23 ***Labor force participation has been declining.*** The participation rate for the 15-64 year age group fell from 59.4 in 1990 to 51.5 in 2004. This is a long-term trend, linked to broader structural shifts – i.e., the transformation of agriculture away from small-family farming characterized by very high participation, and to the rural-to-urban structural shift where labor force participation has been more selective.[116] A temporary shift in the composition of labor force may also have affected the labor force participation rate, as low-skilled rural workers age and are replaced by better-educated urbanized workers who face tighter employment conditions. Overall participation has fallen for both men (about 7 points) and for women (about 9 points). However, the female decline is especially notable, given the very low starting point.

4.24 ***Participation rates are very low by European and international standards.*** Turkey's participation rate in 2004 was about 20 and 14 points below the EU-15 and EU-

[116] Between 1990 and 2003, rural labor force participation rates for persons aged 15-64 declined by 11.5 percentage points, while urban participation rates decreased by 3.2 percentage points.

10 means, respectively (Figure 4.1). It is also below Bulgaria, Romania, and non-European middle-income comparator countries. These comparisons show that the low aggregate rate for Turkey is due to the very low female rates that are between 16 and 36 points below the comparator countries.

Figure 4.1: Turkey's labor force participation rates in international context, persons aged 15-64 years, 2004



EU-15 and EU-10 figures are weighted averages of countries included.
Rates for Thailand include all persons 15 years and over.
Participation rate for Thailand (2003) and Malaysia (2000).

B.2. Underpinnings of Turkey's Employment Performance

4.25 ***Employment rates have been falling and are well below the Lisbon standards.*** The employment rate for those between 15-64 years declined from 54.5 in 1990 to 46.1 in 2004. Huge differences exist between men and women, with employment rates of 67.9 and 24.3, respectively. As Table 4.1 indicates, the EU members, as a group, are not on track to meet the Lisbon targets. In all cases, Turkey is even further behind. It should be noted that the EU itself does not rank particularly highly in terms of employment when compared to a number of other OECD and middle-income countries.[117]

4.26 ***Turkey's relatively poor employment rates reflect very low employment among women and older workers.*** The female and older worker targets were included in the Lisbon guidelines because the EU correctly noted that improved performance for these groups was essential if the overall employment target is to be met. In fact, the two special targets for women and older workers represent the dominant reasons why Turkey lags so

[117] In 2004, 10 OECD countries had employment rates above 70%. Six of these are outside the EU (Canada, Iceland, New Zealand, Norway, Switzerland, and the U.S.) while four are in the EU (Denmark, Netherlands, Sweden, and the UK).

far behind the 70% overall standard. Without major improvements in the participation and employment rates of these groups, this target will remain far above Turkey's actual performance.

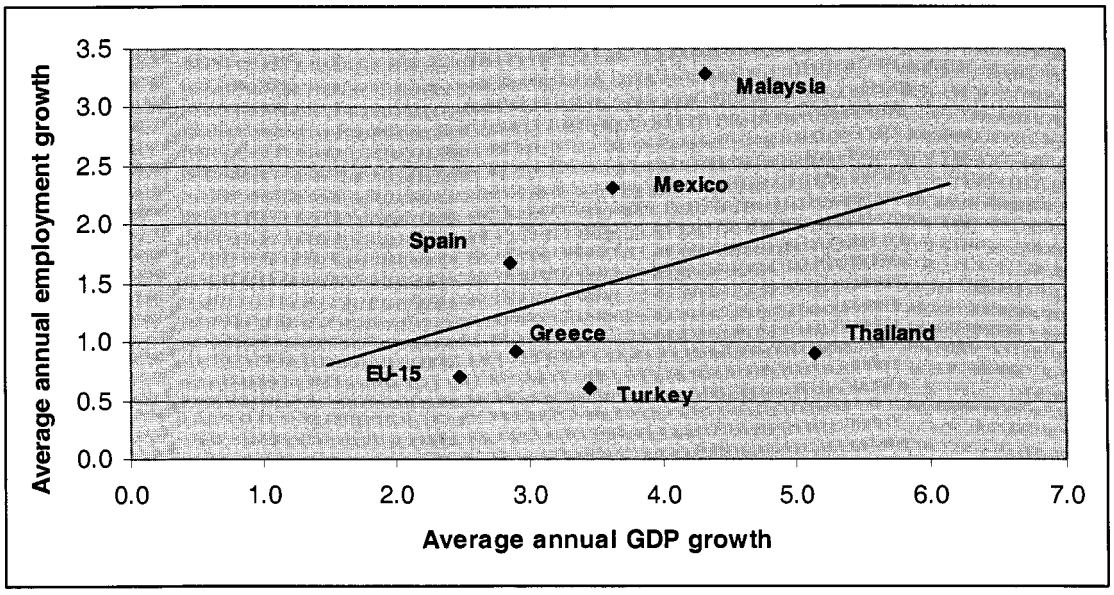
Table 4.1: Employment rates in 2004 relative to the Lisbon targets, Turkey, EU members, and Bulgaria and Romania

Employment rate 2004	Overall employment (15-64 years)	Female employment (15-64 years)	Older workers (55-64 years)
	2010 70% 2005 67%	2010 67% 2005 57%	2010 55%
Turkey	46.1	24.3	33.1
EU-15	64.8	57.0	42.5
EU-10	56.0	50.2	32.3
Bulgaria	54.2	50.6	32.5
Romania	57.7	52.1	36.9

Source: OECD Employment Outlook 2005, Eurostat.

4.27 ***Turkey's low and declining employment rates have occurred despite relatively strong output growth.*** Over the 1995-2004 period, annual real GDP grew, on average, by 3.5%; however, average annual employment growth during these years was only 0.6%. Turkey has not translated output growth into job creation as well as most other countries. Compared to EU countries and selected emerging market economies, Turkey fits into the middle range in terms of GDP growth over the past decade but it has had the lowest rate of employment growth (Figure 4.2).

Figure 4.2: GDP and employment growth, Turkey and selection of countries, 1990s to latest year



Period covered is Turkey (1995-2004), Malaysia and Mexico (1996-2003), EU-15 (1993-2004), Spain (1990-2004), Greece (1991-2004), Thailand (1990-2003).

Source: World Development Indicators, Eurostat, ILO

4.28 ***A number of factors potentially come into play to explain Turkey's low job creation, relative to its GDP growth.*** Some of these are outside the labor market while others are more directly related to labor market policies, institutions, and practices. We will briefly address the possible factors outside the labor market here, while leaving the labor market-specific factors to the remaining sections of the chapter.

(a) Structural change

4.29 ***Aggregate employment levels have been affected by the shift out of agriculture and into industry and services.***[118] Between 1980 and 2004, employment in agriculture fell in absolute terms by over 1.6 million and its share of total employment declined from 50% to 34%. Services are now the major source of employment. Because of agriculture's large starting share and its high labor intensity, however, the relatively fast growth of the other sectors has not been sufficient to generate strong overall employment growth.

4.30 ***Future job creation will be primarily in services.*** Analysis undertaken in the Bank's labor market study showed that employment growth in services has been slower in Turkey than in comparator countries both because of relatively slow growth in services

[118] These factors are addressed in more detail in the Bank's labor market study (forthcoming, following final review by the Government for dissemination).

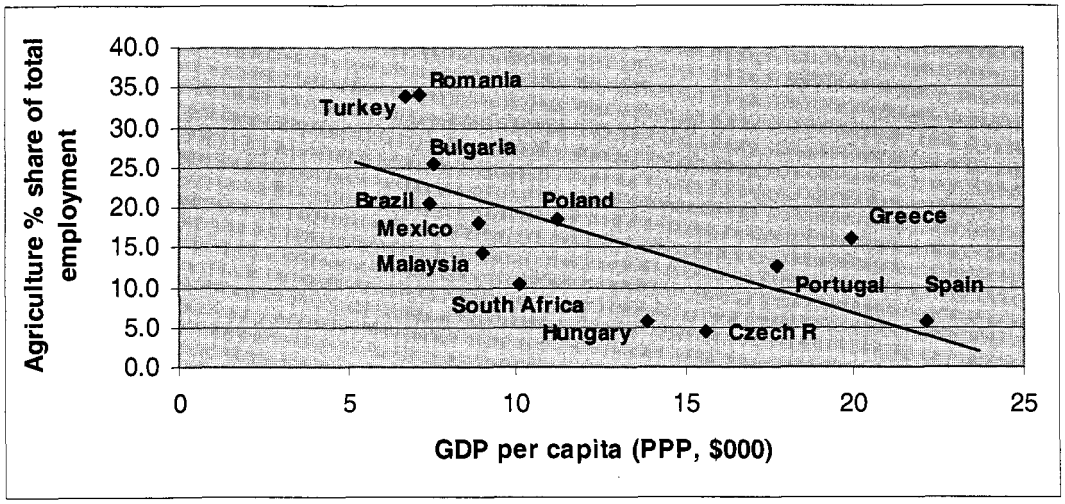
output and a relatively low employment elasticity in that sector. For Turkey's job creation record to improve, services will need to be the source of more employment.

4.31 ***This job creation challenge in services will be heightened in the future since continued declines in agricultural employment are a certainty***. Even with the structural shifts out of agriculture over the past quarter-century, the transition has actually been quite slow when Turkey's trends are considered in an international perspective. Figure 4.3, which depicts the negative relationship across countries between employment in agriculture and GDP per capita, shows that Turkey's employment in the sector is quite a bit higher than would be expected given its level of development. If Turkey was on the trendline, there would be 2.1 million fewer jobs in agriculture than is currently the case. With the elimination of agricultural subsidies, and further adoption of technologies to compete in global markets, the shift of employment out of agriculture can be expected to accelerate.

(b) Macroeconomic trends

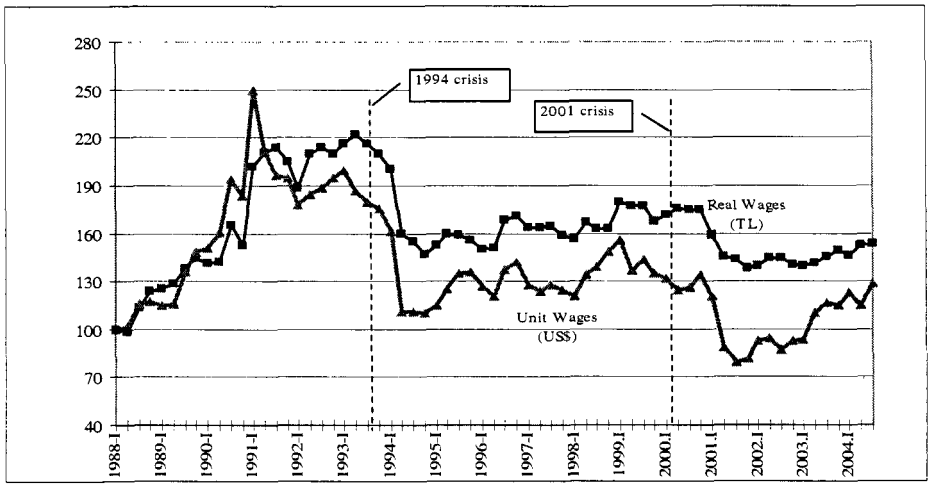
4.32 ***Although Turkey's history of economic volatility has depressed output, it has not been a factor in explaining the country's low employment elasticity of growth***. Analysis undertaken for the Bank's labor market study finds no statistical evidence that Turkey's crises have had a significant persistent effect on employment levels. Adjustment in the labor market primarily happens through wage declines and increases in agricultural employment. Figure 4.4 shows how real wages fell substantially during the 1994 and 2001 crises. In 2001, agricultural employment increased by 320,000 before returning to its long-run pattern of decline. There are surprisingly few layoffs in the formal sector and, as we argue later in this chapter, this is due, at least to some degree, to how employers respond to the constraints of labor market regulation. While employment growth may not have been directly affected by the crises for these reasons, output volatility over time has adversely affected both total factor productivity growth and the investment ratio, as indicated by empirical evidence reviewed in chapter 1. This has had a negative impact on GDP growth and the overall trajectory for employment generation.

Figure 4.3: GDP per capita (PPP) and agricultural share of total employment, Turkey and selected middle-income countries, 2003



Source: World Development Indicators, SIS, Eurostat, ILO.

Figure 4.4: Real wages and unit labor costs in private manufacturing, 1988-2004



Source: SIS data, cited from World Bank labor market study

(c) Cost competitiveness

4.33 ***Turkey is very competitive in terms of its unit labor costs and this is not a factor in explaining the relatively slow employment creation.*** Unit labor costs both for industry and for the total economy are similar now to what they were in 1990 (as shown in Figure 4.4). Turkey's unit labor costs are well below those elsewhere in Europe (Table 4.2). Labor cost competitiveness reflects slow wage growth, owing to labor market slack, but also steady productivity growth. As noted in chapter 1, labor productivity growth had

slowed down in the turbulent 1990s; however, since the last crisis, labor productivity has been especially strong, growing annually by 7.5 to 8 percent between 2002 and 2004.

Table 4.2: Unit labor costs, manufacturing and total economy, Turkey compared to EU members and Bulgaria and Romania, most recent year

	Total economy	Industry
Turkey (2004)	0.26	0.22
EU-15 (2004)	0.55	0.60
EU-10 (2003)	0.48	0.55
Bulgaria (2004)	0.41	0.46
Romania (2001)	0.45	0.57

Unit labor costs represent the current cost of labor (wages plus non-wage labor costs) to produce one unit of output, following OECD methodology.
Source: SIS, Eurostat

4.34 ***However, it is important for future job creation that labor costs remain competitive and do not outstrip productivity growth, especially in lagging regions.*** Turkey is characterized by large regional economic disparities, as discussed in Chapter 1. These disparities reflect productivity differences which, in turn, are manifested in the labor market in regional wage differentials. In manufacturing, average hourly wages in the second quarter of 2005 ranged from YTL 6.9 in Northeastern Anatolia to YTL 3.1 in Southeastern Anatolia.[119] Regional wage differentials are important if employment is going to be created in lower-productivity areas of the country. This should be a consideration in the setting of wage policies, including the minimum wage. In a country with such large regional differences and a national minimum wage, there is a risk that strong growth in the minimum wage could impede job creation in poorer regions where productivity lags behind the national average.[120]

4.35 ***The long-term improvement in Turkey's job performance must be based on continued increases in labor productivity***. These increases should come from both the ongoing reallocation of labor from lower- to higher-productivity sectors and from productivity gains within industries through more and better capital, more skilled labor, and technological change. Higher job growth cannot come from low-productivity solutions that only increase the employment content of growth (i.e., higher employment elasticities). While continuous labor productivity gains may lead to slower employment growth in the short-run, over the longer-term the international experience shows that countries that are able to increase their labor productivity eventually find themselves in a virtuous circle where employment grows as well.

[119] SIS Quarterly Manufacturing Survey (2Q2005, released Sept 27, 2005).

[120] The minimum wage has been raised substantially during the past few years (from 236.4 million TL in 2002 to 433.6 million TL in 2004). While this period has been characterized by rapidly growing productivity nationally, the increasing minimum wage does risk constraining formal-sector job creation in low-productivity regions. It should be noted that the Government has used regional incentive programs, which include subsidies for social insurance contributions, to reduce labor costs in low-income provinces.

B.3. Employment in the Informal Economy

4.36 ***Informal employment is an important feature of the Turkish labor market.*** The exact size of the informal labor market depends on the definition and data used (see Box 4.1). The most straightforward definition is based on whether the job is registered with one of the social security institutions. According to the HLFS estimates on social security registration, 53% of the employed labor force was unregistered in 2004 (Table 4.3).

Table 4.3: Non-registration of employed labor force in social security, 2004

	% of total employment	% not registered
All workers	100	53
Location		
Urban	54	36
Rural	46	73
Activity		
Non-agriculture	66	34
Agriculture	34	90
Employment status		
Regular employee	43	21
Casual employee	8	91
Employer	5	24
Self-employed	25	65
Unpaid family worker	20	97

Source: SIS HLFS

Box 4.1: Defining informal employment in Turkey

Ever since the "informal sector" concept was introduced in the early 1970s, statisticians and economists have been engaged in a protracted debate about how it should be defined and measured. In 1993, the International Conference of Labour Statisticians defined the informal sector as including (i) informal own-account enterprises, which may employ family workers and other employees on an occasional basis, and (ii) informal enterprises which employ workers on a continuous basis. To be classified as "informal", enterprises must be below a specified employment threshold (to be determined at the country level) and/or be unregistered (ILO 2002).

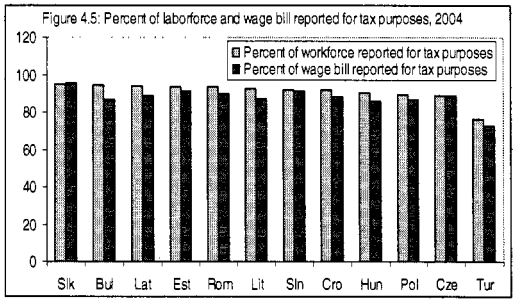
According to the Turkish SIS, *unregistered* employment includes "all employed persons who were not registered to any social security institutions corresponding to their main job during the reference unit." The *informal sector* is defined as "all non-agricultural economic units which are unincorporated (establishments whose legal position is individual ownership or simple partnership), paying lump sum tax or not tax at all and working with 1-9 engaged persons."

The concepts of unregistered employment and employment in the informal sector are very similar but not identical. According to the 2003 HLFS, over three-quarters of unregistered employees were working in the informal sector, as defined above (Kenar and Levent 2005).

4.37 ***The high share of informal employment partly reflects the structure of the economy.*** As we have already noted, a large proportion of the workforce is still engaged in rural activities, primarily in agriculture. This is a sector that is not amenable to formal institutions, including social security.[121] In 2004, 90% of employees in agriculture, fishing, and forestry were unregistered.

4.38 ***While informalization is significantly lower in non-agricultural sectors, it is still substantial and does not appear to be declining.*** In 2004, 34% of employees in non-agricultural industries were unregistered. Among regular employees, where one would expect near-universal coverage, 21% were unregistered. Informal urban employment is increasing more rapidly than formal work: between 1995 and 2003, non-agricultural employment grew by 25% while unregistered employment expanded by 45%. The highest concentrations of urban informal employment are in industries where institutions are weak and the state is not involved much (e.g., construction and transportation).

4.39 ***Informality in Turkey is large in international comparison.*** The recently completed 2005 round of the EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS) offers some comparative estimates of informality across Eastern Europe and Central Asia countries, including new EU members. It should be noted that estimated informality in this business survey provides only a partial view of the informal sector, as it is measured by the underreporting of employment and the wage bill by firms who otherwise file for tax purposes and, thus, belong to the formal sector of the economy. However, the estimates are robust as they rely on a large sample of firms across all economic sectors. Even by this partial measure, informality in Turkey is significantly higher than in new EU members and acceding or other candidate countries (Romania, Bulgaria, Croatia). In Turkey underreporting of workers and the wage bill is estimated at about 24 and 28 percent respectively, against an average underreporting of 8 and 11 percent for the comparator countries (Figure 4.5).



4.40 ***The informal economy is an important generator of jobs and provides a safety net for workers. However, it is a low-cost, low-productivity sector with wages that are substantially below those in the formal sector.*** Registered paid employees receive net wages that are 1.7 times higher than unregistered employees (Kenar and Levent 2005). When social security contributions are taken into account, the labor-cost gap rises substantially. Certainly, the wage differential reflects differences in the skill levels of the formal- and informal-sector workforces. The probability of working in the informal sector decreases as the level of education rises; only 1.4% of those with post-secondary degrees are employed in the informal sector (Kenar and Levent 2005). However, even

[121] Unlike many countries, Turkey has a social security program for the self-employed, including in agriculture (Bag Kur). However, coverage is inherently difficult and Bag Kur's membership is less than 2.5 million which represents only a small proportion of the potential membership.

when education and other potential determinants of earnings are controlled for, wages are significantly higher for workers in the formal sector. Kenar and Levent (2005) estimate that the (adjusted) formal-sector wage premium is about 18%. This is largely due to the higher productivity of labor in formal sector firms, estimated on average to be three times higher than in firms in the informal sector (McKinsey, 2004). Because of this gap in productivity performance, the dual structure of the Turkish economy also drives down overall productivity growth and thus limits the potential for job creation in the economy as a whole.

C. LABOR MARKET POLICIES AND THEIR EMPLOYMENT IMPACTS

4.41 ***The slow employment growth and high informality documented in the last section raise questions about the extent to which labor market policies and institutions may be contributing factors***. Particular attention has been paid to whether payroll taxes are too high and whether labor market regulation is too rigid.

C.1 Payroll Taxes

4.42 ***Payroll taxes are levied on employees and employers to finance social insurance programs, with a combined contribution rate on gross earnings of between 36.5%-42%.*** Employees contribute 15% -- 9% for pensions, 5% for sickness, and 1% for unemployment. Employers contribute 21.5% to 27%, depending on industry – 11% for pensions, 7% for sickness and maternity, 2% for unemployment, and 1.5-7.0% for work injury (rates vary by industry).

4.43 ***From an international perspective, Turkey's mandatory payroll taxes are relatively high.*** Vroman and Brusentsev (2005) have assembled contribution rates for 150 countries, according to income level and geographic region. For the 59 middle-income countries included in their study, they find an average payroll tax rate (employer plus employee) of 25.0%, well below the rate of 37.5% they compute for Turkey. The payroll tax rate for Turkey is higher than rates in all regions, except Central and Eastern Europe (46.5%).

4.44 ***Comparative analysis across European countries indicates that the tax burden in Turkey is especially high in the case of workers with children, especially earning low wages***. This analysis is based on calculations of the "tax wedge" which is defined as income taxes and combined (employer-employee) social security contributions, minus cash benefits, as a percentage of total labor compensation. Since Turkey provides consumption tax credits, we have also made calculations of the tax wedge accounting for these credits. Note that payroll taxes account for about 70% of Turkey's overall labor taxes. Table 4.4 compares the tax wedge in Turkey with the EU-15 countries and a selection of EU-10 countries (i.e., OECD members) for workers at different earnings levels and with different family characteristics. Turkey's relative position varies, depending on family status and earning levels. This is because, unlike most European countries, Turkey does not levy lower effective tax rates (especially through income taxes) on families with children and on low earners. In the cases of single individuals and

married couples with no children at or above the average production wage, Turkey's tax burden is in the middle ranks in Europe. But for families and singles with children, Turkey's taxes on labor are among the highest. This is especially the case for low-wage workers with children where Turkey has the highest tax wedge of all of the European OECD countries.

4.45 ***A high tax wedge on labor income hampers job creation in the formal sector, although more solid evidence is needed to confidently assess the expected impact of reforms.*** The employment effects of a high tax wedge depend on (i) the incidence of the tax – i.e., who actually pays the taxes – and, thus, its effect on total labor costs; and (ii) the elasticity of labor demand – i.e., what happens to employment as labor costs change.[122] There has been very little quantitative analysis on these issues in Turkey and the international research offers only rough insights. Studies in middle-income countries provide a wide range of estimates on tax incidence; for example, research in Latin America suggests that anywhere from 20-70% of the employer's social security contributions are passed on to the worker through reduced wages. The lower bound estimate would suggest that high payroll taxes have a substantial effect on labor costs while the upper bound estimate would imply a much smaller impact. In terms of labor demand elasticities, estimates from international research suggest that the likely range is between 0.3 and 0.5 (i.e., a 10% increase in the cost of labor would cause a decrease in employment of between 3 and 5%).[123] Depending on the actual incidence and elasticity in Turkey, these estimates suggest that a 10% decrease in payroll taxes (i.e., 3-4 percentage points) would result in an employment increase somewhere between 1-4%.[124] However, this range is suggestive only and empirical analysis is needed to estimate both the labor tax incidence and the elasticity of labor demand.[125]

[122] Note that a high tax wedge can also create incentives for employees to work informally because of the difference between their gross wage and their take-home pay. This effect may be particularly evident where workers have low expectations that national insurance systems and other social services will deliver benefits in the future. Research by the World Bank, especially in Latin America, has demonstrated that worker choice plays some role in informality (e.g., see Maloney and Cunningham 2001).

[123] This range is based on the literature review in Vroman and Brusentsev (2005). They present these estimates with some caution, because of the lack of empirical evidence from middle-income countries. A more recent study of EU-8 countries (World Bank, EU-8 Quarterly Economic Report, April 2005, Part II) finds a higher elasticity of employment to changes in the tax wedge, between 0.5-0.8, suggesting a strong negative impact of the tax wedge on employment. There is, however, some possibility of bias in these estimates relying on macro data, although it is not clear in which direction any bias might go.

[124] The high-end estimate is based on an assumed employee incidence rate of 20% (i.e., employer actually pays 80% of taxes) and a labor demand elasticity of 0.5; thus, with a 10% tax cut, total labor costs would be reduced by 8% and this would translate into a 4% employment gain. The low-end estimate is based on the other ends of the incidence and elasticity ranges indicated in the text – i.e., 70% and 0.3.

[125] It should be noted that the World Bank has requested data from the Government to undertake an analysis of the effects of payroll taxes on employment and informality.

Table 4.4: Comparing Average Tax Wedges[1] in Turkey with European countries by Family Type and Wage Level, 2004

Family type	Single No children			Single 2 children	Married 2 children			
Wage level [2]	67	100	167	67	67	100-0	100-33	44-0
Turkey tax wedge (%), OECD methodology	41.8	42.7	44.4	41.8	42.7	42.2	42.2	41.3
Number of EU-15 countries with higher tax wedge	3	8	8	0	0	0	3	
Number of "EU-4" countries[3] with higher tax wedge	2	3	3	0	0	0	1	
Turkey tax wedge (%), with consumption tax credit	39.0	40.0	41.5	39.0	38.3	38.7	39.2	35.3
Number of EU-15 countries with higher tax wedge	5	9	9	0	1	1	3	
Number of "EU-4" countries[3] with higher tax wedge	3	4	4	0	0	1	2	

1. Income tax plus employee and employer contributions less cash benefits; consumption tax credits added for Turkey.
2. As percent of average production wage. In married family types, wage level for each adult.
3. Includes EU-10 countries that are also OECD members -- Czech Republic, Hungary, Poland, and Slovak Republic.
Source: OECD (2004), with calculations by IMF and World Bank staff

4.46 ***In the absence of broader reforms, currently there is little scope for major reductions in payroll taxes because of the fiscal position of the social security funds.*** Subject to feasibility in view of broader fiscal policy considerations, taxes for unemployment insurance could be decreased without threatening the integrity of the Unemployment Insurance (UI) Fund, as discussed below. However, since this represents a minor part of overall social security contributions, any employment gains would be relatively small. The strategy should be to successfully implement social security reforms to put the overall system on better financial footing which would allow for deeper tax cuts in the future. In the meantime, institutional reforms to improve tax collection and reduce non-compliance would be useful.

4.47 ***Reducing payroll taxes, when feasible, and strengthening tax collection and inspection would bring more workers into the formal social protection system.*** As was discussed previously, Turkey has a high percentage of the non-agricultural workforce that is outside the social security system.[126] To the extent that social security reforms

[126] The non-registration figures discussed earlier actually understate the lack of coverage because registration is often only partial due to the underreporting of wages; for about 50% of employees enrolled in SSK, wages as reported by employers are at the minimum insurable level.

eventually put the system on a sound financial footing and taxes can be reduced, incentives for formalization will improve. In the meantime, institutional reforms to improve tax collection and improve enforcement would be useful in bringing more workers into the formal social protection system. At present, the Ministry of Labor and Social Security and the Social Security Institution do not have the resources or the capacity to adequately address non-compliance.

C.2. Employment Protection Legislation[127]

4.48 ***Employment protection legislation (EPL) provides job security for covered workers but it can also have unintended consequences by discouraging job creation, especially in the formal sector.*** EPL covers the kinds of contracts permitted and the rules and procedures for terminating workers, including the severance obligations of employers. Research has found that strong employment protection rules can have unintended labor market impacts, increasing informality, somewhat reducing participation and employment rates, and increasing unemployment duration. Women and youth are disproportionately affected because they are underrepresented among the "insiders" who benefit from the job security rules. The challenge for policy-makers is to find an appropriate balance between flexibility and security in employment protection legislation.

4.49 ***Turkey's employment protection rules are very restrictive by international standards.*** One widely used measure is the OECD index that calculates strictness of EPL according to 18 indicators of employment protection in three areas: dismissal regulations for permanent or regular workers; regulations regarding flexible work forms; and regulations governing collective dismissals.[128] The most recently published scores take into account Turkey's 2003 Labor Code (OECD 2004). The 2004 OECD scores indicate that Turkey, along with Portugal, had the most restrictive EPL among member countries. Figure 4.6 summarizes the results, benchmarking Turkey against groups of OECD countries.[129] Turkey's high score is primarily due to its rules concerning flexible work contracting (temporary and fixed-term employment) which are the most restrictive in the OECD.[130]

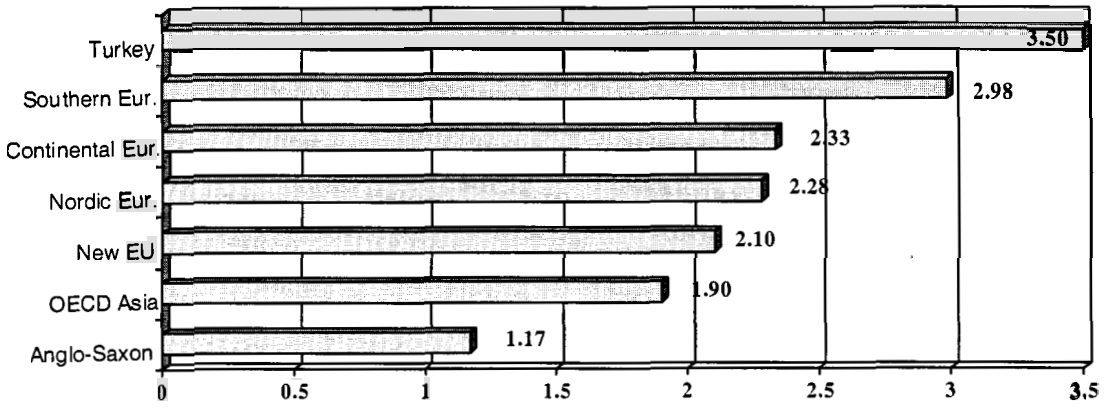
[127] For more detail on the analysis summarized here, see the World Bank labor market study, Chapter 4.

[128] For details on the methodology, see OECD (2004, Annex 2.A1).

[129] Note that the figure also includes two EU-10 countries, Estonia and Slovenia, that are not part of the OECD. These scores were calculated by Riboud, Sanchez-Paramo, and Silva-Jauregi (2002).

[130] The 2003 Labor Code did create a legal framework for flexible employment forms and put these on the same legal footing as full-time, indeterminate employment. However, the Code did not remove the restrictions on using these work forms. No legal provision exists for temporary agency work; Mexico is the only other OECD country where this is the case. Only Turkey and Greece restrict fixed-term contracts to situations where the nature of the assignment has an end date (such as seasonal work, specific project, replacing temporarily absent workers). Other OECD countries allow for at least some fixed-term employment, even where the work is not inherently of a limited duration.

Figure 4.6: Turkey's EPL Rating compared to other OECD and European countries, 2004



Source: OECD (2004, Table 2.A2.4); Riboud, Sanchez-Paramo, and Silva-Jauregi (2002); and calculations by World Bank.

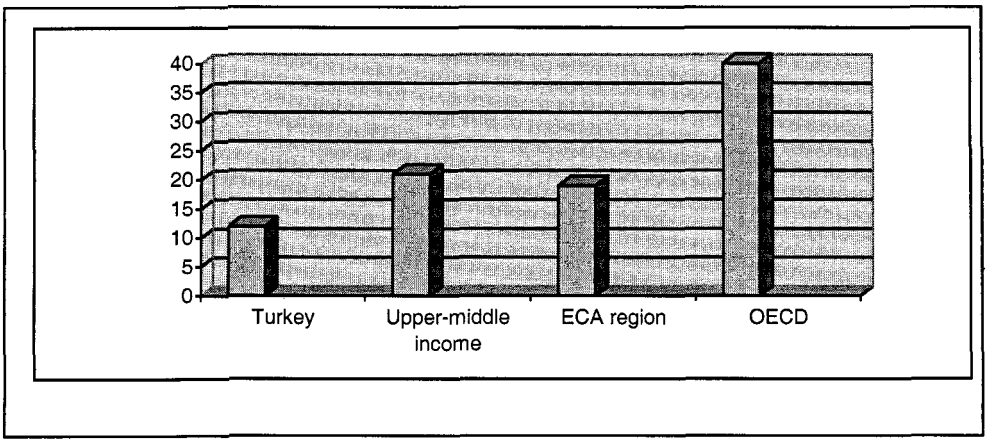
4.50 ***Severance pay is the other aspect of employment protection where Turkey's rules stand out.*** Severance payments are much more generous than is typically the case in other middle-income countries, or in Europe and the rest of the OECD (Figure 4.7).[131] The Government committed to reform in the 2003 Labor Code, specifically in the form of introducing a severance pay fund. However, to this point, this has not been implemented because of a lack of consensus on the part of social partners and the Government about the details of the proposed fund.[132] The previous severance arrangements (under the 1971 Labor Code) prevail in the meantime.

[131] Regular workers are eligible for severance payments after one year of service in the event of resignation for just cause, dismissal initiated by the employer for reasons other than worker misconduct, and qualification for old-age pension. The payment is set at a level equal to one month of pay (at last gross daily wage rate) for each year of service. A ceiling is placed on the amount a worker can receive. This ceiling is established as the annual amount of the retirement bonus of the highest state official subject to the Civil Servants Act.

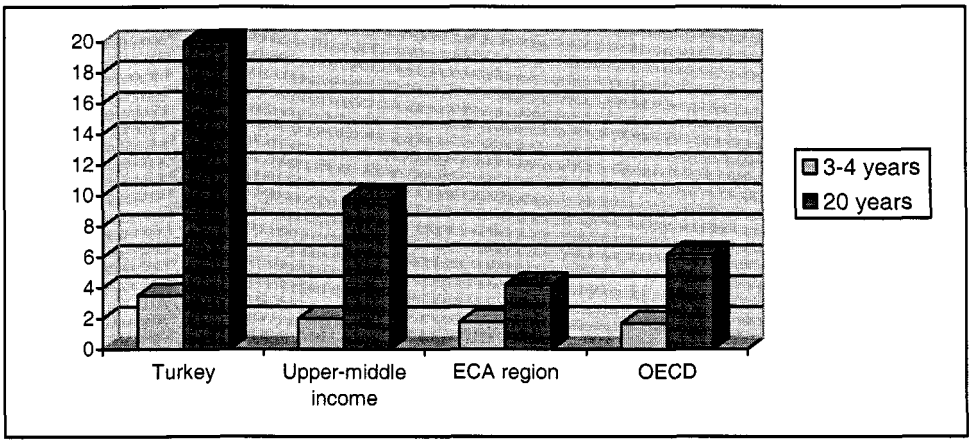
[132] Studies on severance pay reform, including the establishment of severance fund, are being continued.

Figure 4.7: Turkey's severance rules compared to other countries

(a) Minimum months of employment required for eligibility



(b) Multiples of monthly wages paid in severance at selected lengths of service



Source: Holzmann, Iyer, and Vodopivec (2003)

4.51 ***Job security rules, including both flexible contracting and severance payments, should be brought closer into line with norms in Europe and in other middle-income countries***. As noted above, while these protections do benefit covered workers, the international evidence suggests that they come at a price – constraining formalization, a less dynamic labor market with lower employment, and exclusion of vulnerable groups from the formal labor market. If the job security rules are changed, it is important to introduce reforms *both* to open up opportunities for flexible contracts and to reduce severance costs for regular workers. Many countries (e.g., Spain) tried to move only on the former, avoiding the latter because of the political difficulties associated with reducing severance.[133] In these cases, however, the result has tended to be expansion of temporary and fixed-term employment at the expense of regular employment which had

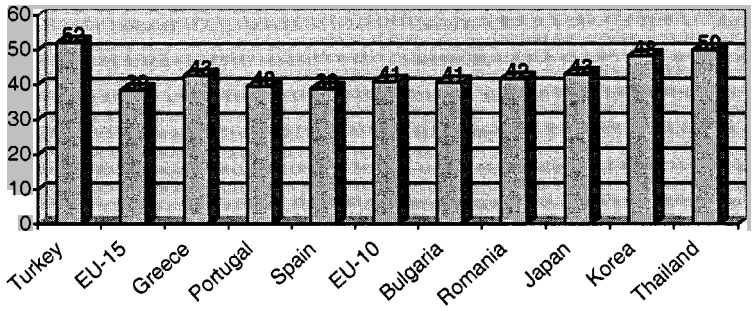
[133] Spain eventually followed these initial reforms with a second round that increased the attractiveness of permanent contracts for employers.

become relatively more costly. This unbalanced pattern of job creation will typically persist until reforms are extended to change severance pay for regular terminations.

4.52 ***Employers use various strategies to avoid entering into the obligations associated with EPL and payroll tax compliance.*** The most common strategy is simply to operate informally, not registering workers and keeping below the sightlines of workplace inspectors.

4.53 ***Employers tend to respond to increased labor demand by lengthening hours of existing workers rather than hiring new ones.*** Workers in Turkey report actual hours that are among the highest in the world – certainly far beyond European countries and even longer than in East Asian countries that are known to have long work weeks (Figure 4.8). As Turkey came out of the 2001 crisis, increased demand for labor was met by increases in average hours; in 2002 and 2003, average weekly working time in manufacturing rose by 0.5 and 0.3 hours, respectively.

Figure 4.8: Average actual weekly working hours in manufacturing, Turkey in an international context, most recent year



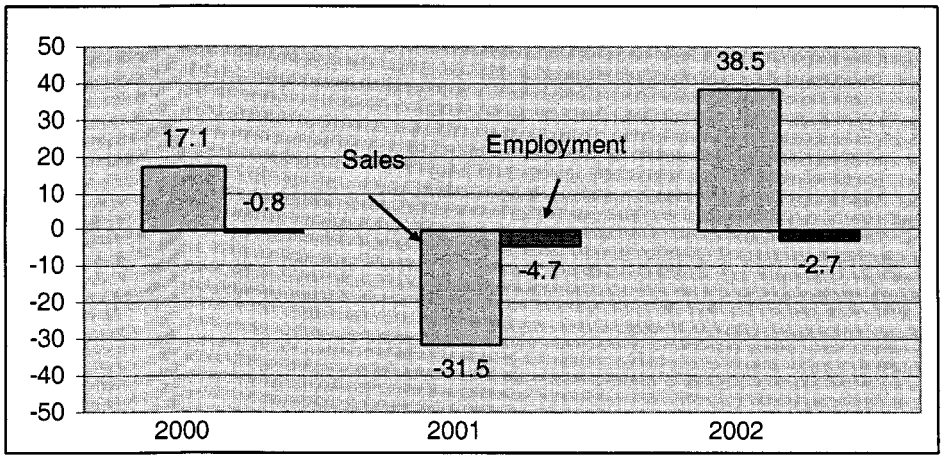
1. Estimates are for 2003 for Turkey and Japan, 2001 for Korea and Thailand, and 2004 for the rest.
Source: Eurostat, ILO

4.54 ***Formal-sector employers are reluctant to hire new workers because of possible separation costs in the future, as well as other obligations.*** An analysis of a sample of large firms during and after the most recent crisis illustrates how formal sector employers maintain very stable employment levels even in the face of very unstable business conditions. This analysis is based on employment and financial information from 101 publicly-traded firms over the 2000-2002 period.[134] The research provides evidence that firms did not lay off workers in significant numbers during the downturn and then did

[134] This sample was drawn from the Worldscope database and includes all firms that provided full reporting on employment, capital, and sales for 2000, 2001, and 2002. Of the 101 firms, 70 were in industry and 31 in services. Because of their size and financial status as publicly-traded, these firms would represent the most formal segment of the Turkish private sector. For details on the Worldscope database, see http://www.thomson.com/common/view_brand_overview.jsp?section=financial&body_include=/financial/brand_overviews/Worldscope_Fundamentals&page_mode=full&subsection=null&secondary=null&subnav=prodaz&tertiary=null&product_name=Worldscope_Fundamentals

very little hiring when business conditions improved again. As Figure 4.9 shows, despite extremely large changes in sales over this three-year period, the median firm employment level remained nearly flat. Calculations of employment elasticities on sales yield very small estimates of between 0.0 and 0.15.

Figure 4.9: Changes in sales ($US) and in employment over previous year, sample of formal-sector firms, 2000-2002



Source: Calculations by World Bank staff based on Worldscope data

4.55 ***The strategies that employers use to minimize the costs of Turkey's legal framework are not always economically efficient and they constrain job creation, especially in the formal sector.*** At the same time, they leave a large share of the labor force without access to formal instruments of social protection.

4.56 ***Better outcomes would result from more flexible job security rules that encourage employment creation in the formal sector.*** This would involve reforms to bring Turkey more in line with comparator countries in Europe and elsewhere in terms of severance pay requirements and flexible contracting. Increasing flexibility through the reforms suggested in this report does not need to jeopardize the protection of the basic rights of workers. International experience suggests that women and young people would especially benefit in terms of increased access to formal employment.

4.57 ***At the same time, the labor force would be more effectively protected by a stronger safety net with wider coverage and better opportunities for skills development.*** The key elements would be an improved unemployment insurance system, capacity to implement cost-effective active labor market programs, and a high-quality training system.

4.58 ***This strategy of making Turkey's EPL more flexible while strengthening the safety net and skills development can be seen as shifting protection from jobs to workers.*** This transition is necessary if Turkey's labor market is going to have the flexibility to benefit from the opportunities of ongoing economic liberalization, to

provide full access to a diverse population, and to offer workers the tools to enhance their employability and to manage the inevitable adjustments.

C.3. Unemployment Insurance[135]

4.59 ***The Unemployment Insurance system has been providing benefits payments since 2002.*** The legal framework for the system follows the standard OECD model. It is mandatory, covering all industries and occupations (except public administration and the self-employed); benefits are available for those involuntarily laid-off in registered firms; benefit levels are earnings-related; entitlement duration is tied to previous employment history; and benefits are financed by employer, worker, and government contributions. One important deviation from the OECD model is a simplified monitoring of continuing eligibility. This is primarily dictated by the large informal sector and limited capacity of employment offices to monitor the current status of recipients, including their job search behavior.[136]

4.60 ***In its short history, Turkey's UI system has actually provided benefits to relatively few unemployed workers.*** The most recent figures indicate that there are slightly less than 100,000 recipients, representing about 4% of all unemployed workers. Although it would be expected that a new system would expand only gradually, the growth in the number of recipients has been slow when compared with other countries that have introduced unemployment insurance.[137] Additional reforms will be required for broader coverage.

4.61 ***If the UI program is to evolve into a broadly-based source of protection, reforms will be needed to improve compliance, to ease eligibility requirements, and to improve protection offered through higher benefits. These reforms would complement reductions in severance payments, as discussed earlier.*** The compliance issue around social security in general has already been raised. In the case of UI, there is an additional issue – job separations being reported as voluntary (primarily to avoid severance) with the consequence that many unemployed workers are ineligible for unemployment benefits.

4.62 ***Eligibility requirements are quite restrictive and easing them would increase the number of unemployed workers who could qualify for benefits.*** Currently, workers need to have worked in covered employment continuously for 120 days preceding the termination of employment, and for 600 days in the preceding three-year period. This condition is particularly strict, when compared with OECD countries and with the

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[135] This sub-section is based on World Bank (2005) and underlying analysis from Vodopivec (2004), updated in 2005.

[136] The Unemployment Insurance fund is also used to finance short-time compensation and a Wage Guarantee Fund. The former provides for UI payments to "top up" wages of workers who have hours reduced because of reduced labor demand. The latter provides partial payment of wages to workers who are employed by firms unable to pay their wages because of liquidation or some other reason.

[137] In other developing countries that have recently introduced UI, coverage rates are significantly higher. For example, Korea's UI system provides benefits to about 15% of all unemployed workers. Based on the experience of middle-income countries, Turkey should expect that coverage rates should be in the 25-50% range when the system matures.

transition countries. The Government has recently proposed that the eligibility requirements be amended to 120 days (not necessarily continuous) over the past year and 450 days over the preceding three-year period. In its Labor Market study[138], the Bank recommended a reduction in eligibility requirements to 12 months of covered employment over the preceding 24 month period.

4.63 ***Higher benefit levels would be another way to increase the coverage of the plan as well as improve the degree of protection offered to the unemployed.*** Benefits are now set at 50% of net earnings (from average of previous 4 months). The ceiling for benefits is the net wage of the official minimum wage for workers below 16 years of age. The Government is currently considering a proposal to raise the ceiling to double the minimum wage. The Bank has recommended in its Labor Market study that the maximum benefit be de-linked from the minimum wage since, in some instances, the setting of minimum wages may not reflect market conditions. The specific recommendation was to establish a target benefit ceiling tied to the average private sector wage. Implementing this recommendation will require a sound statistical basis for calculating this average private sector wage.

4.64 ***The Bank has also recommended that the UI contribution rate be reduced from the current 4% to 2%.*** While the employment impact of this reduction would be modest, it would provide some alleviation to the high payroll taxes to fund social security.

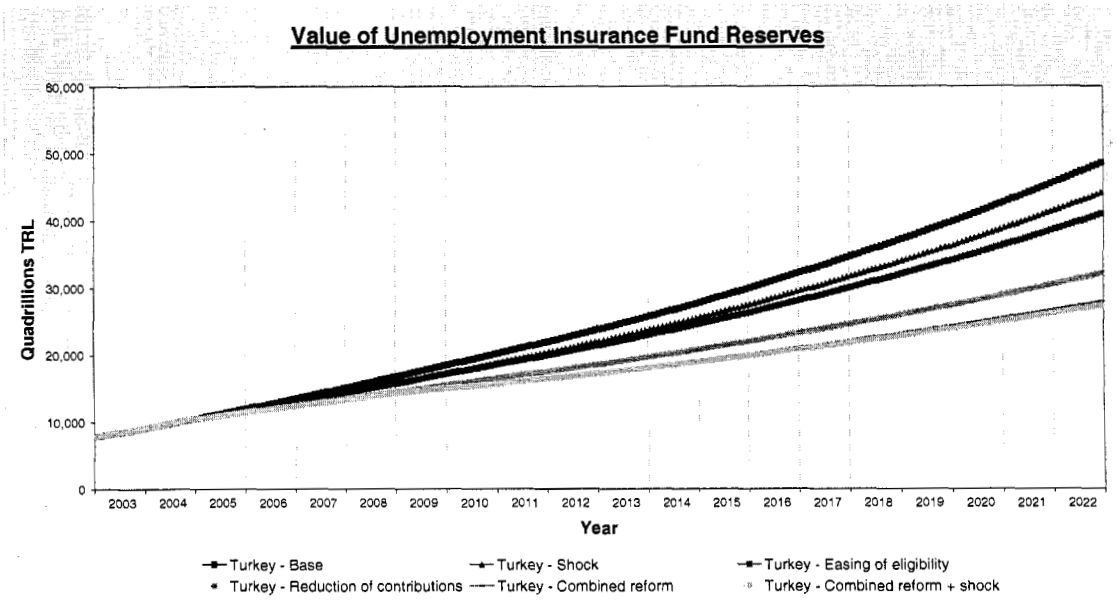
4.65 ***The Government is in a position to consider liberalizing changes to the UI system given the strong financial position of the Fund.*** Because of low liabilities and very high rates of return, the Fund has a surplus of over 15 billion YTL (over $11 billion). The Bank's Unemployment Insurance Simulation Model (UISIM) was used to assess the impacts of different macroeconomic and parametric reform scenarios on the UI system and the performance of the Fund. [139] The "combined reform" simulation includes the eligibility, benefit, and contribution rate changes indicated above, plus increasing spending on ALMPs to reach a level of 0.2% of GDP by 2009. This reform simulation was also run under an "economic shock" scenario where the economy slows and then contracts between 2007-2010. Figure 4.10 shows that the combined reforms could be financed without any jeopardy to the sustainability of the UI Fund. This conclusion holds

[138] Forthcoming, following final review by the Government for dissemination.

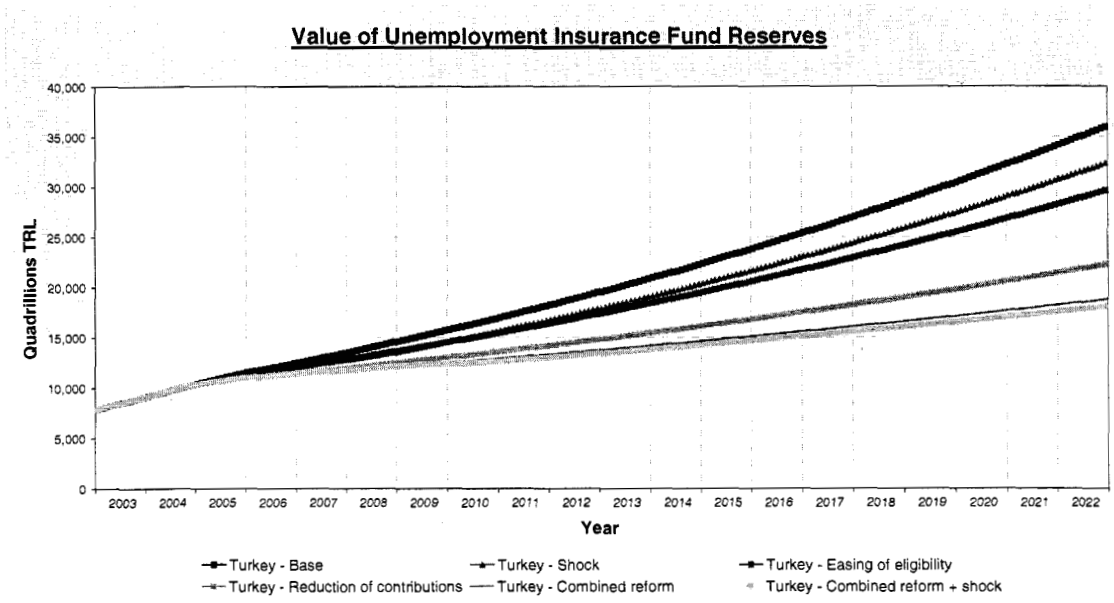
[139] This model predicts (i.e., projects) outcomes for key financial and other system variables based on input data regarding contributors, beneficiaries, and rules of the system, as well as macroeconomic and labor force variables. The simulations include a base scenario and a set of alternative scenarios to capture the effects of possible changes to key parameters and changes in macroeconomic conditions. Simulations are run out to 2022. The base case simulation assumes that key parameters of the system remain as they were in April 2004. As for macroeconomic parameters, the base scenario assumes the real yearly interest rates (the rate applied to the UI reserve fund) of 8.0% in 2003, declining by 0.5% yearly until it reaches an equilibrium rate of 4.0% in 2011. Under the low-interest rate scenario, interest rates are set at 2.)% from 2006 to the end of the simulation period. Note that inflation is dealt with implicitly, as the model works with real values of financial variables. Under the base case, real GDP is assumed to grow at a 5% rate during the simulated period. Real wage growth is assumed to be 5.8% in 2005, then gradually declines to reach an equilibrium range of 3.0-3.2% by 2013. The macroeconomic assumptions are the same as those used by the World Bank for its more recent pension and health insurance model simulations Further details on the model are available in Vodopivec (2004) and World Bank (2005).

even when the reforms are combined with the economic shock or when interest rates have been reduced significantly.

Figure 4.10: Value of the UI Fund reserves, UISIM (various simulations), 2003-2022
Base case



Low interest case



4.66 ***Reforming UI along the lines indicated above would improve the coverage of the system and its capacity to provide income protection to unemployed workers***. When this support is combined with cost-effective ALMPs (discussed below), unemployed and otherwise vulnerable workers will be able to more effectively manage labor market risks.

4.67 ***However, as the UI fund is a component of the government's primary fiscal position, reforms should be planned subject to broader fiscal feasibility.*** Appropriate fiscal space should be made for broader coverage of social safety nets by structural fiscal reforms aimed at downsizing low-value programs and broadening the tax bases, as discussed in chapter 2.

4.68 ***In the future, policy-makers may want to consider a more far-reaching reform that goes beyond the modification of existing UI parameters and more fundamentally changes the architecture of income support for unemployed workers.*** This would involve transforming and integrating the existing severance and UI systems into fully-funded individual accounts to provide income support to workers who have lost their jobs. This type of reform has been implemented in some countries, especially in Latin America. While many design issues would have to be worked out, individual unemployment savings accounts have the potential to efficiently protect workers while solving some of the employment and compliance-related concerns discussed in this section.

C.4. Active Labor Market Programs

4.69 ***Income protection needs to be selectively complemented by cost-effective active labor market programs (ALMPs) for unemployed and otherwise vulnerable workers.*** The demand for ALMPs should grow during the accession period, with the labor adjustment that can expected because of increasing trade, privatization, and the restructuring of agriculture.

4.70 ***Currently, Turkey has little capacity to support workers through employment services or other ALMPs.*** Overall spending is not available but it seems probable that Turkey invests less in ALMPs than other middle-income OECD countries which roughly spend between 0.2-0.7% of GDP (OECD 2005). The bulk of spending on ALMPs is financed by World Bank and EU projects. The EU has implemented a technical assistance program, primarily to enhance the capacity of ISKUR, the national employment agency created in 2000.[140] Private employment agencies do not yet play an important role. These agencies were authorized for the first time in 2003 although they cannot provide the full range of employment and training services. According to the latest figures (February 2006), just over 100 have been licensed.

4.71 ***The international experience shows that ALMPs have a mixed record and building capacity in this area must be done selectively and strategically.*** Scientific evaluations indicate that many ALMPs do not help participants find work or improve earnings and, where impacts are positive, they are sometimes outweighed by program costs.[141] Program design and the context in which the program operates matter a great deal and well-designed and implemented interventions can improve the functioning of the labor market and assist targeted workers to find jobs. A recent review by the OECD (2005) has reinforced earlier conclusions by that organization and by the World Bank that

[140] This program includes policy development and improving ISKUR's operational performance; a grant scheme to finance ALMPs; and construction of provincial employment offices.
[141] For a review of the evaluation evidence, see Betcherman, Olivas, and Dar (2004).

job search assistance can have positive impacts at relatively low cost. The record on more expensive interventions like job training is less favorable but the OECD's updated assessment suggests that the impact of these programs may be positive over the longer term even if no positive effects are evident in the short run.

4.72 ***The international experience is clear in showing that successful ALMP strategies are based on rigorous performance monitoring and evaluation and allocation of resources to programs and service deliverers that demonstrate positive outcomes***. The foundation should be a network of public employment offices, directing clients to service deliverers that meet performance standards. There is now considerable institutional variation within the OECD in terms of how this strategy is implemented, ranging from conventional models to more radical innovations in Australia and Netherlands, for example, where a "quasi-market" for ALMPs have been established. Turkey should consider the full range of options as it builds capacity in this area. In any event, allocation of resources should be based on evaluation evidence and directed towards programs and services that demonstrate cost effectiveness. Increases in resources for ALMPs should only be made as the institutional capacity of ISKUR to design and implement them develops.

D. CONCLUSIONS AND RECOMMENDATIONS

4.73 ***Recent initiatives, including the 2003 Labor Code, have brought Turkey's labor market framework into closer alignment with EU requirements***. However, more changes will still be needed to fully comply with the *Acquis*. These generally represent useful reforms for achieving a more efficient and equitable labor market but some of the reforms will require careful design and implementation in order not to work against the job creation objective. Moreover, Turkey's negotiations with the EU should recognize that some of these could require a long transition period, either because they will be costly or because it will be difficult to get agreement from the social partners.

4.74 ***There is also a broader labor market reform agenda to create the conditions for full employment, higher quality and productivity, and social cohesion and inclusion. The principle underlying the reforms should be to shift protection from jobs to workers.*** This will involve making labor market regulation more flexible while strengthening the support workers receive through unemployment insurance, active labor market programs, and skills development. Table 4.5 prioritizes the reform agenda needed to comply with the *Acquis* and to pursue the targets set by the European Employment Strategy.

CHAPTER 5. FINANCIAL SECTOR DEVELOPMENT

5.1 ***Turkey's financial sector is repositioning itself to better facilitate growth of the private sector, as the financial sector's development was impeded by past macroeconomic instability and fiscal deficits, crowding out credit generation to the private sector.*** As a result, the sector today is smaller than its potential size and performing below its potential in terms of prudently allocating credit in the economy. Increasing credit to the private sector will not only facilitate capital accumulation, leading to growth and better labor productivity, but it will also improve the allocation of capital leading to TFP growth.

5.2 ***Turkey's financial sector provides a good payment system and has efficiently mobilized savings, but the mobilized funds have historically not been supporting private sector investments and have instead been largely invested in a small number of firms and in Government securities.*** Therefore, it has neither allocated capital to the private sector efficiently, nor has it diversified risks for its investors.

5.3 ***The EU accession process is a positive force for change as the acquis outlines a number of sound standards for financial sector supervision and standards for corporate governance and transparency.*** EU aims to create an open market for financial services and well as to create a level playing field by applying consistent governance and supervisory systems across member states. Thus, the acquis lays out standards for supervision of financial institution and governance that will guide near term financial sector reforms in Turkey.

5.4 ***Turkey's commitment to EU accession is also stimulating financial sector development through its positive impact on investor confidence.*** EU accession establishes a medium-term policy anchor, which creates trust among international investors that Turkey is on a convergence path with EU. As noted in chapter 1, interest rates have been declining, and international investors have been financing the current account deficit with capital inflows at decreasing interest rates. In February of 2005, the Government successfully marketed a 5-year bond with a yield lower than the 1 year T bill, and international issuers have followed with fixed coupon bond issues with maturities of as much as 10 years. These are positive forces for the development of access to credit and in particular medium- and long-term credit products in local currency.

5.5 ***The World Bank has supported the recovery and development of the banking sector since the financial crisis of 2000/2001 most importantly through a series of adjustment loans, PFPSAL I-III.*** Between 1997 and 2002, 20 banks were taken over by the SDIF, and all but one have been liquidated, merged or sold. In addition, Imarbank

was liquidated due to bankruptcy in 2003. Moreover, Kibris Kredi Bank was voluntarily liquidated without any burden to the public. The bank supervisory system has been strengthened, and three large deposit taking public banks have been operationally restructured and recapitalized. In tandem with the economic recovery, the banking sector is now evolving from a mechanism for funding Government borrowing needs to a sector that intermediates finance for the private sector.

5.6 ***While substantial progress has been achieved since the financial crisis of 1999-2001, financial sector reform remains an unfinished agenda.*** As Turkey continues on its path of economic and financial stability, the key challenge is to strengthen the prudential framework and to create institutions that will facilitate sound and efficient expansion of credit to the private sector, which in turn will foster competitiveness, growth and employment in the private sector. The three large state banks, which required fiscal outlay of US$ 22 billion in the aftermath of the financial crisis, are yet to be sold to private investors. The supervisory frameworks are still in the process of building capacity while adapting to EU and Basel II requirements. The credit markets, which to a great extent remained dormant during the time of economic volatility, need institutional support in the areas of auditing and accounting, credit information system, collateral regime, enforcement of contracts, as well as more sector specific reforms, for instance in the mortgage market. While such institutional underpinnings merited little attention during the time of economic volatility and therefore remain ill developed, they now offer great potential for developing a sound financial sector. A sound regulatory system, a sound accounting and auditing system, a good credit information infrastructure, a good collateral registry and regime, contract enforcement and an effective judiciary will be the foundations for a sound and efficient financial sector.

5.7 The next section provides an overview of the status of Turkey's financial sector followed by sections that review challenges and identify reform needs in: the banking sector, the credit market, the mortgage market, and the insurance sector. The last section provides an overview of policy objectives and policy recommendations combining the broader financial development agenda with the EU accession perspective.

A. OVERVIEW OF THE FINANCIAL SECTOR ISSUES IN TURKEY

5.8 ***The banking sector is the largest and most important part of the Turkish financial sector, and other financial institutions are mostly owned or otherwise affiliated with the major commercial banks.*** In addition, the public equity market has grown since the late eighties to a substantial size, while the non-bank financial institutions (NBFI) sector[142] remains small, and the NBFIs are generally owned by or otherwise affiliated with the major banks. The Government debt market, including a repo market, is large and liquid with significant participation from domestic banks, foreign investors, domestic mutual funds, pension funds and insurance firms. The corporate bond

[142] The sector includes mutual funds, pension funds, insurance, leasing, factoring, asset management and consumer finance firms.

market, in contrast, is virtually non-existent. Table 5.1 provides an overview of assets of sub-sectors of the financial sector in Turkey.

5.9 ***Savings mobilization of the financial sector in Turkey is good compared to other emerging markets, helped by the high returns offered on relatively low risk T-bills throughout the 90'ies.*** As discussed in Chapter 1, improved savings mobilization will be a critical factor for sustainable economic growth. Bank deposit mobilization amounted to 42 percent of GDP in 2004, which is in line with other non-Asian emerging markets (see Figure 5.1). The banking sector dominates savings mobilization with US$ 166 billion worth of deposits in October 2005. The other notable vehicle for mobilizing funds is mutual funds amounting to about US$ 14 billion at the end of 2004. Mutual funds grew rapidly in the years following the financial crisis as an alternative to time deposits. The mutual funds are predominantly money market funds that hold Government securities and reverse repos, and the mutual fund certificates are very liquid.

Table 5.1: Structure of the Financial Sector[143]

2004	Mill. YTL	Mill. US$	Share of sector	Share of GNP	Number of entities
Banks	306,452	228,781	63.9	71.4	50
State banks	114,917	85,791	24.0	26.8	6
Private banks	191,535	142,990	39.9	44.7	44
Insurance and pension /1	8,124	5,817	1.7	1.9	61
Non-life insurance	3,677	2,633	0.8	0.9	35
Life insurance and pension firms	3,893	2,787	0.8	0.9	24
Reinsurance	554	397	0.1	0.1	2
Leasing companies /2	4,227	3,027	0.9	1.0	82
Factoring companies /3	2,019	1,446	0.4	0.5	110
Brokerage firms	1,131	810	0.2	0.3	117
Investment trusts (net asset value)	1,183	847	0.2	0.3	32
Of which real estate investment trusts	1,179	844	0.2	0.3	9
Mutual funds	19,622	14,050	4.1	4.6	244
Portfolio management firms	na	na	na	na	21
Special finance houses	3,878	2,895	0.8	0.9	5
Stock market capitalization	131,672	98,299	27.5	31	na
Total	479,486	356,815	100	112	731

Sources: Treasury, ISE, and Banks Association.

/1 Consolidated for insurance, re-insurance and pension fund companies. Pension includes only the private pension funds. Emeklilik Sandigis are reportedly significant.

/2 Data reflect March 2004

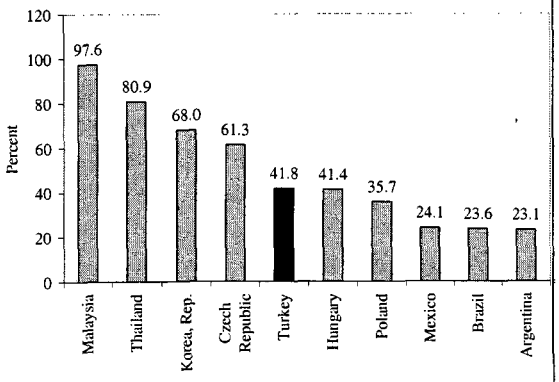
/3 Data reflect 2002. Asset data are not available for 2004, but according to Factor Chain International, volume in US$ terms doubled between 2002 and 2004 suggesting that factoring assets

5.10 ***In terms of credit generation to the private sector, Turkey's financial sector performs poorly (see Figure 5.2***[144]***).*** Despite rapid bank (mostly retail) credit growth in

[143] As of October 2005, total assets of the banking sector were US$ 268 billion of which state banks accounted for US$ 86 billion.

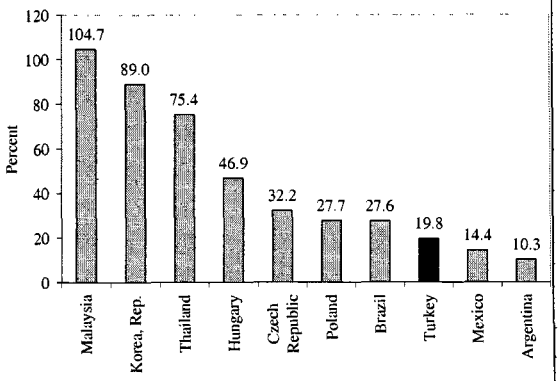
2003 and 2004, credit to the private sector still amounts to less than 20 percent of GDP. Other specialized institutions account for a combined 9 percent of finance to the private sector, while the traded corporate bond market is virtually non-existent. Facilitating improved access to credit thus remains a critical challenge for Turkey.

Figure 5.1: Bank Deposits/GDP, 2004



Source: IFS and Staff Calculations

Figure 5.2: Bank Credit to Private Sector/GDP, 2004

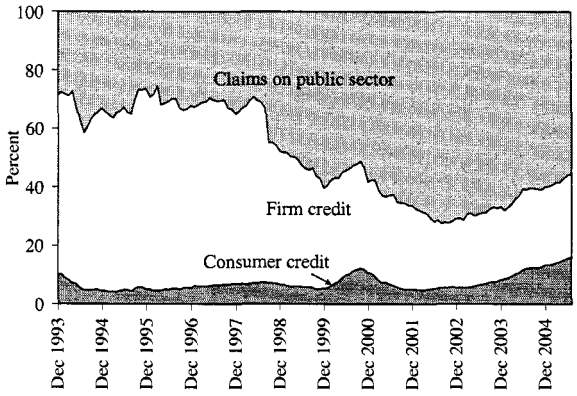


Source: IFS and Staff Calculations

5.11 ***Consumer credit has grown rapidly in tandem with the macroeconomic improvements, but credit to SMEs remains problematic.*** Figure 5.3 shows how the banking sector assets were directed towards claims on the public sector (mostly in the form of Government bonds and bills) throughout the late 90'ies. In contrast, loans to private firms have remained at a low level throughout the period. In the recent period after 2001, credit to consumers has grown very rapidly and much of it has been in the form of credit cards and more recently housing loans. Credits to firms, however, remain at about the same level in real terms as 10 years ago. Other than for the top tier firms, firm credit generation represents the area where the banking system has substantial room for improvement. As of October 2004, just 418 firms accounted for more than half of total credit to firms, confirming that SMEs have poor access to finance.

[144] In most banks and in most countries, loan to deposit ratios are below one, but occasionally such as in the case of Malaysia, credits exceeds deposits and are funded with borrowings, issued securities, equity and other non-deposit liabilities.

Figure 5.3: Distribution of Banking Sector Assets

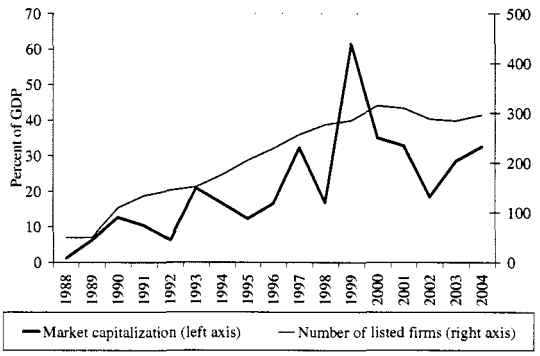


Source: CBT.

Note: Loans to state owned enterprises are included in claims on public sector.

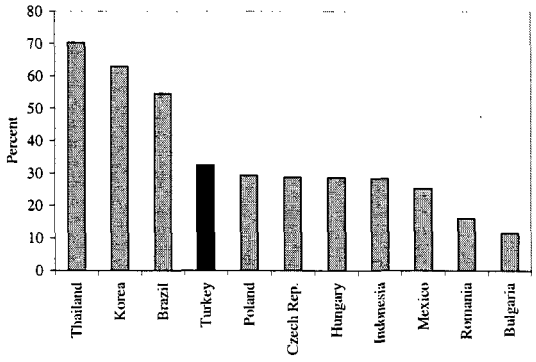
5.12 ***The capital market has two well development components: the equity market and the Government bills and bonds market. The capitalization of listed firms amounts to US$ 98 billion or 33 percent of GDP with 296 firms (see Figure 5.4 and 5.5).*** The equity market has been growing steadily in terms of listed firms, while the market capitalization has been more erratic over the same period reflecting mostly the volatility in pricing of equity.

Figure 5.4: ISE Listed Equity



Source: WDI.

Figure 5.5: Market Capitalization, 2004

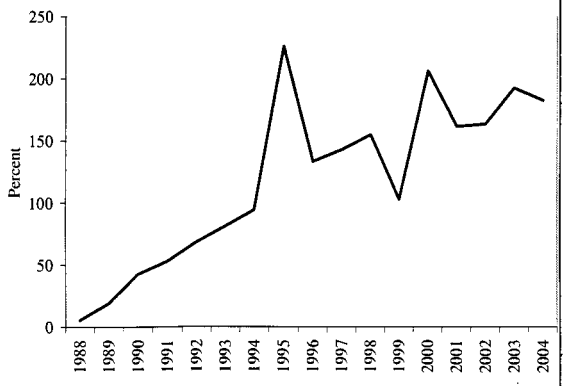


Source: WDI and LDB.

5.13 ***The equity market provides an important source of financing for large enterprises and an essential alternative to bank (or debt) financing, but it has not reached its potential.*** Although the capitalization of listed firms amounts to US$98 billion, the value of listed equities amount to only US$25 billion. The difference is made up by stock, which has never been floated on the exchange, thus financial intermediation provided by the exchange is only US$25 billion. This suggests that the exchange still has great potential of increased intermediation if informational asymmetries, corporate governance and other institutional impediments can be overcome.

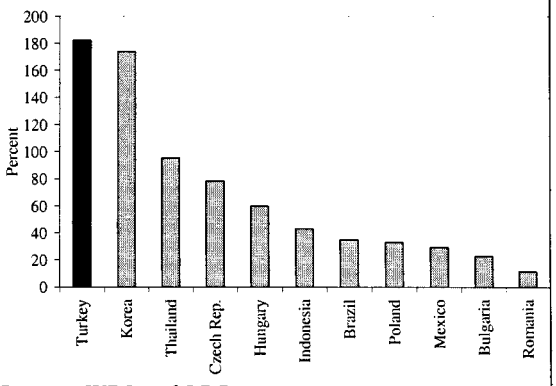
5.14 ***Trading in equity has been growing rapidly over the same period (see Figure 5.6), and the market today is quite liquid in comparison with other emerging markets (see Figure 5.7).*** Notable is the difference vis-à-vis other emerging European countries, where listed equity markets often are a legacy of privatizations and the stock exchanges are less often used for raising new capital or as a market place.

Figure 5.6: ISE Equity Turnover Ratio



Source: WDI.

Figure 5.7: Equity Market Turnover Ratio, 2004

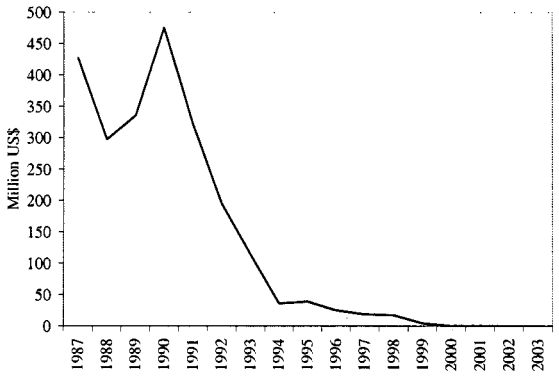


Source: WDI and LDB.

5.15 ***The traded corporate bond market is virtually non-existent after it dried up in the mid-90'ies, but even before that, the market was small (see Figure 5.8), but tax reforms are likely to support the re-emergence of the market.*** High interest rates on Government bonds and a tax advantage on Government bonds vis-à-vis corporate bonds contributed to the demise of the market. With a large and liquid equity market and the sharply declining interest rates in Turkey, the market can support a vibrant corporate bond market if the tax and regulatory regimes were realigned to encourage new access to debt markets. Better corporate governance, accounting and auditing standards will be essential to support a healthy development of this market.

5.16 ***Reforms of the withholding tax on capital gains and interest designed to level the playing field between Government securities and other debt instruments is expected to support the reemergence of the corporate bond market.*** A withholding tax of 15 percent will be applied to all capital gains and interest including Government securities starting January 1st, 2006. This will bring deposits, Government bonds, and corporate bonds on a level playing field with respect to taxation. The existing tax exemption for Government bonds contributed to the demise of the corporate bond market, and the repeal of the exemption is therefore a welcome development.

Figure 5.8: Corporate Bonds, Value of Outstanding Bonds



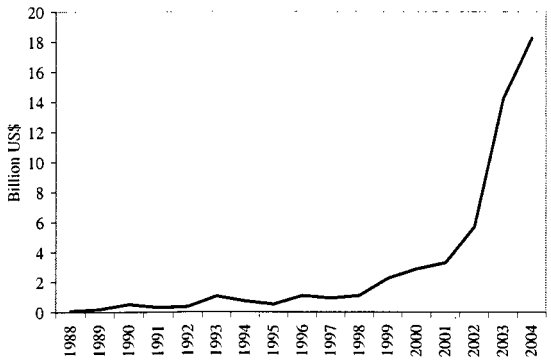
Source: CMB.

5.17 ***The traded domestic Government bills and bonds market is large and amounts to US$169 billion or 57 percent of GNP, and the market is very liquid for three reasons.*** First, as a result of short maturities, new issuance of debt is very frequent. Second, the secondary market is very active with US$263 billion worth of trading in 2004. Third, the securities support a highly liquid repo market in which transactions amounted to US$1,090 billion in 2004.

5.18 ***The Government securities are still held in large part by banks (banks held 40 percent of their assets in Government securities as of October 2005), but also by Turkish individuals, domestic NBFIs, foreign investors, and other domestic investors.*** The wide distribution of the securities helps sustain liquidity when the market is under stress and therefore reduces liquidity risks for banks and other financial institutions.

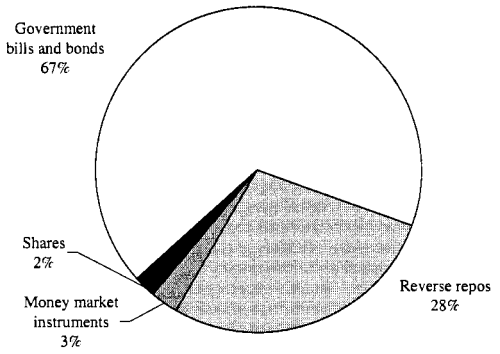
5.19 ***Mutual funds have become an important savings vehicle in Turkey, and their assets account for 4.6 percent of GDP.*** The mutual funds grew rapidly after the crisis in 2001, see Figure 5.9. The mutual funds are offered by the banks and are close substitute to time deposits and are more flexible instruments for the investor than directly holding Government securities. The emergence of mutual funds has put a downward pressure on t-bill to deposit spreads, where banks used to earn much of their income, but the development has also reduced risk in the financial system. By shifting deposits to mutual funds, the banks reduce their interest rate and liquidity risk exposures, and the earnings of banks become more predictable as they earn fees for the mutual fund services.

Figure 5.9: Mutual Funds, Portfolio Value



Source: CMB.

Figure 5.10: Mutual Funds, Aggregate Asset Composition, 2004



Source: CMB.

5.20 ***Mutual fund assets are overwhelmingly placed in Government securities and the funds are not very active in the equity markets (see Figure 5.10), but with the large assets size they have the potential to become important sophisticated investors in the equity market.*** The assets of the mutual funds are 95 percent in Government securities or reverse repo. Reverse repo are loans secured with Government securities, so the credit risk and yields closely resemble those of T-bills, but reverse repos on average have shorter maturities and are more liquid (as mentioned above, repo transactions amounted to US$1,090 billion in 2004). Only 2 percent or US$ 400 million are invested in equity, and thus the mutual funds are not important equity market investors. However, as the governance, auditing and accounting standards for listed firms improve, the mutual funds with large assets could become sophisticated investors in private sector securities.

5.21 ***Looking forward, the two key potential risks to the financial sector are: (i) sharp increases in international interest rates, which will likely be combined with capital outflows from emerging markets; and, (ii) a loss of political commitment to the key policy anchors: the IMF program[145] and the EU accession, which could affect, inter alia, the pending reforms in the state bank and/or regulatory spheres.*** The financial markets' confidence in the Turkish economy is based on a trust in a continued reform oriented policy that will insure fiscal sustainability and financial stability. A loss of confidence would lead to increases in interest rates, a depreciation of the currency, and a slow down in the real economy, all of which will negatively impact the banking sector. While the financial sector is viewed as being significantly more robust than in the run up to the 2000/2001 crisis, it is clear that risks to the sector remain

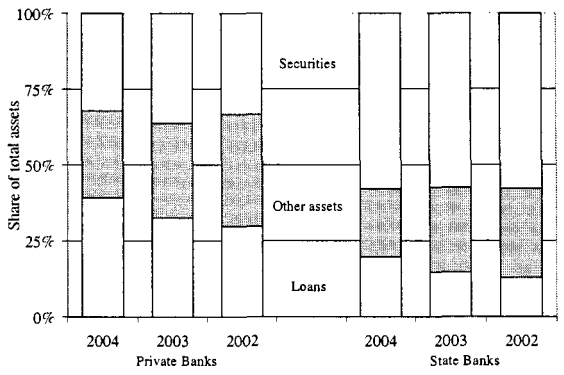
[145] A three-year IMF program was signed in April of 2005.

B. THE BANKING SECTOR

B.1. Performance

5.22 ***Banks in Turkey are in the process of transforming their business models towards better assessing credit risk and providing value added services for their clients (see Figure 5.11).*** The private banks are further along in this process, while the state banks remain heavily invested in Government securities. Although the banks are generally handling the transition well, several issues remain. State ownership in the sector remains very large with 34 percent of assets, the privately owned banks are mostly parts of large financial industrial conglomerates, and foreign ownership remains small. The SDIF is still faced with finalizing the resolution of assets from banks that failed after the financial crisis. In addition, the supervisory regime is faced with the evolving challenges of adjusting to EU and Basel II standards, especially towards consolidated supervision, and building capacity in the supervisory institutions remains a crucial medium-term endeavor.

Figure 5.11: Asset Composition – State Banks and Private Banks



Source: BRSA.

5.23 ***Recent positive developments in the banking sector are closely related to Turkey's strong economic performance.*** A sound fiscal and macroeconomic framework and a successful disinflation program that has helped reduce nominal as well as real interest rates. In addition, low international interest rates and capital inflows have more recently supported both the macroeconomic stabilization and the positive developments in the banking sector. Syndicated loans and securitization loans from abroad amounted to US$15 billion in November 2005.

5.24 **Resolution efforts have progressed well since 20 private banks were taken over in the period 1997 to 2003[146].** Since the interventions, five banks have been sold, five banks have been merged into banks that were later sold, and one bank was transferred to Halk Bank, a state bank. Seven banks have been merged into Birlesik Fon Bankasi AS[147] currently under resolution. The bank no longer accepts new business, has US$8 million worth of loans and US$ 52 million worth of deposits[148] and is thus well along towards its resolution. Three banks remain under liquidation.

5.25 **The total cost to the SDIF of the interventions amounts to US$ 24 billion net of the US$ 3 billion worth of collections that have been made, but not taking into account assets still held by the SDIF that remain to be liquidated at an estimated US$ 11 billion[149].** Out of the gross cost of US$ 27 billion, US$ 6 billion is related to Imar Bank, whose failure in 2003 was not directly linked to the crisis, but rather was a result of fraud. Recently, the SDIF sold NPLs with a face value of US$ 1 billion at terms favorable for the SDIF. A large cell-phone provider was recently sold for US$ 4.55 billion (and revenues accruing to the SDIF are part of the US$ 11 billion above). Thus, the resolution efforts are well underway.

5.26 ***State banks retain a very significant role in the Turkish banking system.*** The three large deposit taking state banks are slated for privatization. The state banks account for 34 percent of asset in the total banking system (see Table 5.2) they are serving both the private and public sectors and are increasingly operating on a commercial basis. In the aftermath of the 2001 financial crisis, each of the three large state banks was recapitalized and operationally restructured, and all three are now profitable banks. After privatizing these three large banks, Turkey will have a banking sector with more competition, less vulnerability and fewer potential distortions.

Table 5.2: Structure of the Turkish Banking System

Deposit taking banks June 2005		Total	State banks	Private Turkish banks	Foreign banks	Foreign interest banks
Assets	Bill US$	242.0	81.9	91.5	8.8	59.8
	Share (%)	100	33.8	37.8	3.7	24.7
Deposits	Bill US$	159.9	63.2	53.9	5.5	37.3
	Share (%)	100	39.6	33.7	3.4	23.3
Loans	Bill US$	88.2	18.7	37.9	4.5	27.0
	Share (%)	100	21.2	43.0	5.2	30.7
Securities	Bill US$	100.6	49.8	31.8	2.1	17.0
	Share (%)	100	49.5	31.6	2.0	16.9

Source: Banks Association of Turkey.
Note: Foreign interest banks are those where foreign investors hold strategic equity interests or are in the process of finalizing such investments. See Box 1 for details on these banks.

[146] In the period 1997-2002, 20 banks were taken over by the SDIF and all but one have been liquidated, merged or sold., while Imarbank was liquidated due to bankruptcy in 2003, and in addition Kibris Kredi Bank was voluntarily liquidated without any burden to the public.
[147] Formerly Bayindirbank.
[148] As of end-2004.
[149] Please note that numbers in this paragraph have not been discounted to account for the time value of money, but rather are based on the cashflows converted into US$ at the time of the cashflow.

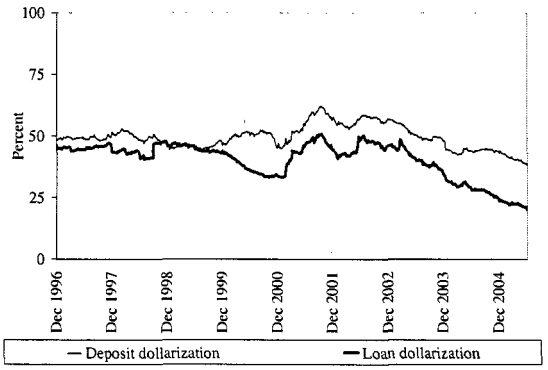
5.27 ***In addition to the three large deposit taking state banks, there are three non-deposit taking state banks that are not of systemic importance, but their poor efficiency is a concern.*** The banks are pursuing policy objectives to a much greater extent than the deposit taking state banks. The largest among them, EXIM Bank (US$3.1 billion in assets), is a key export promotion agency and provides credit, guarantee and insurance services to exporters. Iller Bank (US$2.5 billion in assets) is a municipal development bank providing investment financing for sub-national Governments. The Development Bank of Turkey (US$0.4 billion in assets) is a small project finance bank that extends credit to the private sector in activities that are politically targeted for development, and the tourism sector dominates the bank's loan book.

5.28 ***Almost all the major private banks are affiliated with large financial and/or industrial conglomerates through their shareholders.*** Related lending remains prevalent, as reported direct and indirect loans to shareholders amount to as much as 15 percent of capital in the Turkish banking system. In addition, almost all major banks have subsidiary or otherwise affiliated financial institutions such as life and non-life insurance firms, leasing firms, factoring firms, investment banks, and asset management companies. This presents governance and supervisory problems, because financial reporting is often incomplete without a consolidated group reporting requirement in place. While the reporting requirements for banks in Turkey do require the preparation of financial statements for the consolidated group, importantly, the consolidation does not include non-financial firms. In addition, the ultimate parent of groups that include banks is not required to present consolidated financial statements. Thus, consolidated supervision of the financial groups is incomplete and vulnerabilities are opaque, as affiliated firms have a comparative advantage over non-affiliated firms in accessing credit from affiliated banks. However, these issues are being addressed by the new Banking Law enacted in 2005 and its secondary legislation under preparation. The new banking sector legal framework is closely in line with the EU standards. Provisions under the new law include; lending to entities affiliated with the bank is limited to 20 percent of equity and the bank's board may extend that limit to 25 percent under certain condition, which are in line with EU directives.

5.29 ***Dollarization is strong but declining with 38 percent of deposits and 20 percent of loans in foreign currency[150] (see Figure 5.12).*** While it is straightforward for the banks to hedge the direct exchange rate exposure by rebalancing their marketable securities portfolios, the domestic loan dollarization exposes the unhedged borrowers to exchange rate risk. Consumer loans are predominantly in local currency, while about one third of loans to firms are in foreign currency. Loan dollarization has subsided rapidly since Turkey emerged from the financial crisis. However, long term financing in local currency remains scarce and lending remains mostly short term as a result.

[150] Data in this paragraph reflect June 2005 using the central bank as the source. The BRSA reports different numbers: 40 of deposits in foreign currency and 32 percent of loans in foreign currency as of June 2005.

Figure 5.12: Loan and Deposit Dollarization



Source: CBT.

5.30 ***The structure of the Turkish banking sector is changing as domestic banks are seeking partnership with or divesting shares and control to foreign investors.*** Since December 2004 when Turkey got a date for starting accession talks with the EU, foreign investor interest in the Turkish banking sector has strengthened, and several deals have been made or are in the making with foreign investors (Box 5.1). Those Turkish banks account for 24 percent of total Turkish banking sector assets or 39 percent of assets of the private banks, so the development is very significant. Foreign investors bring in new capital, lower cost of financing, and new risk management technologies, thus improving access to finance for Turkish firms by driving down costs and enhancing the competitiveness of the sector. Finally, they improve the safety of the Turkish banking system, since the parent companies are generally large, sound institutions. In addition to the ownership interests, international lenders are extended syndicated and securitization loans to Turkish banks in the amount of US$14.6 billion, which also contribute to the development of the sector. The continuance of foreign investment in the banking sector depends critically on political developments such as the continued commitment to the IMF economic program and to reforms for EU accession.

Box 5.1: Foreign Strategic Investments in the Turkish Banking System

- **TEB,** BNP Paribas bought 50 percent of the holding company for the bank
- **Koc Bank,** Unicredito bought 50 percent of the holding company for the bank
- **Sekerbank,** Rabobank acquired a 51 percent stake
- **Yapi ve Kredi Bank,** the Koc/Unicredito partnership bought a 57.4 percent stake in the bank.
- **Disbank,** is acquired by Fortis, which took an 89.3 percent stake in the company
- **Garanti Bank**, strategic owner, Dogus Group, sold about half of its shares, 25.5 percent of the total stock, to GE Consumer Finance.

5.31 ***In their efforts to collect deposits, Turkish banks have developed advanced banking services including an extensive ATM network, Internet banking, mobile phone banking, and a vibrant credit/debit card market.*** The credit card market has 27 million credit cards and outstanding credit amounting to US$ 10.2 billions or 3.4 percent of GDP, and transaction volume amounting to US$ 46 billion in 2004. The credit card market is based on a highly scalable business model where credit assessments are done based on

scoring models with simple inputs, and where fixed investments such as IT infrastructure and reach are important competitive parameters. Therefore, it is not surprising that the market is dominated by a small number of large banks, and that the market has taken off so rapidly. In addition to the 27 million credit cards, there are 43 million debit cards, so the total number of cards about equals the population of Turkey[151].

5.32 ***Shortcomings in the information infrastructure are becoming important impediments for credit generation to SMEs.*** As real interest rates are declining and economic and financial stability is taking root, the market potential for lending to SMEs is booming. However, the institutional underpinnings for developing the market have been largely neglected in the past while the former instable macroeconomic environment inhibited the growth of this market. Auditing and accounting, collateral regime, and credit information systems are now becoming critical to facilitate lending by ensuring improved transparency of SMEs creditworthiness as well by improving their willingness to pay.

5.33 ***Developing the banking sector encompasses complementary reforms of state banks, the supervisory framework, and strengthening the institutional underpinnings for developing credit to firms.*** The World Bank has been supporting these reform efforts through a series of adjustment loans and other activities and continues to stay involved. Issues pertaining to developing the credit markets are addressed in a specific section below.

B.2. Key Remaining Issues in Banking Sector Reform

5.34 ***Privatization of three large deposit taking state banks remains a top priority.*** In the aftermath of the crisis, fiscal restructuring cost of the state banks was US$ 22 billion (equivalent to 15 percent of 2001 GDP). The banks underwent early governance and operational restructuring and are now more efficient, transparent and saleable. The prospects for a successful privatization have improved with the stabilization of the economic environment and increasing interest in Turkish banks among strategic investor. At the same time, foreign investments in Turkish banks are making the business environment for banks more competitive, thus creating new challenges for the state banks. In order to be attractive for investors, the banks must prove that they have good potential for medium term profitability by improving their ability to respond to the changing economic and competitive environment.

5.35 ***Vakif Bank is further along with its privatization process than the two other deposit taking state banks.*** Vakif Bank launched an IPO of D-shares[152] in November 2005, and the divestment of Halk Bank and Ziraat Bank is slated to follow. Public offerings of shares as well as block sales remain open options for divestment, and investment advisors, which are yet to be hired, will guide the Government's choice based on market conditions and other considerations. Privatizing the banks will foster increased

[151] While recognizing that one cardholder may have multiple cards, the penetration is still great.
[152] Vakif Bank now has four classes of shares, and D-shares have limited voting rights.

competition, create a level playing field in the sector, and reduce uncertainty for investors in Turkey's banking sector.

5.36 ***The financial sector is still taxed with transaction taxes that are distorting financial intermediation.*** The Banking and Insurance Transaction Tax (BITT) and the Resource Utilization Support Fund (RUSF) transaction tax are currently applied to credits and insurance premiums and have contributed more than 0.5 percent of GDP to fiscal revenues. For the banks, the tax base is interest paid by private borrowers leading to an increased loan-to-deposit interest rate spread and creating an impediment to developing access to credit for the private sector. The Government should consider abandoning the transaction-based taxes. At the same time, it would be advisable to reassess the tax system for the financial sector to make sure that tax neutrality prevails and distortions are minimized.

5.37 ***Further strengthening of the banking supervisory and regulatory regime is required not only to ensure the sound development of the sector, but also to adapt the regime to the evolving requirements under EU and Basel II.*** A sound regulatory and supervisory framework twinned with an effective consumer protection regime instills confidence in the financial sectors among users and investors. In addition to supervision, resolution of assets from failed banks remains an unfinished agenda. The prudential and resolution responsibilities are shared by the BRSA, which is in charge of regulation and supervision, and the SDIF, which is in charge of bank resolution, asset resolution and deposit insurance. The separate but complementary sets of responsibilities ensure better management of the risks inherent in a financial sector. A new banking law passed in October 2005 frames the reforms of the two institutions.

5.38 ***For the BRSA, the drivers of reform are alignment with the EU acquis, the adoption of Basel II and risk-based supervision, implementation of the new banking law, and the continued need to improve the supervisory capacity of the institution.*** The revision of the regulatory and supervisory framework requires in part new processes and skills, which in many areas are yet to be developed, and in part management of risks in the transition process. The BRSA is in the process of finalizing its strategic plan, which *inter alia* would strengthen its processes and capacity. Key actions are related to:

- Developing and drafting regulations supporting the implementation of the new banking law
- Implementing Basel II and risk based supervision
- Developing information systems at the BRSA to support effective implementation of the new supervisory regime
- Training staff in accordance with the new roles and responsibilities
- Effectively implement consolidated supervision in the financial sector

As a near term priority, the BRSA should ensure proper supervision of the rapidly expanding credit market, since poor credit quality may go unnoticed while credit is expanding.

5.39 ***The SDIF is facing an institutional challenge as it changes its strategic focus from its asset resolution function to a deposit insurance and bank intervention and***

resolution function. The SDIF is in the process or realizing asset recoveries of more than US$5 billions, and this effort dominates its near term objectives. The institution has developed a business plan laying out necessary reforms such as downsizing staff as the asset resolution process draws to an end and reorganization of the institution. Some critical issues remain to be addressed, such as strengthening the bank resolution and deposit insurance functions. Thus, extensive reforms remain to be undertaken in order to ensure that the SDIF performs its role in an efficient and effective manner.

5.40 ***The SDIF, the BRSA, and the CBT, which are all tasked with aspects of financial stability, in accord with the new Baning law, are to develop formal and robust rules and procedures for cooperation, information sharing and coordination.*** The cooperation and coordination among the three agencies is a critical prerequisite for developing and maintaining a successful supervisory and regulatory framework.

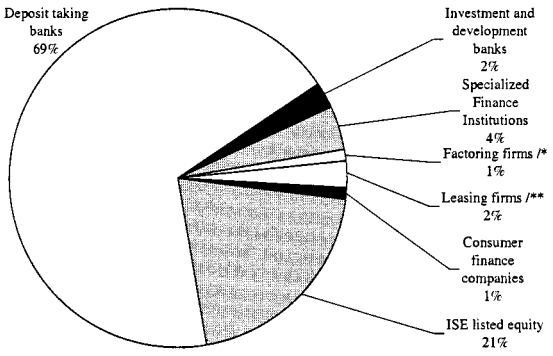
C. DEVELOPING INSTITUTIONAL INFRASTRUCTURE FOR THE CREDIT MARKET

C.1. Corporate Transparency and Audit Information

5.41 ***The credit market in Turkey is in need of improvement, and supporting the development of access to credit requires, inter alia, improving the institutional underpinnings of the credit market.*** Credit to SMEs has been identified as particularly problematic while the consumer segment has taken off very rapidly. Policies should be designed to ensure that credit is allocated efficiently to those firms that can best leverage their capital, as well as to avoid excessive risks building up in the financial system. Developing a sound credit market requires a good mix of: i) accounting and auditing standards, ii) additional informational infrastructure in the form of credit bureaus, iii) sound collateral regime, iv) effective contract enforcement, and v) a taxation regime that provides a level playing field across different means of financing. Contract enforcement is addressed in Chapter 3 (Product Market Regulations and Investment Climate) of this report, and taxation is addressed in Chapter 2 (Public Finance). The mortgage market is unique in nature and has a very large potential in Turkey and is addressed in a separate section below.

5.42 ***Banks dominate the credit market, but leasing, factoring, consumer finance and specialized finance institutions are important components of the market*** (Figure 5.13). The composition of the credit market confirms that access to credit for SMEs is poor, since the bank credit has been concentrated with few firms, and leasing and factoring volumes remain small. Recent evidence suggests that financial intermediaries are now focusing on expanding their business with SMEs.

Figure 5.13: Finance to Private Sector, 2004



Sources: CBT, CMB, BRSA, Turkish Treasury, and staff calculations.
Note: Equity held by Investment and development banks are double counted.
*As of 2002
** As of March 2004

5.43 ***Enhancing transparency and governance through reform in the areas of private sector accounting and auditing is needed to not only support credit market development, but also to develop the corporate bond and public equity markets.*** Corporate governance remains problematic in Turkey, where many listed companies are part of family owned conglomerates, creating the potential for distorted transfer prices and share dilutions. In the absence of reliable financial reporting on SMEs, lending decisions have been primarily based on other sources of information and collateral.

5.44 ***Harmonization with the acquis of the Turkish Commercial Code with respect to accounting and auditing regulations presents an opportunity modernize the system.*** Short-term priorities include defining appropriate standard setting bodies, defining the scope of statutory audits, and outlining the requirements for publication of financial statements for public interest entities. In the acquis, there are relevant directives related to corporate sector accounting and auditing[153], with additional directives related to entities such as banks (Banking Accounts Directive (1986), insurance companies (Insurance Accounts Directive (1991), and listed companies (Regulation (EC) No 1606/2002)).

5.45 ***The accounting and auditing framework for SMEs should be designed to provide useful information while avoiding onerous and overly costly requirements.*** The acquis provides the option to subject SMEs to a simplified framework for both accounting and auditing and utilizing such exemptions would be helpful in Turkey.

[153] Fourth EU Company Law Directive (1978): Annual accounts of companies with limited liability, Seventh EU Company Law Directive (1983): Consolidated accounts of companies with limited liability, and the new Eighth EU Company Law Directive (to be adopted in late 2005): Statutory Audits.

5.46 ***In tandem and expanding to the medium term horizon, some members of the auditing profession will need to be re-tooled in order to be able to perform independent financial statement audits according to International Standards on Auditing, set by the International Auditing and Assurance Standards Board (IAASB).*** Currently, auditing in Turkey is predominantly driven by tax reporting, which is required for all firms, while auditing under IFRS remains a limited activity. Retooling the audit profession entails education and training, possible introduction of a specific designation for individuals authorized to perform audits according to International Standards on Auditing (ISA), and the formation of an independent public oversight body to regulate professionals and the professional body(ies) responsible for audits based on ISA.

5.47 ***In addition to firms' financial accounts, the credit information in Turkey encompasses four important sources: KKB (a private credit bureau); TOBB on-line corporate registry; the Court of Enforcement and Commercial Court of First Instance records; and, a Central Bank public credit registry.*** KKB is owned by several banks and is a well functioning consumer credit bureau, which recently started collecting data on firms as well. KKB ambitiously plans to have 2 million firms included in the database by end 2005. If KKB succeeds even partially, it will be an important source of information for Turkish credit institutions. The TOBB registry includes basic information on more than 650,000 firms. The historical information is still in the process of being brought on-line, and the free and easy availability of this information makes it a useful source for creditors of SMEs. The Court of Enforcement and Commercial Court of First Instance records relate to civil cases for breach of contract, non-payment and bankruptcy. The information is in the process of being made available on-line, but access rights are restricted to lawyers with a relevant need to access the information. Lastly, the Central Bank maintains a credit registry for banks, which includes information on returned checks.

5.48 ***In the area of credit information, private sector efforts are underway to improve information on SMEs, but complementary efforts can improve access to credit information for lenders as well as to protect borrowers and creditor alike from abuse.*** Options for such complementary reforms include:

- Establish a law for credit reporting that provides a basis for creditors to share information and provides specific consumer rights and a regulatory framework for enforcement of the law
- Establish the necessary regulatory and supervisory framework for credit reporting in line with relevant EU directives.
- Pass legislation to make the central bank data available to the credit reporting system – in particular information related to returned checks
- Reduce the role of notaries in the registry process to ease the flow of information

Also, refer to Chapter 3 of this report for a discussion of contract enforcement and the necessary reforms.

5.49 ***The regime for movable collateral includes three principal security devices: i) security interest in registered property supported by a registry for motor vehicles, ships, and airplanes, ii) mortgage against the firm including all the property of the firm***

whether fixed or movable, and iii) mortgage, which may include fixtures, i.e. movable property that has become fixed to the building[154]. The mentioned property registry for vehicles appears to be working well and supports a large volume of collateral. One problem in the collateral regime is unclear priority of the three systems, which yields uncertainty and inefficiency. In order to develop a good movable collateral regime, two significant initiatives should be given priority:

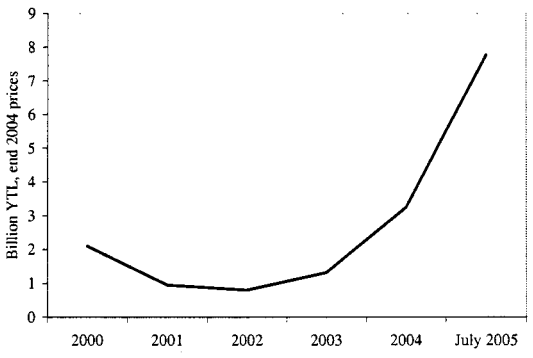
- Impediments in the legal framework should be clarified and addressed
- An effective filing system covering all types of movable collateral should be implemented

C.2. The Mortgage Market

5.50 ***The mortgage market in Turkey has formerly been suppressed by the high and volatile interest rates, which precluded the long term finance needed to stimulate the sound development of the mortgage market.*** However, those market conditions have now changed and thereby created a great potential for the market. Mortgage loans in Turkey amounted to less than 1 percent of GDP at the end of 2004, which is a fraction of the levels in Asian emerging markets, and less than in the new EU member countries.

5.51 ***The mortgage market is poised for strong growth, and it has taken off from its small base since 2003.*** As the economy is stabilizing, and interest rates are declining, and loan maturities are growing, the prospects for this market are formidable, and the near explosive growth of housing loans in the first half of 2005 confirm an optimistic outlook for the market (see Figure 5.14). Banks are extending maturities and lowering rates for the mortgage loans, and in October 2005, Ziraat Bank offered a 10 year fixed local currency mortgage loan for a monthly interest rate of 1.19 percent (equivalent to 15.3 percent p.a.). The loans, however, lead to significant interest rate risk and mortgage securities are not yet developed to fund the banks' lending and hedge the interest rate risk.

Figure 5.14: Housing Loans



Source: CBT.
Note: Data reflect consumer loans for housing deflated by CPI.

[154] Examples of the latter include elevators, escalators, air conditioners, furnaces, commercial interiors, generators and ovens.

5.52 ***Legislation and a sound regulatory regime is needed to foster the further development of the primary mortgage market as well as establishing a secondary market for mortgage securities and thereby to mitigate risks in the banking sector.*** Efforts led by the Turkish Capital Markets Board (CMB) and supported by a $400.000 FIRST Initiative grant[155] are aiming to strengthen the primary market and to develop a secondary market for mortgage securities. A draft new mortgage law has been submitted to parliament, and through the successful implementation of regulatory reform and continued decline in long term local currency interest rates, the market is poised for very strong growth.

In the primary market, the reform areas include:

- Reducing the time needed to foreclose mortgages
- Regulating of the appraisal profession to ensure effective valuation of properties
- Allowing variable interest rates (with some restrictions) on mortgage loans
- Regulating and ensuring effective consumer protection in part by improving information provided to the borrower
- Ensuring proper eligibility for mortgage loans to be included in the cover pool of mortgage covered bonds and mortgage backed securities; for instance mortgages on unauthorized houses shall not be eligible.

In the secondary market, the reform areas include:

- Establishing supervisory and regulatory framework including drafting regulations for the mortgage market, which must be done jointly by the banking regulator, the BRSA, and the securities market regulator, the CMB
- Defining and regulating mortgage covered bonds and other mortgage securities appropriately and in a way that does not restrict origination of mortgage loans to banks only
- Addressing taxation issues related to intermediation, interest income from mortgage securities, and interest expenses related to housing loans

The successful implementation of the reforms will require a multi year effort and ensure that the market reaches its potential in a sound manner.

D. THE INSURANCE SECTOR

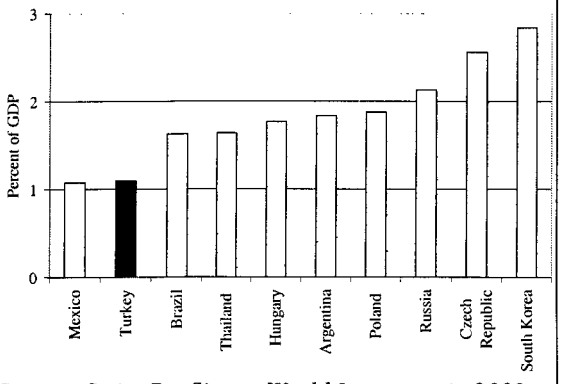
5.53 ***The insurance sector in Turkey is poorly developed, and insurance premiums in 2003 amounted to just 1.1 percent of GDP[156] for the non-life segment and 0.3 percent for the life segment (See Figures 5.15 and 5.16 for comparisons).*** The sector includes 35 non-life providers including two large international insurers, AXA and AIG and 24 life insurance and pension funds providers and employed more than 11,000 people in 2002. The insurance companies are mostly affiliated with major banks.

[155] The project is named "Turkey: Secondary Mortgage Market Development" and was approved in October 2004.

[156] 1.25 percent of GDP in 2004.

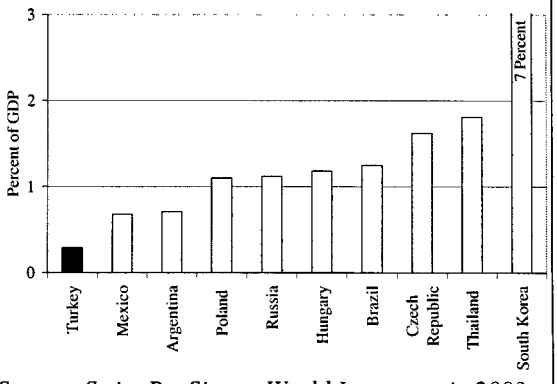
5.54 ***The poorly developed non-life insurance industry is partly related to the poor development of the credit market.*** For instance, as the mortgage market develops, the demand for housing insurance will grow, and enforcement of mandatory coverage for Motor Third Party Liability (MTPL) will increase demand for insurance products.

Figure 5.15: Non-Life Insurance Premiums, 2003



Source: Swiss Re, Sigma, World Insurance in 2003.

Figure 5.16: Life Insurance Premiums, 2003



Source: Swiss Re, Sigma, World Insurance in 2003.

5.55 ***Due to the small size of the sector, the supervisory and regulatory regime for insurance has received insufficient attention and needs substantial revision in order to meet EU requirements.*** Regulation and off-site supervision are done by the General Directorate of Insurance (GDI), and on-site supervision is done by the Insurance Supervisory Board (ISB). Both are hosted in the Turkish Treasury and are thus less independent than for instance the BRSA, the CMB or the CBT.

5.56 ***Supervision and regulation of the insurance industry needs significant improvement.*** Important issues include:

- A new framework law for insurance aiming to modernize the regulatory and supervisory framework and to bring it in line with EU and international standards is urgently needed and has been under preparation for more than a decade
- After passage of the framework law, the supervisory authority will be challenged with producing the supporting legislation and secondary regulations necessary to ensure effective implementation of the framework
- The independence of the ISB and the GDI and the possible establishment of a single entity for insurance supervision and regulation

5.57 ***EU is poised to play an active role in improving the insurance supervisory framework.*** Insurance supervision and regulation has been highlighted by EU's progress report for Turkey as an area in need of substantial improvement.

E. SUMMARY OF REFORM NEEDS

5.58 ***A solid financial sector reform agenda will contribute to the sound development, to expanding access to credit for the private sector, and thereby fostering private sector growth and economic prosperity. A sound financial sector will help sustain the confidence of international investors that underlie the continued strong macroeconomic performance.*** The three large state banks are yet to be sold to private investors. The banking and insurance supervisory frameworks are still in the process of building capacity while adapting to the EU directives and in the case of banks, Basel II requirements. The credit markets need institutional support in the areas of auditing and accounting, credit information system, collateral regime, as well as more sector specific reforms, for instance in the mortgage market. By pursuing such reforms, Turkey has the prospects for a vibrant financial sector that will provide a key pillar for more broadly developing the private sector by allocating credit in a more sound and efficient manner.

A multi-pronged agenda will help the financial sector reach its potential, and the reforms entail:

- Privatizing three large deposit taking state banks
- Strengthening banking supervision by adopting and implementing supplementary regulations to support the new banking law, build capacity both in terms of new technology and training of staff
- Strengthening insurance supervision and regulation by adopting a new framework law and supporting legislation, and addressing the independence and capacity of the supervisor and regulator
- Fostering the sound development of the mortgage market by addressing development issues in the primary market thereby encouraging the future development of secondary market, and by setting up supervisory systems for the secondary market institutions.
- Adapt auditing and accounting standards to the acquis while ensuring adequate exemptions for SMEs to avoid excessive costs
- Establishing law and regulatory framework for credit reporting
- Abandoning the transaction-based taxes, while reassessing the financial sector tax system to make sure that tax neutrality prevails and distortions are minimized.
- Introducing a legal framework and effective filing system for movable collateral

CHAPTER 6. FOSTERING TECHNOLOGY ADOPTION, INNOVATION, AND SKILLS

6.1 ***Productivity differences between countries and between firms within countries are affected by differences in levels of innovation, access to and capacity to adapt technology, use of quality standards, and the availability of a highly skilled labor force.*** A significant body of international theoretical and empirical evidence demonstrates links between technology, innovation and skills (the *knowledge factors*) and total factor productivity (TFP) and economic growth.[157] The *knowledge factors* are also essential for attracting higher levels of Foreign Direct Investment (FDI). As cheap labor becomes less relevant to attracting FDI, availability of technologically advanced local suppliers and a highly skilled labor force become more important for influencing the location decisions of multinational companies (MNCs). Acknowledging the importance of the *knowledge factors* as drivers for productivity and growth, governments in recent years have tried to devise ways to foster technology absorption, increase innovation, encourage use of quality standards and improve the skills of the labor force. For Turkey, this is of the utmost importance, considering the need to ensure sustained fast long-term growth through increased TFP and FDI.

6.2 ***Harnessing the knowledge factors is a central element of the European Commission's policies and strategies to improve EU (and candidate) countries' competitiveness and growth.*** The EC has placed knowledge at the core of its economic policy objectives by issuing a Green Paper on Innovation in 1995 and by setting "make the European Union the most competitive and dynamic knowledge-based economy by 2010" as one of its key objectives at the 2000 Lisbon Council Summit. (See Annex 6.1 for a review of EU knowledge strategies and programs released since 1984.) Turkey has been a full associate member of EU Research and Development Framework Programs since the creation of FP6 in 2002. FP6 aims to contribute to the creation of a "European Research Area" (ERA) and promote research activities in support of implementing EU innovation policies and strategies. The 2003 Innovation Communication identified for the first time specific challenges that candidate countries need to address in the knowledge areas in order to improve the performance of the enlarged EU, including improving countries' institutional capacity to foster innovation, embedding innovation in several policy areas and strengthening the role of the private sector in innovation.

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[157] For a detailed discussion of the impact of technology, innovation and skills on productivity, see Chapter One of *Closing the Gap in Education and Technology* (World Bank, 2003).

6.3 **While the *Acquis* does not dedicate a specific chapter to the knowledge variables, several of its sections include requirements related to knowledge improvements with which Turkey will have to comply.** Key sections of the *Acquis* that cover issues that are related to, or that can influence, the *knowledge factors* include: Chapter 25 on Science and Research, which addresses institutional issues and countries' capacity to use EU funds for innovation; Chapter 6 on Company Law, which addresses issues related to protection of Intellectual Property Rights; and Chapters 1 and 4 on Free Movements of Goods and Capital (respectively), affecting technology adoption and quality standards. Other EU documents complement *Acquis* requirements by providing broader recommendations to improve Turkey's performance in the knowledge areas.

6.4 ***The objective of this chapter is to highlight critical issues related to technology adoption, innovation, quality standards and skills in Turkey by conducting a diagnostic of the country's performance in these areas and providing policy recommendations.*** This chapter comprises three sections. The first section focuses on technology adoption and innovation. The second section looks at quality standards and the Turkish National Quality System, and the third section provides an overview of Turkey's labor skills, with a focus on the specific needs of the private sector to improve its ability to adopt technology and innovate. For each topic, the chapter provides a diagnostic of the country's performance and provides policy recommendations, both to meet *Acquis* requirements and — more broadly — to improve the country's productivity and sustainable long term growth.

6.5 ***The analysis in this chapter is based on the premise that both the private and the public sector have essential roles to play in developing and managing the knowledge factors.*** The reason lies in market failures related to the *knowledge factors, which* have been well documented in existing research:[158] (a) knowledge is non-appropriable because it is a quasi-public good — that is, the knowledge developed by one individual or firm can easily be transferred to another; (b) knowledge generates specific positive externalities and spillovers; (c) investments in innovation are long-term and risky, which implies that private firms are unlikely to undertake them alone; (d) the process of innovation involves bringing various actors together and is subject to coordination failures and free rider behaviors; and (e) diffusion of knowledge is not appropriable. Thus, while adopting new technologies and improving productivity is ultimately the responsibility of firms, governments have important roles to play. This chapter dedicates specific attention to the interplay between the public and private sectors and focuses on the need to strengthen the government's capacity to catalyze knowledge development.

A. PROMOTING TECHNOLOGY ADOPTION AND INNOVATION AT THE FIRM LEVEL

6.6 ***Technology adoption and innovation are intertwined.*** Development of new technologies is mostly the prerogative of firms and institutions in high-income, scientifically- and technologically-advanced countries (often referred to as "core

[158] World Bank, *Closing the Gap*, page 134.

innovators").[159] Most low- and middle-income countries, on the other hand, innovate mostly by absorbing existing technologies.[160] However, the links between technology absorption and innovation are often blurred, with local innovation being an essential requirement to successfully absorb technologies and, equally importantly, to adapt them to the local needs.[161] Focusing on both dimensions is particularly important for a country like Turkey, which is growing rapidly, is very much in need of local innovation to adapt technology to local needs, and could strive to become a "core innovator" in areas in which it has comparative advantages. The sections below analyze key determinants of technology adoption, innovation and collaboration between research institutions and firms (an essential condition to improve both technology adoption and innovation) in Turkey and provide policy recommendations to improve Turkey's performance in these areas.

A.1. Technology Adoption

6.7 ***The three main avenues for acquiring technology in an open economy are importing capital goods, FDI and licensing. Turkey's relatively low levels of capital goods import is a first indicator of the country's limited access to foreign technology.*** The importance of trade, FDI and licensing as drivers of technology absorption has been emphasized by endogenous growth theory.[162] Capital goods often embed technologies and productive applications that increase the stock of capital as well as its marginal productivity.[163] At the end of 2004, imports of capital goods in Turkey were low, at 26 percent of total investment, about one third of the proportion in Bulgaria and one fourth of that in Thailand (Figure 6.1). Direct import of capital goods embedding foreign technologies is an unexploited means that Turkish firms could use to tap into global knowledge, as demonstrated by the East Asian countries, for which importing of technologies through capital goods has been a key means for productivity improvements.

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[159] On the concept of core innovators and for a more detailed discussion of creating versus absorbing new technologies, see the World Economic Forum (WEF) *Global Competitiveness Report* (World Economic Forum, 2000 and following years), in particular, the section by M. Porter and S. Stern in the 2003-2004 *Global Competitiveness Report*, pages 91-111. The WEF defines "core innovators" as countries that have more than 15 US utility patents registered per annum per million population and "non-core innovators" as all other countries.

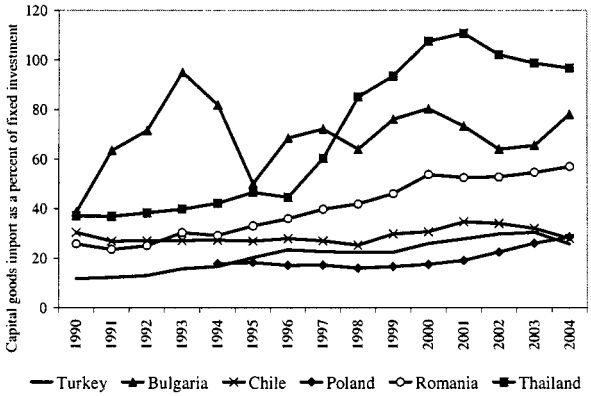
[160] See, among others, S. Lall, "Technology Absorption: An Overview" (presented at The World Bank Istanbul Knowledge Economy Forum, April 2005).

[161] See Cohen and Levinthal "On the importance of R&D for technology absorption" in *Absorptive Capacity: A New Perspective on Learning and Innovation* (1989). See also World Bank, *Poland and the Knowledge Economy* (2004), and World Bank, *Concept Note for a Regional Study on Access to Finance and Innovation in East European and Central Asia Countries* (2004).

[162] See Romer (1996, 1990), Lucas (1988), Grossman & Helpman (1990) and World Bank, *Closing the Gap.*

[163] On the importance of imports of capital goods, see Eaton et al. (2000).

Figure 6.1: Capital goods import/investment



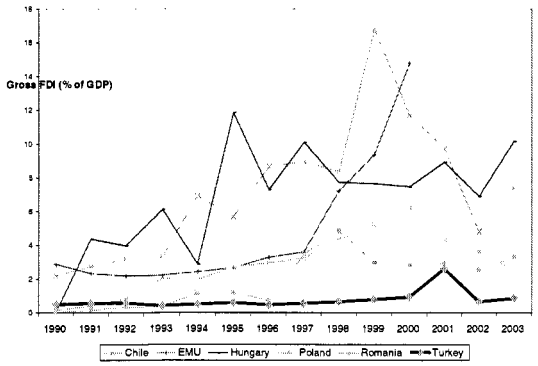
Source: World Bank Live Database, 2005.

6.8 ***Direct investment from foreign firms is a second means of acquiring advanced technology from abroad. In Turkey, FDI has been chronically low but prospects are improving after the rebound observed in 2005.*** While worldwide FDI has increased by a factor of 12 in the last 15 years, FDI in Turkey has remained compressed since the mid-1990s, to less than 1 percent of GDP, compared with more than 3 percent in China, almost 7 percent in Bulgaria, and 10 percent in Hungary, for example (Figure 6.2). Although, as explained in chapter 1, FDI has boomed in 2005, to an estimated 2.6 percent of GDP, it is significantly lower than what would be expected considering the country's income level (see Figure 6.3). Several factors have limited FDI in Turkey, in particular weak investment climate conditions—including related to macroeconomic and political instability—and specific legal and institutional constraints.[164] Some of these constraints have been mitigated, and FDI is expected to grow in the coming years. This will increase non-debt creating capital inflows to Turkey, improve competition in the local market, and facilitate the country's integration with the global economy as well as technology absorption.[165]

[164] See Chapter One, The Product Market Regulations Chapter and S. Sayek, "FDI in Turkey: The Investment Climate and EU Effects," background paper (2005).

[165] Evidence about the impact of FDI on technology absorption is mixed. In some countries, FDI has been instrumental in increasing technology absorption among local firms, while in other countries multinationals (MNCs) have not created linkages with local firms, continuing to do business with their foreign affiliates. Key factors that have to be in place for local firms to integrate with local-foreign supply chains and take advantage of the opportunities offered by MNCs include a technically skilled and highly educated labor force and local firms' capacity to use advanced technology.

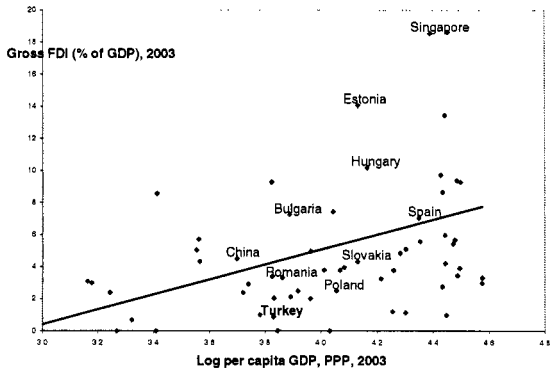
Figure 6.2: Foreign direct investment



Note: EMU — European Monetary Union countries.

Source: WDI, 2005.

Figure 6.3: Foreign direct investment: correlation with income

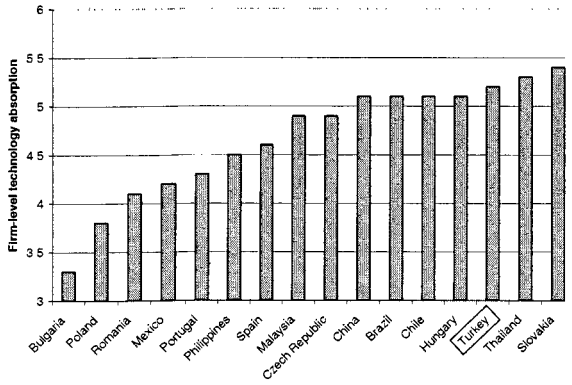


Source: WDI, 2005.

6.9 ***Interviews with leading Turkish business executives and entrepreneurs confirm that, while Turkish firms are eager to absorb technology, FDI is not yet a vehicle for acquiring it.*** Among all comparator countries, Turkey has the widest disparity between firms' recognition of their readiness to absorb advanced technology and FDI contribution as a source of technological development — see Figures 6.4 and 6.5. This is probably due to the low current levels of FDI and concentration in sectors that are not technologically intensive (e.g., real estate, retail). On a more positive note, Turkey has experienced the positive effects of FDI in a few sectors, both in terms of growth and exports and in terms of spill-over effects on the local economy. In the automotive industry, for example, MNCs play a major role. They entered the Turkish market by merging with large local companies (e.g., Ford-Otosan, resulting from the merger of Ford and the local Koc group) and created strong links with several local small- and medium-size enterprises (SMEs), leading to an accumulation of know-how and the development of local technological capacities. [166]

[166] Interview with Ford-Otosan (February, 2005) and Sirin Elci, "Innovation and Technology Absorption in Turkey", 2005.

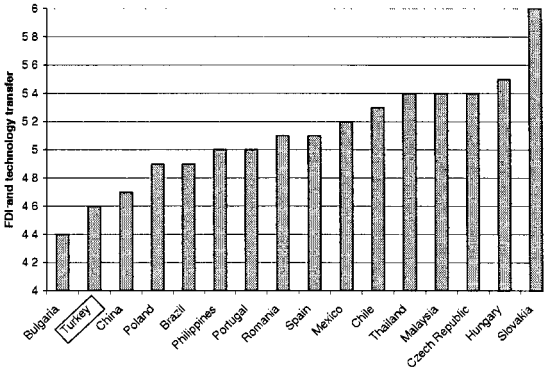
Figure 6.4: Interest of Turkish firms in absorbing new technologies



Note: Companies in your country are ...
... 1 = aggressively absorbing new technologies
... 7 = not interested in absorbing new technologies

Source: World Economic Forum (WEF), 2004-2005.

Figure 6.5: Acquisition of new technologies via FDI



Note: Foreign direct investment in your country ...
... 1 = brings little new technology
... 7 = is an important source of new technology

Source: WEF, 2004-2005.

6.10 ***The third avenue for absorbing foreign technology — licensing — is also somewhat weak in Turkey.*** Licensing involves the contractual transfer of technology between firms. It provides knowledge in a more accessible manner than FDI, and for this reason has been favored by several countries around the world, including Japan, Brazil, India and Mexico. Royalties and license fee payments in Turkey are about US$2 per capita — see Figure 6.6. This is broadly consistent with the country's level of development, although Turkey is below the regression line in Figure 6.7. However, other European comparator and Latin American countries are more aggressively tapping into the pool of global knowledge and over perform compared to their development level. As a comparison, per capita royalties and license fee payments in Poland, Slovakia and Chile are about ten times those of Turkey. Hungary is even more advanced, with per capita royalties and license fees of US$40. East Asian countries had Turkey's current levels of licensing in 1985 (US$2.7 per capita regional average). In 2002, the average per capita licensing for Korea, Thailand and Malaysia was US$42, with Korea reaching US$75. While aggregate values are low in Turkey, the country has had some success at licensing in manufacturing. Licensing agreements — particularly in automotive, automotive spare parts, and white goods sectors — have led to an accumulation of know-how and the development of local technological capacities.[167] Indeed, Turkish business executives and leading entrepreneurs consider licensing as a much more common means of acquiring technology than FDI — compare Figure 6.8 with Figure 6.5. Perceptions are far more optimistic than the real numbers indicate. At the same time, they do suggest that licensing is well known in Turkey and that it holds promise as a means to acquire technology in the future.

[167] Companies like Arcelik, Temsa and Tofas are good examples in this respect (interview with Arcelik, February, 2005). See also Sirin Elci, Op. Cit.

Figure 6.6: Royalty and license fee payments: trends

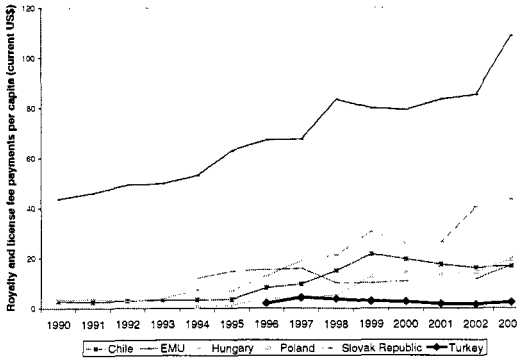
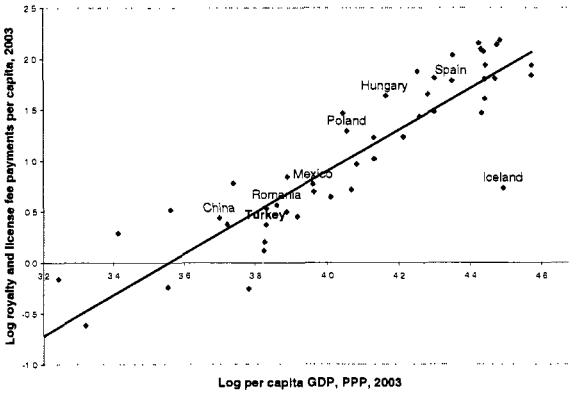
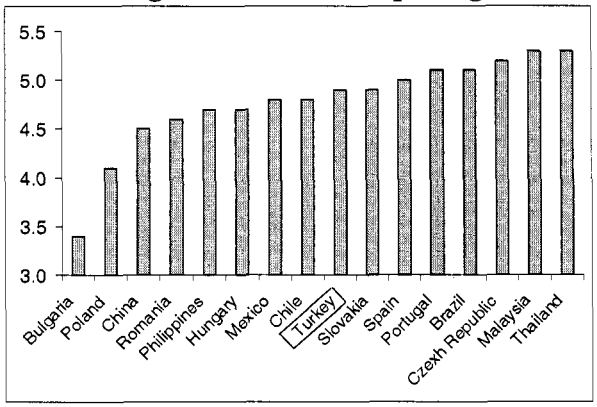


Figure 6.7: Royalty and license fee payments: level of development



Note: EMU — European Monetary Union countries.
Source: World Bank, WDI.

Figure 6.8: Licensing as a means of acquiring new technologies



Note: Licensing in your country ...
... 1 = brings little new technology
... 7 = is an important source of new technology

Source: WEF, 2004-2005

A.2. Innovation

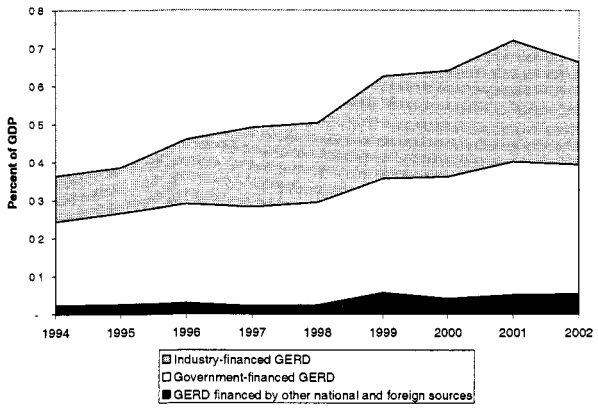
(a) Comparative Performance

6.11 ***Investment in R&D has improved in Turkey, and so has the share of R&D financed by the private sector, a key determinant of productivity.*** Without an adequate volume of R&D expenditures a country will most likely not ascend the technological ladder.[168] With gross expenditures in R&D (GERD) equaling 0.66 percent of GDP at the end of 2002, Turkey is in the middle of the GERD ranking compared to OECD countries taken as a reference (Figures 6.9 and 6.10). Turkey almost doubled its GERD during the

[168] World Bank, *Closing the Gap.*

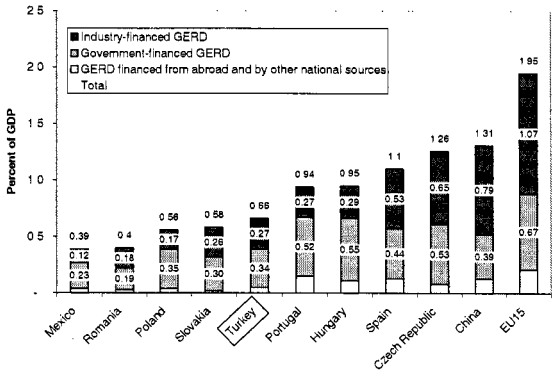
past decade, which (both public and private) is now slightly above that of countries with similar level of development (Figures 6.11 and 6.12). The latest budget allocation for R&D also confirms that the government is moving in the right direction — funds allocated from the 2005 (and 2006) budgets are much higher than in all previous years. However, and notwithstanding recent initiatives to increase institutional capacity – including the creation of the Turkish Research Area (TARAL) which has as one of its key objectives that of increasing institutional capacity for innovation and supporting public-private cooperation in this area—more effort are needed to ensure that Turkey has coherent programs and capacity to utilize these resources effectively. Despite a strong increase in private R&D during the past decade, firm-financed GERD in Turkey was still low at 41 percent of the total in 2002 (versus 52 percent in the Czech Republic and 60 percent in China, for example). R&D performed by enterprises affiliated with foreign companies is also very low — see Figure 6.13. Key objectives for the future will be increasing private R&D investment and ensuring productive use of public R&D by improving collaboration between the public and private sectors. Suggested measures to achieve these goals will be discussed in Section A.4.

Figure 6.9: Gross expenditures on R&D, trends and composition: Turkey.



Source: OECD, Main Science and Technology Indicators database, 2005.

Figure 6.10: Gross expenditures on R&D, total and composition: international comparison, 2001-2003, most recent data available*



Note: data are from 2003 for all countries but Mexico (2001) and Turkey and Portugal (2002).

Source: OECD, Main Science and Technology Indicators database, 2005.

Figure 6.11: Privately-financed R&D and level of development.

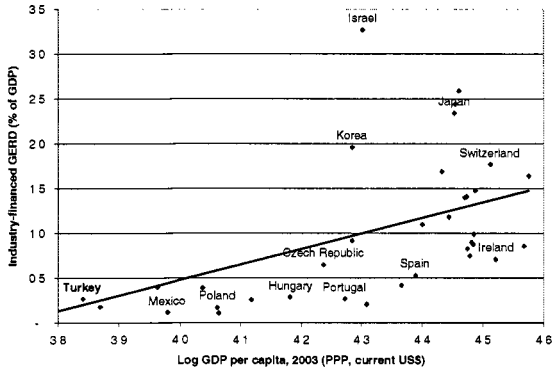
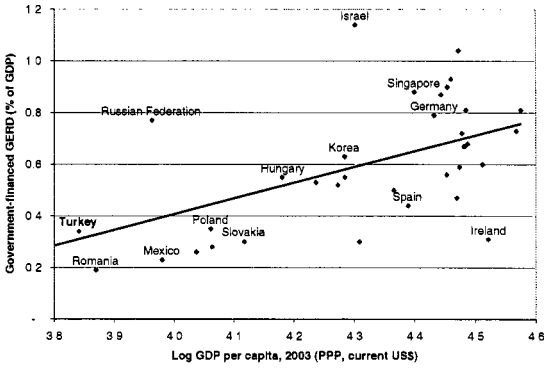
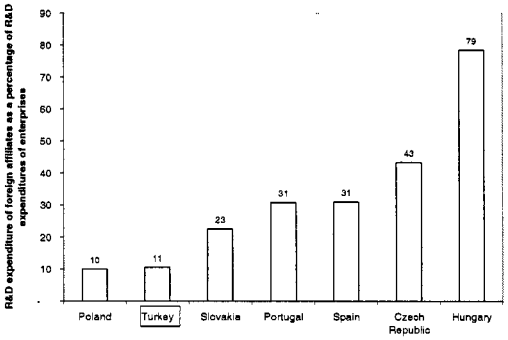


Figure 6.12: Government-financed R&D and level of development



Source: OECD, Main Science and Technology Indicators database, 2005.

Figure 6.13: R&D expenditure of foreign affiliates as percentage of total private R&D, 2000-2002 (most recent year for which data is available)



Note: 2002 data for Poland, Czech Republic and Slovakia, 2001 data for Portugal and Spain, 2000 data for Turkey and 1998 data for Hungary.

Source: OECD, Main Science and Technology Indicators, Volume 2005, Release 01.

6.12 ***The number of patents filed by Turkish innovators in the US is aligned with that of several comparators, but patents granted to Turkish inventors by the EU are limited and the number of patents registered locally is extremely low.*** Patents are relevant for technological development because they protect inventions with industrial applicability.[169] While investment in R&D is an *input* to innovation, the number of patents registered by the residents of a country is a key *output* of the innovation process and can be considered as an indicator of the success of R&D expenditures. Table 6.1 includes the number of patents registered by residents of Turkey in the United States,

[169] Patent applications are for exclusive rights to an invention — a product or process that provides a new way of doing something or offers a new technical solution to a problem. A patent provides protection to the owner of the invention for a limited period, generally 20 years.

Europe and Turkey.[170] Turkey far underperforms all comparators (except Mexico) in filing patent applications at home. Turkish patent numbers are not growing and are low given the country's level of development (Figures 6.14 and 6.15). Turkish inventors also file few patents with the European Patent Office — fewer than all European countries except Romania.[171] The picture improves only when looking at patents granted by the United States to Turkish inventors — about as many as granted to inventors in Poland, although Bulgarians and Slovakians receive over twice that number — see Table 6.1.

Table 6.1: Patents granted per million population

	US utility patents granted per million population, 2003	European Patent Office applications, per million population, 2004	National patent applications, per million population, 2002
China	0.2	0.3	31.5
Philippines	0.3	0.0	NA
Romania	0.3	0.5	68.2
Poland	0.4	2.4	60.8
Thailand	0.4	0.1	NA
Turkey	**0.4**	**0.9**	**7.9**
Brazil	0.7	0.5	37.4
Chile	0.7	0.6	NA
Mexico	0.8	0.2	6.2
Bulgaria	1.1	2.0	38.9
Slovakia	1.1	2.2	51.3
Portugal	1.2	5.0	17.8
Malaysia	2	1.3	NA
Czech Republic	3.9	8.2	59.6
Hungary	7.3	9.3	94.7
Spain	7.5	20.6	105.8

Note: Population data used to calculate the EPO applications is for 2003 from the WDI

Source: US patents, USPTO; EP Patents, European Patent Office Annual Report 2004; National Patent, WDI, 2005.

6.13 ***Progress has been made to improve protection of Intellectual Property Rights in Turkey, but further effort is needed to ensure compliance with the Acquis.*** Intellectual property rights give the inventors or innovating firm the right to temporarily exclude others from using the new ideas commercially, improving innovation and (in turn) technology adoption. IPR protection requires clear rules to ensure that inventors can

[170] The advantage of measuring patents registered in the US is that it is of similar "quality" (within a given technology field) across countries. The shortcoming of this measure is that it reflects, in part, the expected likelihood that inventors of a given country will sell their product in the U.S., and may therefore be contaminated by trade and other flows across countries. Moreover, the relatively high cost may further discourage inventors from lower income countries from registering a patent in the U.S.

[171] Countries outside the European area are not ideal comparators in this case, as they are less likely to file patent applications with the European Patent Office.

appropriate the benefits of their research, together with implementation agencies that are able to ensure enforcement of the IPR rules. Weak enforcement of IPRs and regulatory gaps with respect to international standards (see below) seem to be at the origin of the underperformance regarding especially national patent applications. During the past few years, several legislative changes to improve IPR protection have been introduced in Turkey, including changes to the law on trademark protection to ensure compliance with other Turkish laws and EU requirements, as well as the introduction of decrees related to protection of pharmaceutical and medical processes and products and biotechnological inventions. The Turkish Patent Institute (TPE) has also strengthened its capacity and modernized processes in order to improve its services, including process automation, various IPR promotion campaigns and training programs, and the creation of an Industrial Property Campus building in Ankara, hosting specialized IPR courts. Despite recent progress, more effort is needed to ensure full compliance with *Acquis* requirements and the creation of a comprehensive legal and implementation IPR framework, which is in turn an important condition to foster productive innovation in Turkey. Specific suggestions are included in section A.4.

Figure 6.14: Patent applications (national patent office).

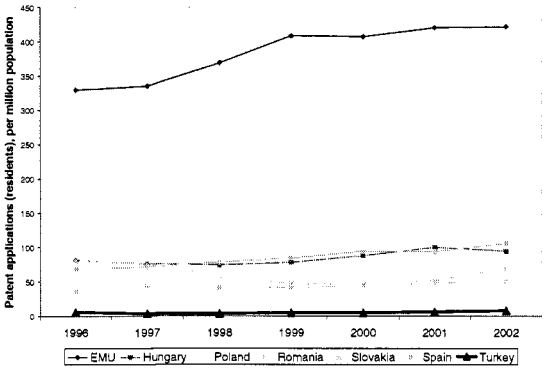
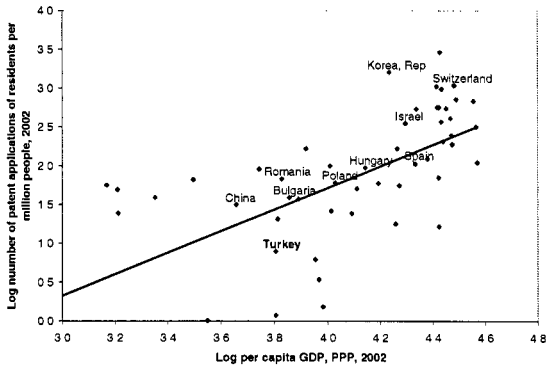


Figure 6.15: Patent applications (national patent office) and level of development.



Source: World Bank, World Development Indicators; U.S. Patent and Trademark Office.

(b) Finance For Innovation

6.14 ***Several tax incentive schemes aim to encourage investment in R&D in Turkey. However, their impact on innovation and their fiscal implications are unclear.*** Turkey has four fiscal schemes to promote R&D:

- Decree on Tax Postponement to Support R&D (1986)
- Support for R&D Investment (1986)
- Law of Technology Development Zones (2001)
- R&D Tax Exemption (2005)

Turkish firms do not find tax postponement or support for R&D investment incentives beneficial and therefore do not use these schemes. The incentives provided by the Technology Development Zone and R&D Tax Exemption Laws are very generous. They

include deduction of 40 percent of R&D expenditures from taxable corporate income, in addition to the ordinary Investment Tax Allowance (deduction of 40 percent of investment expenditures) for all firms and exemption from CIT for software development and R&D activities, as well as PIT-exemption for salaries of R&D personnel until the end of 2013 for firms located in Technology Development Zones. The incentives provided under the Technology Development Law have fuelled high start up rates for technoparks in the past few years. However, the recently approved Tax Exemption legislation provides even more appealing incentives, which are likely to reduce future requests to locate in technoparks. These four schemes should be evaluated to assess their impact on innovation, fiscal impact and consistency with the *Acquis*.

6.15 ***Public and public-private matching grants and soft loans schemes also aim at promoting private R&D and innovation.*** Matching grants to promote private R&D are offered by TUBITAK-TIDEB under the "State Support for R&D Program" financed by the Treasury. TUBITAK-TIDEB provides up to 60 percent of the firm's total project budget to finance R&D-related expenses for personnel, materials, equipment, travel, consultancy and patenting. Reimbursable (soft) loans are provided by the Technology Development Foundation of Turkey (TTGV) with resources from the Undersecretary of Foreign Trade (also under the "State Support for R&D Program") and the World Bank (under the Industrial Technology Project). Finally, the Small and Medium-Size Industry Development Organization (KOSGEB) provides a mix of grants and soft loans for R&D projects by SMEs located in TEKMERs (under the "Technology Research and Development Support" program). As further explained below, existing matching grants and loans programs should also be assessed systematically in tandem with fiscal incentives.

6.16 ***Venture capital and other private means to finance start up are almost non existent in Turkey.*** There are only four VC funds in Turkey[172] and the total percentage of VC investment over GDP is close to nil. To help develop the VC industry, the Turkish Capital Market Board (SPK) modified the venture capital legislation in 2004.[173] The new law introduced two types of Venture Capital Investment Trusts (VCITs): (1) those only entitled to sell their shares to accredited investors such as banks, intermediary institutions, insurance companies and long-term pension funds, and (2) those that can sell their shares to the public without limitations. In addition, the minimum capital requirement for both types of funds was decreased and other unfavorable conditions, such as requirements for a Turkish majority among VCIT board members, were abandoned. Despite the recent legislative improvements, both supply and demand factors still limit the VC industry in Turkey. As explained in Chapter 5, these factors are, indeed, more generic as they impede the development of private capital markets more broadly.

- Key factors hindering VC development on the *supply* side include: the instability of the macro environment until very recently, low FDI levels until 2005, immature

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[172] Vakif Girisim (a subsidiary of Vakif Bank), Is Girisim (owned by Is Bank, TSKB and TTGV), TurkVan Ventures (Advent, IFC, TTGV and others) and KOBI Girisim (owned by TOBB, Halk Bank and KOSGEB). An additional fund is currently being established by FIBA Holding. Sirin Elci, 2005, Op. Cit.

[173] See Communiqué Serial: VI, N. 16 "Amending the Communiqué Regarding the Principles about Venture Capital Investment Trusts".

pension funds and insurance markets that make fundraising difficult, the small size and limited liquidity of the capital market (the market capitalization of Turkey's stock exchange is US$68 billion, versus US$14.2 trillion in the United States and US$726 billion in Spain, for example[174]), insufficient exit mechanisms that make IPOs rare in Turkey, and lack of limited rights for, and protection of, minority shareholders.

- Key factors hindering VC development on the *demand* side are the cultural and managerial practices of Turkish firms and entrepreneurs, which negatively affect the quality and quantity of deals. These include traditional family ownership and management, weak corporate structures, confidentiality concerns of entrepreneurs who are reluctant to share ideas, ownership and control, and firms' accounting practices (e.g., different accounting books kept for different purposes like taxation, banking and management), which make company valuation difficult. The impact of these factors is exacerbated by the low levels of awareness of venture capital investments and the limited capabilities of firms and entrepreneurs to transform their ideas into business plans.

A.3. Links Between Firms And Research Institutions

6.17 ***Creating links between firms, universities and research centers is essential to focus research on productive purposes and stimulate technology adoption and innovation at the firm level.*** University / research center / industry collaboration comes in many forms, including mobility of researchers and students, joint or contract research projects, licensing, consulting, training, formal and informal networks, and spin-offs.[175] According to the WEF survey, university / industry research collaboration is low in Turkey compared to most EU and East Asian countries, although it is higher than in Romania, Bulgaria and Hungary. Leading Turkish executives and entrepreneurs also consider scientific institutions to be of low quality, below those of all other comparators — see Figure 6.16. While these data are based on qualitative surveys and should therefore be taken with caution, they do point to the need to conduct an in-depth assessment of the quality of Turkish research institutions and the constraints that limit collaboration between firms and the scientific world. Indeed, Figure 6.16 shows a high level of collaboration between firms and universities and a low gap between collaboration and quality of scientific institutions in all East Asian countries and in the comparator European countries that have made deliberate efforts to become more technologically advanced (e.g., Spain, Slovakia). The perceptions of Turkish executives and entrepreneurs are also confirmed by other surveys. Reports evaluating the results of the World Bank Industrial Technology Project (ITP)[176] confirmed that "most of the firms in

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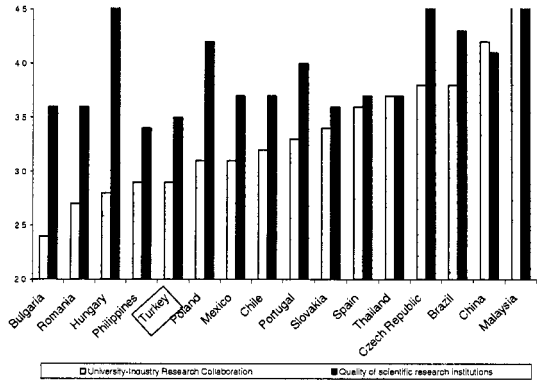
[174] World Bank, *Doing Business in 2005*, based on Standard & Poor's (2004).

[175] Sirin Elci, "Innovation and Technology Absorption in Turkey", 2005, Op. Cit.

[176] The WB ITP Project (1999-2006) was designed to assist in the harmonization of Turkish technology infrastructure with European Customs Union standards and assist firms in upgrading their technological capabilities in order to improve the competitiveness of the Turkish real sector, in both domestic and foreign markets. For a description of the project and its results, see the project documents at: http://www.worldbank.org.tr/external/default/main?pagePK=64027221&piPK=64027220&theSitePK=361712&menuPK=361744&Projectid=P009073

Turkish manufacturing industries do not collaborate with any research center or university in Turkey or abroad to acquire knowledge or develop new technologies."[177]

Figure 6.16: University-industry research collaboration



Source: WEF, 2004-2005.

6.18 ***Several factors hinder collaboration between firms and research institutions in Turkey.*** First, communication between research institutions and firms is limited. One of the main reasons for this is the limited availability of intermediaries (such as technology transfer offices, technology parks, and university-industry technology centers) to facilitate exchanges between the industry and research communities. Second, universities do not have the right incentives to collaborate with firms. Academicians who provide services to firms outside of Technology Development Zones must transfer to universities 70 percent of their income and are not allowed to start their own businesses.[178] Third, firms perceive the quality of Turkish scientific institutions as quite low, which limits their interest in collaborating with local researchers. Finally, cultural differences are an issue. Traditional business culture is reflected in Turkish firms' claim that mature technologies are sufficient for their needs.[179] Firms' overemphasis on confidentiality, academicians' missing deadlines, and differences between the priorities of both sides are also stumbling blocks in Turkey.

6.19 ***Recent measures to increase the number of intermediaries include the Law on Technology Development Zones and the establishment of government-funded university/industry research centers. Despite these efforts, the gaps between the scientific and industry communities are still large.*** Besides providing fiscal incentives for companies located in specific areas, the 2001 "Law on Technology Development Zones" stimulates collaboration between private firms and research centers or universities by supporting the creation of technoparks. The law includes incentives for firms located in technoparks to hire university researchers (who do not have to transfer to their universities any income generated by working for firms in the technoparks) as well as

[177] E. Taymaz "Monitoring and Evaluation of the Industrial Technology Project, Second Report" (2003) and S. Lall and E. Taymaz "Monitoring and Evaluation of the World Bank Turkey Industrial Technology Project, Third Report" (2004).
[178] Sirin Elci, "Innovation and Technology Absorption in Turkey", 2005, Op. Cit.
[179] S. Lall and E. Taymaz, 2003, Op Cit.

giving researchers the opportunity to start companies in the parks. Since the Technology Development Law passed, several universities and research centers have established technoparks. Private firms have also been responsive, mainly due to tax incentives offered in the parks. As a result, there are 17 technoparks in Turkey, more than half of which are under construction. Other programs aimed at improving collaboration between firms and universities or research centers include TUBITAK-TIDEB's University-Industry Joint Research Centers (USAMs) and KOSGEB's Technology Development Centers (TEKMERs), which specifically target SMEs. There are 6 USAMs and 14 TEKMERs throughout Turkey. In 2005, TUBITAK also initiated a National Public Research Program aimed at encouraging public agencies to establish partnerships with industry and academia, as well as an Industry Liaison Office in cooperation with the Chamber of Commerce (TOBB), aimed at training some of TOBB's staff to act as intermediaries between industry and TUBITAK.[180] Despite the recent increase in technoparks, USAMs and TEKMERs and more recent initiatives, the Turkish innovation infrastructure is not sufficient to jumpstart university-firm collaboration throughout the country. Before scaling up, it is important that the outcomes of existing and new programs be evaluated by external experts on the basis of international best practices.

A.4. Policy Recommendations

6.20 ***This section includes key policy recommendations to improve innovation at the firm level.*** It does not include specific suggestions to improve technology adoption through increased imports of capital goods, FDI and licensing. Measures to improve technology adoption (which require general improvements to the country's overall investment climate) are addressed in other chapters of this report (Chapter 1 regarding a macroeconomic environment conducive to stability and growth, and Chapter 3 on Product Market Regulations). Recommendations to improve innovation at the firm level are grouped below under three items: (a) improving the overall policy framework and infrastructure for innovation, (b) increasing access to finance for innovation and (c) improving the institutional effectiveness of the Turkish National Innovation System (NIS).

(a) Improving The Policy Framework And The Infrastructure For Innovation

6.21 ***Policy and legal changes are needed to improve the environment for firm-level innovation and strengthen collaboration between researchers and firms, including extending to all universities incentives currently granted only to technoparks.*** University researchers, excluding students, can benefit from their own research in Turkey.[181] That is, the academician who invents something is the owner of the related IPR and has the right to commercial revenues from patents that his/her research generates. While this policy is satisfactory, additional measures are needed to: (a) extend the benefits currently provided to researchers working in technoparks to all universities, that is, eliminate the rule requiring academicians working for firms outside of

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[180] *TUBITAK's observations and contributions to the CEM, October 2005.*

[181] Decree-Law No. 551, Article 41, April 1995.

technoparks to transfer 70 percent of the income they receive to their universities; (b) provide students with the same patenting rights as researchers, because they may contribute to increasing productive innovation and patent levels in Turkey; and (c) create patent cost sharing schemes between inventors, universities and government, and introduce clear rules about IPR ownership among researchers, research institutions and private firms.

6.22 ***The IPR legislation should be reviewed and IPR enforcement strengthened.*** As mentioned in section II.B, Turkey has improved its IPR regime. However, as also indicated by the EU evaluation of alignment with the *Acquis* Chapter Six on Company Law, the country needs to make further progress both on IPR *legislation* and on IPR *enforcement*.

- *IPR Legislation.* Changes in the final legislation should be revised in collaboration with international experts and relevant stakeholders to ensure that the law meets EU and international rules and requirements.
- *IPR Enforcement.* Suggested measures to improve IPR enforcement include:
  - Increasing the independence of the Turkish Patent Institute (TPE) and improving its staff's capacity and experience on IPR-related issues, on both registration and protection. In the past few years, the TPE has been supported by the World Bank's ITP Project, which has financed several initiatives to improve its effectiveness.[182] Additional staff has also been hired following changes to TPE's law in 2003. The ITP project evaluation shows that TPE's capacity, costs, paperwork and time needed to provide services have improved significantly since program inception.[183] TPE has particularly improved the average registration periods in trademarks, patents and industrial designs. More effort in this direction is needed to further improve TPE's effectiveness. Establishing an independent board dealing with appeals to the decisions taken by the TPE on registration of industrial property rights would also be important. The board should be composed of neutral experts and have a role in between the current board of re-evaluation and examination and the courts.
  - Increasing the number of IPR courts and training programs for judges and prosecutors to ensure that they are able to address the high number of IPR infringement cases. Development of standard manuals, implementation guidelines and training to improve IPR understanding and specialization among prosecutors, judges, and police and customs officers is also needed.

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[182] The World Bank ITP program supports activities necessary to bring the Turkish IPR system into conformance with the European Customs Union requirements. Specific initiatives financed under this project include: (a) technical assistance and training of TPE staff, (b) reorganization of the TPE's staff workflow, (c) construction of a new building for expansion and upgrading of current activities, (d) IPR awareness campaigns for consumers, industry, R&D managers and technical staff and academicians, (d) dedicated information centers easily accessible to customers, and (e) training of judicial officials on IPR.

[183] It is important to note that, in 2004, TUBITAK also established an IPR department that provides help desk services for patent and trademark applications, and also organizes training for TUBITAK researchers, affiliate institutions and firms receiving TUBITAK's financial assistance.

- Limiting piracy and counterfeiting by applying sanctions and improving border controls following the EC Directive on enforcement of intellectual property rights. This, in turn, requires strengthening the administrative capacity of all agencies involved with piracy control, as well as improving coordination and cooperation among enforcement and administrative bodies such as customs, the police, the judiciary, TPE and the Ministry of Culture and Tourism.

6.23 ***Increasing the number and quality of intermediaries to improve communication and collaboration among firms, universities and research centers in Turkey.*** Existing innovation intermediaries (i.e., technoparks, USAMs, TEKMERs and more recent initiatives such as the Industry Liaison Officers) should be systematically evaluated so that only successful approaches will be replicated on a broader scale.[184] TUBITAK has recently started promoting public-private collaboration by requiring public agencies to establish consortia with universities and private firms in order to be eligible for funding, and by providing technical assistance and seed funds to young entrepreneurs. Successful international programs stimulating public-private collaboration that could serve as a useful benchmark include the MAGNET program in Israel, TEKES in Finland and ATP in the US. The Spanish model of private-public Technology Innovation Centers (*Centros de Innovacione Tecnologicas, or CITEs*) may prove particularly beneficial for promoting technology adoption among Turkish SMEs.

(b) Increasing Access to Finance for Innovation

6.24 ***The results of existing financing programs to promote private R&D and business start up (i.e., fiscal incentives, matching grants and reimbursable loans) should be evaluated using best-practice international criteria.*** The results of the four fiscal incentives schemes described previously should be evaluated, to assess their effectiveness, fiscal impact and consistency with the *Acquis*. It is also important to emphasize that fiscal incentives do not benefit SMEs, which do not have sufficient profits to use the tax benefits and usually do not record R&D expenses separately on their financial statements, making them ineligible for these incentives. Thus, alternatives to fiscal incentives should be preferred for stimulating private R&D and innovation, particularly for SMEs. In addition, all existing matching grant and loan programs should periodically be assessed against criteria based on international best practice (e.g., the SPREAD program in India and, for matching grants, the experiences of Israel and Finland). The experiences of Finland, Israel, Malaysia, Hong Kong and (more recently) Mexico and Chile[185], show that well-designed participatory matching grants for R&D projects and consortia of academics and firms, if properly designed, can be beneficial in enhancing R&D investment by firms and promoting the commercialization of

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[184] The Ministry of Industry and Trade is developing a monitoring and evaluation (M&E) system to assess the results of existing technoparks. The M&E system should be designed on the basis of international best practices.

[185] These include the TEKES Program in Finland, the Magnet Program in ISRAEL, the Small Entrepreneur Research Assistance Program (SERAP) in Hong Kong, the Industrial Technical Assistance Fund (ITAF) in Malaysia, and programs supported by the World Bank through Science and Technology Projects in Chile and Mexico. See Philips (2000) and Batra and Mahmood (2003) for an overall evaluation of the benefits and shortcomings of matching grant programs supporting technology and innovation.

innovations generated in academic centers. (Box 6.1). Both TUBITAK and KOSGEB have started evaluating the results of their matching grants programs. External reviews could add value to the internal assessments by providing inputs based on lessons learned from international best practices. Finally, an overall support framework should be designed so as to: (a) assess and reduce as needed overlap among providers; (b) replicate schemes with the highest impact on innovation; (c) increase the level of collaboration between some of these institutions and the funding Ministries — both TTGV and KOSGEB have recently experienced funding problems due to some issues with the Undersecretariat of Foreign Trade and the Ministry of Finance; and (d) reduce administrative hurdles in all financing programs, which beneficiary firms say are a major drawback — citing especially implementing agencies' burdensome bureaucratic procedures, delays in payments caused both by late transfers of funds from the Government and inefficient processes at the implementing agencies, and the risk averse fund allocation approach taken by all institutions. TUBITAK has recently introduced simplified procedures in its TIDEB program, including advanced payment options in R&D financing schemes[186]. It also plans to introduce accelerated application and appraisal processes to facilitate access to R&D grants. The results of TUBITAK's and other agencies' recent efforts to streamline processes should be evaluated and complemented by similar initiatives aimed at streamlining administrative hurdles throughout the financial process.

Box 6.1. Designing matching programs for private R&D investments

Since matching grants programs work by encouraging risk-sharing between the public sector and firms, they orient the selection process toward R&D programs that are most likely to generate innovations that can be commercialized. There are three critical aspects of a matching grant program. First, firms are required to invest a dollar of their own funds against every dollar that they receive as a grant (*matching*). Proof of the private expenditure of a dollar is required before the government reimburses the entrepreneur for the dollar it invested. The importance of matching stems from the fact that it precludes the dollar-for-dollar crowding out of private by public money. Second, matching grant schemes favor *marketable projects*. Successful projects (i.e., those leading to sales) will be required to repay the grant as a royalty from revenue, up to the dollar-linked amount of the grant. Finally, matching grants schemes are *neutral*. Neutrality means that the government does not decide *ex ante* which technological areas, firms or projects to support, but rather responds to the demands of the market. The program should not try to steer the grants (or any other such instrument) in any predetermined direction, but rather to deploy them so as to maximize spillovers or social returns. The success of R&D support programs in both Finland and Israel is in large measure attributable to the fact that, in both cases, the policies were neutral in this sense. In contrast to matching grants, instruments with mandatory repayments (like commercial loans or even loans with interest rate subsidies) do not provide the crucial risk-reducing instrument. In case of technological or commercial failure, the entrepreneur loses his or her own investment and has to repay the loan amount in full. As a result, an adverse selection occurs: only non-innovative entrepreneurs apply, since they are sure that they can repay.

Source: Goldberg, I., World Bank 2005.

[186] Starting in 2006, under the Industrial R&D Grant Program, TUBITAK and the Under Secretary of Foreign Trade will grant up to 10% down payment to SMEs or large firms requesting funds for projects belonging to national priority areas.

6.25 ***Increasing access to finance for innovative start up will also require policies to support development of the venture capital (VC) industry.*** Development of the venture capital industry requires further reforms to improve the business environment (see Chapters 1 and 3) and promote innovation (e.g., improving IPR protection). These measures should be coupled with further revisions to the VC legislation and capital market reforms to increase the liquidity of the stock market (see Chapter 5).

(c) Improving the Effectiveness of the Turkish National Innovation System

6.26 ***Improving the effectiveness of the Turkish National Innovation System is important for aligning with EU policies and promoting innovation and technology absorption.*** A National Innovation System is a network of public and private institutions interacting in a concerted way to create and adopt technologies, together with the policies and strategies that regulate and influence technology adoption and generation. While Turkey's NIS comprises several institutions covering all relevant aspects of science, technology and innovation policies (see Annex 6.2) some key measures are needed to improve its effectiveness, in turn increasing technology adoption, innovation and productivity. These include:

(a) Reviewing the institutional structure and capacity of the Scientific and Technological Research Council of Turkey (TUBITAK) to ensure alignment with international best practices. A new law addressing these issues by introducing changes in TUBITAK's mission and organizational structure based on lessons learned from other countries has been drafted. An external review of the law is needed to ensure that the proposed actions are aligned with international best practices, and lead to improve effectiveness of both TUBITAK and the Turkish NIS. Clarifying TUBITAK's role in Turkey's NIS is also important. Currently, TUBITAK is both secretary of the Supreme Council of Science and Technology (BTYK), and monitoring and implementing agency for science, technology and innovation support programs. International best practice suggests separating these functions. Finally, it is important to complement ongoing internal assessments of TUBITAK's programs and affiliate institutions (e.g., TUBITAK-TIDEM, and UME), which have been recently upgraded and are in the process of further expansion, with external evaluations. The evaluations should focus on outputs and outcomes (e.g., increased innovation, technology adoption and productivity at the firm level) rather than inputs (e.g., number of projects financed, amounts disbursed).

(b) Broadening coverage of the Turkish NIS. Given the size of the country and the economic, social and geographical diversity of its regions, a fully centralized NIS is a significant barrier to addressing local challenges. Local strategies and institutions should be established to ensure that all regions are reached.

(c) Adopting an innovation strategy that places productive innovation at the heart of all economic, and social development (including science and technology) policies, by strengthening the role of the business sector in the innovation process and by broadening the definition of innovation to include non-technological

improvements (e.g., organizational and process changes). While Turkey has developed several strategic plans to support innovation, they have mainly been centered on R&D and science policies. The main science and technology objectives adopted by BTYK in September 2004 are: (a) increasing the demand for R&D, (b) increasing the number and quality of scientists and vocational and technical staff, and (c) raising gross expenditures in research and development (GERD) as a percentage of GDP.[187] While these objectives are relevant, the strategy would benefit from a clearer focus on productive innovation and technology adoption at the firm level and from a stronger emphasis on output (rather than input) measures. Some measures in the Vision 2023 document and BTYK's strategic documents point in this direction, for example: developing skills and technologies to improve productivity in specific industries, supporting the creation of science- and technology-based innovative firms, and improving venture capital legislation and revolving fund regulation (see Box 1). Further emphasis on these objectives and a clear focus on implementation are essential to comply with EU suggestions and ensure that the resources the government has allocated to science, technology and innovation are used effectively and result in increased productivity in the Turkish economy.

B. QUALITY STANDARDS

6.27 ***Improving use of quality certification is important to increase Turkish firms' exports and facilitate integration between local and foreign firms.*** By complying with international quality standards, Turkish firms can be recognized as reliable partners for foreign firms. The Turkish firms could then more easily sell their products abroad, either as inputs to local or foreign firms' production processes or directly to final customers. The use of quality standards also lays the foundation to promote technology adoption and innovation at the firm level. While the use of quality standards has increased in Turkey during recent years, quality certification is still less common among Turkish firms than among firms in most comparator countries — see Figure 6.17. Romania and Bulgaria, for example, have twice as many ISO-certified firms by industry value added as in Turkey.[188] Increasing the use of quality certification at the firm level requires that several conditions be in place, including: a well functioning National Quality Certification System (NQCS), comprehensive quality legislation and regulations, and a sufficient number of accreditation and certification institutions.

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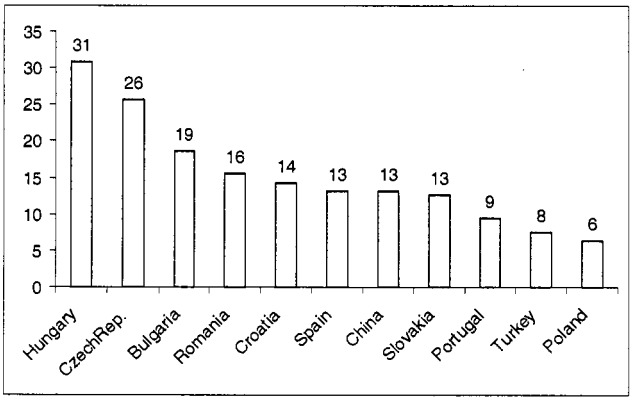
[187] The specific targets to be reached by 2010 to approach the EU objectives set in Barcelona are: increasing the share of GERD/GDP to 2 percent (from 0.66 percent in 2002) and the number of full-time equivalent R&D personnel to 40,000 (from 28,964 in 2002) while increasing the number of vocational and technical staff proportionally. The centrality of these objectives is confirmed by BTYK's *Science and Technology Strategies Implementation Plan* for the period 2005-2010, approved in March 2005.

[188] Although figures on Turkish firms' use of industry- and product' specific quality standards (which are often more relevant than ISO certifications, particularly for supply chain development) are not available, we can assume that ISO certifications are a good proxy for the use of quality standards and the importance that firms attribute to certification.

Figure 6.17: ISO certifications per US$100 million of industry value added, 2003.



Sources: ISO, 2005 (for ISO certifications) and WDI, 2005 (for industry value added).

6.28 ***Turkey has gone a long way towards establishing a modern, market-based quality standards regime compatible with relevant sections of the Acquis.***[189] Turkey has already replaced almost all national technical standards with EU and international standards. It has also significantly reduced (by 60 percent) the number of mandatory standards applied to imports, from about 650 to 261. This reduction brings Turkey close to have an EU-compatible control mechanism (EU Regulation 339/93) on imports from third countries.190 Turkey has a well functioning NQCS in place, comprising the Turkish Standard Institute (TSE), an accreditation agency (TÜRKAK) and a National Metrology Institute (UME). TÜRKAK is a full member of the European Cooperation for Accreditation. While TÜRKAK has not yet been internationally recognized, it is expected that it will soon meet all requirements for signing multilateral agreements with the European Cooperation for Accreditation (EA), which will in turn ensure that its accreditations of Turkish conformity assessment bodies (89[191] in 2005) and their conduct conformity assessments will be recognized by EU countries. The National Metrology Institute already offers reliable measurement traceability, which is needed for the proper functioning of the Turkish quality infrastructure. The transposition of harmonized European legislation into Turkish national legislation, as the first necessary step on the way towards full implementation of the legislation, is now nearing its completion. Public authorities are now at the stage of implementation of the transposed legislation. This requires, among other things, the establishment of a sound functioning market surveillance system with improved administrative and technical infrastructure.

6.29 ***Notwithstanding recent progress, policy and institutional changes are still needed to further improve Turkey's National Quality System and foster adoption of quality standards at the firm level.*** First, it is in Turkey's interest to recognize tests and standards for products originating in countries with which the EU has signed mutual

[189] B. Kaminski, 2005, *Technical Standards Regime and Trade*, Background Note.
[190] The list of those mandatory standards was revised and published as an Annex of the Communique on Standardization of Foreign Trade (Official Gazette 26040 of December 2005).
[191] http://www.turtak.org.tr/eng/acredited.htm

recognition agreements (MRAs),[192] It is also in Turkey's interest to obtain similar recognition for its products from the same countries. This would reduce the cost of imports by increasing competitive pressures on preferential (i.e., free trade agreement) exporters to Turkey and Turkey's quality standards. Second, it is important to complete the process leading to TÜRKAK's international recognition. Third, some sector specific legislation should be aligned with the Acquis requirements (including legislation for pharmaceuticals, cosmetics and chemicals), and food safety and foodstuff legislation should be adopted. Fourth, TSE's responsibilities and functions should be compared with those of similar institutions operating in other countries. International best practice indicates that private sector institutions are often best placed to provide certification and testing services. TSE's standard development, certification and testing functions are now clearly separated both administratively and financially, to avoid conflicts of interest. It would be useful to assess whether the separation of these three functions within TSE is effective or whether it would be preferable to outsource certification and testing services to the private sector. Fifth, the government should encourage creation of private secondary metrology facilities to ensure national coverage. Finally, it is essential to increase Turkish labs' and firms' requests for accreditation and certification. Matching grants have proven successful at raising awareness of encouraging adoption of quality standards in several countries.

C. LABOR SKILLS

6.30 ***Advanced labor skills are essential complements of technology and innovation and fundamental determinants of productivity and income gaps across countries.*** Productivity gaps can be thought of as having two components, skills gaps and technology gaps, which must be closed simultaneously in order to maximize TFP.[193] Countries and firms that are more innovative and open to technology adoption require a more educated and skilled labor force. Likewise, a more educated and skilled labor force is essential for innovation and technology adoption. An educated and skilled labor force includes university graduates, able technical workers and, more broadly, flexible workers who are able and willing to learn and apply their skills productively. What workers need most in today's rapidly changing world, rather than knowledge of specific techniques that can quickly become obsolete, are the abilities to solve problems and to continue to learn. This section provides an overview of the main challenges to enhance the skills of the labor force in Turkey. It starts with a description of educational attainment in the Turkish adult population and then provides an assessment of the *flow* of skilled workers, together with an overview of the quality of the skills obtained at various levels of education.

6.31 ***The stock of educational attainment among the Turkish population is low.*** Turkey has made substantial gains in educational level of its population, having increased the enrollment of 7-14 year-olds from 80 percent to 90 percent in just eight years and

[192] These countries include Australia, Canada, Israel, Japan, New Zealand, Switzerland and the United States.
[193] World Bank, *Closing the Gap.*

introduced programs to improve quality and reduce the disparities in school attainment. Nonetheless, the country faces some significant challenges. Adults in Turkey average only 5.3 years of schooling, less than in all comparator countries (except Brazil) and below the expected value given Turkey's level of development — see Figures 6.18 and 6.19.[194] On average, Turkish adults have 4 fewer years of education than their Polish, Hungarian or Slovakian counterparts, while educational attainment is similar to that of Finland's in 1960. Increasing the average stock of education is essential to ensure that Turkey can absorb and adapt global knowledge and technologies. While current educational attainment is the result of past investments in education, enrollment rates reflect current investments and indicate how the stock of education will evolve. To better assess these trends, the sections below analyze enrollment rates at the primary, secondary and tertiary levels, as well as the quality of the education provided. Overall, as noted in Chapter 2, current expenditures (both public and private) are high in international comparison, but considerable room for improvement in efficiency seems to exist as educational outcomes remain below comparator countries.[195]

Figure 6.18: Average years of schooling of adults (aged 15 and over), 2000.

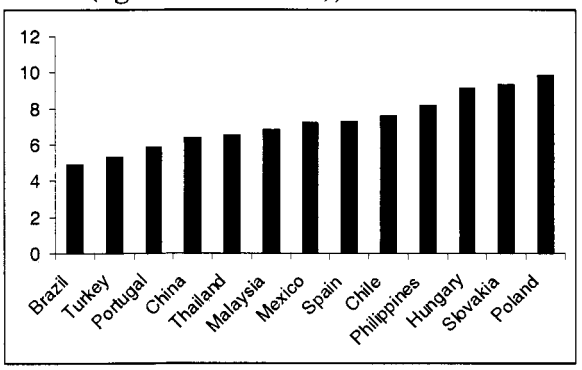
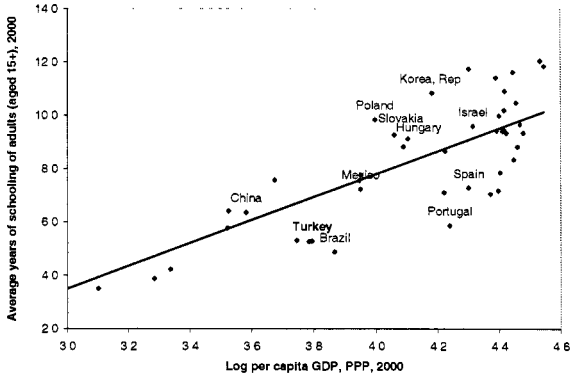


Figure 6.19: Average years of schooling and level of development, 2000.



Source: World Bank EdStats database based on the Barro and Lee Data Set.

While enrollment rates in primary education have significantly improved, Turkish pupils are not acquiring the advanced problem solving, reading and understanding skills that would allow them to learn more and be more productive in future years. Following the adoption of the Basic Education Law in August 1997,[196] which mandated eight years of compulsory education, Turkey dramatically increased its educational coverage. As a result, net enrollment in grades 1 through 8 rose from 81 percent in 1997

[194] Mean years of educational attainment in Turkey is likely to be somewhat higher in 2005 as a consequence of the enactment in 1997 of the eight-year compulsory education law.

[195] The World Bank Education Sector Study (2005) reports that Turkey spends approximately 7 percent of its GDP (combining private and public sources) on education, which is well above most EU and comparator countries.

[196] Law No. 4306

to 90 percent in 2003. However, international assessments of primary school students[197] show that Turkish pupils are learning substantially less than children in EU member states in the core areas of mathematics, science, and reading literacy. On the TIMSS study of mathematics, Turkish students performed almost one standard deviation below EU children — sees Figure 6.20. In the TIMSS primary school science assessment, the average Turkish student's performance is at the lower quartile benchmark, while the mean achievement of EU children is at the top quartile. On the PIRLS assessment of reading literacy, Turkish students also performed, on average, one standard deviation below EU students. Critical learning shortcomings of Turkish children include the ability to apply mathematical understanding to relatively complex situations, to recognize and state relationships between events that they have read in a story, and to solve problems by making inferences based on a variety of information provided by texts, tables, maps, diagrams and images. These capacities are essential foundations to develop knowledgeable and flexible workers able to apply problem solving skills to different contexts and learn continuously. The Government hopes to address these quality constraints by means of a comprehensive program of curriculum modernization that it launched in 2004 to improve teaching and learning across all of the core subject areas.

Figure 6.20: Acquisition of skills in mathematics and science.

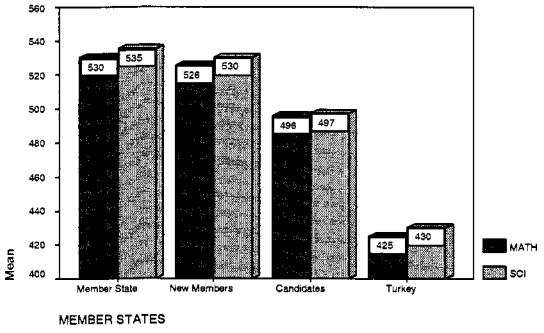
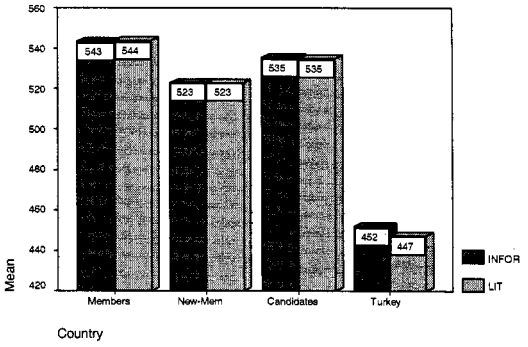


Figure 6.21: Acquisition of skills in reading literacy.



Source: World Bank, Education Sector Study, 2005[198].

6.32 ***Expanding enrollments and improving quality of secondary education are Turkey's critical challenges.*** Less than 50 percent of the 20-24 year old young adults have a secondary education diploma in Turkey, which is well below the EU target of 85 percent. Turkey's success in implementing its eight year compulsory education program has contributed substantially to increasing enrollment in secondary education, but the challenge of closing the gap remains quite substantial. Results from the 2003 OECD Program for International Student Assessment (PISA) show that Turkish students

[197] The Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS) are carried out by the International Education Association in partnership with participating countries, including Turkey. They measure cognitive development and skill acquisition among fourth and eighth grade students (respectively half-way through and at the completion of primary schooling).

[198] Forthcoming, following final review by Government for dissemination.

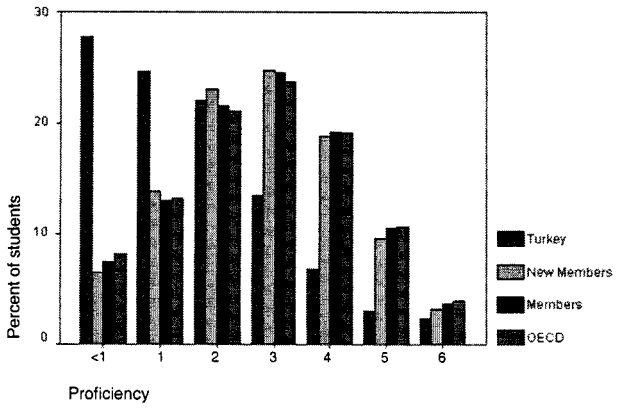
perform well below their OECD counterparts (although a small percentage perform at world-class standards). PISA uses a six-level scale of mathematics-quantitative proficiency, where "1" represents the absolute minimal level of proficiency and "6" represents high-level, complex problem-solving and mathematical reasoning ability. More than half of Turkey's 15-year-old students (55 percent) were unable to perform above level "1," whereas the average proportion in OECD countries (including Turkey) was less than 21 percent — see Figure 6.22. Similar results were found in all mathematics skill areas, from geometry and algebra to statistics and computation, as well as in reading and science.

6.33 ***Turkey's secondary vocational schools — which have very low enrollment rates despite the government efforts to increase them — also do not provide Turkish youth with skills that can be readily applied in the labor market.*** Evidence from PISA indicates that vocational graduates in Turkey are not prepared for employment. World Bank research also shows that vocational graduates are not significantly more likely to be employed after high school than general secondary graduates who do not continue to tertiary education.[199] Vocational school graduates, the vast majority of whom are unable to qualify for university entrance, have the opportunity to enroll directly in post-secondary vocational institutions (MYOs) without an examination. Nonetheless, many of these institutions are of inadequate quality and do not provide adequate value in terms of skill development and preparation for employment (see paragraph 6.35, below). In addition, fewer than half of employed vocational high school graduates report having jobs that use the vocational skills they actually learned in school.[200] This is because many of the secondary vocational/technical school programs are out of step with the needs of the modernizing economy. Some of the vocational programs are still directed to girls with instruction in traditional homemaking skills such as embroidery, knitting, food preparation, and childcare. Even as computer science is being introduced into girls' vocational education programs, it is difficult to see how they can prepare young women for a real profession in a modern labor market, or help them become catalysts of technological change and innovation within firms.

[199] World Bank, Education Sector Study, 2005. The finding is derived from an analysis of Household Labor Force Surveys (HLFS) of the State Institute of Statistics for 2003.

[200] World Bank, Education Sector Study, 2005. The finding is derived from the 1997 household survey, the only survey that included a module on the acquisition of workforce skills.

Figure 6.22: Distribution of students by PISA proficiency level in Turkey and EU, 2003



Source: Education Sector Study, The World Bank, 2005

6.34 ***The skills of university graduates also do not meet the needs of the private sector.*** Tertiary education in Turkey encompasses all post-secondary programs of at least two years. Improving academic qualifications among the teaching staff, especially in newly established higher education institutions, and expanding access to tertiary education have been two of the government's main objectives during the past decade. Tertiary education enrollment rates in Turkey have increased during recent years (from 13 percent in 1990-91 to 25 percent in 2002-03) but are still below those of most comparator countries — see Table 6.2. While the enrollment ratio in science and engineering schools is high in Turkey (above comparator countries according to the latest statistics available),[201] Turkish business executives and entrepreneurs consider the quality of science and engineering schools rather low — see Figure 6.23. Admission to higher education in Turkey is managed centrally through a very competitive process, centered on a highly regarded, broadly trusted university entrance examination. Because this examination serves as the main "entry ticket" to the substantial economic and social benefits associated with university education in Turkey, it drives what most young people study and learn. As such, Turkish experts should review and modernize the content, structure, and methodology of the examination (while maintaining its integrity and transparency) to make sure that it drives the kinds of learning efforts and outcomes for students that Turkey needs to have a highly competent and competitive labor force. Other critical issues for the Turkish tertiary education system include the need to address the uniformity of mission and organization of public universities, the administrative and financial rigidity of the public university system, excessively academic curricula, inadequate communication between universities and the private sector, lack of

[201] WDI (2002).

specialized technical or professionally oriented undergraduate degrees (such as universities of applied science in Germany or the former polytechnics in the UK), and lack of an adequate system of regional colleges that can provide good capillary education. Employers in Turkey, like their international peers, are increasingly concerned about problem solving, creativity, confidence and communication skills than about specific technical skills. However, academics seem reluctant to accept input from firms in determining what and how they teach (with the important exception of a handful of institutions, including private (foundation) institutions, which are beginning to take account of labor market needs). Partially as a result of these issues, there is a relatively high level of unemployment among new university graduates.[202]

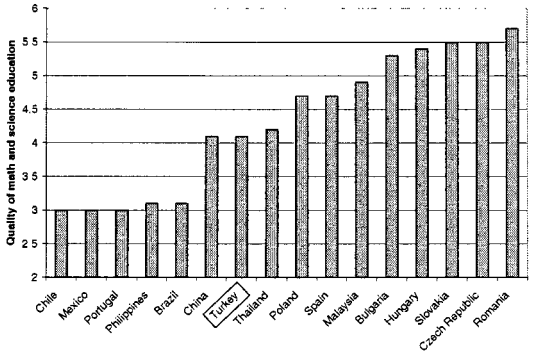
Table 6.2: Tertiary Education Indicators: Stock and Flow

	Tertiary education (% of 25-64 year olds)	Tertiary school enrollment (% gross) 2002-2003
Brazil		18
Turkey	**8.9**	**25**
Portugal	9.4	53
China		13
Thailand		37
Malaysia		27
Mexico		21
Spain	24.4	59
Chile		42
Philippines		31
Hungary	14.1	44
Slovakia	10.8	32
Poland	12.2	60
Bulgaria	21.1	38
Romania	10.0	30

Source: Population with Tertiary Education—EUROSTAT Labor Force Survey, as reported in the TrendChart Innovation Policy in Europe, Innovation Scoreboard 2003.

[202] The level of unemployment is higher among young university graduates than for recent secondary school graduates..

Figure 6.23: Quality of math and science education.



Note: Math and science education in your country's schools:
... 1=lags far behind most other countries
... 7=is among the best in the world).
Source: WEF, 2004-2005

6.35 ***Post-secondary vocational education is also of poor quality and out of sync with the needs of the private sector.*** Employers in Turkey face even greater shortages of mid-tier, technician level workers than of university graduates. Well-prepared technician level workers are essential to facilitate technology absorption and adaptation, as well as (to a lesser extent) innovation. Thus, qualified post-secondary vocational institutions (MYOs), or technically oriented programs in undergraduate schools, are much needed in Turkey. Unfortunately, Turkish MYOs suffer from historic underinvestment, neglect and a poor image. Many students and employers consider most MYOs as undesirable, and many of the universities that are responsible for them neglect them.[203] These circumstances have led to a downward quality spiral, with low staff morale, less prepared students, and a tarnished image among employers. The fact that the MYOs are associated with universities, but are relegated to a second-class status in the system, also prevents them from evolving into strong alternatives to universities, restricts their ability to innovate, and diminishes them in the eyes of students and the public.

6.36 ***Improving the skills of the labor force and ensuring that they match the needs of the private sector will require rethinking the education system at all levels.*** First, it is essential to improve the quality of education both at the primary and secondary levels, to ensure that students acquire the foundations that are needed to continue learning at later stages and key problem solving skills that will allow them to be conduits of change at all stages of their careers. Second, reforms are needed to encourage higher education institutions to develop differential missions and strategies, with a different balance of effort across the functions of teaching, research and service provision. Third, the curricula of universities should be revised to reduce their academic thrust and ensure that they better match the needs of the private sector. Improvement of university-firm communication is essential to reach this aim. Fourth, the Turkish education system should be reformed to avoid systematically assigning students into a specific education track from a very early age. The existing tracking system reduces learning opportunities through a series of selection examinations that tend to separate students by achievement

[203] An indicator of the quality challenge for MYOs is that, according to Government figures, 25 percent of their places remain unfilled, despite the opportunity of open enrollment for vocational education graduates.

and place them into schools that then exacerbate their learning differences and career outcomes. Currently, each step of the education selection process in Turkey leaves fewer and fewer students to benefit from high-quality education. Fifth, there is a need to consolidate and refocus post-secondary technical institutions with their own budgets and missions, while maintaining the academic link to universities. Turkey should also consider ways of using its funding of postsecondary education to upgrade MYOs into technical colleges or polytechnic institutions that can grant two- to four-year degrees in a broad variety of areas so as to more flexibly provide high end technical skills to graduates in line with labor market demands. Finally, more emphasis should be given to cultivating lifelong learning systems for continuously upgrading human capital and to promoting continuing vocational training. This can be accomplished by providing incentives to firms, both to hire technical personnel and to provide relevant training.

D. CONCLUSIONS

6.37 ***This chapter has emphasized that improving Turkey's performance on the knowledge factors — technology, innovation, quality and skills — is a critical part of increasing total factor productivity and ultimately achieving Turkey's goal of sustainable, long-term economic growth.*** Despite some recent improvements and successes, Turkey lags behind comparator countries on many indicators in these areas, including importing capital goods, FDI and licensing (for technology absorption), R&D, patents, access to finance and university/firm collaboration (for innovation), use of quality standards by firms, and the stock of educational attainment and flow of skilled workers (for labor skills). Table 6.3 includes a summary of short- and medium-term recommendations to improve Turkey's performance in the knowledge areas. A firm commitment by both the Turkish Government and the Turkish private sector to make progress on access to and use of the *knowledge factors* will not only allow Turkey to meet the requirements of the *Acquis* and other EU recommendations, but also ensure that the country develops the capability to generate and manage technological change and innovation, as well as create a better alignment between workers' skills and the needs of the private sector, in turn reaping the social benefits of increased productivity and consistent economic growth.

CHAPTER 7. INFRASTRUCTURE SERVICES FOR IMPROVED COMPETITIVENESS

7.1 ***In key infrastructure service areas, Turkey has already made substantial progress in designing the changes to legal and regulatory structures needed to meet EU acquis requirements.*** While much implementation work remains, Turkey recognizes that the combination of internal market liberalization and effective integration with international markets offers efficiency gains that will increase competitiveness and employment growth.[204] This chapter of the CEM focuses on the nexus between EU accession and growth in three infrastructure sectors – Information and Communications Technology (ICT), transport, and energy. Within these sectors, the Government has choices to make in regard to phasing and timing of the changes needed to meet *acquis* obligations. This chapter offers guidance from Bank and international experience.

7.2 ***Infrastructure services are an important driver of growth.*** Transport and communications contribute approximately 15 percent of Turkey's GDP. The importance of these services reflects both internal demand and Turkey's geopolitical position as a link between Europe and Asia. Energy services contribute an additional 3.5 percent of GDP. These services are critical components of the business environment and can play an important role in attracting investment and improving the overall competitiveness of the Turkish economy. Each of these services offers the potential for substantial efficiency gains through structural changes – typically already underway – and regulatory strengthening.

7.3 ***Although Turkey is relatively well endowed with infrastructure compared to other emerging economies, it falls short of OECD and EU standards.*** Businesses are burdened by costly, low quality backbone infrastructure services, as reflected in Table 7.1, below. In particular, the cost of telecommunication services and energy remains among the highest in the OECD area,[205] while quality is among the worst not only in the OECD, but also in comparison to new entrants to the EU. The dominant transport mode – road -- suffers from localized congestion and deteriorating road quality. While daunting, Table 7.1 does show progress in telecommunications over the past three years and substantial progress in electricity services. Gains in both areas reflect initial outcomes from recent reform efforts and suggest that much can be gained through more

[204] Embodied in the Turkish National Programme for the Adoption of the Acquis.
[205] OECD, Economic Survey of Turkey, Paris, 2004.

efficient, user financed, operations. The largest transformational challenge is moving from monopolistic state entities providing services toward the mix of private and state that characterizes efficient higher income economies. Of course, the infrastructure implications of meeting all *acquis* requirements go well beyond those discussed in this chapter. In particular, the environmental dimension, with its very large financial costs, will be dealt with in a later CEM.

Table 7.1 Infrastructure and Doing Business
Percentage of Firms that see infrastructure service provision as a problem doing business

		Telecommunications	Electricity	Transportation
Turkey	2002	22.5	31.6	19.3
	2005	20.4	23.1	21.3
EU-8	2002	11.5	11.4	12.3

A. INFORMATION AND COMMUNICATION TECHNOLOGIES

A.1. The Stakes

7.4 ***ICT are a general purpose set of technologies, applied across all activities with no sector untouched.*** ICT accounts for 8% of EU GDP, 6% of employment and 50% of EU productivity growth between 1995 and 2000. A UN Task Force observed: "The global ICT sector is extremely dynamic and transformational; there is virtually no status quo"[206] and "ICT are rapidly emerging as a vital factor in economic and social development to facilitate innovative and scalable solutions for achieving major development objectives". These observations apply to Turkey – irrespective of the date of EU accession – as a participant in the global economy. Ensuring the widespread diffusion of ICT in Turkey is an unavoidable challenge, one made more difficult by the need to provide access in farming and rural communities, but a challenge where the process of EU accession will provide considerable value added in its own right.

7.5 ***ICT is largely the responsibility of the private sector, nevertheless the government of Turkey still has a significant leadership role to play in policy development and implementation.*** The government sets the business climate for ICT investments. The electronic communications *acquis* is part of the story. Other actions are also required and the challenge is sufficiently broad that one proposal is to appoint a cabinet level e-minister with responsibility for coordinating the response to the ICT challenge.

7.6 ***The electronic communications acquis communautaire is evolving.*** The 2002 version will be reviewed in 2006. By the time of Turkey's accession the target will have

[206] http://www.itu.int/wsis/tffm/final-report.pdf this observation also implies that whatever data is presented here is certainly out of date.

moved again. The *acquis* is an element of the target which includes a set of supporting legal instruments related to data protection, privacy, e-security, e-signature and a panoply of initiatives related to the application of ICT in such activities as e-government, health, learning, work, business, mobility, transport, content and inclusion. The EU has placed great emphasis on the Information Society (IS) in economic growth and social inclusion. The importance of ICT as the enabler of the IS was enshrined in the Lisbon Strategy which represents Europe's response to the challenge of accelerating growth and job creation largely in the 'knowledge based economy'. The associated actions form a considerable component of the target.

7.7 ***To promote ICT the European Commission has developed a series of projects:*** e-Europe, e-Europe 2005 and now the i2010 program together with initiatives to reinvigorate the Lisbon Strategy. Turkey, as a candidate, participated in the e-Europe. Each project set higher benchmarks and standards for ICT diffusion and a more competitive environment. The current emphasis is broadband and its supporting framework. Each new benchmark moves the target for Turkey

A.2. ICT Performance in Turkey

7.8 ***Turkey faces the ICT development challenge with some advantages.*** The telecommunications regulatory authority (TK) though encumbered by a dated and much amended telecommunications law (no. 406 of 1924) assumed the role of issuing licenses in 2001 and has since, January 2004, overseen the full liberalization of the sector. The competition authority (RK), armed with an EU reflective competition law, which needs to be updated[207], has also been very active in supervising the market and its 2004 Annual Report demonstrates the pro-competition role it played in the preparation of the privatization of Turk Telecom. While TK and RK need more professional staff, and their decisions are subject to lengthy appeals procedures, the Turkish market performs well and by implication the policy making institutions appear to be functioning well. Tariffs will fall as competition intensifies. Equally, the SPO has been expanding its capacity on the e-agenda through the e-transformation of Turkey program and the e-Turkey portal has developed into a rich source of information.

7.9 ***The successful privatization of Turk Telecom will allow it to play a more active role in the promotion and diffusion of ICT.*** As a private business it will be more responsive to market needs. The EU accession process will further develop these strengths as Turkey implements the relevant *acquis,* enhances, refines and implements its e-strategy and generally converges to EU benchmarks. But convergence will necessitate an acceleration of developments. However, post-privatization both TK and RK will need to be more vigilant regarding the progress of liberalization in order to ensure that the full benefits of competition in the sector materialize. A private Turk Telekom retains considerable market power over bottleneck facilities essential to the development of competition.

[207] See OECD Review http://www.rekabet.gov.tr/intrel.html

7.10 ***Turkey currently lags member states, peers and competitors in some dimensions of ICT.*** Its relative position is well documented in the final report of the e-Europe + project and elsewhere. There are nearly 50 million telecommunications customers in Turkey with more than half being mobile subscribers. In telecommunications Turkey performs adequately in the 13 (10 accession and 3 candidate) countries. But gaps start to appear when the internet, PCs per 100 population or PCs per 100 elementary school children are examined. The most striking gap relates to broadband.

7.11 Turkey's IT equipment manufacturing capability is "modest"; software is largely imported; ICT imports substantially exceed exports; the share of ICT in GDP is around 2.5% compared with 8 to 10% in the EU and average spending per person on ICT is around $40 compared to $500 in Western Europe and $1,200 in the USA. ICT Intensity (defined as ICT Markets/GDP) and Trade in ICT Goods and Services in Turkey are amongst the lowest in the OECD, there is no Turkish representative in the list of the 250 top ICT firms.

7.12 In this context, the low ICT Intensity in Turkey, evidenced by the low per capita spending on ICT, raises questions for the competitiveness of Turkish businesses. Only the widespread diffusion and application of ICT can remedy this potential threat to Turkish businesses in the global economy (Box 7.1).

Box 7.1. Microeconomic Impact of ICT development

ICT is not a substitute for good management but the combination of the two has a direct and positive impact on performance at the firm level. This holds for individual firms even in declining industries. The OECD identifies[208] the role of ICT in helping firms gain market share and in organizational change at firm level and, with some caveats, summarizes the findings of various studies as:

- ICT use has a positive impact on firm performance, productivity and wages, and is associated with plant expansion
- Computer networks are particularly important; they allow firms to outsource activities, work closely with customers and suppliers, and better integrate activities in the value and supply chains, with positive effects on productivity.
- Organizational change is a key to benefiting from ICT investment and is closely linked to the need for skilled human resources
- Adoption of advanced ICT increases with the size of firms and plants e.g. large firms are more likely to use a combination of network technologies and broadband and to use the technologies to redesign and integrate information and communication flows within the firm, whereas small firms tend only to use the Internet for marketing purposes.
- The benefits of ICT may only emerge over time, as firms need to adapt their skills and organization.

[208] *Ibid* page 59.

A.3. Broadband – The New Imperative

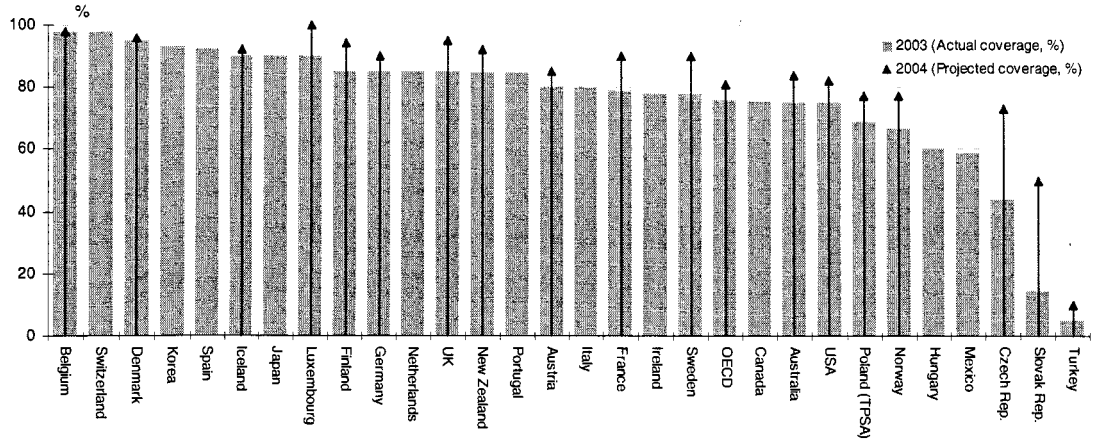
7.13 ***In July 2005, the European Commission issued a landmark document on the digital divide and broad band access.***[209] Broadband has 2 major attributes – it can carry huge quantities data at very high speeds. Postal and courier services can deliver huge quantities of data but they fail the speed test. The expansion of broadband is closely related to the growing importance of the "knowledge economy" which recognizes the growing knowledge intensity and declining material components of goods and service and the associated contributions of knowledge creation and innovation. The Lisbon Strategy seeks to locate the EU economy firmly within the knowledge content orbit since these sectors provide the greatest prospects for economic growth, job creation, well remunerated employment, increasing returns and expanding markets.

7.14 ***The role of broadband in this paradigm is to facilitate, very rapidly, the functions related to knowledge creation, management, applications, control, distribution, capture and manipulation.*** Broadband is becoming a new essential infrastructure for businesses and government. While transport infrastructure handles material products, broadband manages the knowledge components of final and intermediate products and process. Broadband is frequently the means of the 'digital delivery' of many services. As economies become increasingly service and knowledge based the importance of electronic highways increases. These highways are an imperative for a modern economy.

7.15 ***Broadband gaps present a particular challenge in Turkey.*** The European Commission stated[210] "The advent of broadband communications is radically changing the Internet and it is essential for investment in Europe to continue if it is not to be left behind." Turkey lags badly as illustrated by Figure 7.1[211]. Although Turkey shows a doubling of lines from 2003 to 2004, the distance behind the comparators remains striking.

[209] http://europa.eu.int/information_society/eeurope/i2010/digital_divide/index_en.htm
[210] http://europa.eu.int/information_society/eeurope/2005/doc/all_about/acte_sector_en.pdf
[211] http://www.oecd.org/document/23/0,2340,en_2649_34223_33987543_1_1_1_1,00.html

Figure 7.1 -Availability of digital subscriber lines in OECD Countries



7.16 ***The level of broadband access has spatial consequences.*** The Commission's digital divide document addresses the need for actions to ensure the widespread availability of broadband for both economic and social reasons. The spatial issue will be a particular challenge for Turkey since currently broadband access is highly localized.

7.17 ***The EU's determination to achieve full broadband coverage is backed by funding.*** For example the European Commission has produced guidelines for the use of EU Structural Funds (ERDF) for investment in broadband infrastructure.[212] These matching funds are available throughout the EU in rural and remote areas where broadband is not "financially viable". The new "Competitiveness and Innovation Programme" of April 2005, envisages more than € 800 million specifically for an "ICT Policy Support Programme" in the context of €4.2 billion package to re-launch the Lisbon Strategy. Such EU funds are available to member states. EU financial support offers member states, but not yet Turkey, the opportunity to more quickly reach full coverage

A.4. Is Turkey Ready?

7.18 ***ICT diffusion is closely associated with competitiveness***. It is a component of the World Economic Forum's (WEF) "Global Competitiveness Index".[213] In order to monitor developments the WEF produces a complex set of indices to measure a country's "e-readiness" or "network readiness index" (NRI). The NRI represent the overall ranking of a country within a group of 104 countries. Table 7.1 compares the NRI of Turkey with some of its neighbors, peers and competitors. Some of the results are encouraging.

[212] http://europa.eu.int/comm/regional_policy/sources/docoffic/working/doc/telecom_en.pdf

[213] http://www.weforum.org/pdf/Gcr/Composition_of_Growth_Competitiveness_Index
Turkey is ranked 66th out of 104
http://www.weforum.org/pdf/Gcr/Growth_Competitiveness_Index_2003_Comparisons

Table 7.1 Network Readiness Index Rank 2004/05

	Rank		Rank
BiH	89	Poland	72
Bulgaria	73	Romania	53
Croatia	58	Russia	62
Czech Republic	40	S&M	79
Estonia	25	Slovak Republic	48
Georgia	91	Slovenia	32
Hungary	38	**Turkey**	**52**
Macedonia	85	Ukraine	82

7.19 ***Turkey holds a roughly median position regarding network readiness.*** While Turkey is behind Estonia, Slovenia and the Slovak Republic it is ahead of some EU member states and candidates. The highest ranked EU member is Finland at 3rd place. A deeper analysis of the sub-indices for a country can provide insights for the appropriate application of policy interventions and clarify the respective roles of the public and private sectors.

7.20 ***Attention should focus on most critical gaps.*** The overall NRI has 3 major sub-components: environment (of ICT), readiness, and usage. Each of these sub-components is comprised of numerous variables (Table 7.2). In the table below the overall sub-component ranking is listed together with any variable in the sub-component whose ranking differs by 10 places (plus or minus) from the sub-component ranking. Turkey ranks 49th overall for ICT usage but in the usage sub component, Turkey is ranked 1st in the proportion of households with TV – consequently this variable is included in the table.

Table 7.2: Network Readiness Index for Turkey: Significant differences between rankings and variables

Index Sub-Component	Rank	Index Sub-Component	Rank	Index Sub-Component	Rank
Environment	**57**	**Readiness**	**60**	**Usage**	**49**
Variable Rank +/- 10		Variable Rank +/- 10		Variable Rank +/- 10	
Availability of Scientists & Engineers	42	Quality of Educational system	81	Public payphones	77
Availability of Venture Capital	84	Quality of Public schools	70	Television sets	1
Quality of Scientific Research Institutes	70	Buyer dynamism	37	Broadband-DSL Internet Subscribers	59
Subsidies for Firm level R&D	37	Residential Telephone	4	Prevalence of Foreign technology	33

		Connection charge		licensing	
Ease of access to loans	88	Availability of Training services	50	Firm level Technology absorption	29
Administrative Burden	83	Business Investment in R&D	76	Govt success in ICT promotion	81
Ease to start a new business	43	Monthly business Telephone charge	35	Govt on-line services	20
Effectiveness of Law making	34	Govt prioritization of ICT	79		
Laws relating to ICT	77	Govt procurement of ICT	73		
Intellectual property protection	80				

The following comments concentrate on those areas where improvement is needed.

7.21 ***ICT Environment*** This sub-component refers to the overall enabling environment for the ICT sector. Two sets of related variables that stand out are:

- Availability of venture capital and ease of access to loans;
- Administrative burden, laws relating to ICT, intellectual property protection

Both sets require government attention. The first relates to initiatives to promote the development of financial markets and innovation (dealt with in chapters 5 and 6). The second set refers to the legal, regulatory and business environment of ICT. The effective transposition of the electronic communications *acquis* will produce positive results for this component, indeed strengthening the enabling environment of ICT will bring benefits regardless of progress in the Accession process more broadly. Turkey has a good ranking for "effectiveness of law making" so the transposition should not prove to be difficult.

7.22 ***Readiness.*** This sub-component examines the supply side, take up potential, and possible stimulants of ICT development. "Buyer dynamism" is strong in Turkey and the diffusion of ICT is supported by the low costs of telephone usage.[214] It is possible to group the variables as follows:

- Quality of educational system, quality of public schools, availability of training services
- Business Investment in R&D
- Government prioritization of ICT and Government procurement of ICT

7.23 ***The educational issues for technology adoption are addressed in chapter 6.*** The private sector has prime responsibility for the low business R&D ranking. As with the venture capital ranking, macroeconomic conditions could play a significant role. The government should also examine, within the EU parameters, its R&D incentives schemes and the whole R&D nexus of universities, science, research and commercialization. R&D is a particular worrying concern for the EU (see chapter 6). The low rank for government ICT procurement does not reflect recent government commitments to rapid expansion of

[214] It is conceivable these costs will increase when Turk Telecom sets its tariffs more independently and more closely relates investment and tariff decisions.

internet access, particularly for schools. As the single biggest buyer of ICT its practices have important ramifications for the whole ICT sector.

7.24 ***Usage.*** The third sub-component measures how ICT are currently used. The following groups of variables are considered:

- Firm level technology absorption, prevalence of foreign technology licensing
- Broadband-DSL internet subscribers
- Government success in ICT promotion, government on-line services

7.25 ***At the firm level, ICT usage is satisfactory as firms absorb and license foreign technology***. The broadband ranking confirms previous observations. With the liberalization of the electronic communications market and the privatization of TT, the private sector will play an increasing role. The role for the government will be to stimulate demand for broadband. As yet, the performance of the government is mixed since Turkey ranks well in terms of on-line services but poorly in terms of promoting the ICT sector. Finally, discriminatory taxes also possibly burden the development of the mobile segment—a key underpinning of the ICT sector. In response, the Ministry of Finance is now reviewing sector tax policy.

A.5. Policy and Action Guidelines

7.26 ***The first priority is the transposition and effective implementation of the acquis for electronic communications well before EU accession*** thereby providing the regulatory and business climate for increased investment in ICT to enhance the competitiveness of Turkish businesses. The reasons for early implementation are that it takes time for companies to absorb and adjust their organization to ICT, so early implementation will give companies more time to adjust. The UN's Economic and Social Council stresses the importance of the type of enabling environment found in the *acquis* observing: "The creation of an enabling environment for ICT-driven development relies on establishing a legal and policy framework that encourages investment, innovation and entrepreneurship ...[the environment consists of] a set of public policies that operates at several levels: (a) the development of national strategies at the macro-policy level, which favor the development and deployment of ICT in pursuit of social and economic development goals; (b) economic strategies that involve the design, development and implementation of effective policies in areas such as telecommunications policy and regulation, spectrum management and electronic commerce; and (c) accurate measurement and benchmarking, in order to assess the effectiveness of the implementation of policy objectives in relation to development goals and targets." Other actions are also required of the government.

7.27 ***The government could usefully re-examine its own performance across all levels of the ICT deployment model.*** To send clear signals to the market and private investors, a renewed statement of Turkey's ICT macro-policy may be required (level (a)). The statement may include the objectives of the government regarding the e-agenda,

social inclusion (especially regarding farming and rural areas) and broadband and the role that government will play in these developments, re-establishing its ICT priorities.

7.28 ***The government has made great progress in telecoms policy and regulation, but could beneficially examine its role in promoting and procuring ICT.*** It is quite possible that government demand for ICT services (from health to education to general administration) could pull private suppliers into under-served locations in Turkey. This entails a wider analysis of the government's role of ICT buyer and user and assessing the extent to which the government can outsource the supply of services by competitive tender to the private sector. The government could both foster more intense competition in and encourage the aggregation of demand for certain goods and services to bring about lower prices. This may be very important for the household sector where PC penetration is low and a more affordable approach is required. Broadband will be deployed slowly without the widespread diffusion of PCs. The same holds true for relevant content. Though it is beyond the scope of this chapter, some serious consideration must be given the R&D nexus. In undertaking these actions the Turkish authorities could draw on EU experience and work closely with EU counterparts. To support these initiatives it will be necessary to establish monitoring and evaluation (M&E) schemes to measure progress and the fulfillment of objectives and reporting regularly. The establishment of benchmarks and M&E will allow for the continuous refinement of policy actions and instruments.

7.29 ***Coordination in the Government's e-policy is key for success.*** Most EU members have a specific "e" minister with a cabinet level position. The electronic South-Eastern Europe (eSEE) program, in which Turkey participated required the establishment of a cabinet level body in charge of IS promotion and development, to ensure that "IS issues are brought to the highest policy making levels" and to ensure "e-modernization of the public sector is at the core of the national information society policies".[215] Turkey could also consider a similar model, including with a cabinet-level responsibility for coordinating the implementation of its ICT policy.

B. LINKING UP WITH TRANS-EUROPEAN NETWORKS

7.30 ***Turkey's*** **future growth will depend on the quality of its infrastructure.** Raising the efficiency of Turkey's transport sector will contribute to economic growth, environmental sustainability and poverty alleviation. This would help Turkey's competitiveness by lowering logistics costs. It would also increase the access of rural and urban populations to basic services, markets and jobs, and reduce the high human and economic costs of traffic accidents. Mobilizing private investments and managerial know-how in this effort will also help reduce the sector's current onerous deficits.

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215 http://europeandcis.undp.org/uploads/eSEEurope%20National%20Information%20Society%20Policy%20Guidelines.pdf

7.31 ***EU Accession.*** As a result of the official launching of the negotiations between the EU and Turkey, the detailed examination of the regulatory framework is expected to begin shortly. One significant element of the adoption of the EU Acquis is the requirement that the government separate out social services from commercial services, which will have a special significance for TCDD, the National Railway Administration.

7.32 ***EU Progress Report October 2004.*** Regarding the transport sector, the latest EU Progress Report concludes as follows: "Some progress could be recorded in all transport modes, excepted air transport, but overall alignment remains limited and all modes present problematic issues. Concerning in particular maritime transport, the detention rate remains much higher than the EU average, and Turkey remains in the black list of the secretariat of the Paris Memorandum of Understanding (MOU) on Port State controls. Transposition of the Acquis should take place in parallel with adherence to international agreements. The staff and capacity of the Ministry of Transport needs to be strengthened substantially." An update of the progress made since 2004 will be available by the end of this year 2005, and it should be noted that significant progress has been observed in the quality of Turkish-flagged vessels complying with Paris MOU requirements.

7.33 ***EU Acquis for the Transport Sector in Turkey.*** In terms of regulating the road transport market, two new pieces of national legislation (Road Transport Law and Road Transport Regulation) entered into force, elaborated in accordance with EU legislation concerning access to the market and profession. The following actions will need to be initiated as part of the Revised Accession Partnership short-medium term action plan: (i) alignment on road transport legislation (road safety as well as social, fiscal and technical rules), railways and air transport (particularly air safety and air traffic management); (ii) ensure effective implementation and enforcement of transport legislation, particularly as regards maritime safety, road transport as well as air transport; (iii) complete alignment with EU maritime legislation in safety and non-safety areas; improve maritime safety, in particular improve the performance of maritime safety administrative institutions, firstly, as a flag State, and then as a port State, and guarantee their independence; (iv) implement a programme of adaptation of the Turkish transport fleet, particularly maritime and road transport to Community technical norms; and (v) adopt a program with a view to identifying main transport infrastructure needs in Turkey and related transport-network projects, in coherence with the European Community TEN-transport guidelines.

B.1. Overview of the Transport Sector

7.34 ***Transport is vital for the economic development and integration of Turkey.*** Transport (with communications) is the 3rd largest contributor to GDP, amounting to 15 percent in 2003 after Industry (excl. construction) and trade. This level of contribution to GDP is more than twice than that of western European countries (Germany's contribution being 5.2 percent, Denmark's being 7 percent). Increasing the efficiency of the transport sector is a priority both because of the enabling role the sector can play in the economy and the integration of the country with the EU. Turkey is a large country, with an area about that of France and UK combined, and population and activities widely spread. For instance, Ankara is over 400 km from any of its nearest ports, i.e., Samsun, Istanbul, and

Mersin. Turkey is also the natural land transport bridge between Europe and the Middle East. Again, the distances are long, 1,750 km from the Bulgarian border to Iran and 1,900 km to Iraq. Problems of distance are increased by the mountainous terrain and harsh winter conditions in most of Anatolia. Hence the improvement in the transport infrastructure is a major challenging priority for the overall development of the economy.

7.35 ***The Turkish Government recognizes these infrastructure needs*** and further states in the Preliminary National Development Plan that improving infrastructure services is not only a strategic priority unto itself but also a key element for achieving sustainable growth and better quality of life. However, as explained in chapter 2, the main medium-term priority in Turkey has recently been, the macroeconomic stabilization of the country. In this context, infrastructure spending cuts have been part of a broader structural reform program that also includes concrete steps to achieve fiscal and macroeconomic targets, reduce the role of the public sector in the economy, and assess both the government role in infrastructure (particularly regarding limiting the exposure to contingent liabilities) and the problem of quasi-fiscal costs. It lays out a plan to phase out subsidies to goods and services, eliminate extra-budgetary funds and fully budget for "duty losses".

7.36 ***National Transport Strategy***. A National Transport Strategy prepared by specialized consultants and the Istanbul Technical Institute is in the process of being approved by the Government. In addition, a Transport Infrastructure Network Assessment (TINA) study is currently carried out by the General Directorate of Highways (KGM), with a view to identifying main transport infrastructure needs in Turkey and related transport-network projects, in coherence with the European Community TEN-transport guidelines. As detailed below, a shift is needed between the various modes of transport, especially for the transport of freight which should be gradually rebalanced from the road to the railways. Due to the steady increase of containerized cargo, intermodal transport systems should also be promoted to improve the connections between the various modes of transport, e.g., improved railway linkage to ports.

7.37 ***Transport Sector Organization***. There are two main institutions responsible for the transport sector at the central government level, the Ministry of Public Works and Settlements (MOPWS) and the Ministry of Transport (MOT). The MOPWS, through the KGM, is responsible for the development and maintenance of state and provincial roads and motorways. The MOT is responsible for developing the infrastructure of rail, maritime and air transport modes; the regulation of transport operations in the various modes and the supervision of State Economic Enterprises (SEE) in the transport sector, except for the pipelines which are under the Ministry of Energy. The Turkey State Railways (TCDD) is responsible for the operation of the railways and the major ports in the country, while the Airport Agency (DHMI) operates the civilian airports. Turkish Airlines (THY), still owned by the State, has been placed on the list of the SOEs to be privatized in the short-medium term. Finally, the construction and maintenance of rural roads has been decentralized to local authorities since the abolition earlier this year of the General Directorate of Rural Services (GDRS) of the Ministry of Agriculture.

7.38 ***Regulatory Framework.*** The regulatory framework for the transport sector comprises of one general law on the duties of the Ministry of Transportation and a series of laws specific to the sub-sectors, especially the Law on the Organization and Duties of the Ministry of Transport, No. 3348, April 9, 1987. The Tariffs and Trade Department under the Ministry of Transport is in charge of regulating the prices charged for transport and communication services. Where deemed appropriate, the tariffs would be subject to approval and monitoring by this department.

7.39 ***Capital investments and operating budget.*** Planning units within the modal agencies and SEEs are responsible for identifying and proposing capital investments and operating budgets. They provide the technical, economic and, in the case of SEEs, financial feasibility studies for investment projects. The State Planning Organization (SPO) has the responsibility for reviewing the agencies' investment proposals and establishing the medium-term as well as the annual investment programs. The SPO's in-house capability could be further improved to integrate subsectoral demands into a comprehensive intermodal investment plan through an annual budgeting exercise guided by a clearly defined government investment strategy providing broad guidelines based on economic considerations.

7.40 ***Negative impact of recent economic crises on the sector.*** Although the Government needs a coherent investment strategy, excessively centralized control of all operational aspects of agencies and enterprises involved in infrastructure sectors can affect efficiency. These controls now extend from investment and financing decisions to purely operational decisions such as tariffs, revenue requirements and staffing. Investment decisions are taken on an annual basis, even for multiyear projects that can be systematically delayed as a consequence. Infrastructure entities suffer from a lack of autonomy over their operations and resources, and often lack the incentives to improve their way of working. As further explained below, operation and maintenance expenditures would deserve special attention.

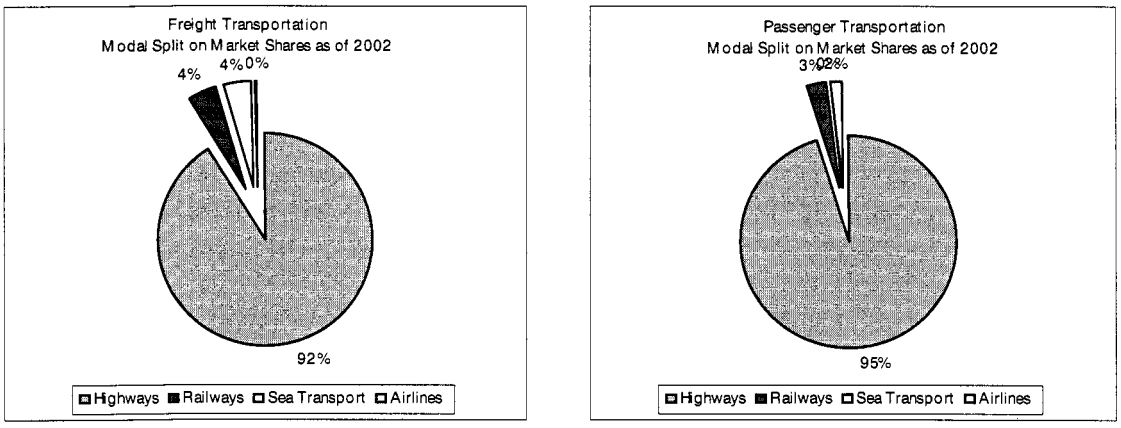
7.41 ***Transport Infrastructure.*** The backbone of Turkey's transport system consists of the 380,000 km of roads (63,372 km of state and provincial roads and motorways, and 317,000 km of rural roads) and to a lesser extent the 10,948 km of rail network; of which 8,257 km is currently being operated as a single line. Surrounded by seas on three sides and with a coastline of 8,300 km, Turkey has some 80 ports and 100 coastal facilities, ranging from open roadsteads to small jetties. Airports (22 state airports, 13 of them international) and pipelines (1,200 km) complete the transport infrastructure.

7.42 ***Transport demand in Turkey has grown significantly over the past five decades.*** Overall, demand has grown at an annual rate of nearly 8% since 1950. Annual demand growth rates have fared at an average of 7.6% for road transport; about 2% for rail transport, 5% for water transport, and over 16% for air transport. Unfortunately, the pattern in the change in the supply of infrastructure is not clearly matched by the change in the demand for transport observed in each mode. Road vehicle registrations have risen in the last decade, most significantly in terms of automobiles, with a more modest growth

in the number of buses and trucks. These have outpaced road construction with the consequence that vehicle densities are high by international standards especially in the Western part of the country, around major urban areas. Increasing traffic congestion results in a high level of road fatalities (see below).

7.43 ***Modal split and dominance of the road sector.*** Based on data from 2002, the share of freight transportation (in volume) is as follows: (i) road transport 91.9%; (ii) railway transport 4.4%; (iii) marine transport 3.5%; and (iv) air transport 0.2%. Regarding transport of passengers, the modal share is as follows: (i) road transport is 96.1%; and (ii) railway transport 2.3%; (iii) marine transport 0.5%; and (iv) air transport 1.1%. Since 1990, air transport infrastructure has shown the biggest growth of any of the modes, but, partly reflecting geography, and partly owing to market forces, the transport system in Turkey relies essentially on road transportation. (see figure 7.2). One clear message from analytical work to date is that a shift is needed between the various modes of transport, especially for the transport of freight which should be gradually – but steadily – transferred from the road to the railways. Due to the steady increase of containerized cargo, intermodal transport systems should also be promoted to improve the connections between the various modes of transport, e.g., improved railway linkage to ports.

Figure 7.2: Turkey Freight and Passenger Modal Split, 2002



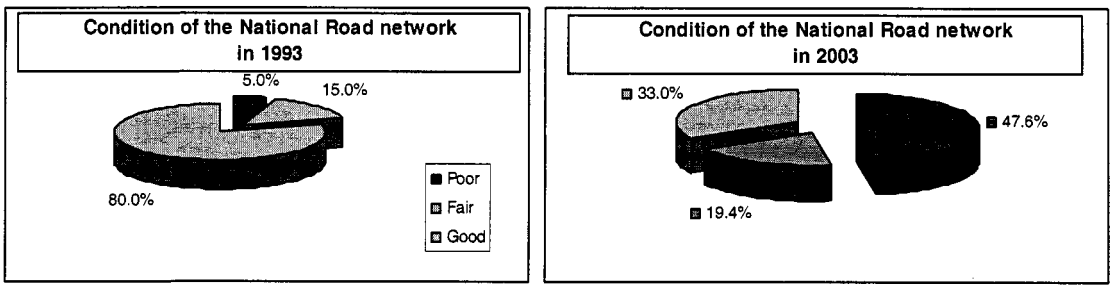
Source: KGM (2003), TCDD (2003)

B.2. The National Road Sector

7.44 ***Quality of the National Road network.*** Parts of the state and provincial road system are old and have weak pavements, leading to high road maintenance and vehicle operating costs, especially in the case of vehicle overloading. The quality is also poor in some sections. As a result of a shortage of funds to finance road maintenance and rehabilitation, the overall condition of the road network is progressively deteriorating as a result of deferred maintenance and rehabilitation works. Indeed, whilst the surface condition of the state road network in 1993 was rated 80% good, 15% fair and 5% poor, the situation deteriorated during the past decade. In particular, the situation of the

secondary roads is alarming with more than 70% in poor condition, as well as for the motorways, where a 40% rate of poor condition in unacceptable by any standards. The figure 3 below illustrates the change in overall quality of the Turkish Road network.

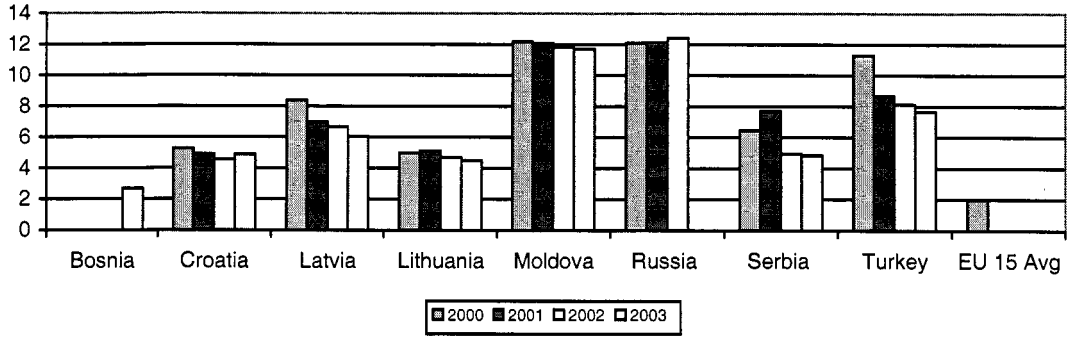
Figure 7.3: Condition of the National road network between 1993 and 2003



Source: KGM

7.45 ***Road Safety level far below EU average.*** Although road safety has improved during the last decade, road accidents remain a serious socio-economic problem in Turkey. In 2003, about 250,000 accidents were reported by police, of which there were 3,966 deaths and 117,268 injuries[216]. From 1993 to 2003, the number of accidents had been growing at an average 2% per year, in line with the growth rate of freight traffic expressed tons-kilometers (2.5%). While the number of fatalities has been drastically reduced, the number of injuries has been increasing at about 1.3% per year. The reduction of fatalities results from the introduction of air bags and seat belts in cars. However, the current fatality rate in Turkey (8 fatalities/10,000 vehicles) is still about four times the average of the European Community (2 fatalities/10,000 vehicles). (see figure 7.4).

Figure 7.4: Fatalities in Road Motor Vehicle Accidents (Fatalities per 10,000 vehicles)



Source: Roads in ECA – World Bank 2004 Unpublished working paper.

[216] These are the data collected during the accidents. Later results (in hospitals and later) are not followed, considered. Therefore the figures shown understate reality.

7.46 ***Road maintenance backlog.*** Due to a significant maintenance backlog, the present state of the network is well below an appropriate standard. Approximately 52 percent of the roads in Turkey are in good and fair condition compared to 95 percent or more in most large western European countries. The economic detriment caused by the poor condition of the road network, in particular for secondary roads, is likely to be acute.

7.47 ***Need for an overall reassessment of road maintenance policy.*** The Government of Turkey should evaluate present levels of maintenance expenditure to determine the economic benefits that will result, and also consider whether further economic benefits could be generated through a reallocation of spending. The Government should also consider the introduction of some form of incentive scheme for National Road Administration (KGM) such that it is financially rewarded or punished depending on its performance in maintaining the road network. Ideally, this incentive scheme would relate to the actual outputs of the road network, perhaps using the grading system currently employed. Basing the incentive scheme on the amount of spending, as is the practice in the U.K., is likely to lead to an inefficient use of resources.

7.48 ***National Road Administration (KGM).*** KGM is a fairly effective organization aiming at gradually increasing its efficiency in road management. As many other public agencies in Turkey, KGM is striving to reduce overstaffing. In 2005, KGM employed about 20,000 staff, of which 4,000 are technical and administrative staff and 16,000 laborers. Over the past ten years, the number of technical and administrative staff have been stable, (mainly to attend the operation and maintenance of an expanding motorway system) while the number of laborers has fallen dramatically, especially temporary labor. The reduction in the labor force has been accompanied by an increase in construction works by contract. KGM, in line with Government's policy directives, is committed to continue the gradual downsizing of KGM's labor force and the shift to contracted works.

7.49 ***Road Financing.*** Given Turkey's apparent difficulty to protect budgetary funds for road development and maintenance, the Government needs to put in place an adequate mechanism to secure road financing in the short term. Tolling major roads and motorways would allow operating and investment decisions to be based more on road users' willingness-to-pay, thus providing a closer link to the demand for the service. Taking into consideration the high level of traffic observed along some itineraries, options for Public Private Partnership schemes for financing and/or operating and maintaining specific itineraries seem promising, although so far no such scheme has been developed in Turkey.

7.50 ***Road charges.*** Turkey has a developed system of road charges: an excise tax on all motor vehicles ranging from 10 to 45 percent of the selling price of the vehicle; an annual motor vehicle tax for cars and motorcycles based on engine power and age of the vehicle; a capital transfer tax; motorway tolls which vary according to number of axles, height and in some cases weight; and fuel charges. The EU publication 'Fair Payment for Infrastructure Use' advocates that charges for infrastructure should reflect the marginal social cost of use. Users should be charged for the costs, both internal and external, they

impose at the point of use, when costs include operating costs, infrastructure damage costs, congestion and scarcity costs, environmental costs and accident costs. The benefits of introducing such principles are to internalize the external costs associated with road transport in order to prevent excessive use of the mode and to provide fair competition across the different modes to the benefit of potential transporters.

7.51 ***Road pricing policy.*** There are two issues that need to be considered when analyzing Turkey's road pricing policies in relation to these principles: the structure and the level of road charges. In terms of the structure of charges, it would appear that Turkey is already well on the way to creating a system in accordance with the principles set out by the EU. Nevertheless, there are some changes to the present structure of its road-charging policy that Turkey could consider: re-examining the scope of the principle of toll charging on its motorways and road network; and greater differentiation and sophistication could be introduced into the toll charging system. In terms of the level of charges, the Ministry of Transport should undertake a detailed study of the costs associated with use of the Turkish road network. The latest study looking at the external costs of road transport suggested that, while cars were more than fully covering their external costs (by 135 percent), trucks and semi-trailers were only covering 25 percent of their costs.

B.3. The Railway Sector

7.52 ***National Railway Administration (TCDD).*** At present, the rail industry in Turkey is dominated by TCDD, a vertically integrated, state-owned company responsible for both infrastructure provision and the supply of both freight and passenger services. The issues concerning the rail sector relate to two main areas: the provision of infrastructure and the restructuring of the sector. In Turkey, the plans for rail infrastructure development are decided by DLH. The Government has decided to restructure its transport system and particularly the role of the railway. Despite the shrinking share of the rail market, it would not be either politically acceptable or economically sound to consider the closing of the railways as some social and economic needs cannot be fulfilled by other transport modes, e.g., dry and liquid bulk, containerized traffic and urban transport services in already highly congested cities.

7.53 ***TCDD,*** the Turkish State Railways operates the national railway, the seven largest ports, and manufactures and repairs locomotives, wagons, passenger coaches, as well as sleepers and switches. Created as a result of the nationalization of the railways in 1924, TCDD was set up as a State Economic Enterprise (SEE) in 1953. As a State owned enterprise, TCDD has the monopoly of any railways related activities. Yet, it is currently the largest money loser among Turkey's public sector enterprises: in 2004, TCDD lost US$780 million (US$ 470 million including subsidies).

7.54 ***Railway network and activities.*** TCDD is responsible for operating and maintaining a 10,948 km long railway network, of which 8,257 km is currently being

operated as a single line. Besides the ports, the railway related activity is the largest element of TCDD, i.e., about 85 percent of TCDD total operating costs but slightly less than 50% of its operating revenues in 2004, resulting from a cross-subsidization from the ports.

7.55 ***Budget support to the Railways.*** During the period 1993-2004, the railway cost the Government about US$9 billion, averaging about US$750 million a year. In 2004, total support from public finance to cover losses as well as capital investment amounted to US$1,023 million, or 0.4 percent of GDP. The value of budget support together with uncovered losses expressed as a share of GDP is broadly comparable with other railways in middle-income countries in Europe[217]. Although the highly profitable port related activities are cross-subsidizing TCDD revenues, its operating revenue does not cover the cost of its staff. The staff totals about 39,000 of which about 9,000 are employed at ports and non-core affiliated companies.

7.56 ***Railway Sector Institutional Reform.*** The Government is clearly committed to change the TCDD -- both structure and technology -- to cope better with the competition in the global market and to increase the share of rail in the transport sector. More specifically, a Letter of Sector Development Policy includes unequivocal commitment for an in-depth reform of the TCDD with the preparation of two new Laws: (i) a Railway Law providing a new legal framework for railway activity consistent with EU directives; and (ii) a TCDD Law supporting the reorganization of the national railway company. The restructuring includes essentially the separation and eventually the privatization of the affiliated companies and of the ports operations, the reshaping of the labor force and the reduction in redundant staff.

7.57 ***Restructuring of the TCDD.*** *To* support the decision taken by the Government to reform the Railway sector, a detailed TCDD Business Plan has been prepared with the assistance of specialized consultants. The TCDD Business Plan for the period 2005-2010 was approved by the Board of Directors of the TCDD on March 23, 2005. The main objectives of the Business Plan aim to: (i) improve its financial situation; (ii) establish a more client oriented structure; (iii) increase railway competitiveness and market share; (iv) integrate the national network into the European and Asian network; and (v) provide an equitable, secure and economic service for the users. The satisfactory implementation of the Business Plan is an integral part of the Railway Restructuring project financed by the World Bank.

B.4. THE PORT SECTOR

[217] Croatian Railways (1.3% of GDP), Romanian Railways (0.7%), Bulgarian Railways (0.6%), Poland (0.4%).

7.58 ***Port Sector in Turkey:*** Five ports handle the bulk of the country's sea freight. Istanbul (Haydarpasa) is the most important port, followed by Mersin, Izmir, Iskanderun, and Derince. There are also many small ports along the country's extensive coastline; coastal shipping is substantial, particularly of such bulk commodities as coal and iron ore. Cargo handling is slow and storage limited, however. The main oil terminals near Iskenderun handle both domestic and Iraqi crude. TCDD is managing the seven most important ports which are currently being privatized except Haydarpasa port.

7.59 ***Port Privatization.*** At the end of 2004, the High Privatization Council, annnounced that the Bandirma, Izmir, Samsun, Derince, Mersin, Iskenderun ports, currently under the TCDD ownership and operation would be included in the privatization program. The Council announced that these ports would be privatized under a transfer of operating rights (TOR) scheme or any other appropriate method, except for the lease and/or sale of assetts. The decision envisaged that the privatization would be completed in 12 months and the ports would be managed by TCDD until they are privatized. TCDD would be involved in the post-privatization monitoring of investor's performance, especially in terms of maintenance, repair and other liabilities with respect to the assets. The revenues arising from the privatization would be transferred to the Treasury, who would in turn transfer the funds to the TCDD.

7.60 ***Privatization principles.*** The privatization process of the ports has been initiated, starting with the port of Mersin, to be followed shortly with the port of Iskanderun and the port of Izmir. The privatization process of the Turkish ports is based on the following key principles: (i) operational rights to operate the port will be awarded to a single operator for a duration of 36 years; (ii) the port asset property remains public; (iii) the selected operator will not be allowed to bid for any other port; (iv) port tariffs will remain aligned with the current TCDD tariffs during three years, the operator being free to set its tariffs thereafter; (v) the operator will have to invest in the development of the port to accommodate traffic increases up to 2010; and (vi) the TCDD staff currently employed in the port will be reverted to TCDD. The prequalification of the bidders will be made essentially on their financial capacity and the contract awarded to the biggest one time fixed fee to be paid upfront.

7.61 ***Key issues related to the ongoing port privatization process.*** As a result of the discussions with the Privatization Administration, the following points need to be taken into account before completing the privatization process : (i) the current process is likely to result in a transfer of a public monopoly to a private monopoly, with no institution yet in place to ensure a proper regulation of the sector; (ii) it is not yet clear on how the port tariffs policy will be implemented after the three year tariffs freeze imposed on the single operator; and (iii) the technical documents to be used for the transaction should be made explicit on: (a) technical criteria to be imposed to the operator, including quantified minimum operational performance; (b) the nature of the investment program imposed to the future single operator; (c) the relevance to revert the current TCDD staff employed in the port to the loss-making TCDD; and (iv) conditions to avoid risk abuse of monopoly position.

7.62 ***Creation of a National Port Authority:*** The Undersecretary for Maritime Affairs is now acting as the National Port Authority with the power to: (i) regulate port tariffs; (ii) ensure security and safety within the Turkish ports; and (iii) manage the Harbor Masters' functions and responsibilities. The Undersecretary of Maritime Affairs has been involved in the design of the privatization process and is currently working on the setting up of individual Port Authorities in each of the Turkish ports. Particular attention should be given to the establishment of an adequate regulatory framework before awarding the concessions of the ports to private operators. This is one of the key lessons learned from the past experience of the port privatization process which took place in Latin America during the past decade, which currently faces serious problems.

B.5. The Maritime Transport Sector

7.63 ***Maritime Transport.*** Except for national cabotage services, the maritime transport sector in Turkey is fully liberalized with significant progress recently observed in the quality of the vessels under Turkish flag to increasingly comply with Paris Memorandum of Understanding (MOU) requirements. The steady decline of the detention rate of Turkish vessels in European ports demonstrates the progress made so far. In order to implement the International Maritime Organization's State Port Control obligations, 160 experts are now deployed in the Turkish ports to control the quality of the vessels, with a global control rate of 30% for foreign vessels and 100% for national vessels. Regarding national cabotage services, the government has included its intention to liberalize national cabotage in the EU accession National Program, after EU membership.

7.64 ***Financial incentives to promote maritime transport.*** In order to support national maritime transport, the special consumption tax (OTV) on fuels was not collected in 2004, providing TL 190 trillion relief to operators. Turkish Maritime Lines (TDI), the operator of domestic and international ferry and passenger services, and the Istanbul Fast Ferries Company (IDO), owned by the municipality of Istanbul, were able to cut their fees. The TDI cuts ranged from 9 to 32% and the IDO cuts were in the 25 to 42 % range. Both companies recorded increase in passenger and car traffic in 2003. As of August 2003, the port tariffs were cut by almost 50%, in an attempt to enhance the competitiveness of the ports. A discount of 75% was introduced in cabotage fees.

B.6. Air Transport and Airports Sectors

7.65 ***The General Directorate of Civil Aviation,*** under the Ministry of Transportation, is the agency tasked with developing civil aviation rules, licensing air transport personnel, authorization of all aviation activities, the coordination of navigation services, monitoring of the implementation of international agreements, the examination of air transport-related accidents, the auditing of all civil aviation systems and determining the

contents of civil aviation training programs. The General Directorate of Civil Aviation has been restructured in order to enhance air transport safety and to enable it to effectively perform the duties assigned to it by law. A draft law on this issue is under preparation and is expected to be sent to the parliament in 2005.

7.66 ***General Directorate of State Airports (DHMI)*** is in charge of airport operations, provision of airport services, air traffic control, setting up and operation of the navigation systems and the associated facilities. DHMI operates 34 out of the 68 airports in Turkey. The remaining airports are those with special status, those used by the Turkish Aeronautical Association (THK), the military airports used by civil aviation entities under special protocols, military airports and joint military-civilian airports.

7.67 ***Turkish Airlines (THY)*** is the predominant provider of passenger and freight services in Turkey's air transport sector. Turkish Airlines was established in 1933, as a department of the Ministry of Defense as the State Airlines Administration and in 1935, it was assigned to the Ministry of Public Works. In 1938, this entity was renamed the General Directorate of State Airlines. From 1939 onward, it operated as a department of the Ministry of Transportation. In 1955, it was restructured as a private corporation to be managed and operated under private law. From then on, it operated as Turkish Airlines. In 1984, Turkish Airlines was classified as a State Economic Enterprise and in 1990; it was included in the list of the State Economic Enterprises to be privatize. The Turkish Airlines Corporation was then transferred to the jurisdiction of the Privatization Administration in 1994.

7.68 ***Liberalization of domestic air transport***. The recent opening of domestic air transportation to competition was followed by the emergence of several private carriers. These carriers provide cheap transport options in certain high-volume routes such as Istanbul to Ankara, Bodrum, Trabzon, etc, with ticket prices reportedly around two thirds cheaper than THY. In 2004, the special transaction tax (ozel islem vergisi) and education support fund share (egitime katki payi) were eliminated from the airplane ticket prices.

7.69 ***An increase in the total number of airline passengers was recorded in 2004***, both for THY and for private airlines. In 2004 a 57% increase was observed in the number of domestic air passengers, reaching almost 14.5 million, from just over 9 million passengers in 2003. Private airlines carried 3.7 million passengers. The number of international air passengers increased by 20.8% in 2004. In 2004, THY load factors exceeded 70% for the first time in company history and the increased travel figures also helped the company financials. It reported YTL 110 million in profits before taxes. In addition to the increase in passenger numbers, the air fleet also grew in 2004. There was a similar picture in the air freight business, where the number of freight planes increased from 5 in 2003 to 12 in February 2005.

7.70 ***As for airports, there are currently several ongoing projects for the maintenance and upgrading of in the Istanbul, Ankara, Izmir, Antalya and Dalaman airports, along with modernization of several airports and the construction of new airports***. Following a tender process initiated by DHMI in 2004, a new international and

national terminal for Ankara Esenboga Airport will result from a Build-Operate-Transfer (BOT) model, similar to the ongoing one in Istanbul International Airport.[218] Another important BOT project is Antalya Airport international lines terminal building and its complements. Tenders have also been realized for the construction of a new international terminal building of Adnan Menderes and Dalaman airports.

C. ENERGY

C.1. Electricity

7.71 ***Comprehensive reform program in electricity.*** The Government has embarked upon a comprehensive reform and restructuring program of the electricity sector over the last 5 years, with a view to creating a liberalized, efficient and economic sector consistent with the principles of the Acquis on energy. Turkey is signatory to the Athens Memorandum, 2003 – the Memorandum of Understanding on the Regional Energy Market in South East Europe and its Integration into the European Union Internal Energy Market. While the other regional members signed the Energy Community Treaty in October 2005, Turkey is currently in discussion with the European Community on some aspects of the Treaty, before it considers signing the Treaty. Turkey however, remains committed to implementing the Acquis as demonstrated by the progress so far on its ambitious and complex reform program in energy – progress on implementing the reform program has been uneven, and this is discussed in subsequent sections of this chapter.

7.72 ***Reform legislation and independent regulation.*** Turkey is in compliance with the legislative requirements of the Athens Memorandum. In February 2001, Turkey enacted the Electricity Market Law[219] which is in line with the EU Electricity Directive. In order to implement the provisions of the Law, and to be consistent with EU requirements on energy, Turkey has also prepared a strategy paper[220] which lays down the timelines for these activities[221]. Pursuant to the law, Turkey has set up an independent regulatory authority, the Energy Market Regulatory Authority (EMRA) with jurisdiction over electricity, petroleum and gas. EMRA has powers over licensing, tariff setting and customer service issues. The Law also mandates the restructuring of the generation and distribution sectors, and introduction of competition and privatization of distribution.

7.73 ***Preparation for privatization of electricity distribution.*** The distribution sector has accordingly been restructured into separate companies in preparation for their

[218] The Istanbul Ataturk airport's BOT project consisted of an international terminal building and complements with a total cost of US$ 400 million.
[219] Electricity Market Law – Law No. 4628
[220] The High Planning Council approved the Electricity Sector Reform and Privatization Strategy Paper in March 2004.
[221] The Bank has assisted the reform process through its ongoing loans, as well as through the mobilization of Trust Fund and PPIAF grants for supporting the conceptualization and implementation of the reform program.

privatization starting late-2005. In accordance with this organizational framework, the distribution sector has been restructured into 21 separate companies. One company, named Kayseri ve Civari Elektrik A.S. is privately owned, with the remaining 20 companies owned by wholly owned affiliates of TEDAS, the Government-owned distribution corporation. TEDAS suffers from high technical and commercial losses, and also has problems accruing and promptly collecting electricity bills. TEDAS has not been able to finance periodic maintenance of the system as a result of which parts of the system are unreliable and suffer from low voltages and poor quality of supply. The Government attempted to privatize the distribution business over the previous decade, but did not meet with success. Due to perceived constitutional restrictions to a sale of the electricity distribution assets, the Government adopted a concession-type approach, which however met with severe legal challenges. As a result, most of these contracts were cancelled. The Government is attempting to privatize the distribution business again, using a modified Transfer-Of-Operating-Rights (TOOR) approach where the operator will have full control over the assets (though ownership will rest with TEDAS) and over new investment, and will be provided with a multi-year regulatory framework to ensure certainty in the tariff profile. In 2004, the TEDAS companies were transferred to the program of the Privatization Administration in preparation for their phased privatization.

7.74 ***Private participation in electricity generation.*** The generation sector is also in the process of being restructured into separate companies with different portfolios of generating plants. The Government intends to privatize these portfolios in phases over the medium term to enable competition and to reduce chances of abuse of market power. In order to ensure supply security, the Government has endeavored to attract private investment into generation through various means. In 2005, nearly 54.5% of Turkey's total annual electricity generation of about 160 TWh (Turkey's total installed capacity in 2005 was 38,819 MW) was produced by plants owned by the private sector (refer to Table 7.3 below). The private sector operates about 41.8% of installed generating capacity. About 10.5% of total generation is produced by auto-producers as a result of the gradual opening up of the electricity industry, and about 34% is produced under Build-Operate-Own (BOO) and Build-Operate-Transfer (BOT) schemes. An additional 2.5% of generation comes from capacity that is operated under public-private partnerships where existing Government-owned plants are operated by the private sector under Transfer-Of-Operating-Rights (TOOR) arrangements. While these investments have brought in significant generating capacity, the Government has had to provide guarantees and long-term offtake contracts, and some of the capacity has turned out to be very expensive. A number of the contracts were challenged legally and subsequently cancelled, leading to arbitration cases, some of which have resulted in further liabilities for the Government.

Table 7.3: Turkey – Breakdown of Generation by Ownership (2005)[1]

Ownership	% Share in Generation
EUAS + EUAS Affiliates	41.5%
Other Public (Generation Companies Under Privatization Program)	4.04%
Total Public Sector	45.5%
Build-Operate-Own (BOO)	25.7 %
Build Operate Transfer (BOT)	8.5 %
Auto-producers	10.7 %
Transfer of Operating Rights (TOOR) Contracts	2.5 %
Other private ownership	6.56 %
Mobile Power Plants	0.53%
Total Private Sector	54.5%

Source: Turkey Electricity Transmission Company (TEIAS)
[1] Provisional

7.75 ***Renewable energy.*** Renewable sources are an important source of energy in Turkey. Apart from hydro, Turkey also has potential for geothermal and wind energy. The Government has recently approved a new law supporting renewable energy, the Law on the Utilization of Renewable Energy Resources in Electricity Generation[222]. The Law aims to protect the environment through reduced greenhouse gas emissions and conservation of renewable energy resource areas. It also seeks to promote renewable energy by providing incentives in terms of prices and off take agreements during the transition until the sector can attract investments on its own merit. Subsequent to the Law being approved, there has been an increase in private sector interest in renewable energy, especially in hydro power.

7.76 ***Market opening in electricity.*** Turkey has opened up the retail market, and currently consumers up to 7.7GWh of demand are considered eligible, i.e., they can choose their electricity supplier. Current market opening is estimated at around 30% of the total Turkish electricity market, with a significant number of consumers either producing electricity for their own consumption, or buying from a supplier other than the incumbent distribution company operating in the same region. Turkey aims to achieve the ambitious target of complete market opening by 2011.

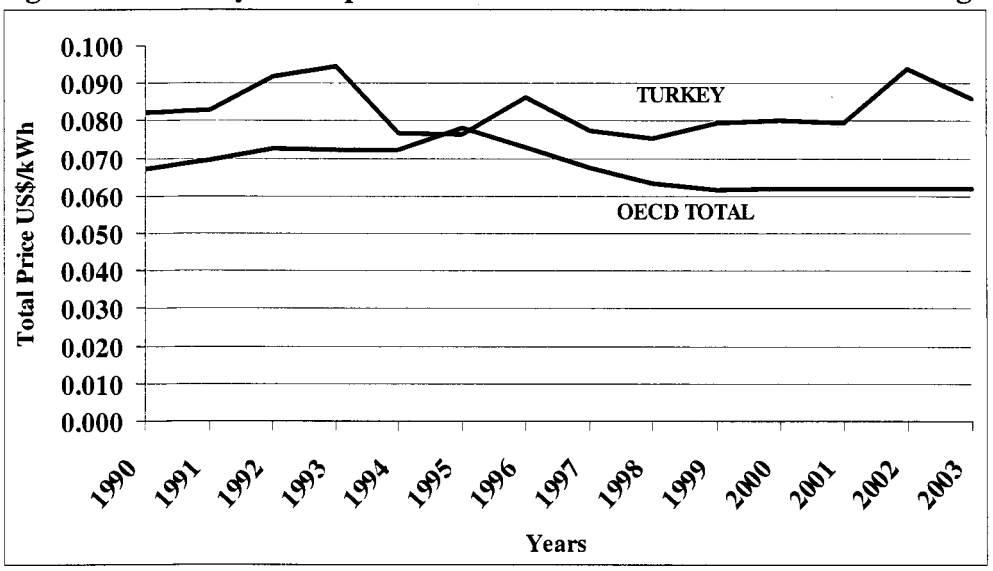
7.77 ***Introduction of a competitive market in electricity.*** Before making the electricity market fully competitive, Turkey is in the process of implementing a transitional balancing market which is being tested at this stage. The market will consist of a bilateral contracts market complemented by a balancing and settlement system. A separate ancillary services arrangement will also be put in place. TEIAS, the transmission company, is the independent system operator and will also be the market

[222] Law on the Utilization of Renewable Energy Resources in Electricity Generation – Law No. 5346 enacted in May 2005.

operator. During the transition period, big generators will submit their schedules and upward/downward regulation offers on a "day-ahead" basis. The market operator will calculate hourly system marginal prices from merit order of upward/downward regulation offers. At a later date, a day-ahead market where all wholesale market participants, including demand-side participants, can submit buy/sell offers and "spot" price determined at the intersection of supply and demand curves will be instituted. The market, once it is functional, is expected to provide the necessary price signals for potential new generation based on the demand characteristics of various consumer groups in bilateral contracts.

7.78 ***Electricity prices.*** Retail electricity prices are relatively high in Turkey, at approximately US$0.092/kwh (excluding VAT) for households and US$0.087/kwh for industrial consumers. Refer to Figure 2 below for a comparison of industrial prices with OECD averages. Generally, retail prices for industrial consumers are higher than OECD average, whereas retail prices for households are moderate compared to OECD average. Turkey currently has implicit cross-subsidies between regions and also for certain sub-categories of consumers. The Government is contemplating putting in place a transition period – through the use of a tariff equalization methodology for reducing cross-subsidies and graduating to cost-reflective tariffs over the medium term.

Figure 7.5: Turkey – Comparison of Industrial Prices with OECD average



Source: IEA, Energy Prices and Taxes

7.79 ***Security of electricity supply and the regional market.*** Turkey is the dominant power producer and consumer in South East Europe. Electricity demand is growing at 6-7% per annum, and additional generation capacity will be required beyond 2009-2010 under most demand (and supply) scenarios made by the Ministry of Energy and Natural Resources. Security of electricity supply is a key government concern. The Government is exploring alternatives for adding significant amounts of capacity in order to meet the probable shortage of supply in the medium term. However, given that the electricity market is in transition towards a competitive one, and given that the Government does

not want to take on further liabilities with regard to new generation facilities. The Bank and Government are beginning work on exploring options for obtaining additional generating capacity in the current situation – a competitive market in transition and delays in privatization of distribution. With the exception of Turkey, by late 2004, all South East Europe power systems were synchronously interconnected. After establishment of necessary transmission lines, Turkey is planning to become synchronously interconnected with all South East Europe power systems. The two existing 400 kV transmission lines between Turkey and Bulgaria would allow full integration of Turkey by the end of 2006. In addition to these lines a new 400kV line between Turkey and Greece is now under construction, of which expected commissioning time is 2007. Turkey is not a member of the Union for the Coordination of Transmission of Electricity in Europe (UCTE), which is the association of transmission system operators in continental Europe but would like to join. Turkey's interconnection with UCTE is expected to contribute to the security of supply both in the South East Europe region and in Turkey through electricity trade. Detailed technical studies in this regard have been initiated in coordination with UCTE. Turkey is undertaking key investments required to enable joining UCTE such as upgrading load dispatch and system control abilities, implementing market management software and constructing cross-boundary interconnections.

7.80 ***Areas requiring further attention.*** While Turkey has implemented a number of the requirements of the EU and has in some cases achieved more than is required under the directives, its overall alignment with the EU directives remains uneven across different areas of energy policy. The Government has , not allowed retail tariff increases over the past three years, choosing instead to increase the use of hydro generation owing to low cost of production. Government agencies and offices, notably municipalities, do not pay on time or adequately for their electricity consumption, leading to a further cash flow problem in the electricity sector – the Government is endeavoring to introduce new legislation to curb this problem. It is also hoped that with privatization of distribution, this problem of non-payment will reduce – privatization itself is delayed however, and it will take time to privatize the entire distribution network. There are delays in implementing the balancing market as well, although this is not unexpected in a market which is faced with complex issues such as high system losses and poor collection efficiency even as it is transitioning from a state-owned monopoly to a competitive and increasingly privately owned and operated system.

C.2. Gas

7.81 ***Natural gas market legislation.*** The national government has addressed the gas sector challenge through a 2001 Natural Gas Market Law[223] and subsequent secondary legislation, which requires the natural gas sector to be restructured into a competitive market over the medium term. Again, current legislation is in compliance with the EU Natural Gas directive. The Law sets a very ambitious target for the transition to competition, requiring BOTAS – the Government-owned monopoly transmission system

[223] Natural Gas Market Law - Law No. 4646

operator, importer and wholesaler – to reduce its role in gas imports and wholesaling to 20% of each market by 2009. The Bank's recent policy note on the sector[224] analyzes progress in implementing the law and highlights measures needed to achieve the objectives of the Government in the sector over the medium term. The policy note highlights the importance of moving to competitive gas wholesaling within Turkey. The note also states that it may not be feasible to transfer BOTAS gas contracts to other licensees given that suppliers may not agree to such a transfer, advocating instead that BOTAS' monopoly over imports and wholesale be gradually reduced through gas volume release programs. This is already an accepted approach in EU countries for introducing wholesale competition.

7.82 ***Gas demand and supply.*** Gas has grown rapidly as a percentage of total primary energy supply in the past decade, now reaching 23%, which however is still lower than in EU and OECD countries. Turkey's total natural gas demand is currently estimated at 25 bcm, and has grown very rapidly at about 10% per annum over the last few years. This growth is expected to sustain in the medium term primarily due to increasing urbanization, increased dependence on natural gas for heating and increased use of natural gas in electricity generation (refer to Table 7.4 below). Turkey does not have natural gas reserves and imports its supply primarily from Russia through two pipelines, one through Bulgaria and one under the Black Sea. Other major suppliers are Iran, and Algeria and Nigeria (in the form of LNG). Turkey is also expecting delivery of natural gas to start from Azerbaijan in late 2006.

Table 7.4: Turkey – Natural Gas Demand (bcm)

Year	1990	1995	2000	2004	2005	2010 (est)
Electricity Generation	2.6	3.8	9.7	13.0	15.4	21.4
Residential/Commercial	0.1	1.0	2.8	4.4	5.9	9.6
Other	0.7	2.0	2.1	4.7	5.6	13.1
Total	3.4	6.8	14.6	22.1	26.9	44.1

Source: BOTAS

7.83 ***Introduction of competition in wholesale supply.*** Until recently, BOTAS was also responsible for gas distribution and sale to retail consumers. Pursuant to the Law however, BOTAS has sold its existing distribution businesses to private investors. The Government is also working towards removing the monopoly of BOTAS over imports and wholesaling, through the contract/ volume release program mentioned above. The contract/ volume release program aims to transfer 16 bcm of the total gas consumption of 25 bcm (about 64%) to independent importers/ wholesalers. This process was started in November 2004, and has been delayed due to amendments in the Law in June 2005 – the date for the tenders has been postponed to November 30, 2005. 35 companies are said to have applied to EMRA for import licenses, which is a prequalification requirement in

[224] World Bank: Turkey: Gas Sector Strategy Note, Report No. 30030-TR, September 2004

order to participate in the tender. BOTAS is currently also in the final stages of separating its transmission, storage and natural gas sales businesses into separate accounting entities, in preparation for eventual unbundling. Even though the timeframe for competition envisaged in the Law is ambitious, over the medium to long term, it is anticipated that BOTAS will remain as a gas transmission company and gas system operator, no longer having monopoly over imports and wholesaling. Contract release tenders have been realized on November 30, 2005. Bids are currently being evaluated.

7.84 ***Private investment in natural gas distribution.*** Turkey has moved speedily on the introduction of private investment in gas distribution networks. Due to gasification of cities over the last few years, household penetration rates have risen rapidly and are now around 22%. Until recently, only 5 cities had gas distribution systems. During the last two years, EMRA has awarded licenses to private investors for building and operating greenfield gas distribution systems in an additional 31 cities. While it is still early to comment on the outcome of these privatizations since investments have not yet begun flowing in significant volumes, 20 of these cities are reported to have started the use of natural gas, and it is expected that with the gasification and interconnection of these cities, natural gas demand will rise sharply in the short to medium term.

7.85 ***Turkey's role in the European gas market.*** Turkey, due to its unique geographical location, is well-placed to be a major natural gas transit country into mainland Europe. Turkey is currently proceeding towards construction of large pipelines reaching into countries in continental Europe, and in addition to the growing domestic demand for natural gas, this role for Turkey as a transit country is likely to drive the economics of the natural gas market in the medium term. Turkey currently has long-term contracts for supplies significantly larger than its current domestic demand, and it is unlikely that in the foreseeable future, the demand will cross available supply. These supply contracts except for the Azerbaijan contract, however, do not currently allow re-export of gas out of Turkey.

7.86 ***Natural gas pricing.*** Natural gas prices in Turkey are regulated by EMRA. EMRA sets a price cap for wholesale, storage, transportation and retail sale, and historically, BOTAS has priced itself below the cap, partially on account of larger politico-social considerations. BOTAS has however, been able to recover its costs with these tariffs, and has been able to invest in developing the entire gas transmission system in the country. On the other hand, the implemented retail prices are generally determined at cap by private firms.

7.87 ***Priority interventions.*** The above text documents progress in energy sector reform that has received positive mention in the EC's 2005 Progress Report[225]. Going forward, implementation will be as great a challenge as further transposition of the Acquis. In particular. Regulatory support for cost reflective tariffs, improved payment discipline by government agencies, and implementation of the electricity balancing market need particular attention.

[225] Turkey 2005 Progress Report – European Commission – Brussels, November 9, 2005 SEC (2005) 1426

D. COMMON REFORM DIRECTIONS

7.88 ***The long run gains offered by liberalization of infrastructure services offset the costs, but do require thoughtful timing and legislative action to realize.*** The sectors discussed above share the qualities of high cost relative to comparator countries, and relatively low efficiency. The combination, while daunting, does mean that unlike many countries, Turkey has the potential to lower the cost of services while increasing quality and coverage. The means to achieve this – market liberalization to capture the benefits of competition – are embodied in the relevant acquis chapters, so Turkey's on-going efforts to achieve that goal are consistent both with growth strategy and accession requirements. Furthermore, the needed actions typically have a low economic cost and offer fiscal relief. However, institutional reform comes with other costs that have slowed implementation. These include shifts in relative power among actors in the sector, with government agencies or state economic enterprises yielding power to more independent private entities (or state entities operating on commercial terms). The use of tariff policy as a social instrument will need to be altered in favor of explicit budgetary provision for social support. Finally, although the EU Acquis and practices allow for financial transactions and other practices through the "services of general economic interest" under well-defined conditions, the government's flexibility in the use of Treasury shares, duty losses, and other *ad hoc* financial transactions with state economic enterprises should continue to be curtailed.

PART C: PROMOTING INCLUSIVE GROWTH

CHAPTER 8. AGRICULTURE AND RURAL DEVELOPMENT ON THE WAY TO THE EUROPEAN UNION

8.1 ***Despite a projected beneficial impact of EU accession on agricultural production and trade, agriculture's one third share in total employment is likely to decrease in the future, as a result of structural reform and alignment with CAP.*** As Turkey still heavily protects its agriculture and foods sectors, a reduction in protection would tend to hurt agriculture as a result of EU accession. However, simulations of long-term impact suggest that the increase in market access into the EU could generate a significant increase in demand that would support significant growth of the agricultural and food sectors in Turkey. However, the high share of employment in agriculture is likely to decrease in the future, as it has happened in other countries that have liberalized agriculture, while the structural changes in production required to boost competitiveness and take advantage of the new environment will also put pressure on rural labor markets. Consequently, one of the key rural development concerns would be whether economic activities in rural areas will be able to absorb labor force leaving the agricultural sector.

8.2 ***The dual challenges will be to support adjustment to structural changes in agriculture and promote rural development off-farm more widely.*** Strengthening policy coherence will be particularly prominent in the process of EU accession. Particular emphasis will be placed on coherence of instruments and policy objectives between the agricultural and rural development policy, and of their respective institutional and implementation arrangements, as explained by the recent changes in CAP.[226] The accession process also implies the EU alignment of Turkey's national rural development policy and objectives.

8.3 ***The next section reviews Turkey's overall support to agriculture in comparison to the EU and lays out the policy challenges for alignment with CAP during the accession period.*** It then provides an analysis of the long-run impact of EU accession on agriculture—including the multiplier impact on the economy—based on a general equilibrium model simulation. In the third section the chapter addresses rural development and its EU alignment by analyzing the recent patterns of investments in agricultural and rural development, exploring options for diversification of economic activities in rural areas and examining the experience of selected EU member states in

[226] The reformed CAP consists of two pillars, with the rural development representing the 2nd pillar. The 1st pillar concentrates on providing a basic income support to farmers, while the 2nd pillar supports agriculture as a provider of public goods in its environmental and rural functions and rural areas in their development. See: http://www.europa.eu.int/scadplus/leg/en/s04002.htm.

implementing Structural Fund programs in rural areas, and outlining the key EU requirements regarding institutional and implementation arrangements for these Structural Fund programs.

A. ALIGNMENT WITH THE EU COMMON AGRICULTURAL POLICY (CAP)

A.1. Support to Agriculture in Turkey and EU and Impact of Alignment

8.4 ***The level of support granted by Turkey to the agricultural sector, measured by the Producer Support Estimate (PSE) and the Nominal Assistance Coefficient (NAC) rose substantially through the late 1980's and 1990's.*** [227] Despite serious efforts to move away from high market support with the substitution of most budgetary subsidies for agricultural outputs and inputs by a Direct Income Support program (DIS, a uniform, non-distorting per hectare income transfer), Turkey has not stemmed the rise of price differentials between farm gate and world reference prices (as measured by the Nominal Protection Coefficient, NPC). In essence, continually high import tariffs on agricultural commodities and non-trade barriers have kept agricultural prices high, with the aggregate level of such distortion in 2004 (30 percent) being at roughly the same level as that of the EU-25 (29 percent—Table 8.1). The effect of this has been an increased burden mainly on consumers: the Consumer Subsidy Estimate for Turkey (CSE, -22 percent[228] in 2004) is relatively high and again roughly on par with the CSE for the EU-25 (which has been decreasing over the past few years).[229]

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[227] PSE: Ratio between the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, arising from measures that support agriculture, regardless of their nature, to the value of gross farm receipts valued at farm gate prices including budgetary support;

NAC: Ratio between the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, arising from measures that support agriculture, regardless of their nature, to the value of gross farm receipts valued at world market prices, without budgetary support;

[228] This is interpreted as the fact that 22% of consumers' food expenditures are a subsidy paid to agricultural producers.

[229] Non tariff barriers have been particularly distorting in the case of beef imports. Official beef imports have largely ceased owing to import restrictions imposed by the government in 1996 on the account of mad cow disease. However, domestic beef production is not enough to meet demand for beef. On the other hand, a considerable cattle import has been made illegally (an estimated 1 million cattle in 2001), which is also of concern for public health. Owing to these illegal imports, beef prices do not increase as much as would be expected—farm prices are 18 percent higher than that of world reference prices in 2004. Instead of banning legal beef imports, more targeted measures could be considered—such as improving the established system of cattle registration and traceability. In addition, the high cost of feed due to high import tariffs on maize and interventions of TMO could be adjusted to allow livestock farmers to access to lower cost as well as better livestock suitable feed crops, such as soybeans.

Table 8.1. Indicators of Support to Agriculture Turkey and EU (1986-2004)

	1986-88	2002-04	2002	2003	2004
Turkey					
Total Support Estimate (TSE)/GDP (%)	3.94	4.40	4.16	4.91	4.12
Percent Producer Support Estimate (PSE) (%)	16	25	20	29	27
Percent Consumer Support Estimate (CSE) (%)	-16	-22	-17	-26	-22
General Services Support Estimate (GSSE) /TSE (%)	9.7	10.8	26.5	7.7	3.5
Nominal Protection Coefficient (NPC)	1.17	1.28	1.20	1.36	1.30
Nominal Assistance Coefficient (NAC)	1.20	1.34	1.26	1.40	1.36
European Union					
Total Support Estimate (TSE)/GDP	2.82	1.24	1.20	1.26	1.20
Percent Producer Support Estimate (PSE)	41	34	34	36	33
Percent Consumer Support Estimate (CSE)	-38	-21	-21	-22	-20
General Services Support Estimate (GSSE) /TSE	9.1	8.2	8.5	7.5	8.5
Nominal Protection Coefficient (NPC)	1.80	1.32	1.31	1.34	1.29
Nominal Assistance Coefficient (NAC)	1.71	1.52	1.52	1.56	1.49

Source: OECD (2005)

8.5 ***However, the overall level of support captured by the NAC (including both market support and additional support provided by direct payments and other programs), has been and continues to be about 10-15 percent below that of the EU.*** Turkey's NAC has oscillated in the range of 1.3 over the past few years, while that of the EU has been steady in the range of 1.5. Combined with the above discussion on the trends of NPCs, the clear conclusion is that EU support to agriculture is higher than that of Turkey almost exclusively due to higher support extended through non-market subsidy instruments. In addition, support in Turkey for general services, such as research and development, extension and marketing, has been quite volatile with considerable decline in 2004. Fortunately, the recent Agricultural Sector Strategy targets an increase to a 5 percent share for research and development in the total budgetary support for agriculture. Since success of alignment efforts with EU will largely depend on upgraded support to farmers on advice on cropping patterns, access to new technologies and better marketing, increased support for general services in agriculture will be quite important for Turkey.

8.6 ***Producer farm gate and world reference price differentials measured by the NPC are higher for many commodities in Turkey than those of the EU25.*** Although producer prices for sugar beet, poultry and sheep are not being supported as much as those in the EU-25, the prices of wheat, barley, maize, sunflower, potatoes, grapes, milk and beef are being supported at levels higher than those in the EU (Table 8.2).

8.7 ***Keeping the supply levels constant, alignment with the current levels of agricultural prices in the EU-25 would directly impact the value of several products.*** A simple (static) simulation based on NPC ratios of 2004 show what would be the effect on production values in Turkey of alignment with the current levels of agricultural prices in the EU-25 (Table 8.2). The biggest reductions in price and in value of production would be seen for potatoes, grapes, sunflower, maize and barley. Beef, milk and wheat would have price reductions as well; whereas prices for sugar beet, poultry and sheep would have to be increased. It is important to note that these price reductions would positively affect consumers' welfare as food expenditures would decline.

Table 8.2 Change in Value of Production with Price Alignment with EU CAP

	2004 EU-25 NPC	2004 Turkey NPC	2004 Turkey Production Value Share	Expected change in Value of Production with Alignment
Wheat	1.06	1.18	23.28%	-10%
Barley	1.09	1.36	8.25%	-20%
Maize	1.37	1.74	3.61%	-21%
Sunflower	1.00	1.29	2.07%	-23%
Sugar beet	3.04	2.62	5.37%	16%
Potatoes	1.10	2.65	5.93%	-58%
Grapes	1.02	1.53	11.38%	-33%
Milk	1.37	1.50	14.15%	-9%
Beef	1.99	2.14	13.33%	-7%
Poultry	1.82	1.68	7.06%	8%
Sheep	1.33	1.04	5.55%	28%
Weighted Average of above	1.43	1.62		-12%

Source: OECD (2005) and Own Calculations

8.8 ***These static results do not take into account supply responses and production shifts across agricultural commodities, growth of domestic aggregate demand, nor any kind of general equilibrium effect.*** These have been modeled and are reported in the following section. As other studies have shown earlier, for example Nash, et al. (2002), the impact of CAP alignment may have a positive impact on both consumers and farmers in the medium to long term as farmers adjust to the new policies and as real non-farm household incomes increase.[230] For these reasons, the static simulation results above should be considered an indication of the initial impact of CAP alignment in Turkish agriculture.

8.9 ***Turkey's total producer support would increase further for many commodities once it became fully aligned with the levels currently maintained in the EU-25.*** Comparing NAC ratios for major commodities of Turkey and EU, Turkey's producer support for most of the commodities is lower than that of EU, with the exception of maize and milk. Therefore in case of alignment, the supported value of produce for all crops except maize and milk in table in Table 8.3 would have to increase. The biggest increases would have to be for sheep, beef, and sugar beet. Thus, although the market support portion of the agricultural producers' total support would decrease in case of EU CAP alignment (for the set of commodities covered), total producer support could be expected to increase, with financing from the CAP.

[230] A partial equilibrium model of the Turkish agricultural sector to simulate the effects of introducing the CAP. The model considers 11 major agricultural products: wheat, barley, maize, sunflower, sugar, beet, potato, grapes, milk, beef, poultry, and ovine meet.

Table 8.3 Change in Supported Value of Production after Full EU CAP Alignment

	2004 EU-25 NAC	2004 Turkey NAC	Change in Supported Value of Production with Alignment
Wheat	1.64	1.46	12%
Barley	1.85	1.60	15%
Maize	1.75	1.87	-6%
Sunflower	1.59	1.49	7%
Sugar beet	3.24	2.76	17%
Milk	1.44	1.53	-6%
Beef	3.12	2.15	45%
Poultry	1.94	1.68	15%
Sheep	2.09	1.04	101%
Weighted average of above	1.96	1.69	17%

Source: OECD (2005) and Own Calculations

8.10 ***However, because the structure of CAP keeps evolving, it is uncertain that upon accession overall support for Turkish agriculture could in reality increase.*** In the years ahead, the share of CAP budgetary transfers in total support is unlikely to be growing by enough to fully offset the expected decline in EU agricultural trade protection. In addition, the CAP budgetary support to be received by producers in new EU members is likely to be phased in over long periods, with flexibility for the domestic budgets of Member States to "top-up" CAP transfers.

8.11 ***Moreover, this full alignment is either unlikely or expected to take a long period to be phased in after accession, if the current experience of recent EU accession countries is a good guide.*** First, the levels of NACs in the EU will likely continue its slow decline over the next ten to fifteen years, with NPCs falling further and the share of non-market transfers in total support growing but not by enough to fully offset the fall in NPCs. Secondly, the CAP non-market support levels received by agricultural producers in the EU-15 are higher than those in the recent 10 accession countries. The level of support to agricultural producers in the latter group are being phased in from 2005-2012 (financed mainly by the CAP budget with some flexibility for the domestic budgets of Member States to "top-up" these levels). Thus, Turkish agricultural producers would likely face a phase-in period as well.

8.12 ***Turkish agricultural policy during the pre-accession period will need to focus on gradual reduction of tariffs with continued reform of budget support.*** Market support for a number of commodities has to decrease in general through tariff reduction if such support is to converge to EU levels prior to accession and avoid any sharp falls in prices and initial contractions in agricultural income (as have been recently the case in Hungary). At the same time, government budget support for agriculture should be more focused on non-market distorting instruments. This should take the form of maintaining the Direct Income Support (DIS) Program and expanding support for general services and the other non-distorting programs which Turkey is introducing through its draft Framework Agricultural Law. This is discussed in greater detail below.

8.13 ***Adjustment of Turkish agriculture to reductions in tariff protection could be facilitated by further improving market access for Turkish exports to the EU.*** EU imports of all agricultural products originating from Turkey are tariff free if the value of consignment is below a pre-set entry price. For four different kinds of fruit and nine vegetables, however, this suspension of the ad valorem tariff is limited to certain calendar periods ranging from 3-8 months depending on the type of the product. Removing such seasonal restrictions would facilitate adjustment towards more dynamic products where Turkey has a comparative advantage.[231]

A.2. Impact of Alignment with CAP – General Equilibrium Modeling

8.14 ***The economic impacts of Turkey's potential accession to the EU has been analyzed using the World Bank's global general equilibrium model*** calibrated to the GTAP dataset (release 6.0) with supplemental information on Turkey's domestic protection. For modeling purposes, the process of Turkey's accession is decomposed in four parts: 1) the EU eliminates its tariffs on Turkey's exports; 2) Turkey eliminates its tariffs on EU's exports; 3) Turkey aligns its external tariff to the EU's external tariffs; and 4) with funding from CAP, Turkey aligns its domestic support with the EU's. As Turkey still heavily protects its agriculture and foods sectors, a reduction in protection would tend to hurt agriculture. However, the increase in market access into the EU generates a significant demand pull that leads to an expansion of the agricultural and food sectors in Turkey. The fiscal impact of alignment of domestic support with the EU, combined with the loss in tariff revenues would amount to *net savings*, estimated at 0.9 percent of GDP (see below).

(a) Current Status and Accession Policy Implications—model calibration for EU and Turkey in 2004

8.15 ***For the EU, the data is sourced from the GTAP database (release 6.0), which has a 2001 base year.*** The protection measures are updated to their 2004 levels with a pre-simulation shock. The pre-simulation shock incorporates known policy changes. In the case of the EU, this largely reflects expansion to the 10 new members.[232] Turkey's protection has been introduced through an exogenous change to the initial database to reflect the levels of protection reported by the Turkish authorities.[233] The GTAP data reflects preferences and its aggregates are import-weighted.

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[231] Also some tariff rate quotas, at zero or reduced rates, exist for EU imports originating from Turkey with the full MFN tariff or the specific tariff component only applied for above-quota imports. Turkey in general has managed to fill the quotas over the last years, but in many cases the quotas cannot be completely used owing to inability to meet food safety requirements.

[232] For other economies, it also includes the final phase-in of the Uruguay Round agreement including removal of the textile and clothing quotas and China's WTO accession commitments.

[233] The initial database is adjusted using the model itself, but with parameters value set so as to minimize deviations from initial values subject to the exogenously inserted actual protection levels.

8.16 ***Tariffs.*** Table 1 in Annex 8.3 shows the various tariffs structures. For the EU, initial (i.e. 2004) tariffs are given for Turkey, all other exporters and the weighted average (excluding intra-EU trade). The post-accession tariffs are only given for the weighted world average since all of the tariffs on Turkey's exports are eliminated. Average tariffs barely move, reflecting the relatively low share of Turkey's exports into the EU with high tariffs. The average tariff on merchandise trade drops from 3.4 percent to 3.3 percent. This small decline is virtually true across all sectors, with only a somewhat more important reduction in vegetable oils and fats (2.8 percentage points).

8.17 ***Table 1 in Annex 8.3 also provides the initial 2004 tariffs for Turkish imports from the EU and from other exporters, as well as the total.*** Under the model simulation, Turkey eliminates tariffs on imports from the EU and aligns its tariffs with those of the EU. The accession agreement would drop the average tariff on merchandise trade from 3.6 percent to only 0.9 percent. For non-EU exporters, the weighted average tariff drops from 5.4 percent to only 1.9 percent, well below EU's average tariff.[234] This reflects the regional composition of Turkey's imports relative to the EU. The large change for Turkey is in the agriculture and foods sectors. The average agricultural tariff declines to 6.0 percent, from 44.2 percent, and to 6.2 percent from 29.4 percent for processed foods. The reductions in manufacturing are less significant on average.

8.18 ***Domestic support.*** Domestic support is split into four components, plus export subsidies. The four components include production subsidies, payments to capital and land, and input subsidies (e.g. energy and chemicals). Table 2 in Annex 8.3 summarizes the key numbers for Turkey - pre- and post-accession. The average output subsidy would increase by 1.3 percentage points to 5.3 percent on average.[235] The only significant output subsidy in the pre-accession period is in oil seeds, about 24 percent and is more or less lined up with the EU level of support. Post-accession, the only major change is in cotton, where the rate jumps from a negligible 2 percent to 20 percent. This generates a significant jump in the cost of production subsidies, virtually all of it attributable to cotton where CAP payments post-accession total nearly US$1 billion.

8.19 ***Capital payments also increase sharply, in dollar terms from under $100 million to around US$1 billion.***[236] The largest increase in percentage point terms is for the beef and sheep sector reflected in an increase in payment of over $400 million. Other sectors with large payments include dairy, cotton and fruits and vegetables. Turkey's land payments, on the other hand, tend to be somewhat more generous than the EU's on average, and support in percentage terms would decline from 56 percent to 51 percent, albeit with a small increase for the government budget due to higher wheat payments.

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[234] Aggregate tariffs won't line up between the EU and Turkey because of aggregation weights. Even in the same sector tariffs won't line up because the structure of EU's preferences will lead to different aggregation weights if Turkey and the EU are sourcing from different regions.

[235] The average subsidy rate (i.e. across sectors) will depend on whether base or post-simulation levels are used as aggregation weights. Herein, we use post-simulation levels as aggregation weights but this biases the average upward since clearly output will go up in sectors where the subsidy rises. Using base year levels, the output subsidy barely moves.

[236] Capital payments are largely head payments to cattle (including milking cows) but also include other subsidies.

Input subsidies in Turkey are zero initially. If they are lined up with the EU's level, costs would jump to nearly $450 million and the average input subsidy would amount to about 6.1 percent. Finally, the average export subsidy would increase from 1.7 percent to 5.0 percent (using actual weights), between pre- and post-accession levels, though export subsidies on exports to the EU would be eliminated. The budgetary implications are relatively small compared to the other measures with an increase to $144 million from an initial level of $33 million.

(b) Accession Impacts on Agriculture and Food sectors

8.20 ***The model focuses mainly on the agricultural and food sectors, where distortions are highest, except perhaps in services.*** The impact assessment is based on the World Bank's global general equilibrium (GE) model known as LINKAGE.[237] The model is run in its comparative static version, i.e. with no dynamic aspects and results should be viewed as long-term changes to the steady-state assuming no change in the stock of factors (labor, capital and land) and productivity. The data base (as mentioned above) has been modified to reflect the level of support in Turkey in 2004.[238]

8.21 ***Accession would support growth in the output of agriculture and food.*** The two aggregate sectors combined would see a slight rise in their share of total value added to 15.0 percent from an initial value of 14.3 percent (Table 3 in Annex 8.3), with an average output increase of around 15 percent. Within agriculture, the biggest shift is in cotton, with output increasing by 63 percent and its share in agricultural value added increasing from 7.4 percent to 11.4 percent. Other large percent increases in output occur for beef and mutton and rice, although the latter starts from a very small base. This sector is aided by capital (or head) payments that helps overcome its non-competitive cost structure. Sharp declines occur in other meats and other crops (essentially nuts). Vegetable oils and fats see a huge increase in the processed food sectors both relative to the sector's initial level as well as with respect to its share in food production.

8.22 ***Net exports of agricultural and food products are projected to increase.*** The total increase in exports of these goods is $4.5 billion, with net exports increasing by $1.8 billion. Although imports rise substantially because of the large decrease in tariffs, better access to EU agricultural markets boosts exports relatively more. Exports of vegetable oils represent the largest increase in exports—all of it to the EU, with significant increases in cotton and dairy products in value terms. The change in imports is more widely spread out across sectors though with sizeable increases for 'other manufacturing', fossil fuels, and poultry. With regard to the impact of EU accession on overall trade, imports are up $7.6 billion, only about 1/3 sourced from the EU (Table 4 in Annex 8.3). Though Turkey is providing preferential access to EU exporters, it is also opening up its markets to other exporters by aligning their tariffs with the EU. Moreover, the agricultural payments from the EU generate income effects and some real exchange

[237] See van der Mensbrugghe (2005) for more details.

[238] Prior to Turkey's accession simulation, a "pre-simulation" is run that incorporates known policy commitments—final implementation of the Uruguay Round including the elimination of textile and clothing quotas, EU's expansion to EU25 and China's WTO accession commitments.

appreciation that boost net imports of industrial goods and services—especially from non-EU countries. Exports increase by $3.2 billion, with virtually all of the new exports to the EU itself.[239] It should be noted that the simulated increase in total net imports is not likely to impact the capital account. The change in total net imports will more or less match the increase in payments from the EU to pay for the *entire* domestic support budget in agriculture and food. The payments total around $4.8 billion and net exports decline by $4.4.

8.23 ***The overall real income gain is $8.1 billion for the Turkish economy, representing an increase of some 6.5 percent—under the assumption that the EU finances the entire domestic support budget.*** Accession has no measurable impact outside of Turkey, including in the EU (a near zero decrease of $4.8 billion or a loss of 0.1 percent in real income). In terms of macro aggregates, private consumption increases by 6.7 percent, and there is a more sizeable increase of 7.8 percent in real investment reflecting an increase in savings. Exports increase by 8 percent and imports increase by 18 percent.

8.24 ***Net fiscal savings are expected.*** Domestic support—including the export subsidies—would increase from base levels of $2.2 billion to $4.7 billion. Upon EU accession, and barring any transitional clauses or possible limitations mentioned in the previous section, domestic support to agriculture will be funded from CAP in the form of a large current account transfer. Tariff revenues, on the other hand, would drop from an initial level of $1.3 billion to $0.5 billion. Overall, this translates into an increase in net saving of $1.3 billion, or 0.9 percent of GDP.[240] In the model simulations, this fiscal closure replaces the net change in fiscal position by a lump sum transfer to households.

8.25 ***In conclusion, EU accession would boost agricultural output and could help realize fiscal savings, although structural changes in production will be needed.*** Turkey's structure of tariffs and domestic protection is similar to many other OECD countries, i.e. it is heavily skewed towards protecting agriculture and food. While the average merchandise tariff is only around 3.5 percent (trade weighted), in agriculture it is 44 percent (higher than the EU's 13 percent), and 29 percent in processed food (compared with 15 percent in the EU). The post-accession tariffs rates in agriculture and food would drop to around 6 percent, much lower than in the EU (due to the composition of its imports). Despite this drop in border protection, agricultural output would increase as the increase in market access to the EU outweighs the average loss in protection. However, accession would mean a relative shift towards agricultural and food output, from where it is today, also reflected in the export structure. Lining up domestic protection with the EU will also make room for fiscal savings, estimated at 0.9 percent of GDP in 2001, and support from the EU would amount to 3.3 percent relative to GDP.

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[239] Turkey's exporters can benefit from new market access into the EU, but they lose some competitiveness in other markets as the real exchange rate rises in part a result of the outside budgetary support.

[240] Before accession, the government cost of support is $2.2 billion (domestic support) offset by $1.3 billion in tariff revenue for a total net cost of $0.8 billion (with rounding error). With accession, the cost of domestic support jumps to $4.8 billion, but this is completely paid for through budgetary support from the EU. Tariff revenues drop to $0.5 billion, hence the budget position is $0.5 billion. The change in the net position is therefore $1.3 billion (0.5 – (-0.8)).

8.26 ***Several caveats apply on the conclusions.*** First, the sectoral shifts within agriculture are based on a high degree of factor mobility across sectors. The actual extent to which Turkish farmers can switch across crops—for example from other crops towards cotton—may limit the gains from accession. Second, the gains are being measured against a relatively static policy environment. The model has used 'static' protection rates and does not attempt to predict the evolution of protection over time. For example, should the EU open further its market to non-EU countries (e.g., in its everything-but-arms initiative, where sugar is expected to enter duty- and quota-free by the end of the decade), the impacts of Turkey's accession could be altered. Lastly, the usual caveats regarding the model's assumptions apply here—closure rules, perfect competition and returns to scale, no productivity impacts, etc.

B. PROMOTING RURAL DEVELOPMENT AND ITS EU ALIGNMENT

B.1.Comparable International Experiences and Options

8.27 ***As agriculture is the largest sector in many developing countries, and majority of poor live in rural areas, government spending for rural areas and agriculture plays an important role*** (Table 8.4). A number of studies on this spending have found that it contributed substantially to agricultural production and poverty reduction. Agricultural research and development spending is the most crucial to growth in agriculture, while spending on irrigation, education and roads also contributes strongly to growth and poverty reduction (Fan, Shenggen; Rao, Neetha. 2003, "Public Spending in Developing Countries" (Discussion Paper) Washington, D.C.: International Food Policy Research Institute).

Table 8.4. Comparable Country Data

Country	Rural Population Share	Rural GDP Share	Agricultural GDP Share	National GDP Per Capita (Atlas) US$
India	72%	28%	23%	460
China	63%	24%	15%	890
Brazil*	49%	11%	6%	3,070
Mexico*	38%	24%	4%	5,530
Turkey	**35-40%**	**30-35%**	**13%**	**2,530**
Poland	36%	29%	5%	4,230

*Rural GDP shares for Brazil and Mexico are "expanded agricultural." figures including food and processed products.
Source: World Bank "Turkey Policy and Investment Priorities for Agricultural and Rural Development", February 2005, Annex 2.

8.28 ***As agricultural employment declines, Turkey needs to develop off farm income and employment opportunities in rural areas not only to increase economic growth in these areas but also to moderate the pace of rural-urban migration to a more manageable level.*** Turkey still has a considerable share of rural population, although it

holds one of the lowest shares compared to several developing countries. This sizeable rural population generates pressure on urban areas as a means to rapid migration from rural to urban parts of the country leading to all sorts of problems in urban cities over the last decades. Despite the projected overall positive impact of EU accession on agricultural production and trade, agriculture's one third share in total employment is likely to decrease in the future, as a result of structural reform and alignment with CAP. Therefore, the industrial and service sectors particularly need to expand further in rural areas, as they have in Poland over the 1990s, while at the same time agricultural productivity has to increase further by adapting to the recent global advances in agricultural technical efficiency.

8.29 ***In this regard, government expenditures on agricultural research and extension, as well as infrastructural investments including roads and irrigation has to expand further.*** However, another World Bank study (February 2005) found out that greater emphasis in the future should be given to participatory approaches in determining service priorities, to private sector involvement in and financing of service provision, and expansion of the role of cooperatives, producers union, and other types of farmers organizations. This leads to gaining greater co-financing by beneficiaries to infrastructure and other rural investment programs, which may be a sizeable future source of increased investment in the rural sector.

8.30 ***Another essential improvement for rural expenditures, as pointed out by the investment patterns analysis below, is to adequately prioritize the regional as well as "by project" investment needs.*** Dormant projects have to be eliminated from the investment program and projects that are close to completion must be given priority. For poverty alleviation purposes, less developed provinces mainly in regions of East Anatolia, South East and Black Sea should benefit a lot more from the government expenditures

B.2. Rural Development Investment Patterns

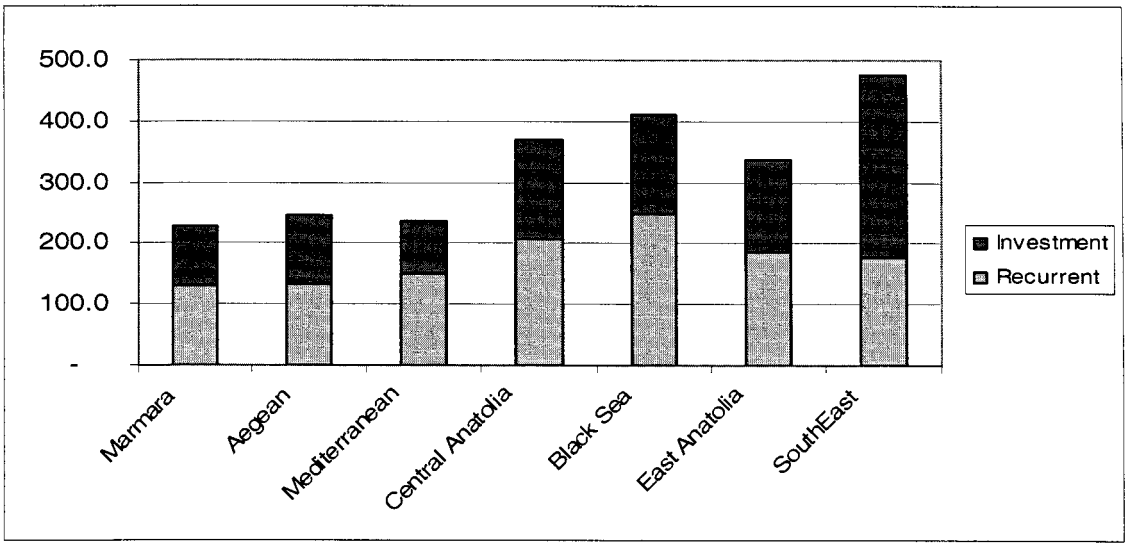
8.31 The analysis in this section includes consolidated budget[241] allocations for the following agencies:

a) Ministry of Agriculture and Rural Affairs (MARA) - agricultural extension, research, animal and crop protection services;
b) Ministry of Environment and Forestry (MOEF) – forestry and environment protection;
c) General Directorate of Rural Services (GDRS) – village roads, on farm small irrigation and drainage works;
d) State Hydraulic Works (DSI) – budget related to only large scale water resources for irrigation;
e) Turkish Electricity Distribution Company (TEDAS) – budget related to only rural electricity distribution and village networks; and,
f) General Directorate of Roads (GDR) – budget related to only road construction and maintenance of provincial roads (roads connecting provinces).

[241] Figures do not include regional spending by special provincial administrations and municipalities.

8.32 ***Based on the figures from these agencies, the total regional rural spending appears to be concentrated in the Southeast region basically due to Southeast Anatolia Project (GAP).*** On the other hand, more developed regions such as Marmara, Aegean and Mediterranean account for the least amounts for rural spending. Analysis of regional rural spending[242] from the consolidated budget in 2002 shows that the largest expenditure is made in Southeast Anatolia region (approximately US$ 475 million) followed by Black Sea (US$ 412 million), then Central Anatolia (US$ 368 million) and East Anatolia (US$ 338 million). The Aegean, Mediterranean and Marmara regions receive the lowest budget allocations with US$ 247 million, US$ 236 million, and US$ 228 million, respectively (Figures 8.1 and 8.2).

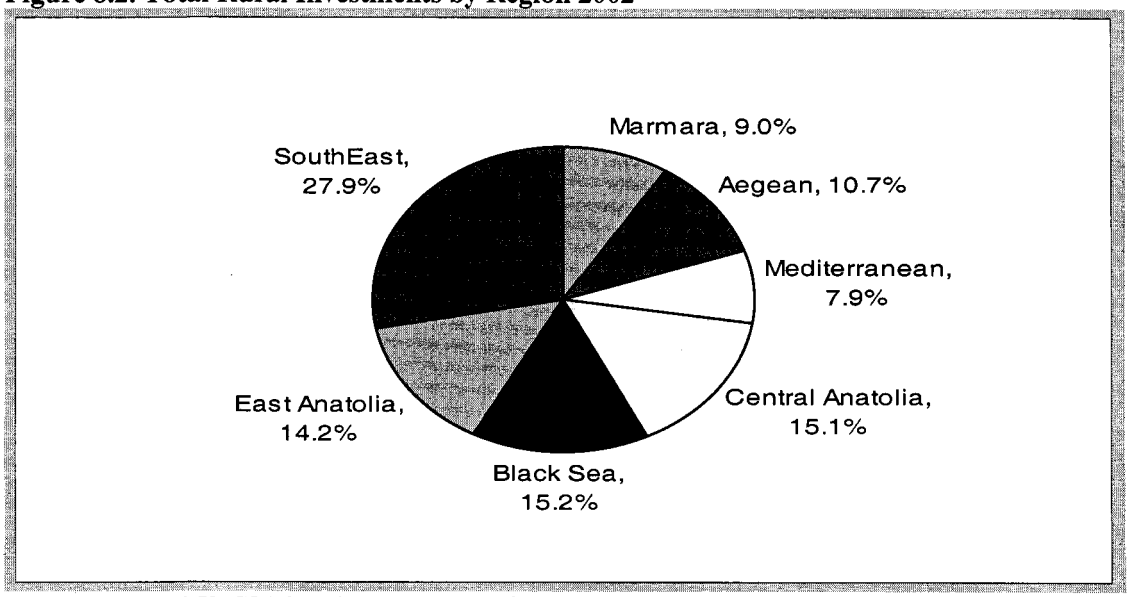
Figure 8.1. Rural Recurrent and Investment Expenditures by Region 2002 (US$ Million)



Source: MARA, DSI, GDRS, MOEF, TEDAS and GD Roads.

[242] Rural spending includes regional current and investment expenditures of MARA, MOEF DSI and GDRS. For TEDAS and GD Rural Roads, only regional investment amounts were available. Owing to GDRS accounting practices, spending amount includes direct expenditures and excludes indirect expenditures.

Figure 8.2. Total Rural Investments by Region 2002

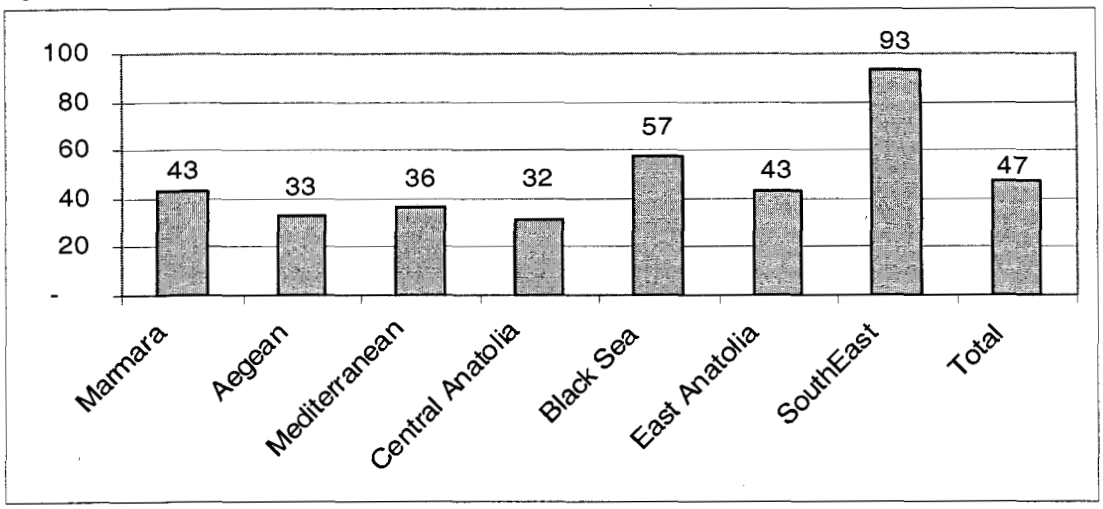


Source: MARA, DSI, GDRS, MOEF, TEDAS and GD Roads.

8.33 ***Per capita investment spending in rural areas in US dollars reveals that the average investment spending per rural population is quite low (US$ 47), and there are differences among regions.*** The Southeast region receives US$ 93, and Central Anatolia receives only US$ 32 for rural investments per capita. (Figure 8.3). Among rural agencies GDRS[243] accounts for the highest total regional spending (40 percent) for rural roads and on farm water works but spending is largely for current expenditures (55 percent) rather than investments (24 percent) in 2002. DSI follows GDRS in terms of total spending among agencies (36 percent). DSI also makes the highest investment spending with 62 percent of total investment spending among other rural agencies. MARA's share of rural regional spending is only 14 percent but its recurrent regional spending is the second highest with 25 percent. TEDAS accounts for 7 percent of rural investments whereas GD Roads and MOEF accounts for only 3 percent of rural investments (see Annex 8.2 Table 1).

[243] GDRS was abolished at the beginning of 2005 and its 2005 budget as well as staff is allocated primarily to SPAs. This can be considered as a start for the decentralization efforts of the government. However, due to uncertainties about work plans of SPAs as well as lack of necessary regulatory revisions, which would for example allow SPAs spend investment amounts funded by foreign loans, difficulties emerged in carrying out GDRS's responsibilities.

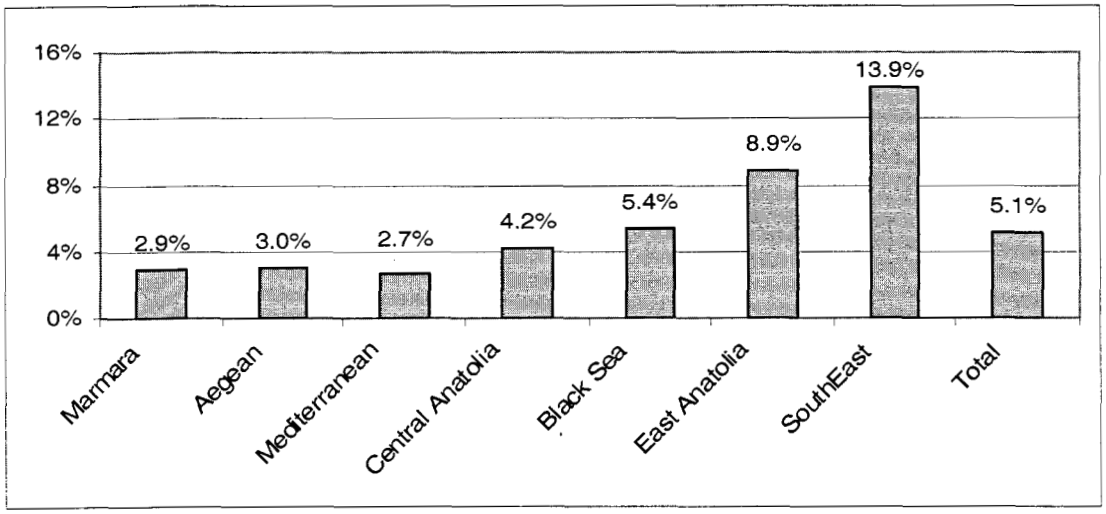
Figure 8.3. Per Capita Annual Rural Investments 2002 (US$)



Source: MARA, DSI, GDRS, MOEF, TEDAS and GD Roads.

8.34 ***Rural expenditures in proportion to agricultural GDP reveal a rather different picture.*** East Anatolia receives the highest budget allocation in percent of agricultural GDP for the recurrent and investment budgets of MARA and GDRS, recurrent budget of MOEF and investment budget of GD Roads. South East Anatolia receives the highest budget allocation per agricultural GDP for the investment budget of DSI and Black Sea region has the highest for the investment budgets of MOEF and TEDAS. The least goes to Aegean for MARA, GDRS and GD Roads budgets; to Mediterranean for DSI and TEDAS's budget and South East for MOEF's budget. In terms total budget allocations of rural agencies per agricultural GDP, East Anatolia has the highest share in terms of recurrent allocation and South East has the highest in terms of investment allocation and Aegean and Mediterranean account for the least of the allocations respectively (Figure 8.4, and also see Annex 8.2 Table 3).

Figure 8.4. Rural Investments in percent of Agricultural GDP, 2002



Source: MARA, DSI, GDRS, MOEF, TEDAS and GD Roads

8.35 ***Although spending figures by seven regions seem to demonstrate that rural spending is higher in general in less developed regions, calculations made at the provincial level point to the opposite.*** Correlations between Per capita agricultural GDP and per capita rural spending by 81 provinces show positive correlations (average 0.60) meaning more spending is made in provinces where per capita agricultural GDP is higher (Table 8.5). Correlations between rural illiteracy levels and per capita rural spending also show that for all of the agencies with the exception of DSI, there is a negative correlation between the two; i.e. agencies' rural per capita spending is lower in provinces where rural illiteracy levels are high. Only DSI has a positive correlation meaning DSI rural per capita investments is higher in areas where there is higher illiteracy levels.

Table 8.5 - Correlations of Per Capita Agricultural GDP and Per Capita Rural Spending

Expenditure Type	Correlation
MARA Recurrent*	0.64
MARA Investment*	0.50
MOEF Recurrent*	0.31
MOEF Investment	0.51
DSI Investment***	0.35
GDRS Roads*	0.39
GDRS Water*	0.80
TEDAS Investment*	0.69
Total*	0.60

** 1 % significant, ** 5 % significant, *** 10% significant.*
Source: MARA, DSI, GDRS, MOEF, TEDAS and GD Road. and own calculations

8.36 ***Rural spending amounts at the provincial level tend to reveal that rural investments may need to be realigned to reflect the regional priorities of the government—with the exception of GAP investments.***[244] However, it is also important to note that the analysis does not include regional budgets of SPAs and municipalities and also investments for education, health and housing in rural areas are left out and inclusion of these budgets may alter the results.

[244]Priority development provinces are determined by the decisions of the Council of Ministers on the Implementation, Coordination and Monitoring of the Annual Programs issued each year. The latest program (2005) selected 49 provinces out of 81 provinces as priority provinces that are located mostly in the East, South East and Black Sea regions and which have in general the lowest per capita income.

Table 8.6 - Correlations of Rural Illiteracy Levels and Per Capita Rural Spending By:

Expenditure Type	Correlation
MARA Recurrent**	-0.43
MARA Investment**	-0.36
MOEF Recurrent*	-0.38
MOEF Investment*	-0.51
DSI Investment**	0.45
GDRS Roads	-0.23
GDRS Water***	-0.25
TEDAS Investment***	-0.42
Total	0.09

** 1 % significant, ** 5 % significant, *** 10% significant.*
Source: MARA, DSI, GDRS, MOEF, TEDAS and GD Roads. and own calculations

B.3. Diversification of Rural Development with Structural Funds

8.37 ***There are large regional discrepancies in Europe both between countries and between regions of countries stemming from low mobility of economic agents.***[245] In order to reduce these regional inequalities, the European Union (EU) has been allocating a large portion of its budget for regional aid. The Structural Funds and the Cohesion Fund currently represent one third of the EU budget (in 2000-2006, 213 billion Euros). They represent from 1.5 percent to 3.5 percent of the GDPs for countries such as Greece, Portugal, Ireland and Spain and 6-15 percent of these investments are financed out of EU sources.

(a) Instrument for Pre-Accession for Rural Development (IPARD)

8.38 ***Pre-accession aid has been operating since 1994.*** The Instrument for Pre-Accession (IPA) envisaged to be implemented within the years 2007-2013 has a component which covers matters of rural development (known as IPARD).[246] The IPARD serves as the framework for supporting sustainable agricultural and rural development in EU applicant countries during the pre-accession period. It aims to solve problems affecting the long-term adjustment of the agricultural sector and rural areas, to help implement the Community *acquis* in matters of the common agricultural policy (CAP) and related policies. In 2007-2013, the EU is planning to allocate in excess of Euro 1 billion per year under IPARD for all candidate countries including Turkey.

8.39 ***Support for agriculture and rural development focuses in particular on two main areas of priority actions.***

[245] This is not a case for some other developed countries such as US due to high labor mobility.
[246] Before 2007 called SAPARD.

a) Priority 1 – Contributing to the sustainable adaptation of the agricultural sector and the implementation of the acquis communautaire concerning the common agricultural policy and related policies:

i) Investments in farms to restructure and upgrade to the EU standards;
ii) Supporting setting up of producer groups;
iii) Investments in processing and marketing of agriculture and fishery products to restructure and upgrade to the EU standards;
iv) Agricultural production methods designed to protect environment and maintain the countryside (at pilot level);

b) Priority 2 – Contributing to the sustainable development of the rural areas:

v) Improvement and development of rural infrastructure;
vi) Development and diversification of rural economic activities;
vii) Preparation of rural communities to conceive and implement local rural development strategies and integrated rural development strategies through local private-public partnerships (at pilot level);
viii) Improvement of training and technical assistance for the above mentioned priorities and measures, including studies to assist with the preparation and monitoring of the Rural Development program and information and publicity campaigns.

Box 8.1 - Experiences from EU Countries with regional aid

There is no one route to economic development and the effect of structural funds has been different in each recipient region. Southern Italy as well as Greece has not seen satisfactory convergence as a result of to regional aid. However, Ireland, Portugal and Finland's experiences have been much positive as they have followed different industrial strategies. It is also important to point out that convergence has been generally at the national level driven by the growth poles, with lower growth in other parts of the countries, widening regional disparities. There is a trade off between economic efficiency and redistributive objectives and policies in general give the priority to efficiency goal.

Ireland: Ireland particularly experienced a boom in the 1980s due to single market that created FDI from Europe as well as investment funds from US's boom. At the same time, structural funds more than doubled in 1990s compared to 1980s. EU support accounted for 10 percent of investments in Ireland. Ireland had favorable characteristics for investments such as low tax rates as well as English speaking environment. However, it also had unfavorable characteristics in terms of low levels of human capital (educational attainment), poor physical infrastructure (transportation, telecommunication and energy) and poor research and development. Therefore, these areas have been the ones that attracted the biggest share of structural funds. In 1994-1999 budget period, 36 percent of structural funds were allocated to physical infrastructure, 28 percent was allocated to human resources, 26 percent to production/investment aid to private sector and 10 percent to income support. Ireland also selected the right strategic areas for the structural funds that were very much inline with the demand of the high tech industries. For example, tertiary education that focused on natural sciences, agriculture and engineering as well as university degrees grew considerably.

Source: Funck Bernard and Pizzati Lodovico, "European Integration, Regional Policy, and Growth", The World Bank 2003.

Poland and Hungary: Before accession, both Poland and Hungary had large economic disparities among regions, and both needed to improve infrastructure and generate non-agricultural employment. In Poland, where 28 percent of the labor force was in agriculture EU was eager to see accelerated efforts to move some labor out of agriculture. The EU provided substantial pre-accession funds to address these shortcomings, and even more money came after accession through "Structural Funds"

and rural development assistance. However, the EU was concerned about a lack of coordination in developing and implementing rural policies: neither Poland nor Hungary had the administrative capacity at the regional level to administer these funds. The EU had rejected several of Poland's proposals for use of pre-accession funds, contending that the proposals were not well developed. Commission reports complained that in Hungary, nine different ministries are involved in rural policy. Nevertheless, successful implementations were achieved in the field of rural development through multi-sectoral integrated plans. Investments were made mainly in the fields of infrastructure (such as drainage, drinking water, highways, etc.), non-agricultural income generating activities and health and education.

Source: USDA Economic Research Service, "Agriculture in Poland and Hungary Preparing for EU Accession" Agricultural Outlook, December 1999
http://www.ers.usda.gov/publications/AgOutlook/Dec1999/ao267h.pdf

8.40 ***The decentralized management of the SAPARD/IPARD financial instrument is unique.*** Subject to ex-post checks, all responsibility for managing the funds is devolved from the Commission to the beneficiary country once the conferral of management of an implementing and paying agency is decided on by the European Commission and the rural development plan prepared by the beneficiary country is adopted by the Commission. This system has a positive impact on the absorption capacity of the rural development funds after accession. This acquired experience is an excellent way to prepare the future Member States for the implementation and management of the *acquis* concerning the CAP and rural development policies. This experience will also contribute to Structural Fund and Cohesion Fund management.

(b) Turkey's Current Rural Development Activities and Accession Plans

8.41 ***The Pre-Accession Economic Program (PEP) prepared and submitted by Turkey in 2003 to the European Commission sets out key objectives of rural development policy:*** to increase competitiveness in rural areas, to ensure economic and social development by increasing income levels and off-farm activities, to widen training and participatory organizations and to protect the environment. To be eligible to access IPARD funds to pursue these objectives, Turkey needs to complete three activities: elaborate a rural development strategy, formulate an IPARD plan, and set up a rural development agency.

8.42 ***Rural development strategy:*** A framework for rural development projects has to be developed by identifying priorities and measures for the sectors and ensuring harmonization with the EU's rural development policies. Efforts are under way to draw up the strategy, and the strategy is expected to be finalized soon. (The National Rural Development Strategy was apparently signed by the Turkish Prime Minister on January 26, 2006.)

8.43 ***IPARD plan:*** This is to be a multi-year programming document which is based on the rural development strategy. The IPARD plan lays out the mix of prioritized activities drawn from the list of measures eligible for support.

8.44 ***Rural Development Agency*** (Paying and Implementation): As payments under IPARD are to take place in a fully decentralized system (ex-ante controls), the new

agency with all its branches has to be set up and proceed through a lengthy accreditation process. The agency can delegate some of its responsibilities to Special Provincial Administrations (SPAs, of which there are 81). In this process, Turkey should initially target a limited number of areas (and a similarly limited number of measures) for developing a functioning administrative structure, and then accelerate the process to improve the system subsequently in more challenging rural areas. In order to simplify and ease the accreditation process, Turkey is apparently considering to establish the new agency initially without local branches.

8.45 ***Turkey needs to increase the capacity of SPAs to identify, plan and execute agricultural and food sector investment programs.*** Turkey also has to rapidly develop key acquis related food safety and regulatory functions such as phyto-sanitary inspection and control, livestock and dairy inventorization and traceability, agro-chemical control and organic certification, so that investments needed to comply with food safety measures can be made eligible for the pre-accession funds.

8.46 ***For regional development (both of rural and urban areas), a Preliminary National Development Plan (PNDP) was drawn up for implementation in 2004-2006.*** The plan is intended to formulate a national economic and social cohesion policy in order to reduce regional disparities and to create an operational infrastructure allowing an efficient use of pre-accession financial assistance received from the EU and allocation of post-accession structural funds. Regional development programs supported by pre-accession financial assistance received from the EU will be launched in 12 NUTS II regions, which have been designated as priority areas in terms of socio-economic development indicators, under the PNDP. The State Planning Organization is coordinating several projects under this program.[247]

(c) Conclusions

8.47 ***While the agricultural sector plays a key role in rural development, support for non-farming activities in the services and industry sectors should be given particular attention***, as has been the case recently in Poland and Hungary. Maximum attention should be given to cooperation between agencies (e.g., ministries) since rural development is multi-dimensional and covers various sectors. Examples of convergence in countries that heavily used structural funds have also shown that investment strategies need to be determined by careful analysis of regional specificities, bottlenecks and potential competitive advantages.

8.48 ***One important conclusion from country examples is that regional policies should be primarily focused on promoting efficiency, with measures ensuring maximum diffusion of growth across regions.*** Also a number of studies have found that regional funding of essential infrastructure (transport, communication, power, water,

[247] Eastern Anatolia Development Program (Euro 45 Million), Southeastern Anatolia Project Regional Development Program (Euro 47 Million), 3 integrated regional development projects in 3 Nuts 2 regions in East, Black Sea and Central Anatolia Region (Euros 52.3 Million), Turkey-Bulgaria Cross Border Program (Euros 19.5 Million) and also Greece-Turkey program is being planned (Euro 19.4 Million).

education) is more effective than subsidies allocated to small businesses. As for the institutional arrangements, structural funds should be integrated into the government's overall strategy and public resource management process.

8.49 ***Taking advantage of structural funds will be a significant challenge.*** The availability of sufficient beneficiary contributions (at least 25-50 percent) for rural development programs linked to structural funds can be a very important obstacle for investments in rural areas. Increasing access to finance in rural areas will key for increased use of such funds. Steps to increase the capacity of SPAs to identify, plan and execute agricultural and food sector investment programs are also needed.

B.4. Needed Changes to Institutional Arrangements for Structural Fund Programs

8.50 ***In pursuing alignment with the EU in the rural sector, including conformity with agricultural acquis, the Common Agricultural Policy, and the Fisheries Policy of the EU, the Ministry of Agriculture and Rural Affairs (MARA) will need to undergo significant restructuring[248].*** This will be done in a context of the Government of Turkey's policy for decentralization of service delivery. Turkey's alignment with the EU will require MARA to fulfill a number of basic conditions/programs. Turkey is well aware of these conditions and they include, but are not limited to:

a) A farmer registration program and integrated administration and control system;
b) A farm accountancy data network (a tool for measuring farmers' incomes);
c) A subsidy policy and MARA Payment Agency responsible for its management;
d) An animal numbering system, initially for cattle but eventually for all livestock;
e) A proper sanitary and phytosanitary food law and food safety system and comprehensive adoption of HACCP management in food production systems;
f) Veterinary epidemiology and plan protection systems including drug, pesticide and heavy metals residue testing, reporting and feedback systems;
g) A sound environmental policy and the promotion/adoption of EUREPGAP (Good Agricultural Practices) principles and practices;
h) Adoption of the EU Common Seed catalogue; and,
i) Translation and adoption of key sections of "acquis communautaire".

8.51 ***The proposed law on Public Sector Reform has a number of characteristics that will impact on MARA.*** These include, but are not limited to:

j) The separation of policy from delivery;
k) MARA's primary role and responsibilities will include development of:
   i) A broad ranging agriculture and rural development policy framework;
   ii) A comprehensive regulatory framework and rules/requirements for implementation;
   iii) Crop and livestock protection systems;

[248] The focus on the restructuring needs of the MARA is not meant to imply that other government organizations do not have an important role in rural development efforts. However, the elaboration of restructuring measures for the other government organizations involved in aspects of rural development, e.g DSI, GDRS, MOEF, TEDAS and GD Roads, and others is beyond the scope of this current analysis and will be taken up in the subsequent module of the CEM series.

iv) Implementation monitoring;

l) Responsibility and funding for implementation and service delivery will be directed closer to the target beneficiaries at the provincial and local level;

m) Participation of stakeholders and the private sector in development and delivery of agricultural services.

8.52 ***The recent EU enlargement process has produced key lessons which can inform the restructuring process.*** First, the GOT should make sufficient investment in administrative and human infrastructure in advance to cope with the immediate demands of pre-accession funding and post-accession responsibilities. Secondly, application of EU food quality standards through adjustments to food safety, environmental and other standards should begin in the early stages of the accession process. This is because EU health and safety standards will need to be implemented progressively, to allow food-processors and farmers time to adjust following a well defined and credible timetable for specified adjustments.

(a) Current Structure and Operational Modality

8.53 ***MARA is currently structured on service function and operational lines.*** Corporate functions of financial, personnel and information administration and management are all discharged from the centre. Legal, inspection and Research, Planning and Coordination (APK) services are also discharged from central "Advisory and Supervisory Units". Three "Attached Organizations" and three "Relevant Organizations" (State Owned Enterprises) including 38 state farms report to MARA. At the centre General Directorates are based on the core functions of:

a) Education and extension services and registration of cooperatives (TEDGEM);

b) Crop and livestock development (TUGEM);

c) Plant and animal regulatory function, e.g, quarantine, border protection (KKGM);

d) Agricultural research (TAGEM)

8.54 ***Apart from the agricultural research institutes, this functional oriented structure is more or less replicated in each of eight-one Provincial Directorates and in offices in each agricultural district.*** Overall, MARA has approximately 38,000 staff. Technical staff at the provincial level are MARA employees and service delivery is essentially based on a project/task oriented model. Funds for implementation are usually tied to projects/tasks and in this way nationally important programs, such as those undertaken by the General Directorate of Protection and Control (KKGM) are seen to have the potential to be applied reasonably uniformly across Turkey. This model is suitable for a Ministry where regulation is a major function as the relationship between the centre and the provinces is linked through authority and budget support and the operational mode is top-down and based on a process of command/control. It is less suitable for rural development programs where a participative approach to provincial/district priorities and service delivery is a strategic goal.

(b) Organization Structure Models, Issues and Options

8.55 ***The EU and international approach to institutional reform in ministries involved in agriculture and rural development has a number of key underpinnings***:

a) The central government role is moving towards agencies that develop the policy and regulatory framework and procedures to contract, monitor and evaluate implementation;
b) Policy is separated from delivery;
c) Public and private sector service delivery agencies are able to access public funds in an open, transparent and contestable basis;
d) Transparency is managed through establishing governance structures that represent the major stakeholders;
e) Service delivery is increasing managed through a transactional process of service delivery contracts; and,
f) The role and contribution to funding of the private sector in agriculture and rural development is encouraged through an inclusive and participative approach to planning and implementation.

8.56 ***A brief review of some long standing and recent EU member states shows that while there is lack of uniformity within EU member states, there is some degree of commonality in the functions performed.*** This review suggests that the organizational structure for a ministry involved in agricultural and rural development could take the following generic form at the political level.

a) ***A Corporate Support Services Directorate***, including sections/divisions of:
   i) Finance
   ii) Human resource management
   iii) Legal matters
   iv) Statistics and payments
   v) Information technology, and
   vi) Public relations and communications.

b) ***Policy and/or Regulatory Directorates***, including, but not limited to:
   i) Food Safety
   ii) Fisheries
   iii) Rural Development
   iv) Plant Products
   v) Animal Products
   vi) Foreign Relations & EU Coordination

8.57 ***In this configuration, the importance of food safety policy in the MARA structure will need to be accentuated,*** with clear procedures of food control "from stable to table" and effective cooperation and coordination between different services and control institutions will have to be laid out. To improve coordination generally and to clarify responsibilities, it would be recommended to base activities on main service units (i.e., Directorates General, Departments) instead of related organizations and affiliated organizations as is currently the case.

8.58 ***At the service delivery level there is even less uniformity in the EU.*** For ***research and extension*** some member states have established National Departments of Agriculture or Agricultural Development with a network of regional offices. Others have decentralized although in most cases research is coordinated as a national function while extension is driven by provincial or district needs. Sometimes the research and extension functions are combined within one department and sometimes separated. Some member states have separated plant research and extension from livestock research and extension. ***Regulatory services*** are sometimes managed from the centre through a regional network and in other cases are delivered by independent authorities that report to monitored and are monitored by the central agency

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8.59 ***There are three main service delivery options that could be considered.***

a) ***Owner-Operated.*** This is close to the current situation. It requires establishment and maintenance of a regional or provincial network of staff. Line control of staff is often seen as a strength that assists the delivery of national projects and programs. Flexibility to respond to stakeholder needs at the local level is often compromised by the need to deliver national priority programs and the development of demand driven services is often not well advanced. The funding mechanism is generally through budget appropriation and in many cases expenditure often occurs in areas for which it was not intended. Management of performance is often based on expectation rather than inspection and is invariably weak due to the diversion of funding from its original purpose. This option would likely not support the government's requirement for decentralization of services and a participative approach to service delivery.

b) ***Outsourcing.*** Where public or private sector agencies and/or individuals are contracted to deliver specific services. This system encourages the development of a range of national and local institutions with specific expertise. Outsourcing is generally effective in reducing the diversion of funds from their intended purpose. Often many of the service delivery institutions act as autonomous or semi-autonomous agencies. Outsourcing is one way of managing and coordinating funds from different public and private sector organizations and a range of funding mechanisms can be employed to assist stakeholders to more effectively determine the service needs and service providers. To work effectively outsourcing requires:
   i) Establishment of effective and stakeholder representative governance structures at the national and local level as appropriate.
   ii) Identification of national and local priorities for service delivery and ensuring that public (and preferably private sector) funds are directed to priority areas.
   iii) Establishment of operational guidelines to ensure that service needs are clearly specified, that selection of service providers is criterion-based and that service provider contracts are awarded in an open and contestable manner.
   iv) Development of service delivery specifications, contract negotiation and contract (including finance) management skills within the management

agency. Given Turkey's the size and diversity of service requirements the issue of regionalization of contract management will need to be resolved.

v) Monitoring and evaluation of contract implementation is often managed by a combination of self-assessment and independent audit of achievement of agreed service standards.

8.60 ***A combination of Owner-Operated and Outsourcing.*** Many EU agriculture and rural development ministries employ both owner-operator and outsourcing service delivery systems. What works best depends on the establishment and maturity of autonomous or semi-autonomous and private sector agencies. During the change process many countries establish transitional organizations/institutions and progressively move from owner-operator to outsourcing systems of service delivery. For example a number of EU countries have established Food Safety Authorities. Many of these operate independently but are responsible to Agriculture (or in some cases Health) Ministries. Turkey may not yet be ready for this but may consider that it would be desirable in the medium term.

(c) Institutional Challenges of EU Agricultural and Rural Development Policies

8.61 ***In the pre-accession period, adjustment of the institutional structure of the ministries responsible for agriculture and rural development in the new EU Member States was indispensable.*** Institutional adjustment facilitated a close cooperation with the EU in a number of areas.

8.62 E***nsuring an efficient and competent dialog with EU Commission Directorate General for Agriculture (DG Agri).*** In light of the cooperation with the EU it was indispensable for these ministries to cover the same range of activity that DG Agri covers. Therefore, to ensure good coordination with the DG Agri, Turkey will need to adjust the structure of MARA to be more in line with the structure of DG Agri, taking into account the roles of government organizations (other than MARA) involved in rural development. Given MARA's current restructuring process, the current time is the best opportunity to effect this adjustment.

8.63 ***Responding to the urgent requirement for an adaptation of the administration structure for pre-accession support from the EU budget (IPARD).*** In view of building an adequate absorption capacity for pre-accession support for rural areas available through the IPARD, a new IPARD department will need to be created at MARA. After adjustment of MARA's internal structure and creation of the IPARD department, a Paying Agency will have to be set up and accredited (discussed below).

8.64 ***New challenges related to food safety.*** In accordance with the national food safety strategy (approved by GOT in 2000), all responsibilities with regard to Food Safety and Control were delegated to MARA after publishing of Food Law No 5179 in 2004. Instead of Ministry of Health, MARA is responsible to coordinate the Food Safety Policy and is the only competent authority to supply food safety. Since MARA's Department of Food Safety develops and coordinates policies in the areas of veterinary

and phytosanitary issues, this Department must now establish a staged strategy for implementing a food safety policy which is complaint with EU requirements.

8.65 ***Need to prepare for accession negotiations.*** Perhaps, the biggest challenge for MARA will be the preparation and efficient use of available human resources. The Agricultural Planning and Research Department (APK)[249] currently bears an excessive burden for agricultural policy analysis, though it confers with and contracts work out to the Agricultural Economics Research Institute and Turkish universities. It lacks a capacity to sufficiently monitor developments in foreign markets, and it also has difficulty in attracting a larger group of qualified staff, partially as a result of specialists being subject to the MARA wide pay scales. By giving institutions similar to the APK an independent status and the ability to pay significantly higher remuneration, a number of CEE governments have created stronger capacity[250] to perform analysis and strategy development on the request of their ministries of agriculture. This would address a current weakness that MARA is bound to see intensify over the next few years as the needs grows for accurate information and complex analyses of policy options and negotiating positions. The first priority of a strengthened APK should be to establish working groups (including ministerial and other experts from scientific and research institutes cooperating with MARA) that reflect the structure of the DG Agri and of the agricultural policy sub–chapters for future negotiations.

8.66 ***Demand for improvement of the efficiency of administration activities in view of a quick increase of tasks, but with modest accompanying increase of financial and human resources.*** Taking into account the high demand for improvement of the efficiency of the administration of agricultural and rural development policies, MARA needs to target a special training program to management staff of the ministry and of the institutions and agencies cooperating with the ministry. This should focus on courses on EU institutions and legislation, on Common Agriculture Policy principles, and on linguistic courses of English (and potentially French) at different levels. Long term training in economics and agricultural policy (including one-year post graduated study abroad) should be proposed to the best candidates (with a detailed selection based on competency level and linguistic skills). For financing those important human resources investments, MARA should request EU financial support to a large extent to supplement its own budgetary resources.[251]

8.67 ***Establishment of Paying Agencies.*** As noted previously, one of the key steps in the preparing for EU accession in the agricultural and rural sector will be the establishment of EU-style Paying Agencies. One Paying Agency will need to be responsible for market measures (Pillar I of the Common Agricultural Policy, CAP): intervention, export subsidies, trade mechanisms, and management of quotas). A second

[249] Planning and Research Departments (APK) in all public institutions have been restructured as Strategy Development Departments by law no.5436 issued in the official gazette on December 24, 2005.
[250] For example, in Poland the Government setup the Agricultural Policy Analysis Unit (SAEPR) under the independent Foundation for Assistance Programs for Agriculture (FAPA), and due to this arrangement it was possible to pay higher salaries to the staff working more efficiently than average in the Ministry of Agriculture and Rural Development.
[251] Through the successor program to the MEDA program.

Paying Agency will be responsible for Rural Development Programs (Pillar II of CAP) and direct payments. The process of setting up of Paying Agencies should be based on close cooperation with similar institutions from EU Member States. In this regard, the EU offers such possibilities for cooperation for Turkey in the framework of "twining projects". In the pre-accession period, the Paying Agency for Market Measures would be expected to gradually take over responsibility for handling Turkey's existing agricultural market support programs and the Direct Income Support Program. (Despite the fact that full CAP compliance will occur only in the long run with full EU membership, the integration of market support programs under a Paying Agency for Market Measures is needed in the medium-term to ensure greater coherence and timeliness of implementation across the existing market support measures). The Pillar II Paying Agency would handle the other more investment-promoting programs under the agricultural and rural transfer budget.

8.68 ***The process of setting up appropriate Paying Agencies is complex and difficult and should be well prepared and planned in a detailed manner.*** For every stage of the process, a comprehensive and realistic plan and schedule should be elaborated. The deadlines for completing every elements of restructuring plan should be established and adhered to. Prior to embarking on this process, the GOT needs to consider whether to set up a unified single Paying Agency or Paying Agencies for each CAP Pillar separately. Current Member States' practice is not a decisive factor on this issue since there is no unique model of paying agencies in the EU. In the majority of Member States there is a single paying agency for all above mentioned measures (e.g., Austria, Ireland, Sweden, Lithuania), but there are also cases of two agencies (e.g., Poland, Portugal, Netherlands) or several agencies (e.g., France[252], Germany[253]).

8.69 ***Establishing one Paying Agency for rural development and market measures has several advantages.*** First, it has lower costs compared to the model with two or more paying agencies due to a fewer number of offices, directors and management staff, and other personnel, as well as lower operational costs. Second, there is no need for establishment of a Coordinating Body as required for two or more agencies (see Box 2 below). Lastly, it allows for better coordination and cooperation of all units responsible for setting up and running Integrated Administration and Control System (IACS), Animal Identification System and others.

8.70 ***Since the Paying Agency for each of the CAP Pillars is a complex institution one its own, attempting to set up a single Paying Agency for both CAP Pillars increases the complexity of properly establishing Paying Agency tasks and implementation procedures.*** This multiplies the risk of not achieving EU accreditation in a timely manner. This risk is further heightened by the dimension of Turkey: a dispersed territory, with a large number of farmers, and with highly diversified needs in different rural areas. The associated opportunity costs would be high given the urgent need for gaining access to EU financial support for the implementation of rural development policy in Turkey.

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[252] For different products: milk – ONILAI, cereals- ONIC, etc.

[253] For different regions

Box 8.2 - Key role of EU CAP Paying Agency and accreditation requirements
The framework for control of expenditure under the CAP is set out in Council Regulations and can be summarized as follows. Primary responsibility for checking and controlling CAP expenditure has is given to the Member States, which must 'accredit' agencies as having met standards for authorizing, paying and accounting for payments.

The Commission is responsible for managing the EU budget and must verify the conditions under which payments and checks have been made as part of an annual 'clearance of accounts' procedure. Expenditure by Member States is reimbursed only when the necessary compliance with EU rules has been established. Financial corrections ('disallowance') are made when this is not the case.

Strict control and accounting measures, including the establishment of certain control bodies and procedures, were introduced in October 1996. The **Competent Authority** is responsible for the granting, maintaining and, if necessary, withdrawing accreditation of Paying Agencies. The Minister responsible for agriculture (or the Minister responsible for finance) is appointed the Competent Authority for these purposes in EU Member States. The Minister, through a Management Board, also exercises the functions of the **Co-ordinating Body**, which is responsible for bringing together and supplying information to the Commission and for promoting the harmonized application of Community rules between Paying Agencies in a country where there is more than one Paying Agency. **The Certifying Body,** which must be independent from the Paying Agencies and Co-ordinating Body, has the function of conducting an audit and certifying accounts annually and of confirming whether scheme controls are adequate. This is a prerequisite to decisions by the Commission on the clearance of Paying Agencies' annual accounts.

Accreditation of Paying Agencies is effectively reviewed annually as part of the certification and clearance of the EAGGF accounts. The Certifying Body may identify 'major' shortcomings in controls which generally result in the Competent Authority having to issue directions requiring the Paying Agencies concerned to take corrective actions by set deadlines. Failure to take action by agreed deadlines can lead to a Paying Agency's accreditation being downgraded from full to provisional status or to withdrawal of accredited status altogether, with responsibility for scheme management and payments being transferred to another Paying Agency.

8.71 ***In order to reduce the risk of delay in the process of building Paying Agency capacities, it is recommended that Turkey adopt an option of two Paying Agencies.*** If it selects this approach, MARA will need to pay special attention to effective establishment, updating and functioning of the Integrated Administrative Control System (IACS), which links the two CAP Pillars. A well functioning IACS will lower the risks of malfunctioning and delay and partially compensate for the higher costs of building and functioning of two Paying Agencies.

B.5. Recommendations for Building SF and CAP Implementation Capacity

8.72 ***To create absorptive capacity for structural fund programs and align agricultural sector regulations and policies to EU CAP requirements, adjustment of the institutional structure of MARA will be needed.*** Initiatives should address a number of challenges:

a) The need to ensure an efficient and competent dialog with DG Agri and with other EU institutions, and Member States
b) Urgent requirements for an adaptation of the administration structure for pre-accession support from the EU budget for rural areas;

c) New challenges related to food safety;
d) Technical preparation for accession negotiations; and,
e) The demand for improvement of the efficiency of administration activities in view of a quick increase of tasks, but with limited accompanying increase of financial and human resources.

8.73 ***In the short-term,*** the main priorities which the GOT and MARA should focus on in the adjustment process would be to:

a) Elaborate a consistent Strategy of Rural Development;
b) Adjust MARA structure[254] so that it covers the same range of activity which DG Agri covers;
c) Commence the expansion of investment in the development of MARA's human resources;
d) Decentralize agricultural administration;
e) Set up two EU-style Paying Agencies - one for market measures (including direct payments) and a separate one for measures akin to CAP Pillar II programs;
f) Establish priorities and detailed timetable for gradual implementation of overall Common Agricultural Policy (Pillar I and II) and food safety policy.
g) Set up a Rural development Agency (IPARD Agency) and national accreditation by competent authority and conferral of management decision by EU.

8.74 ***In the medium term***, the main priorities should be to:

a) Adjust and enlarge the responsibility of MARA and the Pillar I Paying Agency for market measures to the management of CAP measures;
b) Expand the responsibility of the Pillar II Paying Agency to include all the investment-promoting programs under the MARA transfer budget;
c) Focus on the full implementation of food safety policy; and,
d) Gradually implement CAP measures according to the established priorities of Turkey.
e) Expand the function of IPARD Agency for more challenging rural areas and measures and include all the investment-promoting programs under the MARA transfer budget. Convert the IPARD Agency into an EU-style paying agency after accession.

[254] In the light of CEE experience, is important to stress that MARA's new structure should be simple and transparent. Every unit (e.g. department, office, section) should be set on the base of detailed terms of reference. To avoid, overlapping of activities and to improve coordination, a specific terms of reference should be elaborated for every, individual staff member of MARA.

CHAPTER 9. ENHANCING POLICIES FOR SOCIAL COHESION

9.1 ***Ensuring sustained and inclusive growth is an important challenge for Turkey in view of the existing important social and regional gaps and the potential for the EU accession process to create "winners", but also some "losers".*** Although reform is underway to define a more systematic approach to start closing the existing gaps, an integrated strategy will need to be formulated with a strong dimension on policies for social cohesion. The capacity of the social security system to contribute/strengthen social cohesion is impaired by several factors: it does not cover the entire population; it lacks financial stability, with the largest share of funds going to pensions; the presence of a large informal sector; and administrative and management problems which have adverse effects on the effectiveness in the delivery of services. This chapter provides analytical underpinnings in the key areas of social inclusion and health care, with emphasis on policies to improve efficiency and ensure financial sustainability.

A. SOCIAL ASSISTANCE AND SOCIAL SERVICES

9.2 ***Despite there being relatively few Acquis Communautaire requirements in social inclusion***, maintaining a policy framework which facilitates the inclusion of all groups in society in economic and social progress irrespective of their ethnicity, religion, gender, handicap, or sexual orientation is a major element of meeting the Copenhagen criteria. Continuing to meet the Copenhagen criteria is itself a pre-requisite to keeping the entire accession negotiation process on track. This requires that the entire legal framework of the country should enshrine equal rights for all citizens irrespective of these social variables, throughout the constitution itself and the entire body of legislation. More than this it is expected that in many cases specific legislation would be required to address the specific needs of such groups accompanied where necessary by active programs to offset any disadvantages these groups might experience. Such programs and policies are expected to be embodied in the Joint Inclusion Memorandum (JIM) which all candidate countries prepare and which Turkey is currently working under the leadership of the Ministry of Labor & Social Security (MOLSS).Thus far, Turkey has made notable progress in two areas related to social inclusion and the attainment of the Copenhagen criteria, through: strengthening the social safety-net and programs directly targeted towards the disadvantaged and vulnerable. Despite this, further progress is required in the following areas:

9.3 ***Legal Framework***. Priority one is to ensure that the constitutional amendments and other pieces of legislation that enshrine this progress in social inclusion are implemented fully and consistently, throughout the lifetime of the accession process and beyond. Priority two is to review gaps in the legislative framework regarding social inclusion and to deal with them in a timely manner.

9.4 ***Social Inclusion Programs***. A wide range of policies and programs can have an important positive impact upon social inclusion and cohesion. Notable amongst these are basic and secondary education policies (discussed in chapter 6) which extend high quality education at an affordable price to the entire citizenry, the strengthening of the social safety-net under the General Directorate of Social Assistance and Solidarity (SYDGM) and its 931 foundations covering the entire country and in the near future the introduction of UHI, as discussed earlier in this chapter.

9.5 ***Education***. Substantial progress has been made over the last 5 years in basic education in terms of extending the coverage of basic and secondary education, with net enrollment rates increasing from 95% to 98%. Male/female ratios, have improved across the education spectrum and in the case of grades 1to 5 have essentially reached parity. However, there is a problem of increased female school drop-outs in the grades from 6-8 especially in rural areas in eastern Turkey where parents are less likely to send their girls out of the village. This effect is even more pronounced within secondary education, where currently the male/female ratio is 1.33.[255] The good news is that the ratio has been improving.[256] With the Conditional Cash Transfer (CCT), carried out by SYDGM and Back to School campaigns (supported by the Ministry of National Education and UNICEF) further progress is anticipated.

9.6 ***It is in tertiary education where issues of access and social inclusion are more pronounced.*** Obstacles for youth coming from lower income families become magnified at this level because (i) by definition a student must complete all 8 years of primary education and secondary education before even attempting the university entrance examination (OSS) and (ii) in order to do well in the OSS it has become *"de rigueur"* for students to receive intensive preparation from private exam-cramming schools or *dershanes*. In particular, lower income families are less able to pay for *dershanes* and thus their children are placed at a disadvantage in terms of university entrance.

9.7 ***Gender***. Going beyond gender issues in education discussed above, whilst Turkey has made good progress in addressing some gender inequities, and both primary and secondary school enrollment rates are converging for the two genders, there is still more to be done in terms of promoting and supporting female employment, reducing the pay gap and in general integrating women as full equal partners in society. Two key elements are important here – lower skill levels for women due to their historically lower

[255] Ministry of National Education data for the 2004-2005 school year.

[256] Between the 1998-1999 and the 2004-2005 school year, the ratio of boys to girls enrolled in general secondary education decreased, whereas in vocational secondary education, the ratio remained unchanged.

participation in education and training programs, a situation which is being rectified for younger cohorts of women and girls and secondly access to child care. A frequently mentioned reason given by women in qualitative assessments of reasons for non-participation in the labor market is the absence of adequate and affordable child care. Finding low-cost, community –based solutions to this problem is an important challenge for the greater social inclusion of women and enhanced labor participation rates.

9.8 ***Social Services***. A wide range of agencies including municipalities, the Social Services & Child Protection Organization (SHCEK), the SYDGM, municipalities and NGOs are providing social services. Unfortunately there is no integrating framework, and both problems of duplication and inadequate service provision occur, despite the best intentions of the involved agencies to prevent this. Moreover, robust evaluations of the cost-effectiveness of such services, and even beneficiary assessments are few and far between. There is a need to develop an integrated social policy under one lead ministry, improve the monitoring and evaluation of social services, and then expand cost-effective services to underserved population groups, although it would be more than appropriate for the SYDGM to remain as an executing agency outside of this umbrella policy ministry. These issues will be given prominence under the JIM and the demand for such services is expected to grow rapidly now that over 70% of Turkey's population is urban, and the process of the ageing of the population takes hold as Turkey is passing through the demographic transition. Transferring the experience of positive and cost-effective solutions for the provision of social services from the EU is something to be strongly encouraged.

9.9 ***Conditional cash transfer (CCT)***. Turkey is the first country in the ECA region to introduce a CCT program (modeled on the successful programs in Brazil and Mexico) to address the demand side constraints for the uptake of basic health and education services by the very poorest in society. The CCT is targeted towards the poorest 6% of children (with the benefit paid to the mothers) which helps families to maintain the poorest children in school (ages 6-18, with increased payments for girls) and obtain adequate preventive health services, including immunization and check-ups for children. This program covers the entire country and is already reaching 1.9 million children with payments varying from YTL 17 per month for children under 6, to up to YTL39 per month for secondary school girls. It is administered by the SYDGM. The proxy means test for this program was updated in 2005 based upon the 2003 HICES. The proxy means test for the CCT will be systematically updated based upon the latest HICES, and in this manner strengthened so that it can be used for the determination of eligibility for other government programs (such as UHI premia paid for by the state) by adjusting the cut-off point accordingly. Given it very tight targeting, this program not only represents a low-cost (and thus affordable) social safety-net for Turkey, but is designed to invoke positive impacts in terms of school attendance and health care behavior for the poorest. A rigorous impact evaluation of the CCT is underway.

9.10 ***Youth policy***. With youth aged under 30 accounting for 50% of the total population, youth are a particularly important population group to target as they represent nothing less than the future social and human capital of the country. It is urgent to give

more attention to the issues of youth empowerment and inclusion, together with specific programs .to overcome barriers to youth employment (youth unemployment is 2.5 times the national average). Inter alia, this process would be enhanced through the development of a national youth policy and providing significantly more resources to youth programs. The EU, UN and World Bank are all expanding their efforts and programs targeted to youth.

9.11 ***Poverty monitoring***. Turkey has made strong progress on monitoring poverty with annual household income and consumption expenditure surveys (HICES) having been undertaken by the State Institute of Statistics (DIE) since 2002 onwards with Bank support. The EU itself favors a different approach to poverty measurement, which is essentially a relative poverty measure and based upon income. Although Turkey will have to report data on this basis to the EU, the current poverty monitoring mechanism should be maintained in parallel as it provides important policy information relevant to important social inclusion and poverty reduction programs such as the CCT and UHI.

B. MANAGING THE HEALTH CARE SYSTEM

B.1. Status of Health Care System Reform

9.12 ***Turkey spends around 6.7 percent of its Gross National Income (GNI) on health, of which public expenditures account for about 70 percent.*** Per capita expenditure is relatively higher than in countries with similar income levels (Figure 9.1).[257] Health expenditures relative to GNI are higher than in Romania, Russia, Mexico and Chile (all between 5.8 and 6.3 percent of GNI in 2003) but much lower than Ireland, Spain, Czech Republic, Portugal and Brazil (all between 7.0 and 9.3 percent of GNI). However, the public-private financing mix in Turkey is more like Spain, Portugal and Ireland.[258] Social health insurance – offered by SSK, BagKur and Emekli Sandigi – accounts for almost 66 percent of all public expenditures on health, equivalent to about 12,875 trillion liras in 2004, while the balance (6,582 trillion liras in 2004) comes from the central government budget. A little over 53 percent of all public expenditures on health take place on care provided by hospitals, followed by 30 percent on the provision of pharmaceuticals and medical goods and 8.5 percent on outpatient care.[259]

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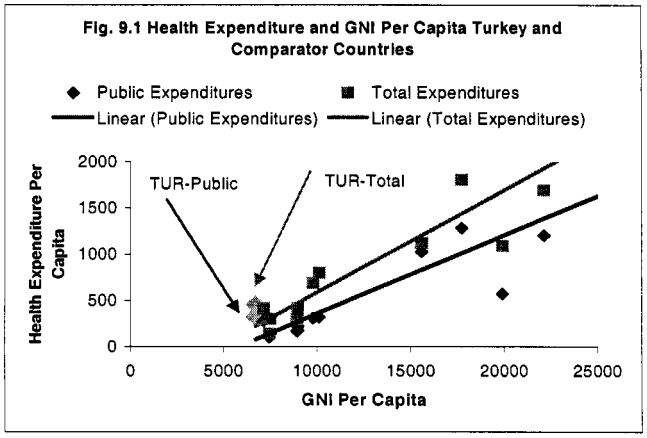
[257] Comparator countries include Brazil, Chile, Czech, Greece, Ireland, Malaysia, Mexico, Portugal, Romania, Russia, South Africa, Spain and Thailand.

[258] Public expenditures on health consist of expenditures incurred by the Ministry of Health, General Directorate of Coastal Health Services, Universities, Social Solidarity Fund, other Ministries and agencies, local governments, state enterprises, civil servants, and social security institutions: Sosyal Sigortalar Kurumu (SSK), Emekli Sandigi and Bag-Kur. Private expenditures on health consist of out-of-pocket treatment and pharmaceutical expenditures incurred by individuals and households, and by companies and individuals contributing to private insurance schemes.

[259] Source: World Bank calculations, based on MOF/MOH/MOLSS data, reorganized and presented in the NHA2000 format

9.13 ***Health outcomes in Turkey are below average levels for countries with roughly equally high levels of share of public expenditures on health and they are unevenly distributed.*** There are huge differences in health outcomes in Turkey across socioeconomic levels and across regions, with expenditure flows in the health sector favoring Turkey's Central and Mediterranean regions over other parts of the country and East and Southeast Turkey receiving less than the proportionate share of spending given their population. The distribution of health benefits to different income quintiles shows a significant bias towards the top two quintiles, who consume about 52 percent more health care per capita relative to the bottom two quintiles. Health insurance coverage is limited to about two-thirds of the population, with the result that not only do the poor receive less service, they also pay a significant share of their income to compensate for the lack of free care.

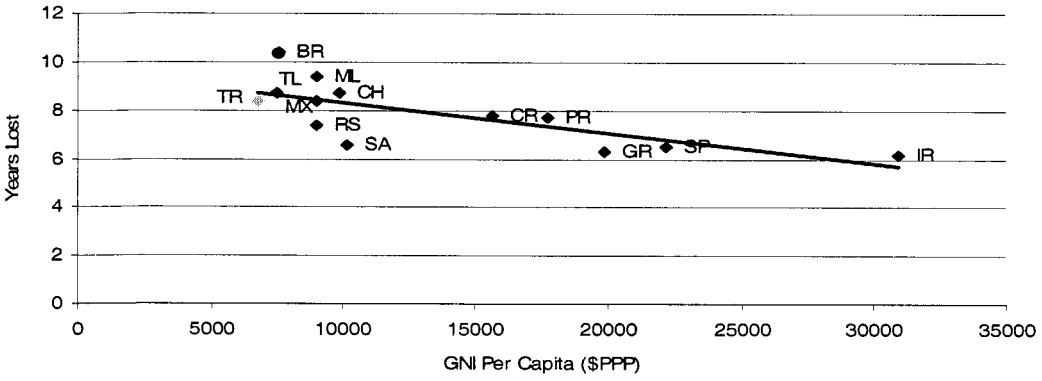


9.14 ***Turkey faces an unacceptably high burden of ill health and ranks far behind most middle-income countries in terms of the health status of its people.*** The reasons for such low outcomes are many and varied. There are gaps in nutrition, housing, access to clean water and satisfactory sanitation, and education, especially of girls and women – all of which are widely recognized to be powerful determinants of good health – that adversely affect health status. On the financing side, besides the fact that there are multiple problems with mobilization of resources, the available resources are not allocated efficiently and equitably. A significant proportion of the population has little or no financial protection, and despite support from special funds and programs like the Social Assistance Fund and the Green Card, in practice the disadvantaged groups are not targeted effectively.

9.15 ***A number of distortions hamper the efficiency of the health care system.*** There are multiple payers for same or similar services, and the institution of revolving funds – which allow health providers to accept user charges and account for them outside the budgetary flow of funds – introduces a variety of perverse incentives for providers and further constrains access to health services for consumers. Public provision of health is characterized by poor incentives for managers and providers alike, leaving them open and vulnerable to alternative sources of income to augment their meager salaries. Like financing, the delivery of health care is also fragmented, and there is little continuity in the different levels of care. Clinical effectiveness of existing medical interventions and treatment protocols is not always tested and attention to quality and effectiveness of care is uneven. The private sector is growing, but its full potential is not fully realized and their role and responsibilities not adequately defined. The present situation, therefore, is one in which the health system fails to reach the poor and vulnerable sections of society

and the health status of the population is well below that of countries of comparable income. By all accounts, the health sector in Turkey is under-performing in achieving health outcomes (Figure 9.2).

Figure 9.2. GNI Per Capita and Expected Years Spent in Poor Health



Comparator countries include Brazil, Chile, Czech, Greece, Ireland, Malaysia, Mexico, Portugal, Romania, Russia, South Africa, Spain and Thailand.
Source: IMF World Economic Outlook database; WHO Statistical Information System
Reproduced from Mitra: Towards Sustainable Social Sector Expenditures in the New Member States of the European Union – Keynote Presentation, Chatham House, London, June 22-23, 2005)

9.16 ***To address the challenges facing the health sector, the Government embarked upon systemic and comprehensive reforms in the last couple of years.*** Key elements of the proposed reforms that aim at improving equity and access to health services are the introduction of universal health insurance and the creation of a health insurance fund that would integrate all functions and premium collections related to health in the existing insurance agencies such as SSK, BagKur and Emekli Sandigi. The health insurance fund would combine all financial flows of fund in the health sector, including budgetary support to MOH (except for public health care activities), financial outlays for the existing Green Card program, and health expenditures of civil servants. Based on the principles of solidarity and risk pooling, all citizens of the country are proposed to be covered under universal health insurance, with the state making premium contributions on behalf of the indigent and others unable to do so on their own behalf. [260] The responsible agency for setting up the universal health insurance system and fund is the Ministry of Labor and Social Security (MOLSS).[261]

9.17 ***The first and most fundamental challenge that the health sector reform in Turkey needs to address is that of providing adequate financial protection for health***

[260] The position at the time of writing is that Pension and UHI Bill has been cleared by the Health Commission of the National Assembly and is before the Planning and Budget Committee.
[261] The bill on the institutional restructuring of the social security system is before the Planning and Budget Committee of the National Assembly.

care to the entire population. The present system of insurance leaves many without any coverage, and with inadequate coverage for many who are nominally covered. Additionally, there are many who enjoy multiple sources of coverage, either by design or by circumstances. There is also little doubt that the different health insurances being offered through SSK, Bagkur and Emekli Sandigi, and the coverage provided to civil servants and welfare programs like the Green Card should – in the interest of efficiency, risk-pooling and consolidation of financing – be combined into one compulsory universal health insurance system.

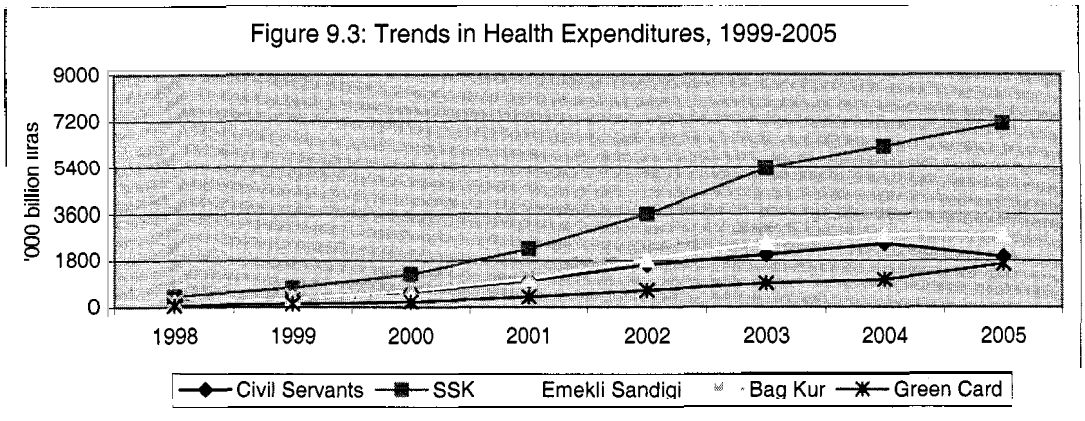
9.18 ***With better access to health care services, ensuring financial sustainability of the system is becoming a key issue.*** At the same time, the extension of health insurance to the entire population will lead to higher levels of public expenditure on health. The reason is that the state will have to bear the health insurance expenditures of those hitherto uninsured, but also that changes in utilization of health services by the already insured may occur as they adjust to new boundaries of coverage, and the utilization patterns of the newly insured. In order for the system to be fiscally sustainable, therefore, the introduction of universal health insurance needs to be accompanied by system-wide efficiency changes that will bring about a downward pressure on health costs and compensate for the additional expenditures associated with extending financial protection to all segments of the population. The proposed introduction of universal health insurance has already triggered a number of reform measures in the health sector in Turkey, and the emphasis at this point needs to be not only on sustaining this momentum and extending it to other areas not included so far, but increasingly on ensuring that the desired access and efficiency outcomes are achieved without any increase in public expenditures on health.

B.2. Health Expenditures, 1999-2005

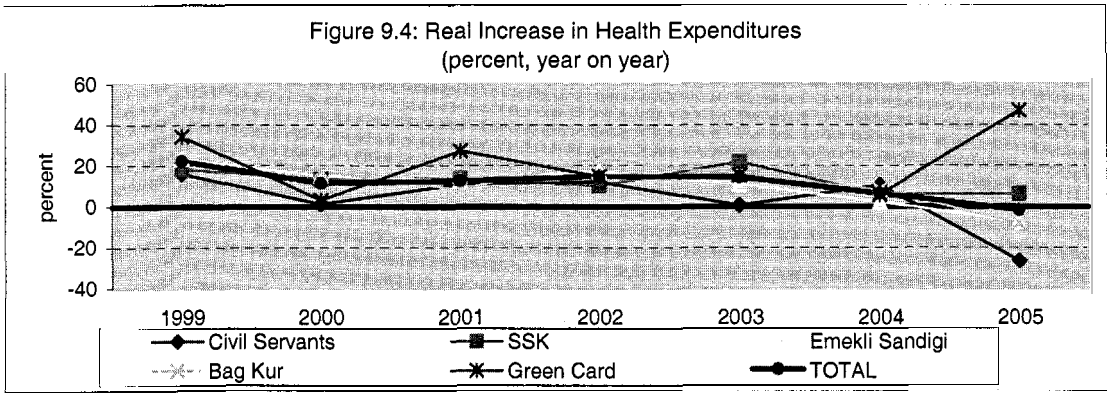
9.19 ***Health care expenditures are on an upward trend.*** As a share of GNP, total public expenditures on health have increased from 3.77 percent in 1999 to 5.33 percent in 2004 (Table 9.1). The share of personnel expenditures on health have increased during this period from 1.23 percent to 1.47 percent of GNP, while the share of investments has fallen from 0.27 percent to 0.19 percent of GNP. The share of general government expenditures excluding social security funds has fallen from 47 percent of total public expenditures on health in 1999 to 34 percent in 2004, while the share of social security funds has increased from 53 percent to 66 percent during this period (Annex 9.2, Table 1). Health expenditures on SSK and Green Card beneficiaries show the largest increase in 2005 relative to previous years and in comparison to other financing agents (Figure 9.3). Adjusted for inflation, real expenditures on health in 2005 for civil servants, BagKur and ES actually fall in 2005 relative to 2004 (Figure 9.4). Real expenditures on SSK and Green Card show a rise in real terms. Overall, real expenditures on health are projected to decrease by around 2 percent in 2005 relative to 2004, with increases in real expenditures for SSK and Green Card beneficiaries being cancelled out by decreases in real expenditures in the rest of the health sector.

Table 9.1: Economic Classification of Total Public Health Expenditures (as a share of GNP)

	1999	2000	2001	2002	2003	2004
Current	2.65	2.49	2.98	3.12	3.26	3.72
Personnel	1.23	1.19	1.48	1.29	1.44	1.47
Other Current	1.42	1.30	1.50	1.83	1.82	2.24
Investment	0.27	0.40	0.37	0.36	0.19	0.19
Transfers	0.85	0.84	1.01	1.15	1.44	1.42
Total Exp.	3.77	3.73	4.36	4.64	4.88	5.33



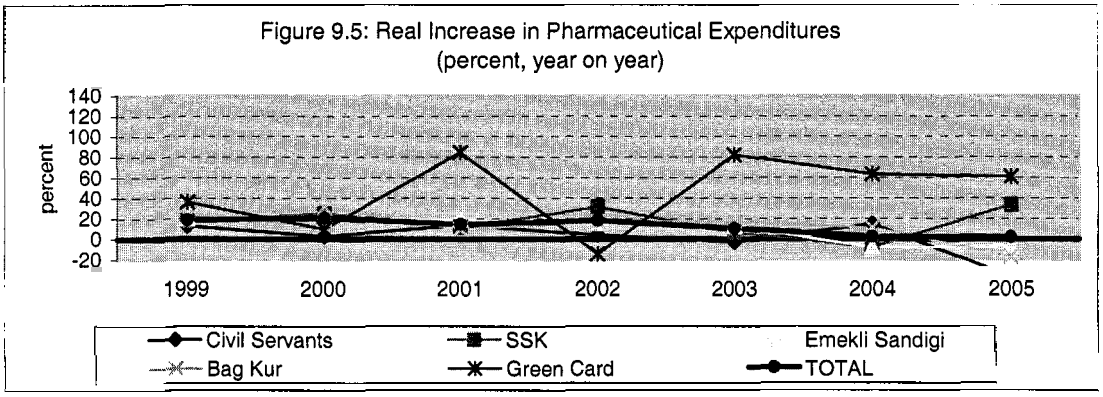
Source: MOH, National Health Accounts (for 1999, 2000); updated author calculations for other years using MOH/MOF/SSK/BK/ES data sources



Source: MOH, National Health Accounts (for 1999, 2000); updated author calculations for other years using MOH/MOF/SSK/BK/ES data sources

9.20 ***Expenditures on pharmaceuticals are volatile but have been growing faster than average health expenditures.*** Total real expenditures on pharmaceuticals are projected to increase by 2 percent in 2005. Over 2000-2005, expenditures on pharmaceuticals grew also faster than total expenditures, at an estimated 11.3 percent per

year, against 9.6 percent for total expenditures. Expenditures on pharmaceuticals are also the most volatile component of health care spending, particularly by Green card holders (Figure 9.5). In 2005, real expenditures on pharmaceuticals increased by 61 percent for Green Card holders followed by 33 percent for SSK beneficiaries and falling for others.



Source: MOH, National Health Accounts (for 1999, 2000); updated author calculations for other years using MOH/MOF/SSK/BK/ES data sources

B.3. Projected Trends in Health Expenditures

9.21 ***Before attempting to project health expenditures in the short and medium terms***, it is necessary to better understand the reasons for the observed increase in health expenditures. As the data presented above shows, almost all the increase is explained by expenditures on pharmaceuticals and on Green Card holders.

Expenditures on Pharmaceuticals

9.22 ***A series of events starting from February 2004 help explain the observed trends in expenditure on pharmaceuticals***. The more important of these are:

- Feb 2004 – Reference pricing introduced
- March 2004 – VAT on prescribed drugs reduced by 8 percentage points
- December 2004 – Protocol signed with suppliers of drugs results in a discount between 7.5% and 14% in the price of drugs
- Jan 2005(a) – Discount of 8% negotiated on non-prescription drugs
- Jan 2005(b) – Prescription drugs extended to Green Card holders as part of their benefit package
- Feb 2005(a) – SSK enrollees allowed to obtain drugs from private pharmacies
- Feb 2005(b) – Positive drug list introduced
- Feb 2005(c) – SSK hospitals transferred and pharmacies closed
- May 2005 – Green Card holders required to make copayments, like others
- June 2005 – A further reduction of 8.83% obtained in drug pricing following the fall in the Euro.

9.23 ***These measures have had mixed results, as was expected.*** Some (those of March 2004, December 2004, January 2005a, and June 2005) resulted in a fall in price of drugs, some (May 2005) resulted in a fall in consumption of drugs, while others (January 2005b, and February 2005a) resulted in increase in consumption of drugs. The net result is that the price of drugs has, on average, fallen, but the quantity procured has increased significantly, particularly following the inclusion of drugs in the benefit package of Green Card holders and by easing the restrictions on SSK enrollees by allowing them to obtain drugs from private pharmacies. In effect, therefore, changes in pharmaceutical policies in the last year or so have resulted in new access for the 10+ million Green Card holders and improved access for the 25+ million SSK enrollees. This has significantly outweighed the gains realized through reductions negotiated in prices.

Green Card Holders

9.24 ***The increase in health expenditures of Green card holders*** is almost entirely explained by the increase in public reimbursement for drugs consumed. In effect, changes in pharmaceutical policies have resulted in a shift in health expenditures from out-of-pocket to public funding.

SSK Enrollees

9.25 ***The increase in health expenditures by SSK is***, however, only partially explained by the changes in pharmaceutical policies mentioned above. With the transfer of SSK hospitals, MOH has begun billing SSK for services provided to its enrollees, and SSK does not appear to have any working system of claims management and control. At present, payments from SSK to MOH are ad-hoc and dictated by transfers from MOF to MOH via SSK. It is unclear whether the invoices submitted by MOH do not accurately reflect the services provided or whether they actually reflect an increase in utilization of services by SSK enrollees following the significant reduction of waiting time in MOH hospitals compared to the former SSK hospitals. In any case, the fact that BagKur and ES are better able to manage the process of settlement of claims is an indication of the great need for developing and strengthening the processes, procedures and controls needed to dispose of claims and invoices that are submitted by MOH.

At the same time, MOH has introduced a type of fee-for-service in MOH hospitals, which has significantly changed the incentives facing physicians in these hospitals. There are widespread concerns that this has led to supplier-induced demand and an increase in production, provision and utilization of health services. While some of this may well be serving some pent-up demand, it is also generating new health expenditures in the system.

Projecting Future Expenditures

9.26 ***Health care costs of Green Card holders were expected to increase following the introduction of UHI***, but a bulk of this increase has already taken place even before the introduction of UHI with the introduction of a large number of Green Cards effectively extending health insurance protection to almost all the poor. In other words, policy decisions taken deliberately or otherwise before the introduction of UHI have started extending de-facto health insurance to most of the poor population. Bulk of the increase

in health expenditures in the future is likely to come when the presently uninsured non-poor take up UHI when it is introduced and as utilization of health services in Turkey increases to levels similar to other European countries (Table 9.2).[262]

Table 9.2: Utilization of Health Services (2003 or latest available year)

	In-patient care admissions per 100	Outpatient contacts per person
Austria	31.2	6.7**
Denmark	19.7	6.2**
Germany	23.8*	...
Italy	15.7*	...
Netherlands	9.27**	5.6*
Portugal	11.6*	3.8*
Sweden	15.4	2.8
Czech	21.8	15.0
Hungary	25.0	12.2
Latvia	20.5	4.8
Lithuania	23.5	6.6
Poland	17.5*	5.6*
Slovakia	18.5	13.0
Slovenia	16.9	6.9
Bulgaria	17.5	...
Romania	24.9	5.6
Turkey	*8.1*	*2.6**
EU	18.5*	6.6*
EU-10	19.5	8.4

Source: European Health for All Database, 2005; * 2002; ** 2001

9.27 ***A significant increase in health expenditures is expected in the years ahead.*** Expenditure projections are based on the following assumptions: (i) most of the increase in costs due to the poor joining UHI has already taken place; (ii) only 10% of the presently non-poor uninsured will join UHI in 2007, increasing to 15% in 2008, 20% in 2009 and so on; (iii) inflation rate will remain at 6.8% year-on-year from 2006 to 2011; (iv) 10% of the country's population will be covered by family medicine in 2007, increasing to 15% in 2008, 20% in 2009, 30% in 2010, 40% in 2011 and so on; (v) outpatient visits will increase to 2.7 per person per year in 2009; and (vi) hospital occupancy rates will increase to 67% in 2006, 70% in 2008 and 72% in 2011. On these assumptions, preliminary calculations show that health expenditures will increase by 5%

[262] Note that the Turkish population has a much lower median age and lower percentage of the population above 65 years and that these figures are not standardized or adjusted for age.

in 2006, 18% in 2007, the year that UHI will be introduced, and around 15% thereafter.[263]

B.4. Short-and medium-term measures to contain cost escalation

(a) Managing Pharmaceutical Expenditures

9.28 ***Drugs deserve particular attention as they are perhaps the single largest cost driver in almost all healthcare systems, and have been the most dynamically growing element in overall costs of healthcare services in recent years.*** According to new data released by OECD, spending on pharmaceuticals across OECD countries has increased by an average of 32 percent in real terms since 1998, reaching more than US $450 billion in 2003. Growth in drug spending has outpaced total health expenditure in most OECD countries, and Turkey is no exception. Expenditure on pharmaceutical products constitutes a significant proportion of total expenditures on health in Turkey, accounting for almost half of all SSK, Emekli Sandigi and Bagkur spending on health. While pharmaceutical prices have increased broadly in line with general inflation, there has been a much larger change in consumption levels, including subtle changes in consumption in favor of newer and more expensive drugs.[264] One of the reasons why Turkey spends a huge amount on drugs and pharmaceutical products is that most of the insured population is insensitive to pharmaceutical prices, with out-of-pocket payments for medicines constituting between 10 and 20 percent of total medicine bill of the insured.[265]

9.29 ***In addition to price controls, managing consumption of pharmaceuticals is critical in order to contain expenditures on drugs.*** Many countries have successfully adopted demand-side measures of controlling consumption, and cost-sharing has proved to be the most effective such measure.[266] The consumption of pharmaceutical products

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[263] At the same time, revenues are also expected to increase, particularly because of the presently non-poor joining UHI and making insurance contributions. Revenue projections have been not been carried out at this time.

[264] Between the years 2000 and 2001, for example, the proportion of drugs consumed priced at half million TL or less decreased slightly from 34 percent to 30 percent, while the proportion of drugs consumed priced at 2 million TL or more increased from 34 percent to 47 percent.

[265] Indeed, the high percentage of pharmaceutical expenditures in terms of overall health expenditures is as much a reflection of low overall expenditures on health as it is of high expenditures on drugs.

[266] In the Netherlands, for example, the introduction of co-payments on prescribed pharmaceuticals (a fixed amount per prescription) led to substantial decrease in the total number of prescriptions. In Germany, drug cost-containment measures take the form of cost-sharing, prescription limitations, reference prices and the pharmaceutical spending cap that makes physicians' associations liable for any overspending with no upper limit. These measures led to substantive decreases in pharmaceutical expenditures for social health insurance, mainly attributable to price reductions, changes in physicians' prescribing behavior resulting in a reduced number of prescriptions by 11.2 percent and increased prescriptions for generics. The French government imposes a fine on pharmaceutical companies if pharmaceutical expenditures surpass budget ceilings either due to price or quantity increases.

among the insured is actually not low by international standards, and there is a strong scope for cost containment if indiscriminate consumption can be curbed.

(b) Consolidating hospitals and improving efficiency

9.30 ***There is ample room for improving hospital efficiency.*** Prior to the recent merger of MOH and SSK hospitals, public hospitals in Turkey were owned and run by MOH, SSK as well as the University, and there was a lot of fragmentation and variation in their performance and efficiency levels. A large number of hospitals were – and continue to be – substantially underutilized, and huge variations still exist in hospital occupancy rates among provinces, ranging from a very low 20 percent in Tunceli province to a respectable 82 percent in Karabuk province. Overall, bed occupancy rate in Turkey is 62 percent, and compares unfavorably with other European countries (Table 5).

Table 9.3: Number of Hospital Beds and Utilization

	Beds per 100000	Average Length of Stay	Bed occupancy rate (%)
Austria	601.4	6.4	76.2
Denmark	336*	3.6	83.5***
France	390*	...	...
Germany	615.5	8.6*	79.4*
Italy	360.2	6.8*	76**
Netherlands	305.1*	7.4**	58.4**
Portugal	321**	...	...
Sweden	223.1	6.2	...
Czech	629.7	8.4	74.1
Hungary	592.7	6.7	77.2
Latvia	545.3	...	...
Lithuania	581.4	7.9	73.6
Poland	466**	...	...
Slovakia	638.6	8.5	64.8
Slovenia	401.0	6.1	68.1
Romania	451.8	...	...
Turkey	228.6	5.6	61.9
EU	414.9	6.8*	76.9**
EU-10	520.0	7.5	72.6

Source: European Health for All Database, 2005; * 2002; ** 2001; *** 2000

9.31 ***Consolidation of hospitals and greater management autonomy could contribute to efficiency gains.*** Many MOH hospitals are too small in size to allow for efficient operation and provision of care, and have significantly lower utilization rates compared to SSK and University hospitals. In addition, hospital managers enjoy very limited administrative and financial autonomy, and have very few incentives to adopt efficiency-

enhancing measures. The proposed introduction of universal health insurance provides a good opportunity to further strengthen the gains from the merger of MOH and SSK hospitals under MOH ownership and management, and while some gains in efficiency can be brought about simply by consolidating and reducing the number of hospital beds in many provinces, further gains will come about only by improving efficiency in the use of hospital resources and overall management and accountability. The separation of provision and financing provides an opportunity to introduce innovative methods in management of health facilities, which can be achieved by granting financial and administrative autonomy to public hospitals. The introduction of hospital autonomy will require appropriate legislation that will allow for public assets to be managed outside the direct purview of the government, and related laws and regulation would need to be amended in order to facilitate the transformation of MOH and SSK facilities to autonomous bodies. This process has started, but it is essential that momentum is maintained during the transition phase.

9.32 ***The harmonization of hospital management and payment after the transfer of all SSK hospitals to MOH is continuing***. However, there is a risk that the delay in the establishment of UHI will lead to interim financing arrangements (such as global budget agreements), which would rely on currently high levels of hospital costs. By internalizing the existing inefficiency, this would effectively undermine the gains from the consolidation and provider-purchaser split. Such interim arrangements should be avoided and hospital and pharmaceutical expenditures need to be closely tracked during the interim period until UHI is introduced.

(c) Strengthening delivery of health services

9.33 ***The introduction of universal health insurance also provides an opportunity to initiate measures to improve delivery of health services.*** This process has also started with the piloting of the family medicine system, which is aimed at shifting the emphasis from treatment of the sick to health promotion and prevention of illness. The family medicine system will bring the physician and family members into closer and more personal contact, enabling the physician to play an important role in the family's health and prevention of illness. Under the family medicine system, simple and routine diagnostic services and consultations could be provided under a single-window and common illnesses could be treated across a broad spectrum of medicine domains, including internal medicine, gynecology and pediatrics. Family medicine places special emphasis on continuity of care and on quality of health services, and integrates preventive health services with basic health services and provides the full package under one window. The family medicine system has the potential for the strengthening of the patient referral system as well.[267]

[267] At the time of writing, the family medicine pilot in Duzce has already made significant headway, with training of over 100 family doctors completed and over two-thirds of the 300,000 population of Duzce registered with family physicians.

(d) Reforms in provider payment mechanisms

9.34 ***The transformation of the health sector through the introduction of universal health insurance also provides an opportunity to bring about changes in provider payment systems and introduce incentives for physicians to provide quality care at lowest costs.*** Some of these changes are already being planned, and a system of paying family physicians on the basis of capitation is being worked out. Physicians paid on the basis of a capitation fee per enrollee receive a fixed amount per enrollee regardless of the type and extent of treatment sought. Physicians participating in this scheme bear most risks of treating a patient, and therefore are likely to be conservative in the amount of health care they provide. Such a system would need to be extended to cover all outpatient care as family medicine is scaled up from the Duzce pilot.

9.35 ***Likewise, and perhaps more importantly, prospective payment mechanisms introduced at the hospital level would provide incentives to hospitals to contain costs.*** Prospective payment mechanisms rely on the fact that services associated with a particular treatment are reasonably predictable and can be bundled into a group to which a monetary value can be attached. The hospital then gets reimbursed according to a pre-fixed rate per bundle. Such payment mechanisms do not encourage excessive use, since the hospital can conceivably make a profit (or a surplus) by being careful about inputs and hospital lengths of stay. One of the most widely-known prospective payment systems is the Diagnosis Related Group, or DRG. Developed to classify treatments according to the resource costs of its treatment, DRGs employ a complete and consistent coding system of patient-level information obtained from medical records to establish and cost bundles of appropriate inputs for one or more diagnosis-based treatment. Typically requiring about 10-20 data items per discharge over a few years, the DRG system provides a valuable tool not only for reimbursing hospitals but also for overall planning and resource management.[268] To be certain, a DRG-based system by itself will not necessarily promote efficient use of resources. Hospital care providers and managers need the flexibility and tools to actively manage their resources and redirect their use, which will ensure that cost-savings in treatment of one case are passed through the entire system.

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[268] Case-mix systems like DRGs may take 2-3 years to establish, even though the discharge items required are not overwhelming. The billing system currently used in the hospital system does not collect all the relevant information that would be required to prepare DRGs, but this data-gap can be filled. Specific data elements for DRGs include, besides age, gender, and discharge status of the patient, the principal diagnosis at the time the patient is admitted and then discharged; up to 8 secondary diagnoses and up to 6 procedures performed during the hospital stay and reported by the hospital using the International Classification of Diseases, 10th Edition (ICD-10) system. A number of cases may be classified to only one DRG, regardless of the number of conditions treated or services provided. Reimbursements based on DRGs represent the average cost of treating cases having similar clinical patterns and costs. In any case, note that having a DRG system for reimbursement purposes which does not necessarily lead to efficiency gains (such as in the US), and having it as a basis to estimate costs and subsequently global budget allocations, as in most European countries, is more likely to lead efficiency gains.

(e) Containing outpatient care provided by hospitals

9.36 ***A large number of outpatient services in Turkey are provided in hospitals, accounting for almost 43 percent of total costs of outpatient services.*** Outpatient services provided in hospitals cost significantly more than outpatient services provided in outpatient clinics, and it is imperative that the introduction of universal health insurance and family medicine be accompanied by a significant reduction in number of outpatient visits in hospitals that are paid out of the health insurance fund. This can be managed by establishing clear and transparent rules restricting reimbursement by the health fund of outpatient treatment carried out in hospitals.

C. CONCLUSIONS

9.37 ***The expansion of UHI will increase public expenditures on health but a number of policy options can help prevent cost escalation without necessarily impacting on access to health care and undermining equity.*** These measures should aim at reducing pharmaceutical expenditures which currently account for 34.6% of total public expenditures on health. In the medium and longer term, however, cost containment will have to rely on building the system hierarchy by full expansion of family medicine as gate-keeper, reforming the patient referral system to streamline hospital-based outpatient care, and finally introduce payment mechanisms for providers which will replace the current performance-based payment of hospital physicians with one which will discourage unnecessary use of physician and diagnostic services and introduce incentives to remain within budget. In addition, some supply-side measures such as overseeing the deployment of healthcare technologies and accreditation and licensing of health facilities and professionals, respectively with a view to overall sectoral needs would also result in efficiency gains.[269] Turkey could also spend more on Public Health in general and health promotion and disease prevention in particular, for long-term benefits and cost savings.[270] For these measures to be implemented effectively there should be a strict separation of providers from the purchaser(s) of services, as predicated in Government's Health Transformation Program.

While all of the above measures are critical to ensure improvements in access, equity and efficiency, it is critical that utmost attention is paid to the sequencing of the above reforms so that the process is seamless and does not lose effectiveness and credibility in the process of its implementation.

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[269] For instance, there are more MRI Units (3.0) in Turkey per 1 million population than there are in France (2.8), Hungary (2.8), Czech Republic (2.4) and Greece (2.3), Poland (1.0) or Mexico (0.2). Similarly, There are more CT Scanners in Turkey (7.3 per million population) than there are in Hungary (6.9), Poland (6.3), the UK (5.8) and Mexico (1.5). Source: OECD Health Data, 2005).

[270] In 2000, Turkey spent 2.4% of its total expenditures on public health and prevention, less than OECD average of 2.9 (2003), and compared with Canada (8%), Netherlands (5.5%) Hungary (5%), USA (3.9%), or Czech Republic (2.9%) (Source: OECD Health Data, 2005).

ANNEXES

ANNEXES Chapter 1

Annex 1.1 Policy Sustainability and the Macroeconomic Performance

The relationship between growth volatility and growth is an old and important issue, both from a theoretical and an empirical standpoint. Observing the high volatility, especially in developing countries in the recent decade led the economists to focus on the issue.

Although the relationship between the average output growth rate and its volatility attracts strong attention among macroeconomists, there has been no theoretical consensus on the relationship between growth rates and output variability. One line of argument suggests that deviations of output from its long run level are temporary. In other words, there is no relation between output growth rate and output variability. Fore example, some business cycle models argue that deviations of output from its natural rate are due to price level misperceptions which are triggered by monetary shocks and therefore are independent of the factors affecting the natural rate of output growth such as skills and technology (Friedman, 1968). A second line of argument dates back to Keynes (1936) and suggests that the relationship can be negative. Large output fluctuations increase the risks on returns to investment and higher risks perception reduces the demand for investment and therefore output growth rate. A third line of argument suggests that the relationship can be positive. One theory is that higher uncertainty increases savings (Sandmo, 1970) and, as Solow (1956) neo-classical model predicts, higher savings leads to higher growth rates. Another theory is that agents choose to invest in riskier technologies only if the growth rates are higher enough to compensate for the associated greater risks (Black, 1997).

Given that there emerges no conclusive result from the theoretical studies, we investigate not only the effect of output variability on output growth rate but also on factors of production in order to identify transmission channels.

The Model

We use output variability as a proxy for the sustainability of economic policies and measure output variability by the conditional variance of output growth.

The growth variable is captured with an AR process. It is plausible that growth rate is also affected by growth variability. In order to account this we include the conditional variance of ε_t as h_t here.

$$Growth_t = \beta_0 + \sum_{i=1}^{n} \beta_i Growth_{t-1} + \beta_{h1} h_t + \varepsilon_t \qquad (1)$$

$$\varepsilon_t / \Omega_{t-1} \sim (0, h_t) \qquad (2)$$

where ε_t has a zero mean and a time varying conditional variance of h_t to capture the risk/variability of growth

In order to model the time varying variance, Engle (1982) introduces the Autoregressive Conditional Heteroscedastic (ARCH) model of order (q) as:

$$h_t = \alpha_0 + \sum_{j=1}^{q} \alpha_{1j} \varepsilon_{t-j}^2 \qquad (3)$$

Bollerslev (1986) generalized the ARCH model of Engle (1982) by including lagged values of the conditional variance h_t as an explanatory variable to the variance equation. In other words GARCH (p,q) specification he introduces is:

$$h_t = \alpha_0 + \sum_{j=1}^{q} \alpha_{1j} \varepsilon_{t-j}^2 + \sum_{j=1}^{p} \alpha_{2j} h_{t-j} \qquad (4)$$

where the coefficients α_0, α_{1j}s and α_{2j}s are non-negative and ε_t^2 is covariance stationary (i.e. $\Sigma\alpha_{1j} + \Sigma\alpha_{2j}<1$).

Nelson (1991) proposed the following model for conditional variance by letting $\varepsilon_t = \sqrt{h_t} v_t$, where v_t is iid with zero mean and unit variance.

$$\log h_t = \zeta + \sum_{j=1}^{p} P_j \log h_{t-j} + \sum_{j=1}^{q} \theta_j \cdot \{ | v_{t-j} | - \mathrm{E} | v_{t-j} | + \delta v_{t-j} \} \qquad (5)$$

This model is referred as E-GARCH model. If θ_j is greater than 1, Nelson's model implies that a deviation of $| v_{t-j} |$ from its expected value causes the variance to be larger than otherwise, an effect similar to the idea behind GARCH specification.

The δ parameter allows this effect to be asymmetric. If $\delta=0$, then a positive surprise has the same effect on volatility as a negative surprise magnitude. If $0<\delta<1$, a positive surprise increases volatility less than a negative surprise. If $\delta>1$, a positive surprise actually reduces volatility while a negative surprise increases volatility.

Nelson (1991)'s specification models the logarithm of the conditional variance rather than conditional variance, which gives us some advantages. One of the advantages of E-GARCH model is that the variance itself (h_t) will be positive regardless of whether θ_j coefficients are positive or negative. Thus, no restrictions need to be imposed for the estimation in contrast to the GARCH model. This makes numerical optimization simpler and allows a more flexible class of possible dynamics models of the variance (Hamilton, 1994 pp.668-9). Moreover, as mentioned in the previous paragraph, this specification allows measuring asymmetry through the leverage effect.

The E-GARCH model can be estimated by maximum likelihood by specifying a density for v_t. Nelson proposed using the *generalized error distribution*, normalized to have zero mean and unit variance for the distribution function of the error term:

$$f(v_t) = \frac{D \exp\left[-(1/2) | v_t / \lambda |^D \right]}{\lambda \cdot 2^{[(D+1)/D]} \Gamma(1/D)} \qquad (6)$$

where $\Gamma(.)$ is the gamma distribution, λ is a constant given by

$$\lambda = \left[\frac{2^{(-2/D)} \Gamma(1/D)}{\Gamma(3/D)} \right]^{1/2} \qquad (7)$$

and D is a positive parameter determining the thickness of the tails. For D=2, the constant λ=1 and equation (7) is the standard Normal density. If D<2, the density has thicker tails than the normal, but for D>2, it has thinner tails.

Next we examine the effects of conditional variance of growth, in other words the volatility of growth that we modelled using E-GARCH specification, on other variables X_t as in Eq. (8).

$$X_t = \gamma_0 + \sum_{i=1}^{n} \gamma_i X_{t-i} + \gamma_{h1} h_t + \eta_t \qquad (8)$$

One might find VAR methodology suitable in this setting, instead of E-GARCH approach. The critical thing in this analysis is that both TFP and investment to GDP ratio variables are generated from GDP and therefore using these two variables with the GDP growth in VAR setup would make the result sensitive to the outliers due to high correlation. By using E-GARCH methodology, we tried to avoid such problems.

The Results

The table below reports the estimate of effect of growth volatility on growth. The estimated coefficients for the growth equation (β_1, β_2, β_3 and β_4) include first four lag and conditional variance of growth (β_{h1}). Note that the estimated coefficient for the conditional variance of growth for the growth is negative and statistically significant. This means that increase in the volatility of growth decreases growth, in other words growth volatility is detrimental for growth. Therefore, our results support the views that the relationship between volatility and growth is negative (Bernanke, 1983; Pindyck, 1991; Ramey and Ramey, 1991; Aizenman and Marion, 1993; Bertola and Caballero, 1994; Ramey and Ramey, 1995; Martin and Rogers, 1997; Caballero, 2000 and Talvi and Vegh, 2000). We did not interpret the coefficients β_0 to β_4 as similar to VAR specification these are used to capture the data generating process.

Table: Effect of Growth Volatility on Growth

Variable	Coefficient	Significance
	Panel A: Conditional Mean	
B_0	0.7967	0.0066
B_1	0.7468	0.0000
B_2	0.1378	0.0009
B_3	0.0464	0.6233
B_4	-0.0014	0.9876
β_{h1}	-2.5304	0.0570
	Panel B: Conditional Variance	
θ_1	-0.9113	0.1695
θ_2	-0.9866	0.0798
P_1	0.2673	0.0300
L1	0.4163	0.0367
D	211.1770	0.9093

Column I of the next table below reports the estimates between GDP growth and TFP. The estimated coefficients for the growth equation (β_1, β_2 and β_3) include first 3 lags of growth and conditional variance of growth (β_{h1}). Note that the estimated coefficient for the conditional variance of growth for the growth is negative and statistically significant. This means that increase in the volatility of growth decreases growth, in other words growth volatility is detrimental for growth. As in the previous case, we did not interpret the coefficients β_0 to β_3 as similar to VAR specification these are used to capture the data generating process.

Table: Effect of Growth Volatility on TFP, Investment, Exchange Rate and Employment*

		I	II	III	IV
		Panel A: Conditional Mean			
	Growth	*Growth*	*Growth*	*Growth*	*Growth*
β_0		1.5075	2.4974	2.0717	2.0832
		(0.00)	(0.00)	(0.00)	(0.00)
β_1		0.1364	0.0342	0.0876	0.0296
		(0.00)	(0.75)	(0.00)	(0.73)
β_2		-0.1272	-0.1631	-0.0029	-0.0493
		(0.10)	(0.14)	(0.97)	(0.52)
β_3		-0.1475	-0.1214	-0.1002	
		(0.06)	(0.02)	(0.00)	
β_4			-0.1787		
			(0.00)		
β_{h1}		-0.0511	-0.1410	-0.1138	-0.1087
		(0.00)	(0.00)	(0.00)	(0.00)
		TFP	*Investment*	*Depreciation*	*Employment*
γ_0		0.0858	1.3751	3.7734	0.2186
		(0.00)	(0.00)	(0.00)	(0.10)
γ_1		0.8413	0.9299	0.0027	-0.0233
		(0.00)	(0.00)	(0.9700)	(0.83)
γ_2		-0.0434		-0.1532	-0.0145
		(0.00)		(0.05)	(0.92)
γ_3				-0.2332	
				(0.00)	
γ_{h1}		-0.0005	-0.0261	-0.2349	0.0138
		(0.00)	(0.04)	(0.00)	(0.25)
		Panel B: Conditional Variance			
ζ		0.9089	1.3398	1.3421	1.9107
		(0.00)	(0.00)	(0.00)	(0.00)
P_1		0.5225	0.1913	0.3924	-0.1144
		(0.00)	(0.18)	(0.00)	(0.28)
θ_1		-0.0487	0.3627	-0.0570	0.2688
		(0.01)	(0.03)	(0.00)	(0.05)
θ_2		0.0379	0.6687	0.3821	0.5605
		(0.57)	(0.02)	(0.00)	(0.00)
Δ		0.6556	0.7444	0.1564	1.0432
		(0.00)	(0.02)	(0.00)	(0.00)
N		0.0268	-0.1300	11.2403	-0.0994
		(0.00)	(0.74)	(0.00)	(0.81)
M		0.0001	1.3750	39.1383	2.4540
		(0.00)	(0.00)	(0.00)	(0.00)

* P-values are reported in parentheses under the corresponding estimated coefficients.

The next set of coefficients for the TFP is reported. γ_0 is for the constant term for the TFP specification. The coefficients γ_1 to γ_3 are for the first 3 lags of TFP and γ_{h1} is the estimated coefficient for the conditional variance of growth in the TFP specification. The estimated coefficient for γ_{h1} is negative and statistically significant. Therefore, uncertainty in growth decreases the TFP which is consistent with the theory supporting

the negative relationship between volatility and growth suggesting TFP as the transmission mechanism (see Martin and Rogers, 1997; and Talvi and Vegh, 2000). However, the coefficient of volatility in the TFP equation is significant but very small and this suggests that the effect of volatility on TFP is small.

Next, we reported the estimated coefficient of conditional variance specification. The estimated coefficient for the lag value of logarithmic conditional variance (P_1) is positive and statistically significant. Observing coefficient of less than 1 satisfies the non-explosiveness condition of conditional variance (Hamilton, 1994).

The second column of the Table is for the analysis on the relationship between growth and investment. The first equation is for explaining growth. β_{h1} is the conditional variance of growth and it is a statistically significant explanatory variable for the growth estimation. The coefficient is negative implying that growth volatility decreases growth (this is parallel with the first column).

The next equation in Column 2 is for investment and includes a constant term, first lag of investment and the output volatility with coefficients γ_0, γ_1 and γ_{h1} respectively. The coefficient for lag investment is significant and positive, which means that higher investment this period implies higher investment next period. This is due to persistency of investment. On the other hand, γ_{h1} is significantly negative, i.e. output volatility decreases investment, suggesting that output volatility is decreasing output via investment supporting the irreversible investment argument of Bernanke, 1983 and Pindyck, 1991 and the empirical study by Aizenman and Marion (1999).

In Column 3, a rarely discussed issue in the literature, the relation between output volatility and exchange rate appreciation, is discussed. The growth equation is in the first part of the column where β_0 is for the constant and β_1 to β_3 are the coefficients of the lagged values of growth. The coefficient β_{h1}, which is significantly negative, shows the explanatory power of the output volatility in the growth equation.

The appreciation equation in column 3 is formed by its lags and the growth volatility. The coefficient of growth volatility γ_{h1} is negative in a statistically significant manner. Therefore, we suggest that growth volatility increases exchange rate depreciation in Turkey.

Finally, the last column of the Table is for examining the effects of output volatility on employment. The growth equation is estimated and the explanatory variables are a constant term, two lags of growth and the volatility of growth (Their coefficients are β_0, β_1, β_2 and β_{h1} respectively). The output volatility decreases output significantly, as in the other estimations.

Output volatility has a positive coefficient in the employment equation (γ_{h1}). This result supports the Schumpeterian view that output volatility increases output because of the creative destruction. However, the coefficient is not significant in our estimations. The discussion behind this view is that all the idea is related to the developed countries. Since the recent discussion is about a developing country, Turkey, it would be expected that the theory would not hold. Moreover, some of the discussions suggest human capital as a transmission mechanism but the employment data we use in the estimates would not carry the same characteristics.

Annex 1.2 Estimating sources of labor productivity growth in Turkey

The source of TFP growth in Turkey is analyzed by estimating a Cobb-Douglass production function with constant returns to scale of the form: $Y = AK^{\alpha}(L*H)^{1-\alpha}$. The reason for employing this type of a production function in our analysis is that it represents a rich set of technology choices in terms of substitutability and complementarity of inputs that producers have and thus it is the widely used formulation in the literature of growth theory.

In this specification we use augmented labor (L*H) together with capital stock (K) and Solow residual (A) as Total Factor Productivity. We relate human capital (H) to average years of schooling (S) and assume a seven percent return each year, thus $H = (1.07)^{S}$. Human capital is assumed to have its effect on output growth via affecting labor. This way we can account for the interaction between labor and education in our model of TFP growth.[271] The results of the estimation for the entire economy and three sub-sectors are given below:

Economy:

$$In(Y/L) = \underset{(3.65)}{0.33}*\ln(K/L) + \underset{(3.76)}{0.67}*\ln(H) - \underset{(-4.19)}{0.07}*Dummy, R^2 = 0.97, DW = 0.75$$

Agriculture:

$$In(Y_{agr}/L_{agr}) = \underset{(19.29)}{1.2} + \underset{(13.72)}{0.45}*\ln(K_{agr}/L_{agr}) - \underset{(-0.88)}{0.20}*Dummy, R^2 = 0.87, DW = 1.04$$

Industry:

$$In(Y_{ind}/L_{ind}) = \underset{(0.50)}{0.72} + \underset{(1.83)}{0.57}*\ln(K_{ind}/L_{ind}) - \underset{(-0.28)}{0.03}*Dummy, R^2 = 0.10, DW = 0.05$$

Services:

$$In(Y_{ser}/L_{ser}) = \underset{(17.21)}{1.99} + \underset{(11.69)}{0.31}*\ln(K_{ser}/L_{ser}) - \underset{(-3.89)}{0.06}*Dummy, R^2 = 0.83, DW = 0.88$$

Sample: 1972-2003 and t-ratios are in parenthesis.

[271] Many studies in growth theory indicated that Human capital expressed alone in the production function yields insignificant estimates together with a negative sign. e.g. Caselli et al. (1996), Islam (1995).

Annex 1.3 Panel Study on Determinants of Private Saving Behavior

Empirically, panel techniques have been utilized to obtain robust estimation results. Our sample consists of a large number of countries, which range from developing to industrial economies. Countries with GDP per capita below US$ 1,700 in 2002 are excluded in order to get a more comparable pool of countries. Overall, the panel is comprised of 70 countries and spans the years 1980 to 2002 with a total of 1160 observations. Evidence from previous works suggests an endogenous relationship between savings and growth. Parallel to the work of Loayza and et al.[272] instrumental variables were used to correct for this simultaneity. Country heterogeneity is taken into account by adopting fixed-effects approach.

Following existing literature, regressors include two income-related variables: the GDP per capita and the rate of growth of GDP per capita. The expected sign of income effect on savings is positive as all previous studies support this hypothesis. As for the growth rate of income, there are two conflicting views: life cycle approach and permanent income hypothesis. According to the former, aggregate savings should increase through an increase in the savings of active workers, whereas, the latter suggests savings will fall in anticipation of higher income in future. Terms of trade captures the transitory component of income fluctuation. Hence, its sign should be positive as income gains (losses) resulting from positive (negative) terms-of-trade shocks should be saved (dissaved). The demographic variables are urbanization, young age and old age dependencies. Income of urban population generally fluctuates much less than that of the rural population, who tend to save more as a precaution. Young and old population dissave against future and previously accumulated earnings respectively. Money stock in the economy is a common variable used as a proxy for financial depth with an expected positive sign. Credit constraint is an important factor in determining private savings and is measured by domestic credit flow to private sector. The higher the credit flow is the lower savings are. More recently in the work of Loayza and et al. the dynamic nature of saving was captured using the lagged private saving rate on the basis that it has long-term effects. Due to Ricardian equivalence, public saving and private savings should fully offset each other. However, the regression will determine the degree of this negative correlation. The macroeconomic stability of the economy is measured by inflation rate. Reflecting heightened uncertainty, private savings tend to rise in more unstable economies signaled by higher inflation rates. Obviously, this is not meant to say that high inflation is good for savings. High inflation distorts relative prices while the associated macroeconomic instability weakens the investment climate. This leads to slower GDP growth that is detrimental to private savings.

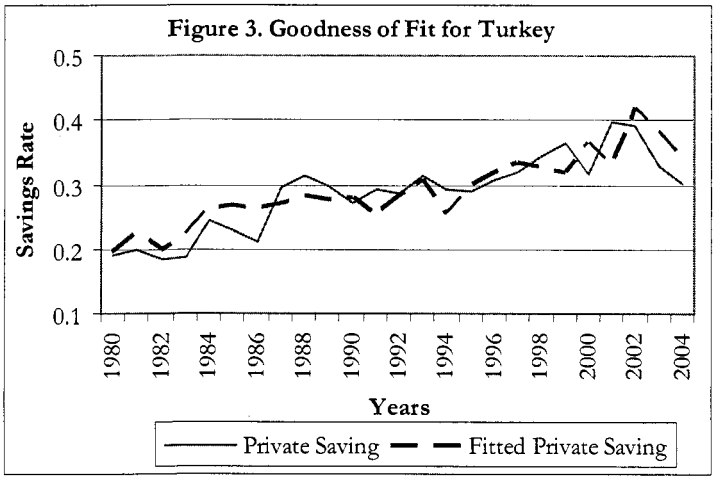
[272] Loayza, N., Lopez, H., Schmidt-Hebbel, K. and Serven, L. 2000. "What Drives Private Saving Across the World?" The Review of Economics and Statistics 82(2):165-181.

Regression Results

Table 1. Fixed Effects IV Regression						
Private Saving	*Coefficient*	*Standard Error*	*t*	*p >|t|*	*95% Confidence Interval*	
Lag.Private Saving	.3958887	.0434351	9.11	0.000	.3107574	.48102
Growth	.3921484	.1144061	3.43	0.001	.1679166	.6163802
GDP Per Capita	.0739968	.0123155	6.01	0.000	.0498596	.0981341
Money	.0130215	.0053884	2.42	0.016	.0024604	.0235826
TOT	.0974209	.0143777	6.78	0.000	.0692411	.1256007
Urbanization	-.1917596	.0363362	-5.28	0.000	-.2629771	-.120542
Young Dependency	-.0897943	.0273332	-3.29	0.001	-.1433663	-.0362223
Old Dependency	-.5774540	.1326124	-4.35	0.000	-.8373696	-.3175384
Public Saving	-.5436394	.0299932	-18.13	0.000	-.6024251	-.4848537
Private Credit	-.0205883	.0088199	-2.33	0.020	-.037875	-.0033016
Inflation	.0245837	.0049869	4.93	0.000	.0148096	.0343579
Constant	-.2764501	.0856758	-3.23	0.001	-.4443716	-.1085285
Wald test that all slope coefficients = 0			*F*	72301.15	*Prob > F*	0.0000
F test that all fixed effects = 0			*F*	4.16	*Prob > F*	0.0000
R-squared within			0.5789			
Number of observations			1160			
Number of countries			70			

Table 1 reports the results on the private saving rate regression on the full sample. Remarkably, all the dependent variables are significant in explaining private saving behavior. Moreover, the regression produced a within R-squared of 0.58, indicating a good fit for our sample.

As the Figure below illustrates, the model predicts private saving reasonably well for Turkey. On this basis, future behavior of private saving has been simulated using projections of determinant variables.



Annex 1.4 Assumptions of per Capita Income Convergence Scenarios for Turkey

Three different scenarios were constructed for the analysis of per capita income convergence between Turkey and the EU25, namely base case, high case and low case scenarios. The base case scenario lays the ground for the analysis and combines the assumptions and features that are most likely to be realized under the current economic policies and reform agenda. The high case scenario presents what Turkey can achieve with a stronger reform agenda, while the low case scenario analyzes a situation where Turkey fails to continue ongoing reform efforts. Key indicators under each scenario are given in the tables below.

Table 1: Key Indicators for Turkey

	(Annual Growth Rates, %)					(percent)	
	GDP (Y)	Capital (K)	Labor (L)	TFP	Population	$\varepsilon_L = (\Delta L/\Delta Y)*(Y/L)$ [1]	I / Y [1]
					Actual		
1973-1980	3.5	8.4	1.8	-0.5	2.26	0.48	
1981-1990	5.2	4.1	1.6	2.7	2.36	0.26	
1991-2000	3.6	5.0	1.5	0.9	1.85	0.39	26.8
1973-2000	4.1	5.6	1.6	1.1	2.15	0.27	
1973-2004	4.1	5.1	1.5	1.3	2.07	0.23	
1990-2004	3.6	4.1	1.2	1.4	1.80	0.28	24.4
2002	7.9	1.2	-0.8	8.1	1.60	-0.10	16.8
2003	5.8	1.3	-1.0	6.0	1.56	-0.17	17.4
2004	8.9	3.2	3.0	5.7	1.45	0.34	21.2
2002-2004	7.5	1.9	0.4	6.6	1.54	0.05	18.4
					Forecast for 2005-2015		
Base case	5.1	4.9	2.0	2.1	1.21	0.39	24.6
High case	6.7	5.9	3.0	2.6	1.21	0.44	25.7
Low case	3.9	4.2	1.3	1.5	1.21	0.34	24.0

[1]: $\varepsilon_L = (\Delta L/\Delta Y)*(Y/L)$ = Output elasticity of labor, I / Y = Total investment over GDP ratio.

Table 2: GDP and Population in the EU25

	(Annual Growth Rates, %)	
	GDP	Population[(1)]
	Actual	
2002	1.1	0.76
2003	1.0	0.50
2004	2.3	0.41
2002-2004	1.5	0.56
	Forecast for 2005-2015	
Base case	2.5	0.10
High case	2.5	0.10
Low case	2.5	0.10

[(1)]: Population forecasts are taken from UN

Annex 1.5: Duration of EU Acquis chapter negotiations for new EU members

Table 1: Number of Months for Negotiations

	Czeck Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Slovakia	Slovenia
Small and medium-sized enterprises	8	8	8	3	3	8	3	8
Science and research	8	8	8	3	3	8	3	8
Education and training	8	8	8	3	3	8	3	8
Fisheries	13	25	14	20	16	51	8	14
Statistics	13	14	13	3	3	13	3	13
Telecommunications	13	13	13	26	13	14	15	13
Consumers and health protection	14	14	14	8	13	14	8	14
Industrial policy	15	13	13	8	8	14	8	13
Free movement of goods	21	33	36	13	15	36	13	36
Economic and monetary union	21	21	21	9	13	21	13	21
Common foreign and security policy	25	25	25	3	3	25	3	25
Customs union	27	48	38	20	21	36	15	43
External relations	27	25	31	9	8	20	3	37
Freedom to provide services	36	36	35	13	16	32	15	32
Company law	36	25	36	15	15	45	15	25
Free movement of capital	38	26	38	15	13	48	14	36
Social policy and employment	38	31	32	16	13	36	15	33
Culture and audio-visual policy	39	32	36	13	13	33	9	38
Environment	39	39	39	21	16	43	22	36
Freedom of movement for persons	43	48	39	16	9	45	16	45
Energy	43	52	31	22	28	43	20	36
Financial control	43	36	27	21	22	27	21	27
Taxation	45	51	39	28	25	48	25	45
Justice and home affairs	45	48	44	28	26	52	28	45
Regional policy and coordination of structural instruments	49	51	52	28	28	55	29	52
Competition policy	55	44	57	9	9	57	34	44
Agriculture	57	57	57	34	34	57	34	57
Transport policy	57	48	45	22	22	51	26	45
Financial and budgetary provisions	57	57	57	34	34	57	34	57

ANNEXES Chapter 2

Annex 2.1 Data and Methodology for Consolidated General Government Classification of Expenditures

1. Economic Classification:

1. In this analysis, the State Planning Organization (SPO) data produced for the Pre-Accession Economic Program (PEP) has been used for the consolidated budget, social security institutions, local administrations, revolving funds, extra-budgetary funds and unemployment insurance fund. With the implementation of the PFMC law in 2006, the institutional coverage will be changed to be more in line with the international definitions and to increase the scope of the general government institutions, however, since the last year covered in this study is 2004, the terminology used here and the coverage are still not consistent with the PFMC law.

2. The SPO is the only public institution which estimates the size of the general government for Turkey. In generating consolidated general government data the SPO is following the GFS manual. The IMF is another source for the general government data in Turkey. However, the purpose of their data is not to measure the overall size of the revenues and expenditures of the general government, but to monitor the performance criteria set in terms of the primary surplus of the public sector. [273]

3. The definition of general government used in this report includes: consolidated budget (CB), local administrations, revolving funds, social security institutions (SSI), Revolving Funds and a common subset of budgetary and extra budgetary funds (EBFs)

a. *Consolidated Budget Institutions*: All of the general and annex budget institutions. As of 2004 the total number of the institutions was 98.

b. *Local Administrations:* 3225 municipalities, 81 special provincial administrations, Iller Bank, 16 water and sewerage companies of metropolitan municipalities and 10 natural gas and public transportation companies.

c. *Revolving funds:* 1,450 (in 2004) enterprises established under the consolidated budget institutions and TRT (Turkish Radio and Television), DG of Dormitory and Student Credits, National Lottery and AOC (Ataturk Forestry Farm).

d. *Social Security Institutions*: SSK, BagKur, Emekli Sandigi and Unemployment Insurance Funds. The UI was included into the balance since year 2000.

[273] For the comparison and methodological differences, please see an internal discussion note on the "Estimation of the Size of the Government in Turkey", prepared by R. Chaves and M. Agar, October 2004.

e. *Extra Budgetary Funds:* The total number of the funds included in the general government balance decreased from 12 in 1999 to 4 in 2004.

4. It should also be noted that the analysis does not include the expenditures of the Central Bank and other public depository institutions, 45 non-financial state economic enterprises (SOEs), nine regulatory and supervisory agencies, and 45 out of a total of 50 special budget institutions listed in the Public Financial Management and Control Law (PFMC).[274] The analysis includes the net subsidies and transfers between these institutions and the consolidated budget.

5. Although the SPO is in general in line with the GFS methodology three adjustments were made to their general government data for the following reasons;

- To eliminate the double counting:

    a. Invoiced payments which are social assistance type of payments made by the Emekli Sandigi through transfers from the consolidated budget were deducted from the social security institutions balance.

    b. Spending on common retirement from BagKur has been netted of in the SSK balance because the same amount of spending is already reported in the BagKur's expenditures.

- To transfer cash –based accounting into accrual accounting;

    c. Interest payments realized in 2001 but reported in 2002 were deducted from 2002 expenditures and added to 2001.

- Moreover, in order to be in line with the primary surplus definition of the GFS 2001 manual, interest revenues of the institutions were deducted. In their current definition of primary surplus, the SPO has been deducting only the interest expenditures but not interest revenues.

[274] Special budget institutions refer to 50 public entities established as affiliated or related to a ministry to provide certain public services. These special budget institutions receive revenues and are authorized to spend them. The complete list of these institutions is presented in the Public Financial Management and Control Law.

2. Functional Classification:

7. In this study a cross classification of general government expenditures -- functional vs economic -- for 2003 and 2004 by combining the expenditures of the institutional coverage defined in the economic classification was used. Regulatory and Supervisory Institutions and some of the special budget institutions which were recently brought under the definition of general government by law 5018 were not included because of the data problem.

8. Main data sources for the study are as follows.

- SPO economic classification of the general government data
- Ministry of Finance, consolidated budget and revolving funds
- SSK, Bağkur, Emekli Sandigi
- High Audit Board (YDK) on the accounts of SSK, Bağkur and TRT (Turkish Radio and Television Board) , AOÇ (Atatürk's Farm) , General Directorate of Credit and Dormitories.
- National Lottery Directorate
- IMF fiscal tables of May 2005
- Ministry of Internal Affairs, General Directorate of Local Authorities

9. As a general principle the GFS consolidation methodology has been used while producing the functional classification of the general government. A detailed analysis on the methodology and assumptions for producing the cross classification is available in Ferhat Emil, 2005, Turkey-Economic and Functional Classification of General Government Expenditures, Draft background analysis note for the CEM. Table 1 below shows the first result of this study. The work is being refined for the upcoming Public Expenditure Review.

Table A.2.1: Cross Functional Classification of the General Government, 2003-2004, in percent of GDP [275]

(% of GDP)	Personnel Expenditures		SSI Premium Payments		Goods and Service Purchase		Interest Payments		Current Transfers		Capital Payments		Capital Transfers		Lending		Contingency		Total	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
General Public Services	0.9	0.9	0.1	0.1	0.5	0.5	16.6	13.3	0.6	0.6	0.4	0.5	0.2	0.2	0.4	0.2	0.0	0.0	19.8	16.4
Defense	0.8	0.8	0.1	0.1	1.4	1.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	-	-	-	-	-	2.5	2.2
Public Order and Safety	1.2	1.1	0.2	0.2	0.6	0.6	-	-	0.0	0.0	0.2	0.2	-	-	-	-	-	-	2.1	2.0
Economic Affairs	1.1	1.1	0.2	0.2	0.5	0.5	0.2	0.1	1.1	1.0	1.5	1.4	0.1	0.1	0.3	0.3	-	-	4.9	4.7
Environmental Protection	0.1	0.1	0.0	0.0	0.0	0.1	-	-	0.0	0.0	0.1	0.1	0.0	0.0	-	-	-	-	0.2	0.2
Housing and Community Amenities	0.3	0.2	0.0	0.0	0.2	0.1	-	-	0.0	0.0	0.6	0.4	0.0	0.0	0.0	0.0	-	-	1.1	0.7
Health	1.3	1.5	0.1	0.1	3.4	3.8	0.0	0.0	0.2	0.3	0.2	0.3	-	-	-	-	-	-	5.4	5.9
Recreation, Culture and Religion	0.2	0.3	0.0	0.0	0.1	0.1	-	-	0.1	0.1	0.1	0.1	0.0	0.0	-	-	-	-	0.5	0.6
Education	2.6	2.5	0.3	0.3	0.6	0.6	-	-	0.5	0.5	0.7	0.5	0.0	0.0	-	-	-	-	4.6	4.5
Social Protection	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	8.5	8.5	0.1	0.1	0.0	0.0	-	0.0	-	-	8.8	8.9
Total	**8.6**	**8.5**	**1.1**	**1.1**	**7.5**	**7.6**	**16.8**	**13.5**	**11.1**	**11.0**	**3.8**	**3.6**	**0.3**	**0.4**	**0.7**	**0.5**	**0.0**	**0.0**	**50.0**	**46.2**

[275] The adjustment with the economic classification data of the SPO will be prepared for the final report.

Annex 2.2 Structure of Tax Revenues in Turkey—Recent Trends and International Comparison

Table A.2.2: Revenues and Expenditures of the General Government, 1999-2004 [1]/

(% of GDP)	1999	2000	2001	2002	2003	2004
Taxes	21.8	24.4	25.6	22.2	23.6	23.6
Direct	9.7	9.7	10.4	7.8	7.6	7.3
Indirect	11.7	14.3	14.9	14.0	15.1	15.7
Wealth	0.4	0.4	0.3	0.4	0.9	0.6
Non-Tax Revenues	2.6	3.0	2.5	3.1	3.0	2.8
Factor Incomes	4.8	4.9	6.3	7.4	6.4	6.9
Interest revenues	0.7	0.8	1.1	1.4	1.3	1.6
Social Funds	5.3	5.8	6.4	6.1	6.6	7.0
Total Revenues	34.5	38.1	40.7	38.8	39.6	40.2
-Privatization	0.1	1.5	0.9	0.2	0.1	0.4
Total Revenues	**34.5**	**38.1**	**40.7**	**38.8**	**39.6**	**40.2**
Primary Revenues	**33.8**	**37.4**	**39.7**	**37.4**	**38.3**	**38.6**

Table A.2.3. Revenue Breakdown for OECD Countries

General Government (in percent of GDP)	2003								
	Taxes & SS	Taxes	Income Tax	PIT	CIT	VAT	Excises	Imp Duty	SS
Australia	...	...	...	...	...	...	...	...	...
Austria	43.0	28.3	12.9	10.4	2.3	9.5	2.7	0.0	14.7
Belgium	45.2	30.6	16.5	13.4	3.0	12.2	2.2	0.3	14.6
Canada	33.6	28.6	15.6	...	...	11.8	0.3	0.2	4.9
Czech Republic	36.5	21.3	9.6	4.9	4.7	8.4	2.5	1.3	15.2
Denmark	48.7	47.1	28.8	26.0	2.8	17.8	4.0	...	1.7
Finland	44.8	32.6	17.5	14.0	3.5	14.0	4.3	0.0	12.2
France	43.4	26.8	10.3	8.1	2.2	14.2	2.5	0.0	16.6
Germany	40.3	22.8	10.3	...	...	7.7	2.6	0.7	17.5
Greece	36.1	23.2	8.3	4.9	3.3	11.9	3.2	0.0	12.9
Hungary	39.1	26.4	9.3	7.1	2.2	13.2	3.3	1.1	12.7
Iceland	...	...	...	...	...	16.8	...	...	...
Ireland	29.6	25.0	11.9	7.0	3.8	9.1	2.0	1.4	4.6
Italy	42.6	29.8	13.2	10.8	2.3	11.7	2.5	0.0	12.9
Japan	...	...	...	...	...	...	...	...	...
Korea	...	...	...	...	...	6.7	...	...	...
Luxembourg	41.9	30.2	15.3	...	...	9.2	0.0	4.8	11.7
Mexico	...	...	...	...	...	...	...	...	...
Netherlands	38.7	24.2	10.1	6.9	3.2	10.7	1.3	1.3	14.5
New Zealand	...	...	...	...	...	...	...	...	...
Norway	43.4	33.4	19.3	11.2	4.3	14.4	1.7	0.1	9.9
Poland	36.6	22.5	6.3	4.1	2.2	12.8	3.9	1.0	14.1
Portugal	36.9	25.1	9.1	5.9	3.2	14.8	3.3	0.2	11.8
Slovak Republic	31.2	18.8	7.0	3.4	2.8	9.3	...	1.4	12.4
Spain	35.8	23.0	10.2	6.9	3.3	10.3	2.6	0.0	12.8
Sweden	50.2	35.8	18.1	16.0	2.1	17.1	3.3	0.0	14.4
Switzerland	...	...	...	...	...	...	...	...	...
United Kingdom	36.1	28.9	13.2	10.4	2.8	10.5	3.5	0.0	7.3
United States	25.5	18.5	10.8	8.9	2.0	10.0	1.6	0.2	7.0
Turkey (2004)	**...**	**...**	**6.8**	**4.6**	**2.2**	**8.0**	**7.0**	**0.3**	**6.8**
OECD average:	**39.1**	**27.4**	**12.9**	**9.5**	**2.9**	**11.8**	**2.5**	**0.7**	**11.7**

Source: OECD; and Turkish authorities.

Annex 2.3 Specific business incentives in Turkey

Turkey has provided various tax incentives since the mid-1960s:

- The first tax incentive package for economic development was introduced in 1964. It included an investment allowance, postponement of import duty on machinery and equipment, an allowance for accelerated depreciation, a longer loss carry forward period, and a lump-sum tax rebate on exports. Many of these benefits were granted on a discretionary basis by the State Planning Organization, which issued investment certificates.
- In the early 1980s other export-oriented tax incentives were introduced. These included export subsidies in the form of input tax rebates, a tax exemption on export credits, and a 20 percent deduction from corporate earnings on exports of manufactured and agricultural products and from the foreign currency proceeds of freight and tourism services.
- In the 1980s, the central bank granted generous lump-sum tax rebates to exports on the provision of evidence that export earnings were transferred to Turkish banks. This subsidy induced fraudulent and overstated export claims, and the system was phased out in 1989.
- In 1988, the authorities established a five-year tax holiday (ten years in the poorest regions) from both corporate and personal income taxes for investments in educational, health, and sports facilities.
- The 1995 investment incentives decree reintroduced a subsidized credit program but only for investments in research and development, environmental protection, regional handicrafts and small and medium-size industries.
- Specific regional-based incentives were provided from 1998 to the end of 2002: an exemption from employers' social security contributions in respect of newly created jobs and 5-year regional corporate income tax holiday.
- By 2000, ITAs were available at differentiated rates from 100 to 200 percent, but with a 15 percent withholding tax to claw back some of the revenue.
- By 2003, Turkey offered two main types of tax incentive: (1) The 40 percent investment tax allowance, which is still in effect; (2) Extensive tax benefits in the FTZ, which are currently as described in Box 4.2.
- Regional incentives were again offered in 2004 and expanded in 2005.

Currently, there are incentives for investment and business activity in specific regions, sectors or activities:

- Software development and R&D activities in the *technological development zones* (established by the Council of Ministers) are exempt from CIT, and the salaries of R&D personnel in these companies are PIT-exempt, until the end of 2013.

- Under the new Law 5084 (which succeeds Law 4324) companies establishing themselves before the end of 2008 in regions with a per-capita income below 1,500 USD are granted free land and energy subsidies. If they operate within an organized industrial zone, they may retain the tax withheld on their wage bill to the tax office for five years. Companies outside an industrial zone retain 80 percent of withheld wage taxes. (In calculating the taxes to be

withheld, it is assumed that all employees are paid the official minimum wage). For the same five-year period, the Treasury pays the employer's social security contribution.

- This scheme was extended to an additional 13 provinces, and made more generous, in 2005: firms of at least 30 employees, which add at least 10 new jobs, attract SSK, PIT subsidies for 'one new and two old' employees. An additional energy subsidy free land is also available.

- Companies established in the former Turkish free-trade zones (now called *customs free zones*) before 6 February 2004 are exempt from CIT until expiry of their license to operate. The wages and salaries of these companies are PIT-exempt until the end of 2008, and their transactions are exempt from all other taxes, duties and fees until then. New entrants may also enjoy CIT exemption until EU accession. Regardless of the expiry date of the original license, profits from the sale of goods produced in the zones can be exempt from tax only while Turkey remains outside the EU.

- Business income derived operating ships registered with the Turkish International Shipping Registry is exempt from CIT (including on capital gains from the transfer of such ships) and PIT withholding. The wages of those working on such ships are PIT-exempt.

- Companies investing in 'cultural activities' (constructing and operating museums, cinemas, theatres, or cultural centres, and so are free land and subsidized energy. For the first three years, they may retain half the income tax withheld from their wage bill), and for the next seven years they may retain 25 percent. Moreover, for 10 years the Treasury pays the employer's social security tax for these companies. To qualify for these benefits, firms have to obtain a 'cultural investment document' from the Ministry of Tourism and Culture.

Several incentives have been removed for new investments, but grandfathered for old:

- Operators of the *organized industrial zones* who received their licenses before 6 February 2004 are exempt from CIT until their license expires, and from PIT until the end of 2008.

- Companies established in *first priority regions* between the start of 1998 and the end of 2000 and employing more than 10 employees are granted a five-year exemption from CIT and a subsequent reduction of CIT until the end of 2007. Until then, the employer's social security contribution is paid by the Treasury.

ANNEXES Chapter 4

Annex Table A 4.1: Labor Code (Law 4857) compliance with EU employment directives

EU directive	Assessment of Labor Code		
	Conforms	Does not conform	Not well-defined or still some differences
Organization of working time	• Normal work week • Minimum rest time • Shift work • Night work	• Maximum week time • Minimum annual leave • Patterns of work	
Framework agreement on fixed-term work	• Definition of fixed-term work • Fixed-term workers rights	• Information/training	• Definition of "comparable permanent worker" • Abuse of successive contracts
Framework agreement on part-time work	• Definition of fixed-time work • No shift from full-time to part-time without consent • Part-time workers rights		• Definition of "comparable full-time worker" • Information/training
Collective redundancies	• Definition of collective redundancy • Information and consultation • Procedure		
Employees' rights in the event of transfers	• Employees' rights • Employers' liabilities	• Information and consultation	
Protection of employees in the event of insolvency	• Claims • Guarantees • Coverage		
Protection of young people at work	• Definition of "young" • Employers' obligations • Restrictions		
Information for employees	• Time limits • Enforcement		• Information content
Consultation and employee representation			• Information content • Coverage • Procedures

Source: Taymaz and Ozler (2005)

ANNEXES Chapter 6
Annex 6.1
EU Strategic Documents on Innovation, Technology and Skills

Year	Reference Document	Key Messages
1973	Directorate General for Research established by European Commission.	
1980s	ESPIRIT – European Strategic Program for R&D in IT	Large technology program to support R&D in IT, which serves as a role model for several EC technology programs.
1984-87	FP1 - First Framework Program	Since 1984 European Community research and technological development activities have been defined and implemented through a series of multi-annual framework programs that last 5 years, with the last year of one and first year of the next program overlapping. FP1 with a budget of EUR 3.75 billion on Research and Technology Development and Demonstration (RTDD) covers 8 strategic areas, with a significant focus on energy issues. Introduces the concept on an "EU approach to R&D" to coordinate national policies.
1987	SEA - Single European Act of 1987	First real codification of European technology policy initiates with the SEA transferring competences for common research and technology policy from national states to the European Commission. Common regional elements and issues covered by FPs, domestic issues still covered by national policies.
1987-1991	FP2 - Second Framework Program	FP2 with a budget of EUR 5.4 billion focused on ICT research.
1991-1994	FP3 - Third Framework Program	FP3 with a budget of EUR 6.6 billion focused on environmental and biotech research.
1994-1998	FP4 - Fourth Framework Program	FP4 with a budget of EUR 12.3 billion united all Community research under one umbrella. Innovation covered specifically for the first time. Technology foresight introduced with FP 4 as a new policy instrument to identify common technology/ sector policy areas to be focused on in the EU. Establishment of Institute of Prospective Studies (IPTS) in Seville, Spain in 1994, comprising a network of 25 national foresight institutes.
1995	Green Paper on Innovation – COM(95)688	Innovation is placed at the core of EU economic policymaking and as a source for economic growth. The business sector is given a special role as catalyst for innovation.
1996	First Action Plan for Innovation in Europe, Innovation for Growth and Employment	First generation "linear" innovation policy: from science to innovation.
2000	The Lisbon Agenda	The Lisbon European Council Summit held in March 2000 set an objective to 'make the European Union the most competitive and dynamic knowledge-based economy in the world by 2010'. Technology, innovation and labor skills are key measures to achieve this target.

Year	Reference Document	Key Messages
1998-2002	FP5 – Fifth Framework Program	FP5 with a budget of EUR 13.8 billion (without EURATOM) focuses on 4 thematic priority areas. FP5 introduces a strategic shift in Commission research policy from funding of research and development towards more comprehensive innovation policy stimulated by the 1995 Green Paper. **4 thematic priority areas:** **3 horizontal measures:** - promotion of innovation and encouragement of SME participation - international role of Community research - improving the human research potential and socio-economic knowledge base
2002-2006	FP6 – Sixth Framework Program	FP6 with a budget of EUR 16.2 billion (without EURATOM) defined as the main policy instrument to establish a European Research Area (ERA) to coordinate fragmented nature of research in Europe. **7 thematic priority areas**
2002-2006	FP6 – Sixth Framework Program (follows)	**4 horizontal measures** focus on EU weakness in the "knowledge" area: - Research and innovation - Human resources and mobility - Research infrastructure - Skills and society
2002	Turkey becomes an associate member of FP6.	Turkey pays EUR 245 million, plus receives EUR 40 million in grants from EC. TUBITAK appointed national coordinator for FP6.
2003	Innovation Tomorrow	To meet Lisbon goals, EU focuses on the transition to third-generation innovation policy, away from a "linear" view of developing innovation (from science to innovation) to innovation as a key element of several policy areas. It also defines innovation in broad terms (e.g. technological and organizational). The essential role of the business sector as a catalyst of innovation is reiterated. **Key Issues Addressed:** **IPRs:** - Proposes European patent and shorter patent cycles, IPR & competition policy need joint

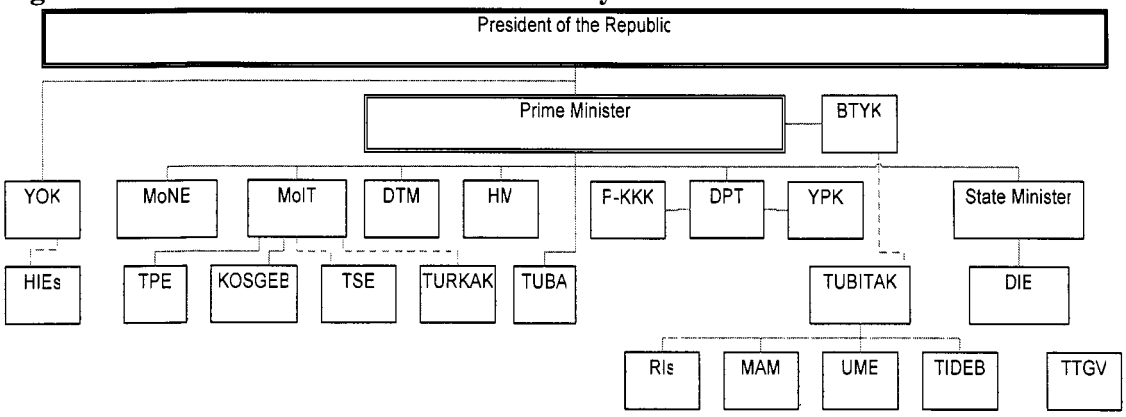
		consideration **Access to Financial Instruments:** - early stage innovation finance for SME - for licensing, patent investigations **Taxation:** - Recommends Tax incentives for R&D & non-RD inputs such as continued improvement in innovation performance **Infrastructure (HEIs):** - promote technology and innovation management training - incentives for individuals with entrepreneurial and intrapreneurial experience to engage in HEI teaching **Trade**: Provide incentives for trade in K intensive business services
Year	**Reference Document**	**Key Messages**
2004	"Innovate for a Competitive Europe" New Action Plan for Innovation	- **Innovate Everywhere** – Innovation at the heart of enterprises. Pull research & entrepreneurship together to create value-added sustainable growth. Promote excellence and benchmarking - **Innovation to Market** – flexible regulations and standards that promote innovation, support consumer confidence in innovative products - **Knowledge Everywhere** – Remove barriers for knowledge transfer and absorption between industry-science and within industry, promote identification, licensing and absorption of existing international IP by SMEs and creation of IP by European firms. Innovation and SMEs to be center of future Framework Programs. - **Invest in Innovation-** Mobilize European Financial Instruments to promote start-ups and young European companies, Structural Funds to support Innovation to internationalize regional clusters and foster absorption by SMEs, proactive State Aid policies that do not impact competition adversely. - **Skills for Innovation –** promoting e-skills, innovation management techniques, import labor and improve skills mobility. **-Efficient Innovation Governance –** improve governance by member states buy in.
2005	CIP - Competitiveness and Innovation Framework Program (CIP)	EC adopts CIP as a new framework program. It will group actions in the area of innovation and competitiveness to fully meet the goals set in the Lisbon agenda.
2007-2013	CIP	Implementation period of the CIP. Innovation-related activities in the RTDD framework programs will be covered under the CIP.

Source: Kapil, N., World Bank, 2005.

Annex 6.2
Key Actors of the Turkey National Innovation System

The two main institutions of the Turkish NIS are the Supreme Council of Science and Technology (BTYK) and the Scientific and Technological Research Council of Turkey (TUBITAK). BTYK is the highest-level science and technology policy making and coordination body. It is chaired by the Prime Minister. BTYK is responsible for approving the policies proposed by TUBITAK, for identifying the responsible bodies and coordinators for each policy measure, and for following up and coordinating implementation of policy actions. TUBITAK is the secretary of BTYK and the implementing agency for science, technology and innovation support programs. It comprises institutions carrying out research in several areas, provides grants for industrial R&D and supports creation of university-industry research programs. Other relevant NIS institutions include the State Planning Organization (SPO), the Technology Development Foundation of Turkey (TTGV), and various Ministries. Figure 1 shows the organizational framework of the Turkish NIS, and Box 1 provides a summary description of the specific functions of each institution comprising the NIS.

Figure 1: The Turkish National Innovation System



BTYK: Supreme Council of Science and Technology
YPK: High Planning Council
P-KKK: Money-Credit and Coordination Council
YOK: Higher Education Council
MoE: Ministry of Education
MoIT: Ministry of Industry and Trade
DTM: Undersecretariat of Foreign Trade
HM: Undersecretariat of Treasury
DPT: State Planning Organization
TPE: Turkish Patent Institute
KOSGEB: Small and Medium Industry Development Organization
TSE: Turkish Standards Institute
TURKAK: Turkish Accreditation Agency
TUBA: Turkish Academy of Science
TUBITAK: Scientific and Technological Council of Turkey
TUDEB: Technology Monitoring and Assessment Directorate of TUBITAK
TTGV: Technology Development Foundation of Turkey
MAM: Marmara Research Centre of TUBITAK
UME: National Metrology Institute of TUBITAK

RIs: Research Institutes
HIEs: Higher Education Institutes

Source: European Trend Chart on Innovation, Annual Innovation Policy for Turkey, September 2003-August 2004.

Box 1: Key Actors of the Turkish National Innovation System

The Supreme Council of Science and Technology (BTYK): the highest level science and technology policy making and co-ordination body in Turkey. Its responsibilities include approval of the policies proposed by the Scientific and Technical Research Council of Turkey (TUBITAK) and of the policies' implementation plan. It is chaired by the Prime Minister and comprises all relevant Ministries.

The Scientific and Technological Research Council of Turkey (TUBITAK): an autonomous body affiliated to the Prime Ministry, TUBITAK is responsible for the formulation of Turkey's science and technology policy as the secretary of BTYK. It is also the implementing agency for science, technology and innovation support programs. Finally, it is the National Coordination Office for Turkey in the EU Sixth Framework Programme. The following institutions are connected to TUBITAK:

- *Marmara Research Center (TUBITAK-MAM)*:* the largest contract research center in the country. It carries out research in several areas, including materials, ICT, energy & environment, food technology, and earth & marine sciences. MAM also runs a technopark and a technology free zone.

- *National Metrology Institute (TUBITAK-UME):* responsible for measurement, training, consultancy, information dissemination and infrastructure support.

- *Technology Monitoring and Assessment Directorate (TUBITAK-TIDEB)*:* provides grants for industrial R&D and has supported creation of six university-industry research centers program (USAMs). They include: Ceramics (at Anadolu University), Textile (Ege University), Biomedical Technologies (Hacettepe University), and advanced manufacturing (METU-OSTIM Organized Industrial Zone). USAMs promote university/industry and inter-firm collaboration for innovation.

State Planning Organization (DPT): responsible for the preparation and implementation of Turkey Five-Year Development Plans, which include innovation policy items for the purposes of budget allocations (assigned through its Co-ordination Council, P-KKK).

Under-Secretariat of Treasury (HM) and Under-Secretariat of Foreign Trade (DTM): involved in the formulation of innovation policies. DTM also provides funds to the "Implementing Agencies" (TUBITAK-TIDEB and the Technology Development Foundation of Turkey, TTGV) for supporting R&D and innovation activities of industry – based on the decree of P-KKK.

Continuation of Box 1: Key Actors of the Turkish National Innovation System

Ministry of Industry and Trade (MoIT): responsible for the determination of the objectives for the Turkish industrial policy, the assignment of technoparks (or 'technology development zones') and the establishment of Organized Industrial Zones. The following institutions are connected to MoIT:

- *Turkish Patent Institute (TPE):* responsible for industrial and intellectual property rights, and for informing and guiding the industrialists, R&D institutes and individuals on IPR-related issues.
- *Turkish Accreditation Agency (TURKAK):* responsible for accrediting organizations and ensuring that these organizations operate in accordance with national and international standards.
- *Turkish Standards Institute (TSE):* responsible for standards preparation, product certification and testing.
- *Small and Medium Size Industry Development Organization (KOSGEB)*:* autonomous public body supporting small and medium enterprises (SMEs). It finances 14 incubators (Technology Development Centers, TEKMERs) in cooperation with technical universities and industrial chambers.

*Note: * indicates implementing agencies that have the explicit objective of facilitating collaboration between industry and research institutions.*

Source: Summary based on Elci, S. (2005), op. cit.

Box 1 (follows): Key Actors of the Turkish National Innovation System

Ministry of Finance (MoF): responsible for the implementation of the R&D tax postponement and tax exemption schemes and the tax exemptions provided to the companies located in technoparks.

Ministry of National Education (MoNE) and the *Higher Education Council (YOK)*: the key players in the NIS for development of the human capital for innovation. They design and implement the education and training policies and coordinate policy implementation.

Turkish Academy of Science (TUBA): It is affiliated to the Prime Minister, and it is mainly engaged in co-operation with the academia and supporting academic research.

State Institute of Statistics (DIE): connected to one of the State Ministers and responsible for providing statistical information related to R&D, innovation and industry.

Technology Development Foundation of Turkey (TTGV):* a not-for-profit foundation financing technology development projects, technoparks, and start-up funds. It is financed by HM from resources of international donors (e.g., the World Bank) and DTM.

Innovation intermediaries that support collaboration between industry and research institutions, in addition to the (*) organizations included above:

Innovation Relay Centers (*IRC-Ege* and *IRC-Anatolia*): established with EC funds from the Sixth Framework Program to foster international technology transfer activities.

Associations and Chambers of Commerce:

- *The Union of Chambers of Commerce and Industry (TOBB)*: a hub of a network of industrial and commercial chambers and non-governmental organizations which facilitates the flows in the NIS.
- *Chambers of industry and commerce* located in several regions around the country. They have important roles as intermediaries. Only a few of them are active on innovation related issues, such as the Istanbul Chamber of Industry and Mersin Chamber of Industry and Trade.
- *Turkish Industrialists' and Businessmen's Association (TUSIAD),* responsible for granting awards for innovation and for organizing Technology Awards and Congress with TTGV and TUBITAK. awareness and facilitating information flows between the public and private sectors.

- *The Technology Management Association (TYD)* which aims at creating a culture of innovation and innovation-based entrepreneurship among school children and teachers in cooperation with private sector companies, NGOs and academia.
- Other remarkable non-governmental organizations with mediating role in innovation related issues include the *Foreign Investors Association (YASED)*, the *Economic Development Foundation (IKV)* and sectoral bodies such as the *ICT Foundation of Turkey (TBV)*, *Informatics Association of Turkey (TBD)* and the *Automotive Manufacturers Association Of Turkey (OSD).* They all carry out activities for raising awareness and facilitating information flows between the public and private sectors.

Technology parks and incubators. There are 17 technoparks established by universities and research centers under the 'Law of Technology Development Regions' and a few incubators set up by private companies (e.g., Ericsson, Koc Holding, and Siemens). The Cyberpark established by the Bilkent University with financing from the World Bank's ITP program-includes an incubator set up jointly with KOSGEB is the first incubator founded through private-public partnership.

*Note: * indicates implementing agencies that have the explicit objective of facilitating collaboration between industry and research institutions.*

Source: Summary based on Elci, S. (2005), op. cit.

Annex 6.3
Strategic Objectives related to science, technology and innovation

BTYK's *Science and Technology Strategies Implementation Plan* for the period 2005-2010 (approved in March '05). The Science and Technology Policies Action Plan is a strategic framework for actions to be undertaken by several S&T institutions between 2005 and 2010. It consists of actions defined under seven strategic objectives that are in line with the main objectives, basic principles and major targets of the National S&T Strategy. The seven strategic objectives are:

- Increasing awareness on science and technology (S&T) and developing an S&T culture
- Increasing and developing S&T human resources
- Supporting result oriented and qualified research
- Increasing the effectiveness of S&T management
- Enhancing the science and technology performance of private firms
- Developing research environment and infrastructure
- Increasing the effectiveness of national and international networks

In a meeting held in March 2005, BTYK appointed TUBITAK as the institution which will monitor and coordinate the implementation of the S&T Plan. TUBITAK has carried out a survey of key participants to increase awareness on the plan and assess the current situation in the areas identified above.

Vision 2023 Project, objectives to be implemented by TUBITAK between 2005 and 2010:

1. Developing knowledge-intensive products with high added value and becoming a global design and production center for consumer goods.
2. Becoming competitive in agricultural production.
3. Developing competencies in development of space and defense technologies.
4. Developing competencies in flexible manufacturing-flexible automation processes and technologies.
5. Gaining skills for clean production.
6. Gaining skills for developing material technologies.
7. Developing competencies in the field of health and life sciences.
8. Gaining skills for developing modern and safe transportation systems.
9. Ensuring food safety and reliability.
10. Gaining skills for healthy and modern urbanization and establishing required infrastructure.
11. Developing competencies in energy technologies.
12. Gaining skills for the productive use of natural resources.
13. Developing competencies in environmental technologies.
14. Strengthening the technological infrastructure for transition to the information society.

Eight priorities for competency building:

1. Information and Communication Technologies
2. Biotechnology and Genetic Technologies

3. Material Technologies
4. Nanotechnology
5. Design Technologies
6. Mechatronics
7. Production Processes and Technologies
8. Energy and Environmental Technologies

Summary of complementary objectives included in *The Eight Five-Year Development Plan (2000-2005)*; *The Preliminary National Development Plan*; *Industrial Policy for Turkey;* and *SME Strategy and Action Plan.*

- Fully establishing and efficiently operating the National Innovation System (NIS).
- Completing legal and institutional arrangements for the smooth functioning of the NIS
- Supporting scientific and technological developments to ensure Turkey's transition to a knowledge economy, including: increasing state supports for R&D, enhancing physical, human and legislative infrastructure for innovation, encouraging establishment of technoparks and promoting growth of venture capital.
- Making the Intellectual Property Rights regime fully operational, and raising public awareness on IPR.
- Encouraging improvement of university-industry collaboration by establishing technological support and development centers, technoparks and technology institutes.
- Increasing innovative capabilities of enterprises through training and international co-operation.

Source: Summary based on Elci, S. (2005), op. cit.

ANNEXES Chapter 8

Annex 8.1: Model-based simulations of impact of EU accession on agriculture and food sectors

Table A 8.1: Pre- and post-accession tariffs for the EU and Turkey with respect to trading partners

(tariffs in percent)

	European Union-25				Turkey				
		2004		Post		2004		Post-accession	
	Turkey	Other	Total	Total	EU	Other	Total	Other	Total
Merchandise trade	**1.2**	**3.4**	**3.4**	**3.3**	**1.9**	**5.4**	**3.5**	**1.8**	**0.9**
Agriculture & food	**5.7**	**14.1**	**13.8**	**13.6**	**47.2**	**35.2**	**39.0**	**8.8**	**6.1**
Agriculture	**2.8**	**13.6**	**13.1**	**12.9**	**68.7**	**36.8**	**44.2**	**7.8**	**6.0**
Rice	98.4	91.6	91.7	91.5	34.0	34.0	34.0	85.6	83.5
Wheat	4.0	10.5	10.3	10.2	40.0	40.0	40.0	12.4	9.1
Other grains	10.6	21.5	21.3	21.2	56.3	56.3	56.3	12.5	11.4
Oil seeds	0.2	1.7	1.7	1.7	20.0	20.0	20.0	1.0	0.9
Sugar	73.8	113.2	113.1	112.9	77.2	77.2	77.2	44.0	18.6
Plant-based fibers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vegetables & fruits	3.0	19.1	17.3	17.0	36.9	36.9	36.9	24.2	21.9
Other crops	0.5	2.8	2.7	2.7	39.7	39.7	39.7	3.6	3.1
Beef and sheep	1.2	6.2	6.1	6.1	135.0	135.0	135.0	1.7	0.2
Other livestock	2.2	1.2	1.2	1.2	135.0	135.0	135.0	0.8	0.4
Processed foods	**12.1**	**14.7**	**14.6**	**14.4**	**27.5**	**31.1**	**29.4**	**11.5**	**6.2**
Beef and sheep meat	64.6	52.5	52.5	52.4	227.5	227.5	227.5	38.4	33.7
Other meat products	28.0	25.8	25.8	25.6	227.5	227.5	227.5	30.0	16.7
Vegetable oils & fats	58.6	11.3	13.6	10.8	31.2	31.2	31.2	9.4	7.9
Dairy products	40.9	42.1	42.0	40.9	150.0	0.0	150.0	0.0	0.0
Other food	2.9	8.8	8.6	8.5	14.1	14.1	14.1	12.0	5.5
Beverages & tobacco	4.9	8.9	8.8	8.7	15.9	15.9	15.9	9.5	3.5
Other natural resources	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.0	0.0
Fossil fuels	0.5	0.2	0.2	0.2	0.0	0.1	0.1	0.2	0.2
Textile & wearing apparel	0.2	7.0	6.7	6.7	0.2	9.3	3.8	5.7	2.3
Textile	0.3	6.5	6.0	6.0	0.2	8.7	3.8	5.6	2.4
Wearing apparel	0.1	7.9	7.5	7.5	0.2	11.1	3.0	6.6	1.7
Leather	0.5	5.9	5.9	5.9	0.2	12.8	4.9	5.8	2.1
Chemicals rubber & plastics	0.3	2.2	2.1	2.1	0.2	4.1	1.3	1.7	0.5
Iron and steel	0.0	0.7	0.6	0.6	0.5	8.2	5.5	0.7	0.4
Motor vehicles & parts	0.0	6.4	6.0	6.0	0.2	8.6	1.0	5.7	0.6
Capital goods	0.1	1.1	1.1	1.1	0.3	1.7	0.8	1.1	0.4
Other manufacturing	2.8	2.8	2.8	2.7	0.1	2.7	1.1	1.9	0.7

Source: GTAP release 6.0 and CEPII.

Table A 8.2: Average domestic support in Turkey pre- and post-ccession

	In percent		In millions of dollars	
	Pre-	Post-	Pre-	Post-
Output subsidies	4.0	5.3	235	1,196
Capital payments	2.0	18.4	94	997
Land payments	56.2	50.7	1,799	2,017
Input subsidies		6.1	0	446
Sub-total			2,128	4,657
Export subsidies	1.7	5.0	33	144
Total			2,161	4,801

Source: GTAP 6.0 and own calculations

Table A 8.3: Output impacts of accession

	Pre-accession	*Change in $ million*	*Percent change*	*Structure[a] in percent*	*Structure[a] in percent*
Agriculture and food	**31,750**	**4,777**	**15.0**	**14.3**	**15.0**
Agriculture	**21,598**	**1,722**	**8.0**	**11.4**	**11.3**
Rice	29	258	896.5	0.1	1.0
Wheat	1,698	241	14.2	8.0	8.8
Other grains	718	-29	-4.0	3.4	3.2
Oil seeds	432	17	3.9	3.0	2.9
Sugar	658	33	5.1	2.1	2.5
Plant-based fibers	2,963	1,875	63.3	7.4	11.4
Vegetables and fruits	9,720	-26	-0.3	57.0	57.3
Other crops	1,608	-645	-40.1	9.9	6.0
Beef and sheep	1,313	509	38.8	3.0	2.6
Raw milk	1,440	193	13.4	3.7	3.7
Other livestock	1,019	-705	-69.2	2.4	0.7
Processed foods	**10,152**	**3,056**	**30.1**	**2.9**	**3.6**
Beef and sheep meat	539	126	23.3	3.5	3.5
Other meat products	317	261	82.4	2.6	3.9
Vegetable oils and fats	1,159	2,389	206.1	8.1	20.2
Dairy products	3,082	250	8.1	38.6	34.0
Other food	2,611	-118	-4.5	26.8	20.8
Beverages and tobacco	2,444	148	6.1	20.5	17.7

Note: a. The structure for the three broad aggregates is relative to aggregate value added. For the agricultural sectors, it represents the share of total agricultural value added and similarly for the food sectors.

Source: LINKAGE simulation results.

Table A 8.4: Trade impacts—change in export and import values in millions of dollars

	Exports			Imports			Net
	EU	Other	Total	EU	Other	Total	Trade
Agriculture and food	**3,734**	**837**	**4,572**	**1,374**	**1,338**	**2,712**	**1,860**
Agriculture	571	710	1,281	614	957	1,571	**-290**
Rice	234	0	234	8	12	21	213
Wheat	25	303	328	36	88	124	204
Other grains	**18**	**98**	**116**	0	135	135	-19
Oil seeds	**3**	**2**	**5**	**8**	**129**	**137**	**-132**
Sugar	**39**	**0**	**39**	**66**	**-1**	**65**	**-27**
Plant-based fibers	**248**	**248**	**496**	**-43**	**-144**	**-187**	**683**
Vegetables and fruits	**-23**	**-36**	**-59**	**30**	**79**	**109**	**-168**
Other crops	**-47**	**-108**	**-156**	**86**	**317**	**403**	**-558**
Beef and sheep	21	176	197	41	6	47	149
Raw milk	9	14	22	0	0	0	22
Other livestock	46	14	60	379	337	717	-657
Processed foods	3,164	127	3,291	760	381	1,141	2,150
Beef and sheep meat	277	0	277	4	133	137	140
Other meat products	**242**	**126**	**368**	**129**	**24**	**153**	**215**
Vegetable oils and fats	**2,272**	**-3**	**2,268**	**102**	**233**	**335**	**1,934**
Dairy products	**266**	**114**	**380**	**296**	**0**	**296**	**84**
Other food	**68**	**-130**	**-62**	**143**	**-7**	**135**	**-197**
Beverages and tobacco	**40**	**21**	**60**	**87**	**-2**	**85**	**-24**
Other natural resources	-31	-30	-61	5	26	31	-92
Fossil fuels	1,653	1,255	2,908	60	1,298	1,358	1,550
Textile and wearing apparel	**-268**	**-16**	**-284**	-24	242	218	-502
Textile	-70	14	6	-17	148	132	-187
Wearing apparel	-219	-49	-268	15	39	53	-321
Leather	**21**	**18**	**39**	**-22**	**55**	**33**	**6**
Chemicals rubber and plastics	**-144**	**-168**	**-312**	**248**	**434**	**682**	**-994**
Iron and steel	**-183**	**-219**	**-403**	**-232**	**413**	**182**	**-584**
Motor vehicles and parts	**-368**	**-117**	**-485**	**182**	**88**	**270**	**-755**
Capital goods	**-532**	**-363**	**-895**	**583**	**393**	**976**	**-1,871**
Other manufacturing	**71**	**-330**	**-260**	270	289	559	-819
Construction	**-19**	-15	-35	4	2	6	-40
Utilities and services	**-759**	**-770**	**-1,530**	294	349	643	-2,173
Other manufacturing	**465**	28	492	1,115	2,942	4,057	-3,565
Non tradeables	**-779**	**-786**	**-1,564**	297	352	649	-2,213
Merchandise trade	**3,931**	**849**	**4,780**	**2,465**	**4,522**	**6,987**	**-2,207**
Total	**3,152**	**63**	**3,216**	**2,763**	**4,873**	**7,636**	**-4,420**

Annex 8.2-Regional Spending By Agency

1. Regional spending for each agency is diverse due to many reasons including location of natural resources (forests in the case of MOEF and water resources in the case of DSI) as well as sizeable ongoing projects. However there are problems with prioritizing the projects where there is very limited available funding. DSI allocates its agricultural spending based on ongoing irrigation projects in 26 different areas. However, funding amounts are insufficient to complete the current projects and there is no clear plan for prioritization of project implementation. Therefore, many areas that are in urgent need wait for a long time to receive enough funding to be completed. With current levels of investment allocation[276] and without inclusion of any new projects, it would take 35 years to finish all DSI's on-going.

2. In 2002, DSI allocates 39 percent of its investment budget in the Southeast region and as much as 28 percent is distributed in Urfa province alone. Almost all of these investments are made under the GAP project[277], still there are problems with GAP due to insufficient funding; i.e. in order to complete the investment program fully by the planned year of 2010 the current size of investment allocations have to be increased considerably. Apart from that, Mediterranean region receives the lowest allocation from DSI budget with only 5 percent.

3. Unlike DSI, MARA spends the lowest share of both recurrent and investment budget in the Southeast region (9 percent each); whereas, the highest share of recurrent and investment budgets are used in Central Anatolia (19 percent and 18 percent respectively. GDRS's spending (direct recurrent and investment costs) is concentrated in the Black Sea region (24 percent) and the least amount is utilized in the Aegean region (10 percent). MOEF also distributes its highest recurrent and investment budgets in the Black Sea region (21 percent and 22 percent respectively) and lowest budgets in the Southeast region (6 percent and 4 percent respectively). Tedas and GD Roads are similar to MOEF and spend the highest portion of investment budget in the Black Sea region (29 percent and 33 percent respectively). Tedas spends the least in the Southeast region (7 percent) and GD Roads spends the least in the Aegean region (5 percent). (Annex 2 Table 2)

4. Rural Expenditures per rural population shows that MARA utilizes the highest amounts in Mediterranean and the least in South East Anatolia; DSI allocates the highest again in South East and the least in Mediterranean; GDRS spends the highest amounts in Black Sea and lowest amounts in Aegean; MOEF spend the highest recurrent in Black Sea and highest investment in Mediterranean and the lowest amounts in South East; TEDAS and GD roads makes the highest investments per rural population in Black Sea and the lowest in South East and Aegean respectively. The biggest total recurrent spending per rural population is made in Black Sea and the biggest investment per rural population is made in South East regions. The lowest ratio for recurrent budget is spent in Aegean and for investment is spent in Central Anatolia. (Annex 2, Table 4 and Chart 3).

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[276] World Bank "Turkey Policy and Investment Priorities for Agricultural and Rural Development", February 2005.

[277] GAP accounted for approximately 15 percent of rural budget expenditures (excluding energy) in 2002. Through 2001, 10.8 quadrillion TL had been spent for GAP. (Ibid, Annex 2.)

Annex 2

Table 1. 2002 Rural Expenditures (Current NTL)

		Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
MARA									
	Recurrent	58,338,522	60,649,751	70,524,832	89,570,525	79,061,152	61,378,262	41,702,766	461,225,809
	Investment	4,528,732	5,211,154	6,031,081	6,183,500	5,730,211	4,168,038	3,249,128	35,101,844
	Total	62,867,253	65,860,905	76,555,913	95,754,025	84,791,363	65,546,300	44,951,894	496,327,653
DSI/1									
	Recurrent	18,795,032	24,948,181	12,702,286	37,578,893	22,644,243	35,393,044	98,595,021	250,656,701
	Investment	74,441,499	98,812,281	50,309,952	148,838,752	89,687,072	140,181,258	390,505,373	992,776,187
	Total	93,236,531	123,760,462	63,012,238	186,417,645	112,331,315	175,574,302	489,100,394	1,243,432,888
GDRS/2									
	Recurrent	102,650,209	99,187,689	124,227,595	157,195,897	246,395,064	165,414,407	116,813,445	1,011,884,307
	Investment	38,755,714	37,448,435	46,902,282	59,349,506	93,026,762	62,452,414	44,103,061	382,038,173
	Total	141,405,923	136,636,124	171,129,877	216,545,403	339,421,826	227,866,822	160,916,506	1,393,922,480
MOEF									
	Recurrent	17,776,113	15,092,250	19,509,806	28,012,348	27,302,283	16,688,577	7,745,540	132,126,916
	Investment	7,293,175	7,184,988	8,834,306	7,669,737	9,884,297	3,316,698	1,715,683	45,898,883
	Total	25,069,288	22,277,238	28,344,112	35,682,085	37,186,579	20,005,274	9,461,223	178,025,799
TEDAS									
	Investment	16,671,511	20,662,846	7,767,465	14,144,358	30,489,515	9,455,821	7,343,418	106,534,934
GD Roads									
	Investment	3,129,426	2,222,713	7,539,278	6,400,467	15,403,894	9,419,892	2,495,704	46,611,374
TOTAL									
	Recurrent	197,559,876	199,877,871	226,964,519	312,357,663	375,402,742	278,874,290	264,856,772	1,855,893,733
	Investment	144,820,056	171,542,417	127,384,364	242,586,320	244,221,750	228,994,121	449,412,367	1,608,961,395
	Total	342,379,932	371,420,288	354,348,883	554,943,983	619,624,492	507,868,411	714,269,138	3,464,855,128
TOTAL (Million USD)									
	Recurrent	131.3	132.9	150.9	207.7	249.6	185.4	176.1	1,233.9
	Investment	96.3	114.0	84.7	161.3	162.4	152.2	298.8	1,069.7
	Total	227.6	246.9	235.6	368.9	412.0	337.7	474.9	2,303.6

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
Ag GDP 2002 (NTL)/3	4,961,121,092	5,634,190,936	4,662,538,116	5,757,973,574	4,526,425,639	2,570,836,311	3,223,838,334	31,336,924,000
Rural Population	2,238,838	3,492,436	2,329,310	5,109,891	2,829,232	3,508,465	3,216,949	22,725,121
Ag GDP Per Capita (NTL)	2,216	1,613	2,002	1,127	1,600	733	1,002	1,379
Exchange Rate ($/TL) (Annual Average)		1,504,119						

1/ DSI's current budget is allocated based on regional distribution of investments.

2/GDRS's current and investment budgets are allocated based on the regional ditsribution of direct costs of investments as shown below.

Direct Costs of Investment	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
Rural Roads	71,052	64,488	74,450	122,673	203,766	128,670	74,438	739,537
Drinking Water & Other	26,958	30,216	44,162	27,417	31,491	29,267	37,095	226,606
Total	98,010	94,704	118,612	150,090	235,257	157,937	111,533	966,143
Region's Share	10.1%	9.8%	12.3%	15.5%	24.4%	16.3%	11.5%	100%

3/ Regional Ag GDP for 2000 is reflated to 2002 levels by using GNP deflator.

Table 2. 2002 Rural Expenditures for Each Agency by Region (%)

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
MARA								
Recurrent	12.6%	13.1%	15.3%	19.4%	17.1%	13.3%	9.0%	100.0%
Investment	12.9%	14.8%	17.2%	17.6%	16.3%	11.9%	9.3%	100.0%
Total	12.7%	13.3%	15.4%	19.3%	17.1%	13.2%	9.1%	100.0%
DSI/1								
Recurrent	7.5%	10.0%	5.1%	15.0%	9.0%	14.1%	39.3%	100.0%
Investment	7.5%	10.0%	5.1%	15.0%	9.0%	14.1%	39.3%	100.0%
Total	7.5%	10.0%	5.1%	15.0%	9.0%	14.1%	39.3%	100.0%
GDRS/2								
Recurrent	10.1%	9.8%	12.3%	15.5%	24.4%	16.3%	11.5%	100.0%
Investment	10.1%	9.8%	12.3%	15.5%	24.4%	16.3%	11.5%	100.0%
Total	10.1%	9.8%	12.3%	15.5%	24.4%	16.3%	11.5%	100.0%
MOEF								
Recurrent	13.5%	11.4%	14.8%	21.2%	20.7%	12.6%	5.9%	100.0%
Investment	15.9%	15.7%	19.2%	16.7%	21.5%	7.2%	3.7%	100.0%
Total	14.1%	12.5%	15.9%	20.0%	20.9%	11.2%	5.3%	100.0%
TEDAS								
Investment	15.6%	19.4%	7.3%	13.3%	28.6%	8.9%	6.9%	100.0%
GD Roads								
Investment	6.7%	4.8%	16.2%	13.7%	33.0%	20.2%	5.4%	100.0%
TOTAL								
Recurrent	10.6%	10.8%	12.2%	16.8%	20.2%	15.0%	14.3%	100.0%
Investment	9.0%	10.7%	7.9%	15.1%	15.2%	14.2%	27.9%	100.0%
Total	9.9%	10.7%	10.2%	16.0%	17.9%	14.7%	20.6%	100.0%

Table 3. 2002 Rural Expenditures by Agricultural GDP (%)

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	South East	Total
MARA								
Recurrent	1.18%	1.08%	1.51%	1.56%	1.75%	2.39%	1.29%	1.47%
Investment	0.09%	0.09%	0.13%	0.11%	0.13%	0.16%	0.10%	0.11%
Total	1.27%	1.17%	1.64%	1.66%	1.87%	2.55%	1.39%	1.58%
DSI/1								
Recurrent	0.38%	0.44%	0.27%	0.65%	0.50%	1.38%	3.06%	0.80%
Investment	1.50%	1.75%	1.08%	2.58%	1.98%	5.45%	12.11%	3.17%
Total	1.88%	2.20%	1.35%	3.24%	2.48%	6.83%	15.17%	3.97%
GDRS/2								
Recurrent	2.07%	1.76%	2.66%	2.73%	5.44%	6.43%	3.62%	3.23%
Investment	0.78%	0.66%	1.01%	1.03%	2.06%	2.43%	1.37%	1.22%
Total	2.85%	2.43%	3.67%	3.76%	7.50%	8.86%	4.99%	4.45%
MOEF								
Recurrent	0.36%	0.27%	0.42%	0.49%	0.60%	0.65%	0.24%	0.42%
Investment	0.15%	0.13%	0.19%	0.13%	0.22%	0.13%	0.05%	0.15%
Total	0.51%	0.40%	0.61%	0.62%	0.82%	0.78%	0.29%	0.57%
TEDAS								
Investment	0.34%	0.37%	0.17%	0.25%	0.67%	0.37%	0.23%	0.34%
GD Roads								
Investment	0.06%	0.04%	0.16%	0.11%	0.34%	0.37%	0.08%	0.15%
TOTAL								
Recurrent	3.98%	3.55%	4.87%	5.42%	8.29%	10.85%	8.22%	5.92%
Investment	2.92%	3.04%	2.73%	4.21%	5.40%	8.91%	13.94%	5.13%
Total	6.90%	6.59%	7.60%	9.64%	13.69%	19.75%	22.16%	11.06%

Table 4. 2002 Rural Expenditures by Rural Population (Current NTL)

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
MARA								
Recurrent	26	17	30	18	28	17	13	20
Investment	2	1	3	1	2	1	1	2
Total	28	19	33	19	30	19	14	22
DSI/1								
Recurrent	8	7	5	7	8	10	31	11
Investment	33	28	22	29	32	40	121	44
Total	42	35	27	36	40	50	152	55
GDRS/2								
Recurrent	46	28	53	31	87	47	36	45
Investment	17	11	20	12	33	18	14	17
Total	63	39	73	42	120	65	50	61
MOEF								
Recurrent	8	4	8	5	10	5	2	6
Investment	3	2	4	2	3	1	1	2
Total	11	6	12	7	13	6	3	8
TEDAS								
Investment	7	6	3	3	11	3	2	5
GD Roads								
Investment	1	1	3	1	5	3	1	2
TOTAL								
Recurrent	88	57	97	61	133	79	82	82
Investment	65	49	55	47	86	65	140	71
Total	153	106	152	109	219	145	222	152

Table 5. 2002 Rural Investments

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
Total Rural Investment (Current NTL)	144,820,056	171,542,417	127,384,364	242,586,320	244,221,750	228,994,121	449,412,367	1,608,961,395
Total Rural Investments by Region	9.0%	10.7%	7.9%	15.1%	15.2%	14.2%	27.9%	100.0%
Rural Investment/Ag GDP	2.92%	3.04%	2.73%	4.21%	5.40%	8.91%	13.94%	5.13%
Per Capita Rural Investment (Current NTL)	65	49	55	47	86	65	140	71
Per Capita Rural Investment (USD)	43	33	36	32	57	43	93	47

Rural Investments by Agency within Regions (%)

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
MARA	3%	3%	5%	3%	2%	2%	1%	2%
DSI	51%	58%	39%	61%	37%	61%	87%	62%
GDRS	27%	22%	37%	24%	38%	27%	10%	24%
MOEF	5%	4%	7%	3%	4%	1%	0%	3%
TEDAS	12%	12%	6%	6%	12%	4%	2%	7%
GD Roads	2%	1%	6%	3%	6%	4%	1%	3%
	100%	100%	100%	100%	100%	100%	100%	100%

Rural Investments by Region for Each Agency (%)

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
MARA	13%	15%	17%	18%	16%	12%	9%	100%
DSI	7%	10%	5%	15%	9%	14%	39%	100%
GDRS	10%	10%	12%	16%	24%	16%	12%	100%
MOEF	16%	16%	19%	17%	22%	7%	4%	100%
TEDAS	16%	19%	7%	13%	29%	9%	7%	100%
GD Roads	7%	5%	16%	14%	33%	20%	5%	100%

	Marmara	Aegean	Mediterranean	Central Anatolia	Black Sea	East Anatolia	SouthEast	Total
Ag GDP 2002 (Current NTL)/1	4,961,121,092	5,634,190,936	4,662,538,116	5,757,973,574	4,526,425,639	2,570,836,311	3,223,838,334	31,336,924,000
Rural Population	2,238,838	3,492,436	2,329,310	5,109,891	2,829,232	3,508,465	3,216,949	22,725,121
Ag GDP Per Capita (Current NTL)	2,216	1,613	2,002	1,127	1,600	733	1,002	1,379
Ag GDP Per Capita USD/2	1,473	1,073	1,331	749	1,064	487	666	917

1/ Regional Ag GDP for 2000 is reflated to 2002 levels by using GNP deflator.

2/ Exchange Rate ($/TL) (Annual Average) 1,504,119

ANNEXES Chapter 9

Annex 9.2 Data Tables

Table 1: Total Health Expenditures, by Financing Agents, 1999-2004 (billion liras)

	1. General Govt	1.1 General Govt exc Social Sec. Funds	1.1.1 Central Govt	1.1.2 Local Govt	1.2 Social Security Funds	2. Private Sector	2 2.1 Private Household	2.2 Other	Total
1999	3,047,000	1,432,340	1,273,930	158,410	1,614,660	1,937,550	1,454,430	483,120	4,984,550
2000	5,190,130	2,308,090	1,845,170	462,920	2,882,040	3,057,780	2,280,150	777,630	8,247,910
2001	7,022,381	2,937,265	2,818,996	118,269	4,085,116	4,749,617	3,541,733	1,207,884	11,771,998
2002	11,743,273	4,497,469	4,331,273	166,196	7,177,304	6,828,504	5,091,934	1,736,570	18,571,777
2003	15,787,575	5,056,720	4,831,306	225,414	10,662,355	8,364,918	6,237,619	2,127,299	24,152,492
2004	19,526,730	6,582,478	6,316,507	265,972	12,875,752	9,159,585	6,830,193	2,329,392	28,686,315

Source: MOH, National Health Accounts (for 1999, 2000); updated author calculations for other years using MOH/MOF/SSK/BK/ES data sources

TABLE 2: Program and Actual Health Expenditures, 2005

Billion TL		2005 Prog	2005 Actual	Variation (2-1)	% Variation (3/1)
	HEALTH	1,190	1,115	-75	**-6.34**
Budget	**PHARMA**	1,125	832	-293	**-26.04**
(Civil Servants)	**TOTAL**	**2,315**	**1,947**	**-368**	**-15.91**
	HEALTH	3,960	3,117	-843	**-21.29**
SSK	**PHARMA**	2,340	3,551	1,211	**51.74**
	OTHER	480	432	-48	**-10.10**
	TOTAL	**6,780**	**7,099**	**319**	**4.71**
	HEALTH	1,077	1,132	55	**5.08**
ES	**PHARMA**	1,590	1,525	-65	**-4.07**
	OTHER	143	126	-17	**-11.96**
	TOTAL	**2,810**	**2,783**	**-27**	**-0.97**
	HEALTH	1,501	1,297	-204	**-13.57**
Bağ-Kur	**PHARMA**	2,160	2,058	-102	**-4.72**
	OTHER	253	268	15	**5.78**
	TOTAL	**3,914**	**3,623**	**-291**	**-7.43**
	HEALTH	850	902	52	**6.14**
Green Card	**PHARMA**	300	779	479	**159.63**
	TOTAL	**1,150**	**1,681**	**531**	**46.18**
	HEALTH	8,428	7,563	-865	**-10.27**
TOTAL	**PHARMA**	7,665	8,745	1,080	**14.09**
	OTHER	876	825	-51	**-5.82**
	TOTAL	**16,969**	**17,133**	**164**	**0.96**

Sources: (1) Budget (CS):January-November figures are taken from GD of Public Accounts of MoF. December is estimated to be the average of August-November.
(2) SSK : January-November taken from SSK. December is an estimate.
(3) ES : Taken from ES. January-September realization. October-November provisional. December is estimated to be the average of August-November.
(4) BK : January-November taken from BK. December is an estimate.
(5) Green Card: "Total" figures are taken from GD of Public Accounts of MoF. December is estimated to be the average of Aug-Nov. Last three months for "Health" and "Pharma" are estimates.

TABLE 3: Trends in Health Expenditures, 1998-2005

Billion TL		1998	1999	2000	2001	2002	2003	2004	2005
	HEALTH	102,491	190,191	285,429	479,749	836,776	1,063,078	1,242,000	1,114,613
BUDGET	**PHARMA**	112,689	198,272	308,001	543,393	817,224	972,410	1,220,000	832,094
	TOTAL	**215,180**	**388,463**	**593,430**	**1,023,142**	**1,654,000**	**2,035,488**	**2,462,000**	**1,946,707**
	HEALTH	204,596	389,238	622,780	1,123,942	1,493,315	2,559,000	3,287,500	3,116,900
SSK	**PHARMA**	165,585	304,017	572,409	992,616	1,878,558	2,450,000	2,471,528	3,550,600
	OTHER	36,000	55,445	85,000	141,400	222,477	352,079	446,500	431,519
	TOTAL	**406,181**	**748,700**	**1,280,189**	**2,257,958**	**3,594,350**	**5,361,079**	**6,205,528**	**7,099,019**
	HEALTH	68,031	135,635	222,152	345,171	645,117	867,046	1,135,000	1,131,833
ES	**PHARMA**	106,044	198,076	358,185	660,135	1,099,664	1,516,601	1,524,000	1,525,095
	OTHER	12,965	25,737	42,736	84,089	95,440	114,543	136,000	125,951
	TOTAL	**187,040**	**359,448**	**623,073**	**1,089,395**	**1,840,221**	**2,498,190**	**2,795,000**	**2,782,879**
	HEALTH	52,920	140,327	215,605	330,043	692,900	996,700	1,111,000	1,297,363
Bağ-Kur	**PHARMA**	121,417	231,419	458,336	780,446	1,321,531	1,892,100	2,302,000	2,058,075
	OTHER	26,918	41,672	56,355	118,360	180,900	200,700	247,000	267,629
	TOTAL	**201,255**	**413,418**	**730,296**	**1,228,849**	**2,195,331**	**3,089,500**	**3,660,000**	**3,623,067**
	BUDGET	51,843	108,161	166,580	300,817	536,937	665,000	612,000	902,180
GREEN CARD	**PHARMA**	9,095	19,273	31,939	91,438	112,878	252,000	450,000	778,880
	TOTAL	**60,938**	**127,434**	**198,519**	**392,255**	**649,815**	**917,000**	**1,062,000**	**1,681,060**
	HEALTH	479,881	963,552	1,512,546	2,579,722	4,205,045	6,150,824	7,387,500	7,562,890
TOTAL	**PHARMA**	514,830	951,057	1,728,870	3,068,028	5,229,855	7,083,111	7,967,528	8,744,744
	OTHER	75,883	122,854	184,091	343,849	498,817	667,322	829,500	825,099
	TOTAL	**1,070,594**	**2,037,463**	**3,425,507**	**5,991,599**	**9,933,717**	**13,901,257**	**16,184,528**	**17,132,732**

TABLE 4: Real Increase in Health Expenditures, 1998-2005 (percent, y/y)

Billion TL		1998	1999	2000	2001	2002	2003	2004	2005
	HEALTH	26.0	19.1	-0.5	8.2	20.8	3.7	6.7	-16.7
BUDGET	**PHARMA**	16.4	12.9	2.9	13.6	4.2	-2.9	14.6	-36.7
	TOTAL	**20.8**	**15.9**	**1.2**	**11.0**	**12.0**	**0.5**	**10.5**	**-26.6**
	HEALTH	9.8	22.1	6.0	16.2	-8.0	39.9	17.3	-12.0
SSK	**PHARMA**	32.6	17.8	24.8	11.7	31.1	6.5	-7.9	33.4
	OTHER	-5.3	-1.1	1.6	7.1	9.0	29.2	15.8	-10.3
	TOTAL	**16.3**	**18.3**	**13.3**	**13.6**	**10.2**	**21.8**	**5.7**	**6.2**
	HEALTH	29.2	28.0	8.5	0.0	29.4	9.7	19.5	-7.4
ES	**PHARMA**	26.5	19.9	19.8	18.7	15.4	12.6	-8.2	-7.1
	OTHER	19.8	27.4	10.0	26.7	-21.4	-2.0	8.4	-14.0
	TOTAL	**27.0**	**23.3**	**14.9**	**12.6**	**17.0**	**10.8**	**2.2**	**-7.6**
	HEALTH	63.3	70.2	1.8	-1.4	45.4	17.4	1.8	8.4
Bağ-Kur	**PHARMA**	177.4	22.3	31.2	9.6	17.3	16.9	11.1	-17.0
	OTHER	39.1	-0.6	-10.4	35.2	5.8	-9.4	12.4	0.6
	TOTAL	**110.7**	**31.8**	**17.1**	**8.3**	**23.7**	**14.9**	**8.2**	**-8.1**
	BUDGET	28.7	33.9	2.1	16.3	23.6	1.1	-16.0	36.9
GREEN CARD	**PHARMA**	77.9	36.0	9.8	84.3	-14.5	82.2	63.1	60.7
	TOTAL	**34.3**	**34.2**	**3.2**	**27.2**	**14.7**	**15.2**	**5.8**	**47.0**
	HEALTH	22.1	28.9	4.0	9.8	12.9	19.4	9.7	-4.9
TOTAL	**PHARMA**	45.3	18.6	20.5	14.3	18.0	10.6	2.7	1.9
	OTHER	11.3	3.9	-0.7	20.3	0.5	9.2	13.5	-7.6
	TOTAL	**31.3**	**22.2**	**11.4**	**12.6**	**14.8**	**14.2**	**6.3**	**-1.7**

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MAP SECTION

TURKEY

PROVINCE CAPITALS*
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
PROVINCE BOUNDARIES*
INTERNATIONAL BOUNDARIES

*Province names are the same as their capitals.

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