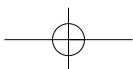
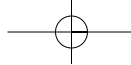


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# A Way Forward for the Turkish Economy: Lessons from Korean Experiences

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## A Way Forward for the Turkish Economy: Lessons from Korean Experiences

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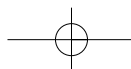
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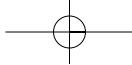
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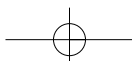
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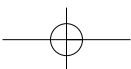
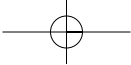


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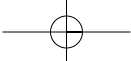
Today, it is widely recognized that the development gap between the developing and developed countries has been fundamentally attributable to the knowledge gap between them. With high acknowledgement of its importance in economic and social development, international society has put forth great effort to narrow the knowledge gap. As a country that made a successful transition to a developed country after the ruins of war and benefited greatly from international society, Korea owes it to the world to share its own developmental experiences with developing countries.

The Korean Ministry of Finance and Economy (MOFE) launched its annual program called Knowledge Sharing Project (KSP) to reduce the gap and assist the development of partnership countries in 2004. The Republic of Turkey was chosen as one of the target countries along with Indonesia in the second year, 2005-2006. The main job of the project was to give specific policy recommendations for selected current concerns of the Turkish government - ① Public Policy for Private Sector Development, ② Technology Development and Innovation System, ③ Industrialization and Human Resources Development, ④ Administrative Response to the Public Management Reform, and ⑤ Reforming the Fiscal Management System.

I would like to express my gratitude to Prof. Sung Hee Jwa, Professor of Seoul National University, and all the project consultants – Prof. Won Young Lee, Prof. Kwan Young Kim, Prof. Jin Park, Dr. Young Sun Koh, and Prof. Yong Yoon – for all their hard work. My sincere thanks go to Prof. Sung Hee Jwa, the project manager and editor, whose efforts made this project successful. I would also like to thank all the officials of the State Planning Organization, Turkey for their active participation, warm hospitality and friendship. My special thanks go to Dr. Ahmet Tiktik, President of the State Planning Organization, for the strong support he has shown for this project. Likewise, the invaluable advice contributed by Chairman Nyum Jin, former Deputy Prime Minister of the Ministry of Finance and Economy, and all other members of the Steering Committee is greatly appreciated. Last but not least, the members of the International Development Exchange Program have been a great support throughout the project.

It is hoped that this project will make contributions to Turkish economic development and serve as an opportunity to promote mutual cooperation between Korea and Turkey. The policy recommendations in this report are based on Korean experiences and are solely the opinions and recommendations of the authors.

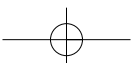
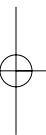
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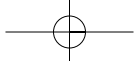


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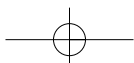
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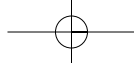
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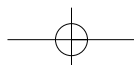
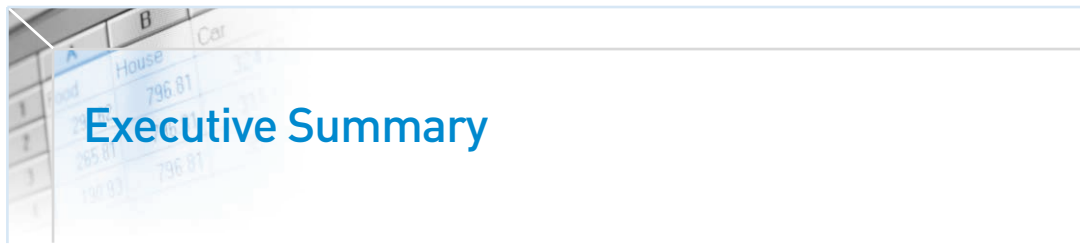




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To meet the demands and to assist the economic and social advancement of the development partnership country more efficiently, the Ministry of Finance and Economy of the Republic of Korea launched a special project under the name of “The Knowledge Sharing Program” with the Republic of Turkey. The KDI School of Public Policy and Management(KDI School) was assigned as the project implementing agency (PIA) with the overall responsibility of planning, implementing and evaluating all the project activities. The close collaboration, consultation, and exchange with the State Planning Organization(SPO) of the Republic of Turkey has been a critical factor in producing the outcomes, namely recommendations, of the project.

Five projects constitute the Knowledge Sharing Program(KSP) of Korea and Turkey 2005-6, namely, (1) Public Policy for Private Sector Development, (2) Technology Development and Innovation System, (3) Human Resources Development, (4) Administrative Response to Public Management Reform, and (5) Reforming the Fiscal Management System.

The projects involved close collaboration between Korea and Turkey through careful research, workshops and seminars on the specific policy areas listed above with the aim of providing policy recommendations that emphasize enhancing the development capacity of the Republic of Turkey at the personal, institutional, and national levels, mainly through the sharing of policy experiences. Dr. Sung Hee Jwa, Visiting Professor at the Graduate School of International Studies at Seoul National University, was appointed as the Project Manager (PM) for the Korea-Turkey KSP Program, while Mr. Kamil Ayanoglu of the State Planning Organization (SPO) served as his counterpart in Turkey.

Given Korean developmental experiences, the Korean experts provide a theory of incentives based on Economic Discrimination(ED), which is presented in further detail in the following chapter. The theory basically recommends that Turkey sharpen the discriminatory function of public policy at ALL levels, including the design, planning and implementation stages. Specifically, ED, by getting the incentives right through dynamic selection and reward of better economic performers, is meant to encourage economic actors (whether in the public or private

sectors) towards achieving individual goals and thereby contributing to aggregate national economic development. We briefly summarize the topics of the project which are presented in detail in the latter chapters.

Prof. Sung Hee Jwa and Prof. Yoon Youg were responsible for the project on PRIVATE SECTOR DEVELOPMENT. Sharpening the policy instruments for SME and FDI promotion was identified as the most important policy issue for private sector development in Turkey. Recommendations for consideration and action include: (1) improve the public policy making and implementation machinery by sharpening the discrimination power of public policy in line with national development goals. This involves detachment of egalitarianism (especially populism) from the economic policymaking process, adoption of a more focused strategic framework, and promotion of economic as well as regional amalgamation, (2) enhance SME and corporate sector by placing ED at the center of SME promotion policy (especially adopting the selection and reward “policy cycle”), create a “Firm Evaluation Body” for SMEs, and encourage the formation and growth of large corporations, (3) reform laws and regulations to meet the needs of the private sector especially by simplifying rules, regulations and procedures, as well as promote competition in the private sector, and (4) place strong incentives in the informal sector and good infrastructure for private sector development, as well as promote FDI by encouraging “export contests” to strengthen competition in free trade zones.

Prof. Won Young Lee was responsible for the TECHNOLOGY DEVELOPMENT AND INNOVATION SYSTEM PROJECT. The following recommendations were made: 1) adopt more aggressive industry promotion policy for industrial restructuring and upgrading. For this purpose, it is recommended that long-term visions of strategically important industries are made jointly with the private sector and the government, and to set up “industrial technology centers” of strategically important industries, whose mission may include: the technology extension services, management consulting, assistance for international marketing, testing, and policy research; 2) pursue international technology transfer and domestic technological capability building simultaneously. More effort is needed to improve the foreign investment environment and to increase domestic R&D simultaneously; 3) enhance cooperation between industry and university. For this goal, reforms are called for in the university management system to strengthen self-motivation. A higher priority should be given to joint projects between universities and industry in allocating the governmental R&D grants and in accepting firms in TDZ’s; 4) improve the effectiveness of SME innovation and venture business support systems. It is important to set up a vision as to the course of industrial development and the pattern of cooperation and specialization among large firms and SMEs. The government needs to utilize procurement policy to encourage innovation and to monitor the requests and complaints of venture enterprises.

Prof. Kwan Young Kim was responsible for the part on HUMAN RESORUCES

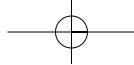
DEVELOPMENT. Policy recommendations suggested are: (1) the government needs to institute a demand-driven training policy to forge a closer tie between vocational training and the labor market, (2) tuition increase at higher schools to encourage the establishment of private or foundation schools, and finally to seek more various sources of funds available for education investments thereby, enhancing the quality of education, (3) creation of a “Cyber School” for the correction of imbalance of education among regions and genders, (4) promote administrative and financial autonomy in secondary and tertiary education through decentralization process to improve the efficiency of education policy, and (5) improve the incentive scheme to encourage the establishment of more private schools.

Prof. Jin Park took up the project on ADMINISTRATIVE RESPONSE TO PUBLIC MANAGEMENT REFORM. The project covers personnel management reform for the government and reform of local government, which are considered the two pillars of public management reform, particularly needed to upgrade Turkey’s civil servants. Policy recommendations for each provision of the new Public Personnel Law, which was drafted in late 2004 in Turkey (but not yet legislated) were made, which included the following: (1) establish Government Reform Office whose mission is to reform the central and local governments and SOEs in the area of administrative and fiscal reform including privatization either in the Prime Minister’s Office or SPO, (2) reduce the number of civil servants and instead raise the financial compensation, (3) clarify the definition of “contracted personnel” in Turkey, which should be divided into different groups having different prescription offered to each group, (4) introduce a relative evaluation and a multi-dimensional evaluation in major personnel decisions such as promotion and (5) establish a training institute focusing on short-term training programs for both the central and local government officials. Regarding the empowerment to local government, the second part of the project, it was suggested that (1) the government needs to start transferring administrative duties to local government but in a more gradual manner, (2) less control and more empowerment be coupled with increased performance monitoring, (3) implement financial accountability, public procurement reform such as e-procurement system in Korea (G2B), accounting standard and budget classification at the local as well as the central levels, (4) enhance the urban ratio while maintaining the regressive aspect of the current fiscal redistribution mechanism to metropolitan municipalities, and (5) reduce the number of provinces (81) and municipalities (3,200) for more focused growth pole strategy.

Dr. Young-Sun Koh worked on the REFORMING THE FISCAL MANAGEMENT SYSTEM PROJECT. The Korean government embarked on an effort to overhaul its fiscal management system in the last few years. Notwithstanding the relatively short experience of Korean fiscal management reform, the following were suggested: (1) program evaluation and program review should supplement strategic plans and performance monitoring because the latter are by themselves seldom enough to foster performance orientation in government, (2) the central budget office should play a leading role in introducing performance management, (3) the

central budget office and line ministries should be prepared for the increased workload due to performance management, and (4) strong leadership from the top is a must to fight evaluation fatigue and institutional fragmentation of performance management.

The underlying message of policy recommendations provided by Korean experiences is that Turkey needs to get incentives right to regain the much-needed rigor in its economy at the public and private levels. Turkey's economy, in short, should be turned into an arena for free and fierce rivalry, not unlike the "beauty contests" of the Miss Universe pageants, where every economic agent will rival each other for the "economic prize." This will translate individual efforts and success into national economic growth and prosperity. This is true for not only the private or public sectors, but also for manufacturing, agriculture, education, technology, government officials, firm growth, consumer satisfaction, etc. The quest for the "economic prize" through rivalry in free and fair economic contests, which we argue can be enforced by Economic Discrimination(ED), is what is needed to place the right incentives that will stimulate economic actors to make sincere effort towards improving their material wellbeing as well as creating a better society for themselves.



A Way Forward for the Turkish Economy:  
Lessons from Korean Experiences



## Chapter 1

# Background on Turkish and Korean Economic Development Experiences

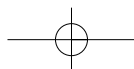
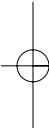


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# Background on Turkish and Korean Economic Development Experiences

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Figure 1-1 ●● Map of Turkey



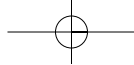


Figure 1-2 ●● Map of Korea



Figure 1-3 ●● National Flags

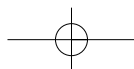


Table 1-1 ● Some Basic Information and Statistics

Description	Turkey	Korea
Area	780,580 sq km	98,480 sq km
Population (July 2006 est.)	70,413,958	48,846,823
Population growth rate (July 2006 est.)	1.06%	0.42%
Life expectancy (2005)	72.62 years	77.04 years
Literacy (2005)	86.5%	97.9%
Government type	Republican parliamentary democracy	Republic
Capital	Ankara	Seoul
Administrative divisions	81 provinces	9 provinces
Executive Branch	Chief of state: President Ahmet Necdet SEZER (since 16 May 2000) Head of government: Prime Minister Recep Tayyip ERDOGAN (14 March 2003)	Chief of state: President Moo-hyun ROH (since 25 February 2003) Head of government: Prime Minister Myeong-sook HAN (since 19 April 2006)
GDP (PPP) (2005 est.)	\$552.7 billion	\$965.3 billion
GDP - real growth rate (2005 est.)	5.1%	3.9%
Per capita income (PPP) (2005 est.)	\$7,900	\$20,400
GDP by composition (2005 est.)	Agriculture: 11.7% Industry: 29.8% Services: 58.5%	Agriculture: 3.7% Industry: 40.1% Services: 56.3%
Labor force (2005 est.)	24.7 million <sup>1</sup>	23.53 million
GINI for family incomes	42 (2003)	35.8 (2000)
Inflation rate (CPI- 2005 est.)	7.7%	2.6%
Investment (gross fixed: 2005 est.)	19.3% of GDP	28.9% of GDP
Budget (2005 est.)	Revenues: \$93.58 billion Expenditures: \$115.3 billion	Revenues: \$195 billion Expenditures: \$189 billion
Public debt (2005 est.)	67.5% of GDP	30.1% of GDP

1 \_ About 1.2 million Turks work abroad

Description	Turkey	Korea
Current A/C Balance (2005 est.)	\$-22 billion	\$14.32 billion
Exports (2005 est.)	\$72.49 billion f.o.b.	\$288.2 billion f.o.b.
Imports (2005 est.)	\$101.2 billion f.o.b.	\$256 billion f.o.b.
External debt (30 June 2005 est.)	\$161.8 billion	\$188.4 billion
Exchange rates	Turkish liras per US dollar - 1.3436 (2005), 1.4255 (2004), 1.5009 (2003), 1.5072 (2002), 1.2256 (2001)	Korean won per US dollar - 1,024.1 (2005), 1,145.3 (2004), 1,191.6 (2003), 1,251.1 (2002), 1,291 (2001)
Mobile cellular (2004)	34,707,500	36,586,100
Internet users	5.5 million (2003)	33.9 million (2005)

# 1. Background on Turkey

Turkey has a very advantageous geographical position, constituting a natural link between Europe and Asia, and recently, it has started to make greater use of this, especially in trade and tourism. Its strategic location and political alignment with the West made it a founding member of NATO. According to World Bank classifications, Turkey is a lower-middle-income developing country. Turkey was accepted as a candidate member of the EU in 1999 after a customs union agreement effected in 1996. Its close ties with the EU date back to 1963. Here, we provide brief background information on Turkey's political and economic landscape, as well as the country's planning and implementation machinery.

## 1.1 Political Landscape

Following the fall of the Ottoman Empire, Mustafa Kemal, later called Atatürk, founded the Turkish Republic on October 29, 1923. The newly born nation was in the same territories that had once been the center of one of the world's largest empires, with its boundaries extending into three continents between North Africa, the Arabian Gulf and Lower Austria. Atatürk, elected as the first President, immediately initiated a series of reforms in society, religion, politics, and language, thus, establishing the ideological base of modern Turkey.

Turkey was a one-party state until 1946, after which a second party was formed. This second party came to power after the elections in May 1950. In the midst of general unrest, on May 27, 1960 a military junta took charge, presided over by General Cemal Gürsel. A new constitution was prepared and accepted on July 9, 1961. One of the changes was the establishment of a bicameral parliament consisting of a Senate (now abolished) and a Grand National Assembly, elected by direct vote on the basis of proportional representation.

Alternating parliamentary and military governments experienced growing instability until 1980, when a National Security Council representing the armed forces assumed control of the country, administering it without political parties. The 1982 Constitution, approved by a majority of voters, provides for a democratic parliamentary government.

In the elections held on November 6, 1983, the Anavatan (Motherland) Party came to power under the leadership of Turgut Özal, a former head of the State Planning Organization, a deputy prime minister during the military administration and a convinced proponent of a liberal, free-market economic policy. Repeating its success in the elections held in November 1987, the Özal

government promoted free trade and encouraged dynamic growth, partly by offering incentives but mainly by liberalizing the restrictions in the most important areas such as import, export, foreign currency, banking, and foreign investment. Before the end of his term as Prime Minister, Mr. Özal resigned to become President of Turkey.

In 1991, the True Path and Social Democrat Popularist parties formed a coalition government. The coalition broke down in 1995, and an early election was called in December of that year. A coalition between the Refah Party and DYP was formed, which lasted until July 1997. Following this, a coalition of the ANAP, Democratic Left and Democratic Turkey parties was formed. The April 1999 elections resulted in a coalition government formed by the Democratic Left Party (DSP), Nationalist Movement Party (MHP) and Motherland Party (ANAP). In July 2002, the coalition government, worn out due the financial crises, made a decision to call for early elections in November 2002.

Turkey's political landscape has changed significantly with the three elections in November 2002. A new party in the political scene, the Justice and Development Party (AKP), won a majority of the seats in Parliament and established a single party government. This meant a radical change in Turkey's political history, which had been governed by coalitions since 1991.

### 1.1.1 Political System

*Structure of government:* According to the 1982 Constitution, the parliament (TBMM - the Grand National Assembly) is the sole legislative power in Turkey. It consists of 550 representatives who are elected directly by adult suffrage at least every five years. To replace representatives who resign or die, interim elections are held 30 months after the main elections. If 5% of the 550 seats fall vacant, an election is held within three months, regardless of the 30-month period.

The President is elected by the parliament. The term of office is seven years, with no option for reelection. The President appoints a Prime Minister, who in turn chooses the Council of Ministers. The President approves the Council of Ministers.

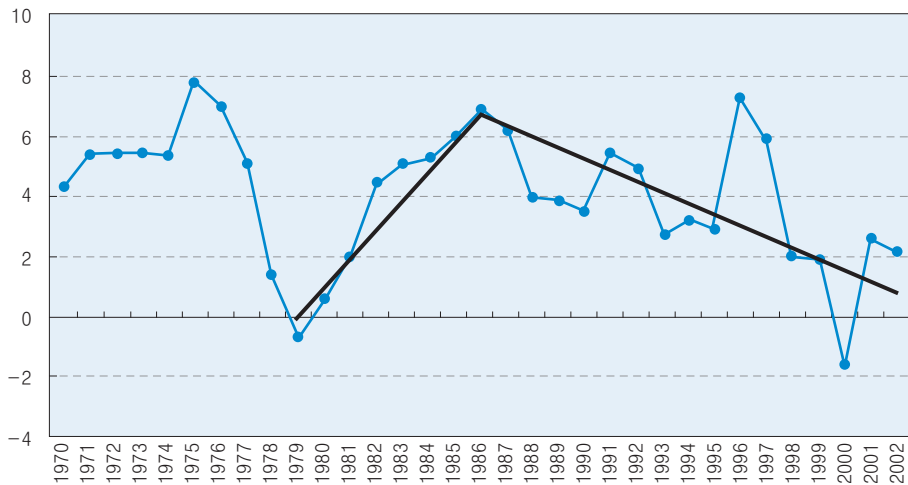
*Legislation:* A law originates either as a proposal from the deputies or as a bill by the Council of Ministers. The draft is presented to the president of the parliament, who turns it over to the relevant commission. If the commission approves it, it is presented to the General Assembly; if ratified, it then goes to the President for final approval. If the President approves, it is issued in the Official Gazette and enters into force as of the date stipulated in the publication. If the President does not approve, it is returned within 15 days to the parliament for reconsideration; the parliament either insists on the original version or amends it, at which time

it is considered for approval. If the parliament insists on the original text, the President must sign it and send it for publication in the Official Gazette. In case of amendment, the President may veto it again. A Law Decree is passed by the Council of Ministers and can easily be amended.

## 1.2 Economic Landscape

The original concept of a centrally controlled economy dominated by State Economic Enterprises (SEES) and Public Economic Enterprises (PEES), with a small private sector heavily protected by investment regulations, and foreign exchange and import controls, has been superseded by the development of free enterprise and private (including foreign) ownership in the 1980s.

Figure 1-4 ● Turkey's Real GDP Growth Rates (3-Year Moving Average: 1970-2002)



The Turkish economy underwent a rapid transition during the 1980s as the economy switched from an import-substitution strategy to export-led growth.<sup>2</sup> Turkey's real GDP growth

2 \_ But the transition has been somewhat slow in certain cases; for example, import barriers in the form of customs duties and funds were abolished in trading with the EU countries starting from January 1, 1996, when Turkey gained EU Customs Union, and simultaneously a Common Customs Tariff was implemented for third-party countries.

rates shows that the years from 1979 to 1987 were exceptionally good years for economic growth. The country at the time experienced a stable political climate under the Özal administration, which together with the switch to an export-led growth strategy allowed the economy to register steady growth. The period after the late 1980s until recently has been highly volatile and economic growth has been disappointing. High inflation averaging 65% over the period of 1980-2000 led to uncertainty and poor resource allocation in an economy characterized with high-risk premium. Moreover, Turkey's political rivalry and instability resulted in high public sector borrowing requirements, which placed a huge burden on the relatively shallow and unhealthy financial sector, thereby creating pressure on real interest rates and hampering private sector activities. Economic growth rates, although exceeding 4% in a number of years, declined sharply in 1994, 1999 and 2001.<sup>3</sup> The allocation of economic resources has also been largely influenced by the political landscape, somewhat emphasizing social needs such as the welfare system rather than economic needs. Excessive spending by the government had led to huge public deficits, which regularly exceeded 10% of GDP. After years of high inflation, the Central Bank, after its independence in 2001, has made much progress in taming inflation.<sup>4</sup> More recently, Turkey's macroeconomic outlook has been impressive with declining (yet still relatively high) inflation - the lowest for over 30 years,<sup>5</sup> as well as overall increased productivity growth.

The 8th Five Year Development Plan (2001-2005) emphasized that efforts be continued to bring down inflation to a stable single digit level through attainment of public sector balance and use of appropriate income policies. Also, in order to meet the Maastricht criteria, it states that necessary measures should be taken for the realization of institutional and structural reforms that would increase economic efficiency and, in line with the Helsinki Summit decisions where the candidate status of Turkey for membership was approved, the necessary steps towards realization of the membership target has been prioritized. The plan also stresses other aspects such as "the improvement of income distribution and reduction of poverty and interregional disparities", improvement of the educational system to meet the needs for qualified labor power necessary for economic development and competitiveness, restructuring

3 \_ The date of the most recent crisis can be traced to November 2000 with the collapse of a medium-sized commercial bank in the midst of an IMF-supported stabilization program.

4 \_ Traditionally, inflation and public sector indebtedness have been perennial problems of Turkey's economy. Annual consumer price inflation averaged around 80% in the 1990s and nearly 50% in 2000 through 2003. Wholesale price inflation has been at comparable levels. In 2003, however, Turkey's Central Bank finally succeeded in controlling inflationary pressures: as of February 29, 2004 the previous 12-month increase in the CPI had fallen to 27.01%.

5 \_ Despite high growth and increasing private consumption, demand side is still under control and inflation keeps on a downward trend mainly due to relatively stable foreign exchange rates, changing pricing behaviors of economic units in the floating exchange rate regime, the weak status of labor and real wages, along with the tight fiscal and monetary policies.

of health services with “the principles of equality and justice to meet the needs and expectations of society,” concentration of the state on its main functions while withdrawing from the field of production through privatization, strengthening industrialization policy that aims at a flexible structure allowing advances in technology,<sup>6</sup> taking measures for a reliable and sustainable meeting of the energy demand at a low cost, strengthening multi-lateral and bilateral economic relations in order to increase global and regional impact “in a balanced manner,” expanding the use of knowledge through access to knowledge at national and international levels including necessary legal and institutional arrangements. The Plan is comprehensive and ambitious.

We shall proceed with briefly mentioning some aspects of Turkey that are of concern to the Korea-Turkey KSP.<sup>7</sup>

### 1.2.1 EU Integration

The Council of Europe, guardian of European values and principles, admitted Turkey as its full member in 1949 only a few months after the Treaty of London had been signed. It judged that Turkish Republic fulfilled its two conditions for membership - to be a European Country and to respect human rights, pluralistic democracy and the rule of law. In 1959, Turkey applied for associated membership of the European Economic Community (EEC), which resulted in the Ankara Agreement of Association signed in 1963. After several delays, the Customs Union entered into force in 1996. In 1987, Turkey submitted an application for membership to the European Community (EC). The European Council concluded in its December 2002 meeting that “if the European Council in December 2004, on the basis of a report and a recommendation from the Commission, decides that Turkey fulfils the Copenhagen political criteria, the European Union will open accession negotiations with Turkey without delay. With this conclusion, European Heads of State and Government for the first time offered Turkey a definite prospect of accession negotiations. The European perspective offered to Turkey by the European Council and overwhelming support for EU membership on the part of the Turkish people, have opened a window of opportunity for reforms. The European Commission welcomes the Turkish government’s adoption of far-reaching reforms, which is seen as clearing a major obstacle to Turkey’s EU hopes.

6 \_ Emphasis on R&D and also meeting the environmental norms, respecting consumer health and preferences, activating local resources, utilizing qualified labor power, implementing contemporary management and production methods for taking advantage of the globalization with an ability to make original designs, creating trade marks, and shifting to knowledge- and technology-intensive fields.

7 \_ Such issues like inflation, which has been linked with unsustainable government spending, will not be discussed here; Current account deficit, also another important, issue is not mentioned here. We concentrate on only topics identified under the KSP, as well as some closely related issues.

## 1.2.2 Public Sector Reform and Managing of Public Finance

The system of managing public finances was, until recently, complex and opaque with many loopholes. Continuing deficits in the public sector and loose fiscal and monetary policies have resulted in accelerating inflation levels and a relatively high foreign-debt burden in the 1980s and 1990s. A process of rationalization is underway. This has included legislation on debt management and public procurement, and the introduction of accounting classifications and procedures based on best international practice. There has also been a gradual improvement in documentation and reporting. In December 2003, a new Public Financial Management and Control (PFMC) Law was enacted to overhaul the entire system of budget preparation, execution, reporting and auditing. The Law foresees the introduction of medium-term (three year period) and performance-based budgeting, and makes the Court of Accounts the single, supreme audit body. Some clauses of the PFMC Law took effect at the beginning of January 2004, but full implementation is not due until 2006. Medium-term budgeting, for example, is to begin with the 2006 budget, as is the inclusion of extra-budgetary.

## 1.2.3 Industry and Private Sector Development

The SPO finds that in addition to inadequate capital accumulation, inability of maintaining macroeconomic stability, chronic high inflation rate, high taxes, high cost of capital and basic industrial inputs, ineffectiveness to keep pace with technological developments, inefficiency in innovation and new technology creation, are the factors adversely affecting the competitiveness of Turkey. Some of the most important weaknesses of Turkey's industry have specifically been identified as excessive bureaucracy, inconvenient investment climate, insufficient R&D expenditure as well as inadequate design and brand creation, barriers in access to finance, inefficient marketing, small scales of economy, low productivity and incompetence in quality and environmental awareness.<sup>8</sup>

*SME Policy:* As Turkey ratified the European Charter for Small Enterprises in April 2002, significant attention has started to be given to the principles stated in the Charter. Small-sized industrial enterprises are said to face problems in the fields of productivity, quality, marketing, technical knowledge and financing, and as a result of their limited capacities and disorganized structure. In addition, unregistered employment is highly prevalent, which, as a consequence, has exacerbated the large informal sector.

<sup>8</sup> \_ See "Industrial Policy For Turkey (Towards EU Membership)" by SPO.

**Unemployment:** Unemployment increased due to the financial crisis in 2001 and the trend continued in 2003. Despite strong growth in the economy, improvement in unemployment remained limited. As of the end of 2003, the working population was 21.2 million and the unemployment rate was 10.5%. Unemployment in urban areas increased faster than unemployment in rural areas in 2003. Among the unemployed, the share of educated young people increased up to 30%. In 2004, the number of unemployed is estimated to be 2 million and the unemployment rate is estimated to be 10.2% for Turkey as a whole.

**Foreign Direct Investment:** Despite its strong potential, Turkey has not benefited much from increased FDI flows brought on by globalization. From 1999 to 2003, FDI inflows to Turkey averaged about EUR 1,330 million net per year, equivalent to about 0.1% of GDP. In Turkey, low FDI may be attributed partly to the slow pace of reforms and instability in growth, high inflation rates and high competition for FDI from other Eastern European countries.<sup>9</sup> In order to enhance Turkey's economic development, the capability of gaining the interest of the foreign investors in Turkey is vital as this should help enforce industry and services in the country. FDI should help create opportunities for employment and income growth, transfer of technology and management skills to Turkey, address poverty and underdevelopment in Turkey's inland regions, and further expedite the integration of Turkey into the global community.

#### 1.2.4 Human Resources Development

Turkey is trying its best to increase the educational facilities for the population as well as to enhance the quality of education. Being treated as a superior catalyst for sustainable development as well as Turkey's aspiration towards building a knowledge economy, education has been set as one of the most important areas for reform. The main reform areas that are currently being addressed are (1) to increase the effectiveness of Vocational and Technical training and its attractiveness, mainly to address issues in the transition to higher education, the weak link between education and the labor market, and the absence of a National Qualification System for Vocational and Technical education, (2) to bring about a real change in terms of increasing the schooling rate in pre-school education, which currently stands at around 15%, (3) to upgrade the quality of higher education so as to close narrow demand-supply imbalances at the university entrance exam, address unemployment of university graduates and the brain drain problem, and strengthen linkage between universities and industry, (4) to restructure the

9 \_ A new FDI law was approved by Parliament in June 2003, in order to improve existing regulations and create a better environment for foreign investments. The aim of the law is to encourage foreign direct investments; to protect the rights of foreign investors; to define investment and investors in line with the international standards; to accept a notification based system for foreign direct investments rather than screening and approval; and thus promote principles to increase foreign direct investments.

secondary education system, especially addressing poor educational quality (currently through the PISA Tests) and to utilize better IT in education more efficiently, (5) to improve the finance of Education including revision of the current public expenditure based system, encourage contribution of all types of private sources (particularly for higher education), and introduce performance based budgeting, (6) to project better and more accurately the manpower projections to help match the needs of the economy with new labor force entrants, (7) to introduce production oriented education, and (8) to enhance entrepreneurial skills.

### 1.3 Planning and Implementation

Since the early 1980s Turkey's economic policy makers have moved away from the statist principles on which the Republic was founded, abandoning protectionist policies and opening the economy to foreign trade and investment. Turkey's efforts reached a new stage in January 1996 in terms of market opening, with the inauguration of a customs union with the European Union.

Turkey has annual as well as multi-year development and economic plans. The most important one is the National Development Plan (originally five years), which from 2007 will cover a seven-year period. There is the multi (three) year economic plan, which is called the Medium Term Program (2006-2008), giving a broad medium term framework for economic and social policies and strategies. An Annual Program, which has more detailed information on goals and policies for the macro economy as well as economic and social sectors, is also available. Turkey also has other plans like the annual document called the Pre-Accession Economic Program that is prepared for the EU and more directed towards and limited to EU related areas, as well as another one for the IMF economic program. The high degree of formality is one thing, while their implementation is another.<sup>10</sup> These plans are prepared by the State Planning Organization (SPO) of Turkey and with other relevant ministries were applicable. We shall mainly confine discussions to the Five Year Development Plans.

The State Planning Organization (SPO) of Turkey, which operates under the Prime Ministry, is responsible for setting and designing important national goals and objectives, which have been issued in the Five Year Development Plan since 1966. The SPO prepares annual programs and public investment programs, through which it aims to achieve developmental targets as well as assist all related government units in the process of decision making for economic, social,

10 \_ In general, most of the above plans and programs are not too binding and not monitored stringently (except the IMF program) in the sense that they do not accompany a strict action plan.

and natural resources development. Sub-commissions are usually formed to encourage extensive participation from all sectors of society. Reports prepared in these sub-commissions are put into a compatible format and then are submitted for approval by the Turkish Parliament.

These plans cover all areas from macroeconomic policies, economic relations with other countries, regional development to social and economic sectors such as development of human resources, culture, enhancement of welfare, industrialization, improvement of the scientific and technological capacity, information and communication technologies, agricultural development, transportation, tourism and promotion, urban and rural infrastructure, and environment. The enhancement of efficiency in public services is also covered in these plans.

### 1.3.1 Machinery of the Five-Year Development Plans

The Prime Minister or the minister concerned instructs the SPO to prepare the development plan and annual programs within the framework of the principles and targets adopted by the Council of Ministers. The High Planning Council meets within a week following the submission of the development plan to the Prime Ministry. The Council examines the plan and reports to the Council of Ministers whether the plan is consistent with the main targets adopted. Following the adoption of the plan by the Council of Ministers it is submitted to the Turkish Grand National Assembly for approval. The Undersecretariat of the SPO works in close cooperation with the ministries, public institutions, the State Economic Enterprises, establishments having the nature of public institutions and high-level private institutions in compiling information, preparing the plans and monitoring their implementation. The SPO determines the data required at the stages of preparing, implementing and monitoring the development plans and annual programs, the purpose and time intervals for the compilation and evaluation of these data and their form of presentation. The High Planning Council decides the economic, social and cultural targets and the principles for the determination of policies. The Council of Ministers discusses the principles determined and reaches a conclusion. Annual Programs are prepared by the Undersecretariat of the State Planning Organization and then submitted to the High Planning Council. The Council examines the programs and reports to the Council of Ministers. Medium-term estimates are also submitted with the programs. Annual programs are prepared before the budgets and working schedules. While preparing the budgets and working schedules, the principles adopted within the annual programs are taken into account. During the discussion of the budgets at the Turkish Grand National Assembly Plan and the Budget Commission, the principles and procedures laid down in Article 2 of the Law, no 3067, on Putting the Development Plans into Effect and Protection of Their Entirety shall be taken as a basis for adding the multi-year investment projects which are closely related with the entirety of the Development Plan and Annual Programs.

### 1.3.2 Long-Term Development Strategy 2001-2023

The Turkish Grand National Assembly on 27 June 2000 in accordance with the provision of the Law no. 3067 dated 30 November 1984 also approved the “Long Term Strategy” under the 8th Five Year Development Plan.<sup>11</sup>

The basic target of the long-term strategy for the period of 2001-2023 is: in line with Atatürk’s target to surpass the contemporary civilization level, to make Turkey an influential global power in the 21st century attaining the highest level in culture and civilization, manufacturing products at world standards, sharing the income equitably, securing human rights and responsibilities, realizing supremacy of the law, participatory democracy, secularism, freedom of religion and conscience. Other targets of the strategy include getting higher shares of world production by ensuring transformation into an information society, raising quality of life for society, contributing to science and civilization, and becoming influential as regards regional and global decisions. With a view to ensuring the high living standards “deserved by people,” emphasis will be given to the “improvement of income distribution and reduction of poverty and interregional disparities.”

### 1.3.3 Other Important Institutional Players<sup>12</sup>

Other important institutional players in national economic management worth mentioning are (1) the Central Bank, (2) Undersecretariat of Treasury, (3) Ministry of Finance, (4) Undersecretariat of Foreign Trade, (5) Ministry of Industry and Trade, and (6) Revenue Administration. In April 2001, the Central Bank was decreed with instrument independence. Its primary objective is to achieve and maintain price stability. The Undersecretariat of Treasury has a special role in monitoring the activities of SEEs (State Economic Enterprises) and other noncommercial State Institutions, as well as to act as a financial creditor in lending their allowances through their annual investment and expenditure programs which were previously prepared and submitted to the approval of Board of Ministers by the Treasury. It also has an important function in performing regulations on investment incentives for domestic and foreign capital (this includes FDI promotion.) The Minister of Finance is responsible for implementing

11\_ See [http://www.mymerhaba.com/en/main/content.asp\\_Q\\_id\\_E\\_481](http://www.mymerhaba.com/en/main/content.asp_Q_id_E_481) for abstracts of the Long Term strategy and 8th Five Year Plan. Also see homepage of the SPO at <http://www.dpt.gov.tr/ing/>

12 \_ The full list of Ministries would be Ministry of Energy and Natural Resources, Ministry of National Defense, Ministry of the Interior, Ministry of Foreign Affairs, Ministry of Finance, Ministry of Education, Ministry of Public Works, Ministry of Health, Ministry of Transport, Ministry of Agriculture and Rural Affairs, Ministry of Employment and Social Security, Ministry for Industry and Commerce, Ministry for Tourism, Ministry for Forestry, Ministry of the Environment.

fiscal policy, developing and implementing expenditure policy, preparing the central government budget in coordination with other public institutions and implementing and monitoring the budget, and determining the public revenues policy. The Ministry of Industry and Trade is responsible for facilitating the determination of industrial policies according to the current economic and technological conditions, to providing and encouraging rapid and stable development of industry through the targets and policies envisaged by development plans and programs, establishing and controlling small scale industrial estates and organized industrial zones and providing credits, and permitting the establishment of Technology Development Regions.<sup>13</sup>

In the area of science and technology it is worth mentioning the Scientific and Technical Research Council of Turkey (TÜBİTAK), which is responsible for the formulation of science and technology policies and promoting and coordinating R&D activities. Together with the Small and Medium Industry Development Organisation (KOSGEB) which provides assistance for R&D activities; offering laboratory, supervision and design services, helps quality improvement, offers consultancy and training services for marketing and employment creation, they are important institutions for private sector development. The Union of Chambers of Commerce, Industry, Maritime Trade and Commodity Exchanges of Turkey (TOBB), Turkish Industrialists' and Businessmen's Association (TÜSİAD), The Confederation of Turkish Craftsmen and Tradesmen (TESK) and Sectoral Producers' Associations are important private sector institutions that cooperate with public decision makers and institutions formulating industrial policy and related measures in corresponding areas.

13 \_ Important regulatory and supervisory agencies include Radio and Television High Council, Telecommunication Agency, Capital Markets Board, Banking Regulation and Supervision Agency, Energy Market Regulation Board, Public Procurement Agency, Presidency of Competition Agency, Sugar Agency, Tobacco, Tobacco Products and Alcoholic Beverages Market Regulation Agency, and Saving Deposits Insurance Fund.

## 2. Background on Korea

### 2.1 Economic Discrimination and Takeoff (1960s and 1970s)

The history of Korea's modernization is now well documented. In particular, widespread interest sparked by curiosity concerning the country's "economic miracle" of the 1960s and 1970s that followed the near total devastation of the country during the Korean War (1950-53) has established the study of the Korean economy as a well-respected area of study. Korea's modernization began in the early 1960s under the Park Chung-hee regime and the launch of the Five-Year Development Plans (1962~), when Korea set off towards rapid growth unprecedented in any other part of the world since or after. The story of the country's developmental effort with the switch from import substitution to export-led growth,<sup>14</sup> the *saemaul undong* (New Community Movement), selective industrialization under the HCI drive in the 1970s, as well as the more recent advance as a global IT leader, are just some examples of Korea's experiences that are envied by countries the world over.

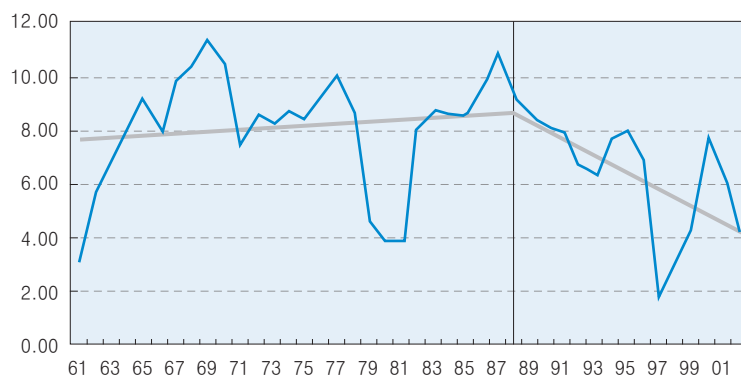
The growth of Korea's economy in the 1960s and 1970s has been attributed to various factors. Heavy government intervention and control was a major characteristic of policy initiatives towards industrialization and modernization during the Park Chung-hee era. But, one has to go underneath the distinction between government-led growth and market-orientation to recognize that Korea's success was possible through a unique selection mechanism in which economically viable entities (firms, households, etc.) were selected to participate in government economic development programs as well as in markets, in the efforts towards meeting national objectives. On the other hand, those economic entities that were not able to meet specific performance targets were promptly restructured or even removed from government support. This regular evaluation-for-policy-support was a major feature of the way Park Chung-hee's regime was able to provide the necessary signals, particularly needed in the absence of well-defined markets to major economic players including government institutions, banks and investors, as well as encourage them to align their activities to help "winning" firms that performed strongly. Besides providing important signals to the economy, the cycle of evaluation and support provided several advantages including an agglomeration effect through which economic resources amassed to viable firms, industries and institutions enabling them to acquire the critical mass needed to undertake various business projects. In addition, such discrimination policies encouraged rivalry and instilled the "can-do spirit" in the minds and actions of

14 \_ Between 1963 and 1978 world trade grew in volume by 9 percent a year, but South Korea's exports grew by 31 percent a year.

entrepreneurs and firms, as well as government officials and other players in the financial and services sectors.

The following chapters will provide further details of Korea's transformation of its public sector (public administration and personnel management reform) and private sector (industrialization, technology and innovation), as well as in the education sector and fiscal reform. Let it suffice to say that the period since the latter 1980s somewhat differed from the early take-off period under Park Chung-hee. Let us now discuss the post-1980 era.

Figure 1-5 ●● Korea's Real GDP Growth Rates (3-Year Moving Average: 1961-2002)



## 2.2 Rise of Economic Democracy and Economic Slowdown (1980s and 1990s)

A stabilization plan was announced in April 1979, and following the assassination of Park Chung-hee on October 26, 1979, the central focus on HCI within government policy was quickly removed. Inflation pressure following the “high-investment” in HCIs and the expansionary monetary policy, as well as the poor export performance and harvest failure in 1980, became the main concern of economic policy.<sup>15</sup> The government went further than simply

15 \_ The international economic environment in the early 1980s was extremely unfavorable—a situation that further restricted Korea's exports, and encouraged the new government to concentrate on stabilization, and in its first two years on controlling inflation.

refraining from HCI policies, and redirected policy more broadly and “equally,” for example, towards supporting SMEs, rural development, improving the welfare system, etc. Furthermore, de-concentration of economic entities became increasingly popular, particularly since the late-1980s, as if with the intention to reverse the agglomeration effects of policies in the 1960s and 1970s.

The 29 June 1987 democratization pledge is a turning point in Korea’s economic history. The political change, although most welcome, often did not translate into good economics. The amendment in 1987 of Paragraph 2, Article 119, of the Korean constitution now reads, “The state may regulate and coordinate economic affairs in order to maintain the balanced growth and stability of the national economy, to ensure proper distribution of income, to prevent the domination of the market and the abuse of economic power and to democratize the economy through harmony among the economic agents”. Quite significantly, many of the ideals of what a modern society should be can be literally read of this Act. Economic policy, and Korea’s public policy at large, has since come under the influence of terms and concepts such as “regulation”, “balanced growth”, “proper income distribution”, “domination of market”, “abuse of economic power”, “economic democratization”, etc., which are now accepted as “norms” even by the general public and media.

Egalitarianism is a contested concept in social and political thought. The Stanford Encyclopedia of Philosophy puts it that egalitarianism is a trend in political philosophy, that favors equality of some sort — people should get the same, or be treated the same, or be treated as equals, in some respect. That is, egalitarianism is a protean doctrine, because there are different types of equality that might be thought to be desirable. In economics, the term “egalitarianism” is often used to refer to a position that favors, for any of a wide number of reasons, a greater degree of equality of income and wealth across persons than currently exists, or, simply, the “equality of outcomes.” Such an inclination tends to destroy incentives by placing good economic actors into a disadvantaged position. A prime example in Korea of egalitarianism practices is the pressure to mitigate economic concentration of corporations with a series of uniform regulations over the past 15 years or so. With the backing of the “economic democracy” doctrine and the almost atavistic fear of big businesses, corporate policy in Korea has taken on as its responsibility to check corporate expansion and growth.<sup>16</sup> Other examples abound in promotion of SMEs, balanced education policy, balanced regional development strategy, improving the welfare system, etc.

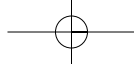
16 \_ The Korea Fair Trade Commission (KFTC), the main body that carries out laws on competition and monopoly regulation, classified on an annual basis the top 30 chaebols to which special regulation, much of it aimed at de-concentrating economic power of large corporations, was uniformly applied.

Korea's economic slowdown under the "egalitarian trap" features populist politics under the banners of democracy, market liberalization, globalization. The highly-selective "government-led discrimination" mechanism of the early take-off era, which we argued was characterized by constant evaluation and rewarding of the best performers, eventually lost favor with consecutive democratic governments as well as with the general public. Consequently, economic policies, particularly those involving the allocation of resources, have become largely static subject to uniform rules and regulations. The main weakness of such policies, as we will explain further in the chapters that follow, is the absence of continuous monitoring, evaluation and reward, which does little to mitigate moral hazard, economic waste and corruption.

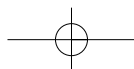
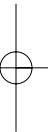
## 2.3 Re-interpreting the Market

It is worth re-visiting the meaning of markets. After Adam Smith, Hayek is perhaps the most important figure in economics to show to the world the importance of markets. Throughout much of his career, he was interested in understanding how people's actions were coordinated, and he defined the market as spontaneous order. By spontaneous, he meant unplanned—the market was not designed by anyone but evolved slowly as the result of human actions, and which was beneficial to society—this echoes the "invisible hand" of Adam Smith. Also stressed by Hayek was the information-clearing role of markets. Markets, he argued, could process more information than could possibly be done by any central government, and he strongly argued how decentralized, unorganized individual decision-making through markets could outperform the central planner. It is difficult to improve on Hayek's view of markets, but we wish to highlight one aspect that seems to have been ignored.

We argue that the market is a tireless discriminator. Indeed, its primary function is to discriminate or constantly evaluate and reward market players and their behavior. One can easily sense a parallel between market discrimination and the discrimination policies of the early developmental policies under Park Chung-hee. In contrast, the market can be seen as impersonally and objectively "treating differences as differences." In this sense, we view the market as the ultimate economic discriminator to which producers, consumers, investors, lenders, managers, laborers, etc. are all subject to. This interpretation of markets can be contrasted with the neo-classical framework, which emphasizes the ideals of perfect markets, identical firms, a constant choice set, etc. The neo-classical method leaves out important aspects, which have some negative implications for our understanding of the economic development process that might be realized. Most importantly, the neo-classical method tends to disregard differences (e.g. economists can be heard speaking of models featuring identical firms in a perfect competition setting). Such disregard of differences is in itself contradictory and tends to miss the main aspect of markets. Contrary to what such a nirvana position might claim,



markets cannot exist nor can they function in a homogenous world. Simply put, the function of markets is to allow each and every economic actor to exercise its discriminatory power, and it cannot do so if all actors are identical. The role of markets is therefore elaborated as a discriminatory mechanism in the chapters to come.



### 3. KSP Findings and Recommendations

Five projects constitute the Knowledge Sharing Program (KSP) of Korea and Turkey 2005-6, namely, (1) Public Policy for Private Sector Development, (2) Technology Development and Innovation System, (3) Human Resources Development, (4) Administrative Response to Public Management Reform, and (5) Reforming the Fiscal Management System.

The projects involved close collaboration between Korea and Turkey through careful research, workshops and seminars on the specific policy areas listed above with the aim of providing policy recommendations that emphasize enhancing the development capacity of the Republic of Turkey at the personal, institutional, and national levels, mainly through the sharing of policy experiences. Dr. Sung-Hee JWA, Visiting Professor at the Graduate School of International Studies in Seoul National University (SNU), was appointed as the Project Manager (PM) for the Korea-Turkey KSP Program, while Mr. Kamil AYANOGLU of the State Planning Organization (SPO) served as his counterpart in Turkey.

In general, the following strengths and weaknesses were found with the policy making and decision machinery:

#### Strengths:

*Expertise:* Public policy personnel are highly qualified.

*Formalization:* Policy and programs are comprehensive and of high standards (often in line with international standards).

#### Weaknesses:

*Passive:* The implementation of policy and programmes is somewhat passive. A more target-oriented and pro-active approach is needed.

*Balanced Development:* Mitigating regional disparity through balanced growth is a major concern if not a major priority of most of Turkey's developmental efforts. The balanced growth strategy is not always the most effective way to achieving economic development goals.

*Bureaucracy:* The size and amount of public policy and decision-making institutions need to be streamlined to reduce bureaucratic inefficiencies. Turkey is currently pursuing public administrative reform including legislation changes to reform the public sector, and the success of these reform efforts is seen to be an important step towards much improved public institutions and policymaking machinery.

The recommendations can be found in detail in the following chapters. The underlying message of most policy recommendations is that Turkey needs to get incentives right to regain the much-needed rigor in its economy at the public and private levels. Turkey's economy, in

short, should be turned into an arena for free and fierce rivalry, not unlike the “beauty contests” of the Miss Universe pageants, where every economic agent will rival each other for the “economic prize.” This will translate individual efforts and success into national economic growth and prosperity. This is true for not only the private or public sectors, but also for manufacturing, agriculture, education, technology, government officials, firm growth, consumer satisfaction, etc. The quest for the “economic prize” through rivalry in free and fair economic contests, which we argue can be enforced by economic discrimination (ED), is what is needed to place the right incentives that will stimulate economic actors to make sincere effort towards improving their material well-being as well as creating a better society for themselves.

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### A. TURBULENT POLITICAL CONTEXT

Turkey underwent a far-reaching political transition in the 20th Century. The Republic of Turkey was founded on the ruins of the Ottoman Empire in 1923 by Mustafa Kemal Atatürk, who ruled as President of the Republic until his death in 1938. A multi-party democracy was installed in 1945, and in 1950 the first free election was held. As a result of political, social and economic instabilities, the multi-party regime was interrupted by a number of military coups.

During most of the decades since World War II, including the 1990s and into the new millennium, Turkey has been governed by fractious and unstable coalition governments, with repeated political and economic upheavals. Most recently, in July 2002, the government of Prime Minister Ecevit experienced a severe political crisis in the midst of a major macrofinancial crisis. As a result, early elections were called for in November 2002. In a landslide victory, the Justice and Development Party (AKP) gained 34.2% of the votes, securing 363 of 550 seats in parliament. Of the eighteen parties running in the elections, the social democrat Republican People's Party (CHP) was the only other party to win parliamentary representation. The parties that governed the country in the 1990s failed to pass the 10% threshold needed to enter the parliament. This outcome was explained by public disillusionment over their capacity to bring Turkey much needed political and economic stability.

Although the AKP is an offshoot of the Welfare Party (RP), which was banned in 1997 for Islamist activities, the AKP's moderate, nonconfrontational rhetoric and policy agenda made it attractive to a diverse array of the population.<sup>17</sup> Since the AKP assumed power in November 2002, and the AKP party leader, Recep Tayyip Erdoğan, took over as Prime Minister in early 2003, the government has consistently pursued political and economic stability and reform in the quest for the overarching national goal of Turkey's accession to the EU. As a result, the AKP has been able to strengthen its popular support and it scored a clear victory in the municipal elections in April 2004. At this point it is expected that AKP will continue in power until at least the next national parliamentary elections in 2007.

17 \_ Cagaptay, S., "The November 2002 elections and Turkey's new political era", Middle East Review of International Affairs 6.4: (2002).

## B. A VOLATILE ECONOMY

Turkey is a large middle-income country, with purchasing power parity GDP per capita at about USD 5,890 in 2001.<sup>18</sup> Some two-thirds of its population of almost 70 million lived in urban areas in 2001.<sup>18</sup> Agriculture accounts for 16% of its GDP, industry for 24%, and services for 60%. Turkey's economy grew at an average annual rate of 4% between 1965 and 2001, with its real per capita GDP growing at just under half that rate due to rapid population growth. This long-term growth performance makes Turkey less successful than many of its competitors among the dynamic, emerging market economies located mostly in East and Southeast Asia and Latin America. Korea, Thailand and Malaysia grew two to three times more rapidly in per capita terms over the same period, and Brazil, India and Chile also outperformed Turkey, with average annual per capita GDP growth rates well above 2%.<sup>19</sup>

A key reason for Turkey's less than stellar economic performance has been the fact that its growth was highly volatile over the last two decades with repeated booms and busts, accompanied by persistently high inflation. At the core of this pattern of instability were the growing fiscal imbalances in Turkey, especially in the 1990s, with high and growing public sector deficits, borrowing requirements and hence substantial increases in total public debt.<sup>20</sup> In addition, substantial hidden public liabilities were accumulated in an unsound banking sector, with many large and inefficient public banks and poorly supervised private banks becoming increasingly insolvent. Matters came to a head in the late 1990s after the 1997-98 financial crisis in East Asia and Russia had severely reduced the trust of international capital markets in emerging market economies. The knock-on effect of the regional and worldwide economic slowdown exposed Turkey's weak macroeconomic fundamentals. Two major earthquakes during the second half of 1999 further damaged Turkey's outlook, resulting in a severe economic contraction that year.

Recognising the long-term unsustainability of the economy's trends, the Turkish authorities initiated a major economic reform programme in 1999. This included an exchange-rate based disinflation programme and encompassed ambitious structural reforms, including a banking sector workout, fiscal and public sector reforms, as well as agricultural and energy sector reforms and privatisation. Initially, confidence in the Turkish economy rebounded and it recovered dramatically in 2000. However, accumulated financial imbalances, political

18 \_ UNDP, "Human Development Report 2003", p. 238. Turkey was marginally ahead of Romania with a PPP GDP per capita of USD 5,830. At current exchange rates, Turkey's GNI per capita was about USD 2,500 in 2002, according to World Development Indicators.

19 \_ The World Bank, "Country Economic Memorandum", October 2003; and The World Bank, "Turkey Country Brief", September 2003.

20 \_ Ibid.

wrangling among the government coalition partners and continued international market jitters plunged Turkey back into economic crisis starting in late 2000. During 2001, Turkey's economy contracted by 7.5%, while the public debt-to-GDP ratio reached almost 100%. This led the government in May 2001 to abandon the exchange rate anchor and to announce a new, even more ambitious economic programme involving dramatic fiscal stabilisation, further banking, energy and agricultural sector restructuring, and an intensified privatisation and public sector reform programme. These macroeconomic and structural reforms were complemented by efforts to strengthen the social safety net to help protect the most vulnerable

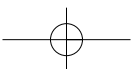
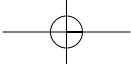
population groups from the negative impact of the economic crisis.<sup>21</sup> The Government's reinforced programme was supported by extensive financial and advisory assistance from the International Monetary Fund (IMF) and the WB, with IMF commitments for the period 1999-2004 totalling over USD 30 billion and with a total of USD 2.5 billion disbursed by the WB in quick disbursing loans between 2000 and 2003.<sup>22</sup>

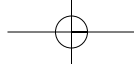
The events of September 11, 2001 and continued domestic and regional political uncertainties in 2002 kept Turkey's economic outlook in a high state of uncertainty during much of 2002. However, the cumulative impact of the reforms actually being implemented and the increased domestic political stability after the November 2002 elections have now set Turkey on a more sustainable path of economic stability and recovery. GDP growth rebounded to 7.9% in 2002 and is estimated at 5.8% for 2003. Inflation has also dropped dramatically from a 50-80% range in the last few years to below 20% in 2003. With the government clearly committed to a continued strict fiscal policy stance and structural reforms, the outlook now is that a virtuous cycle of fiscal stabilisation, real interest rate declines, a reduced public sector debt overhang and increasing confidence should help maintain GDP growth on a relatively strong and stable path (at or above 5% per year). Of course, there is no guarantee that this favourable outcome will actually materialise. Turkey remains vulnerable to external shocks, with its continued high debt levels, short track record of policy performance and heavy dependence on a potentially fickle tourism boom. Moreover, the positive outlook depends on continued strict fiscal management and the effective implementation of ambitious economic reforms.<sup>23</sup> Perhaps the best hope for this optimistic scenario materialising lies in Turkey's clear ambitions to place itself firmly on a track towards EU accession.

21 \_ Ibid.

22 \_ The World Bank, "Turkey Country Assistance Strategy," October 2003.

23 \_ OECD, "Economic Outlook No. 74: Turkey Summary", November, 2003; The World Bank, "Country Economic Memorandum", October 2003.





A Way Forward for the Turkish Economy:  
Lessons from Korean Experiences



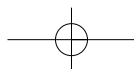
## Chapter 2

# Public Policy for Private Sector Development



1. Summary of Conclusions and Recommendations
2. Theory of Incentives Based on Economic Discrimination (ED)
3. Background: Issues and Problems of Turkey's Private Sector
4. Policy Recommendations (Based on Korean Experiences)

References and Notes





## Public Policy for Private Sector Development

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&  
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### 1. Summary of Conclusions and Recommendations

Turkey faces enormous challenges to improve its private sector. Broadly speaking, SME promotion and FDI promotion are the two most important policy areas for private sector development in Turkey. In this report, we focus on addressing these policy areas as well as issues and problems of the policy making and implementation framework itself.

This report consists of three parts: The first part contains the theory of incentives based on the principle of economic discrimination (ED), which is presented here to help guide public policy making and implementation. The second part presents the issues and problems of Turkey's private sector that were identified through discussions with Turkish counterparts in the various workshops in Ankara and Seoul. The third part presents policy recommendations for private sector development based on Korean experiences.

The theory of incentives based on ED recommends that Turkey sharpen the discriminatory function of public policy, especially at the implementation level. Specifically, ED, by getting the incentives right, will encourage better economic performance of all economic actors, thereby contributing on the aggregate to national economic development. Specific recommendations for consideration and action are as follows:

#### *A. Public Policy Making and Implementation*

1. Develop private sector in line with national development goals
2. Detach egalitarianism (especially populism) from the economic policymaking process
3. Sharpen the discrimination power of public policy
4. Encourage a more focused strategic framework
5. Encourage economic as well as regional amalgamation

### *B. SME and Corporate Sector*

6. Place ED in SME promotion policy (Policy cycle)
7. Create a “Firm Evaluation Body” for SMEs
8. Encourage large corporations

### *C. Laws and Regulations*

9. Simplify rules, regulations and procedures
10. Promote competition in private sector

### *D. Informal Sector, Infrastructure for Private Sector, and FDI Promotion*

11. Incentives for economic actors to participate in the formal sector
12. Encourage privatization of state owned enterprises (SOE)
13. Approach and attract “target/desired” foreign firms into Turkey through ED
14. Adopt “export contests” to introduce competition in export zones

The message here, and this applies to the other projects of the Korea-Turkey KSP, is that, to regain the much-needed rigor in Turkey’s economy, economic discrimination (ED) should be made to feature prominently throughout the economy. Put differently, Turkey’s economy should be turned into an arena for free and fierce rivalry, not unlike the “beauty contests” of the Miss Universe pageants, where every economic agent will rival each other for the “economic prize” that will translate individual efforts and success into national economic growth and prosperity. This is true regardless of whether we are talking about the private or public sectors, or whether we are speaking about manufacturing, agriculture, education, technology, government officials, firms, or consumers, etc. The quest for the “economic prize” through rivalry in free and fair economic contests, enforced through economic discrimination (ED), is what is needed to place the right incentives that will stimulate economic actors to make sincere effort toward improving their material wellbeing as well as creating a better society for themselves.

## 2. Theory of Incentives Based on Economic Discrimination (ED)

Successful economic reform depends on getting the incentives right. In this section, we provide a new theory of economic development, which is meant to help guide public policy by essentially placing the right incentives for private sector growth and development.

### 2.1 Economic Discrimination

We begin by introducing the term “Economic Discrimination” (ED). In our definition, the word “discrimination” is best defined simply as “treating differences as differences.” This differs from the use of the word to mean social discrimination such as sexual or racial discrimination. Rather, the discrimination or “different treatment” applies to the economic realm, hence the term economic discrimination or simply ED, where agents exhibiting better economic performance are rewarded more favorably than their competitors or rivals.<sup>1</sup>

An example should better explain the workings of ED. In the economy, for example, exports, say, could be an important goal for various exporting firms. The government and/or the market may discriminate among different firms based on their economic performance, or in this case, say, value of export sales. That is, the government and/or market acts as the discriminator(s)<sup>2</sup> thereby “deciding” how and where each exporting firm is ranked on a “performance-ladder.” Consequently, those firms exhibiting higher value of export sales are then rewarded according to their economic contribution. In our example, we can assume a number of exporting firms operating in the economy, with each exporting some value by the end of the year—the value of sales is an identifiable criterion that allows differentiability,<sup>3</sup> i.e., the ranking of firms according to their export performance; which, we argue, should command due economic rewards. In other words, the “discriminator” (government or market) treats differences according to the performance of the “discriminatee” (exporting firms) by appropriately rewarding and thereby encouraging better economic performance, while simultaneously disfavoring and discouraging poor economic performance.<sup>4</sup> It is now easy to see

1 \_ See Jwa and Yoon (2004a) for further discussion of the term, economic discrimination.

2 \_ Jwa and Yoon (2004b) refer to these as “government-led discrimination” and “market-led discrimination,” respectively.

3 \_ Welch (2005) uses the term “difference,” which is synonymous with ED.

4 \_ The intensity of ED can be imagined or gauged by the degree of “verticalness” or “uprightness” of a

that ED is consistent with getting the incentives right. The underlying dictum of ED is “helps those that help themselves.”

## 2.2 Principle of Economic Development

We state the principle of economic development:

*Economic discrimination (ED) is a necessary condition for economic development.*

By getting incentives right, ED drives an economy toward higher levels and standards not only in terms of material wealth, but also in helping maintain the “spirit of development.” That is, ED promotes economic development, which according to our understanding of the human condition, not only consists of the expansion of material wealth, but also encompasses, perhaps more importantly, keeping the human “spirit of development.”<sup>5</sup> Let it suffice here to add that without this, development would be reduced to the narrow meaning of economic growth in the classical sense (i.e. expansion of material wealth in terms of physical quantities, e.g. capital, labor, land).

## 2.3 Corollaries of the ED Principle

Given that ED is a necessary condition for development, then its negation (not-ED) should be a sufficient condition for economic digression. Put differently, digression is defined as the reverse of economic development, and with the necessary condition (i.e. ED) absent, digression is bound to result.<sup>6</sup> The negation of ED is what we call “egalitarianism,” which could be seen as “treating differences the same” or “mitigating differences.” Hence, a corollary of the principle of economic development is:

**Corollary 1:** Egalitarianism is a sufficient condition for economic digression.

society’s hypothetical developmental ladder?the more upright it is, the more the potential for economic development. Such a “developmental-ladder” that is built into a society’s socio-economic fabric, by definition, allows for progress/development (as well as regression/underdevelopment).

5 \_ The “spirit of development” is explained in Jwa and Yoon (2004a), which is based on human cognition in social life.

6 \_ For the logical argument to this conclusion, see Jwa (2002b).

A second corollary is the “naturalness” of amalgamation in the process of economic development and ED. In a sense, economic development throughout history can be understood as a series of events of amalgamation of economic (and non-economic) entities. Amalgamation or coagulation,<sup>7</sup> if you like, has been the great leverage upon which humans and societies have advanced. Hence:

**Corollary 2:** Amalgamation of economic (and non-economic) entities is akin to economic development.

ED is ubiquitous. The table below shows how ED can be either the prerogative of government or of markets (or both).

Table 2-1 ● Ubiquitous ED

Discriminator	Government	Markets (all players in the economy)
<i>Criteria</i>	Export-sales	Price, quality, profits, sales, etc
<i>Reward</i>	Tax-incentives, low interest rates, etc.	Brand recognition, increased market share, firm growth, etc.

Traditionally, markets have been viewed as a vacuum where exchange of goods and services takes place. To give concreteness to what a market really is, it is best to recognize its discriminatory function. Simply put, discrimination between economic players is what defines the market. Hence :

**Corollary 3:** The market is the epitome of ED

In markets, what is involved is the economic discrimination of an orchestra of economic actors, i.e., the market can be viewed as a collection of discriminators. As such, the primary function of markets is to discriminate or constantly evaluate and reward market players and their behavior. Interestingly, markets are impersonal, objective discriminators treating differences as differences in a most rigorous and tireless manner.

7 \_ In a sense Ridley’s (1998) interpretation of the coagulation process is not unlike the one presented here. Ridley suggests 3 distinct stages of coagulation in human development: 1) the coagulation of the human genes toward a cooperative team for over one billion years, 2) the coagulation of our ancestors into a cooperating society for over one million years, and finally 3) the coagulation of human thought and its origins for one thousand years. What is interesting is that Ridley argues that specialization and the division of labor among humans is not an evolutionarily recent consequence of civilization or even the Industrial Revolution, but rather has been ingrained in the human psyche for a very long time through the natural selection of the “selfish gene.” The term “selfish gene” is from Dawkins.

## 2.4 Salient Features of ED

### *ED works for catch-up economies*

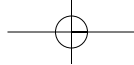
Economic development has and continues to elude an almost embarrassing number of governments and development economists throughout the world. Debates abound regarding the importance of effective government institutions, laws and regulation, human capital, technology, trade, and even democracy. We have proposed that ED is the “key” necessary to unlocking the secrets of economic development. This, moreover, is highly relevant for catch-up economies, as illustrated by Korea’s experiences and other countries that were able to detach themselves from the iron grips of poverty in the past century. Strengthening the discriminatory function of public policy leads to economic development by getting incentives right, and is also useful in narrowing the gap between advanced and developing countries. Of course this is easier said than done, and each country has to find the right balance between government ED and market ED given the country-specific histories and characteristics as well as the changing exterior environment. There might not be a possible full proof or indeed a perfect blueprint for developing a nation, but we propose that strengthening ED is the best possible strategy for aspiring nations in the 21st century.

### *ED means unbalanced growth*

ED and economic development is a highly lop-sided phenomenon, in which a mixture of successes and failures keep the economy in flux, but progressing steadily. At any one time, in every country, differences, sometimes serious differences, are unavoidable and a typical feature of the development process. Differences come in many dimensions including incomes, wealth, firm size, geographical or spatial concentration, technological skills and know-how, etc. Although safety nets to cushion possible negative effects are desirable, care must be taken not to mitigate inherent or acquired differences for the sake of equalization. Often, attempts to “correct” differences can and do aggravate the differences, as egalitarian intervention usually has a distortion effect that leads to undesirable and often unforeseen results.

### *ED involves private entities in rivalry*

Adam Smith was right in identifying rivalry as a fundamental element of the free market system. It is what brings out the best in competitors seeking profit and wealth. ED, by setting the terms and incentives of economic rivalry, is consistent with the free market model as it places incentives for economic agents to rival each other for their own economic profits. ED is also consistent with the development-state model, which, as the experiences of countries like Korea have shown, demonstrates the role of the “visible hand” in economic growth and

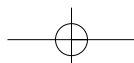


development. Simply put, ED by markets, governments or both help intensify rivalry for economic growth and prosperity.

### *ED requires “leadership with guts”*

ED is hardly a popular concept. But reality is often known to be harsh. Political and business leaders who appreciate the role of ED often have to display a fair amount of guts to carry their economic or business policies through. In the long-run the benefits of ED should outweigh the deficit in populism.

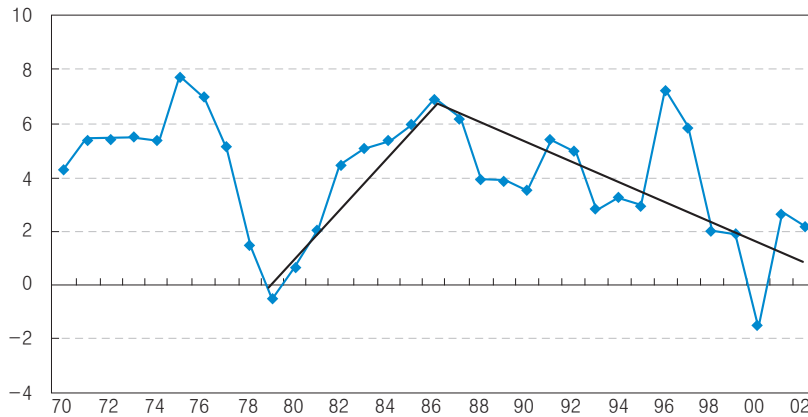
Visionary leadership is an important catalyst for economic development. In Korea, Park Chung Hee’s dedication to economic development set the tone for government officials and the public by encouraging the “can-do” spirit of every Korean. Such developmental spirit was motivated mainly by the discriminatory mechanism that championed successes over failures. In our conceptual framework on economic development, Park Chung-Hee’s developmental era can be characterized as a government-led discriminatory policy regime (see Table 2.1 above).



### 3. Background: Issues and Problems of Turkey's Private Sector

Turkey is a representative country to study the policies and economics of the private sector. Turkey, being one of the oldest and most exotic civilizations, as well as one of the newest and most intriguing democratic nations, is a meeting of the “East” and “West” on many levels. Spanning two continents, Europe and Asia, the 99.8 % Muslim population consistently elects a determinedly secular government. Turkey stands on a delicate border where it is strongly connected to the Middle East while in line to enter the European Union (EU).

Figure 2-1 ● Turkey's Real GDP Growth Rates (3-Year Moving Average: 1970-2002)



A quick glance at Turkey's real GDP growth rates shows that the years from 1979 to 1987 were exceptionally good years for economic growth. The country at the time experienced a stable political climate under the Ozal administration, which together with the switch to an export-led growth strategy allowed the economy to register steady growth. The period after the late 1980s until recently has been highly volatile and economic growth has been disappointing. Turkey's political rivalry and instability has cost the country dearly economically. Economic growth rates, although exceeding 4% in a number of years declined sharply in 1994, 1999 and 2001. The allocation of economic resources has also been largely influenced by the political landscape, which has somewhat emphasized social needs such as the welfare system rather than economic needs. Excessive spending by the government led to huge public deficits, which

regularly exceeded 10 % of GDP. After years of high inflation, the Central Bank, after its independence in 2001, has made much progress in taming inflation.<sup>8</sup>

The current regime continues to face the challenges of much needed reform. The private sector faces many old and new difficulties. Particularly, microeconomic aspects such as incentives for the informal and SME sectors, incentives for investment including FDI, and development of private sector infrastructure need to be boldly addressed. Changes in the global economic environment will not wait and pose many challenges. In particular, the rise of China and India competes for potential FDI with Turkey, and their textile manufacturers threaten more than 40% of Turkey's industrial employment.<sup>9</sup>

In this section, the main issues regarding Turkey's private sector identified under the Korea-Turkey KSP are presented.

### 3.1 Public Policy Making and Implementation

Different public institutions play roles in the implementation of incentives in Turkey. The main organizations are:

- Undersecretariat of Treasury has the authority to grant state aid for investments.
- Undersecretariat of Foreign Trade and Turkish EXIMBANK are the bodies that grant state aid to support exports.
- Small and Medium Industry Development Organization (KOSGEB) grants state aid for small- and medium- sized firms.
- Ministry of Finance has the authority to prepare secondary legislation for tax exemption and exceptions.

8 \_ Turkey's principal economic problems remain inflation and public sector indebtedness. Annual consumer price inflation averaged around 80% in the 1990s and nearly 50% in 2000 through 2003. Wholesale price inflation has been at comparable levels. In 2003, however, Turkey's Central Bank finally succeeded in controlling inflationary pressures: as of February 29, 2004 the previous 12-month increase in the CPI had fallen to 27.01%.

9 \_ The textile sector is Turkey's largest manufacturing industry and its largest export sector. The removal of EU quotas on textile and apparel imports—part of the customs union?has improved growth prospects. The global phase-out of textile quotas in 2005 will provide increased opportunities, albeit with increased competition from other suppliers, in the U.S. and other markets. Other principal growth sectors are defense equipment, tourism infrastructure, building products, automobiles and automotive parts, and electronics.

In general, the following strengths and weaknesses were found with the policy making and decision bodies:

**Strengths:**

- 1) *Expertise*: Public policy personnel are highly qualified.
- 2) *Formalization*: Policy and programs are comprehensive and of high standard (often in line with EU/OECD/World Bank, etc. standards).

**Weaknesses:**

- 1) *Passive*: The implementation of policy and programmes is somewhat passive. A more target-oriented and pro-active approach is needed.
- 2) *Balanced Development*: Mitigating regional disparities is a major concern if not a major priority of most of Turkey's developmental efforts. In the words of economists, equity issues weigh more heavily than efficiency issues. Balanced growth strategy is not always the most effective way to achieving economic development goals.
- 3) *Bureaucracy*: The size and amount of public policy and decision making institutions need to be streamlined to reduce bureaucratic inefficiencies. There is need to reduce administrative obstacles faced by the private sector, and to reduce or eliminate some unnecessary and repetitive bureaucratic transactions as well as improve and simplify procedures rapidly.

Until recently, Turkey's efforts over the past 20 years to open up its economy to international competition, with respect to both the goods and services market and the financial market, had not been accompanied by radical reform of its public sector institutions. Under the economic reforms of the current leadership together with the galvanizing effect of potential E.U. accession, Turkey is currently pursuing public administrative reform including legislation changes to reform the public sector. The success of the reform efforts is seen to be an important step toward much improved public institutions and policymaking machinery.

### *Incentives*

On the operational level, there are basically two areas at which incentives are directed: (1) for investment, and (2) for export promotion. The former involves exemption from customs duties and fund levies, value added tax exemption for imported and domestically purchased machinery and equipment, credit allocation from the budget, soft loans for investments, etc. after a special "Incentive Certificate" is obtained together with the investment approvals from Undersecretariat of Treasury (UT). According to the current incentive regime, a minimum investment of 200 billion TL is necessary for priority regions and 400 billion TL for other regions. Currently, the incentive system concerning investment does not distinguish between domestic firms vs. foreign firms established in Turkey (i.e. the origin of the investor) and does

not favor any manufacturing sector (in which investment is aimed); that is, the system treats all investors (regardless of origin) and sectors equally.

Incentives for export promotion are usually directed toward exportation activities of companies which export as well as Small and Medium-Sized Enterprises (SMEs) to help in their production and marketing processes. The main aim is to encourage exports, to develop the export market and to increase the competitive power of Turkish firms in international markets. There are currently 11 support programs in terms of state incentives for export; they are R&D incentives, support for domestic fairs which have international features, support for national or individual participation in international fairs and exhibitions, export returns in agricultural products, support for environmental costs, support for market research, incentive for education, incentive for employment, support for the opening of branch offices abroad and their management and the advertisement activities of the firm's trademark, support for the expenditures for patents, useful model certificates and industrial design, trademarking of Turkish products abroad, and support for trademarking, advertisement and setting the image of "Türk Malı." Lastly, the Turk Eximbank supports exporters, export-oriented manufacturers, overseas investors and companies engaged in foreign currency earning services with short, medium and long-term cash and non-cash credit programmes.

The major problem with the current incentive system is its egalitarian inclination in terms of objectives and uniform treatment in terms of application. Policy packages and programs aim for balanced growth (particularly, regional development) and are hardly discriminatory. This, we feel, amounts to weak incentives for private sector development.

### 3.2 SME Sector (State Aids)

Small and Medium Sized Enterprises (SMEs) play a very important role in the Turkish economy owing to their large share in the total number of enterprises and in total employment. Their average profile is different from that of SMEs in other European Union countries and OECD countries in that their average workforce and turnover are much smaller. They also lag well behind in terms of know-how, skill levels, capital investment to support their activities, and access and ability to take advantage of modern technologies, especially in the information and communications fields. As in most other countries, they find it difficult to obtain financing.

A major issue until recently has been establishing a correct definition for SMEs.<sup>10</sup> The

10 \_ See "SME Strategy and Action Plan" (2004).

Implementing Regulation which was published on 18 November 2005 and prepared in line with EU regulations provides the basis for the definition of SME. The table below (which is adapted from the Implementing Regulation) provides the quantitative boundaries defining the SME.

**Table 2-2** ●● Classification of Enterprises

Number of employees	Size	Balance Sheet Value (YTL)	Annual Net Sales Turnover (YTL)
1-9	Micro	1.000.000	1.000.000
10-49	Small	5.000.000	5.000.000
50-249	Medium	25.000.000	25.000.000
>=250	Large	>= 25.000.000	>=25.000.000

Source: Implementing Regulation

In 1994, SMEs in Turkey accounted for 99.5% of the overall manufacturing industry and 61.4 % of total employees.<sup>11</sup> In 2005, the structure hardly changed with 99.6% of the manufacturing industry employment accounted for by SMEs (See Table 2.2 below).

**Table 2-3** ●● Distribution of Enterprises in the Manufacturing Industry with Respect to Their Sizes (2005)

Number of workers	Number of Enterprises	%
Only the owner of the enterprise	1.509	0,61
1 — 9	220.030	89,12
10 — 49	20.325	8,24
50 — 99	2.453	0,99
100 — 150	946	0,38
151 — 250	719	0,29
250 +	917	0,37
Total	246.899	100,00

<sup>11</sup> \_ See “Experience in Promotion of SME’s in Turkey,” UN-ECE Operational Activities at <http://www.unece.org/indust/sme/tr-study.htm#Table%201%20:Enterprises>

Given the importance of SMEs in Turkey's private sector, much of the policy addressing the private sector has so far aimed at SME promotion. The Turkish counterparts of the KSP identified 3 basic problems of the SME sector, namely (1) insufficient know-how and low level of technology, (2) a disadvantaged financial environment, and (3) negative economic arrangements with the EU including some elements of the customs union and FTA, as well as regarding trade arrangements with various North African and South American countries. Although we agree that the 3 problems are important, we identify a more basic problem—the need to put into place and strengthen ED in the SME-promotion policy.

Regarding planning bodies, the Undersecretariat of State Planning Organisation (SPO) is the most important. It is responsible for the formulation and implementation of policies concerning SME promotion and for preparing long-term development plans and annual programmes concerning SME development at the macro level. Moreover, SPO evaluates the developments of the SMEs and proposes revisions to the policies when required. Other important public organizations are the Confederation of Tradesmen and Artisans of Turkey (TESK) and the Turkish Union of Chambers of Commerce, Industry, Maritime Trade and Commodity Exchanges of Turkey (TOBB) which represents SMEs that are tradesmen and artisans as well as merchants and industrialists.

At the implementation level, the main public bodies responsible for SME policies are the Ministry of Industry and Trade (MIT) and Small and Medium Industry Development Organisation (KOSGEB) (an affiliate organisation of MIT). The Undersecretariat of Treasury and Undersecretariat of Foreign Trade are also institutions that implement incentive programmes for SMEs. In addition, SMEs are supported by loans and guarantees through T. Halk Bank Inc., Tradesmen and Artisans Credit and Security Cooperatives Union Central Association of Turkey (TESKOMB) and Credit Guarantee Fund Inc. (KGF).

SMEs enjoy a series of benefits aimed to increase their productivity and international competitiveness as well as to improve their share of value added such as low interest loans, tax exemptions and VAT support, etc. However, again, much of the SME promotion policies lack discriminatory power, are uniformly applied and, in many cases, are inclined to seek balanced growth (egalitarianism).

### 3.3 Law and Regulation

The evolution of Turkey's economy from a government-controlled regime to market-based competition led to the enactment in 1994 of the Act for the Protection of Competition (“Competition Act”) and the creation of the Turkish Competition Authority (“TCA”) in 1997,

which is also involved in the privatization process, especially as regards the regulation of network industries.

Because they are so numerous, small in size and dispersed throughout the country, SMEs are not directly affected by the Law on Competition. As such, there seems to be little change in terms of effectiveness regarding the competition law, which encompasses rules and procedures to tackle anti-competitive behavior by companies (restrictive agreements between undertakings and abuse of dominant position), as well as to scrutinize mergers between undertakings and to prevent governments from granting state aid, which distorts competition in the internal market. But more importantly, we argue that encouraging new players and rivalry into old and new markets should strengthen competition policy.

### 3.4 Informal Sector

The size of Turkey's informal sector has been estimated to be as large as 40% or more. A large part of the labor force works in the informal sector, which makes it difficult for government policy to properly address the unemployment issue. Other problems of a huge informal sector include; (1) poor nature and conditions of work; (2) poor access to capital and technology; (3) low levels of education, productivity and income. Overcoming the enormous difficulties presented by the large informal sector has been a most difficult issue for the government as well as for private businesses.

The informal sector is usually an outgrowth of a combination of inconsistencies in the tax and regulation systems. In Turkey, the high tax rates, especially following sizable hikes in tax rates in the 1990s, without any improvements in either the tax system or expenditure productivity, seem to have been an important reason for the growth of the informal sector. Other business conditions including difficulties in company registration procedures and the rigid labor laws have done little to help mitigate the expanding informal sector.

### 3.5 Infrastructure for Private Sector (Business)

Turkey is a major player as both a transit country and as an origin and destination of freight. The country's geopolitical position as a link between Europe and Asia makes the transport sector crucial for the economic development of the region. Not only efficient transportation but also good communication infrastructure is a critical factor in private sector development in Turkey, a country which covers a large physical area. Infrastructure is an unpaid factor of

production, which enhances the productivity of the private sector and the general welfare of the public. Investment in infrastructure has become an increasingly effective policy instrument for domestic industry in the midst of global competition. The privatization of SOEs that provide a bulk of the energy, transportation and communication in Turkey could be an important way to help improve infrastructure.

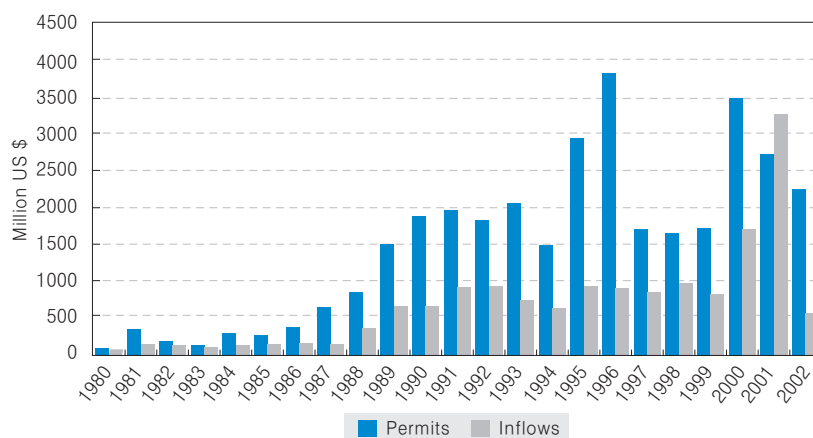
The issue of privatization in Turkey began as part of the liberal economic policy strategy of the 1980s, specifically by setting up Law 2983 (March 1984) and Law 3291 (May 1986). The most important objective of the privatization program was seen to make the economy more responsive to market forces, thereby increasing industrial efficiency and economic growth. However, controversies delayed the privatization program as the government was criticized for not clarifying objectives, priorities and method and prices of sales of SOEs. The Law No. 4046, enacted in 1994, established a more comprehensive infrastructure for privatization practices, and, more recently, legal amendments for privatization practices in the areas of telecommunications and energy were completed in 1995 and 1997. Despite starting earlier than many of her neighboring countries, however, privatization continues to be a difficult issue for Turkey. For example, the public sector still owned more than half the shares of 24 of a total 31 institutions placed within the scope of privatization in May, 2002. The Turkish privatization board is in the process of privatizing a series of state-owned companies, including the state alcohol company and the oil refining parastatal. Schedules include the privatization of the state tobacco company and the telephone company in 2004,<sup>12</sup> and with its commitments to the World Trade Organization, the government is liberalizing the telecommunications sector. In general, the privatization program has yet to enjoy popular support, as the public perception in Turkey remains largely negative to privatization, particularly based on fears about worsening income distribution and unemployment.

12 \_ Parliament enacted legislation separating telecommunications policy and regulatory functions in January 2000, by establishing an independent regulatory body, the Telecommunication Authority. The Authority is responsible for issuing licenses, supervising operators, and taking necessary technical measures against violations of the rules. Most regulatory functions of the Transport Ministry were transferred to the Authority. The government also decided to give Turk Telekom commercial status and to end its monopoly in fixed telephone lines by December 2003. It changed this plan in May 2001 and announced full privatization of Turk Telekom, with the exception of a “golden share” for the government to protect security and public interest concerns. The sale of 55% of Turk Telekom to the Saudi-owned Oger Group was finalized on November 14, 2005.

### 3.6 FDI Promotion

In order to enhance Turkey's economic development, the capability to gain the interest of foreign investors in Turkey is vital. This should help enforce industry and services in the country through investments and incentives. FDI has a number of benefits for Turkey—it may help create opportunities for employment and income growth, transfer of technology and management skills to Turkey, help address poverty and underdevelopment in Turkey's inland regions, and further the integration of Turkey into the global community.

Figure 2-2 ●● FDI in Turkey



Source: Undersecretariat of the Treasury

The stock of FDI in Turkey was only \$300 million in 1971, and up until 1980 the average annual inflow of FDI was only \$90 million, which was far less than other comparable countries,<sup>13</sup> and FDI did not increase significantly for most of the 1980s. It was only with a shift in Turkey from a protectionist trade regime to export-oriented economic liberalization in the mid-1980s that FDI increased significantly. Turkey's large internal market, skilled and cost-effective labour force, strategic location, customs union with the EU, and regional trading relationships would have seemed useful in attracting FDI. But it hasn't been enough. In the

13 \_ See Balasubramanyam (1996).

1990's, FDI inflows averaged less than 0.5% of GDP in Turkey, while regional competitors for FDI such as Hungary and Poland averaged inflows of 4% and over 2%, respectively (see Table 2.4). That notwithstanding, the private sector could only attract less than \$1 billion of FDI annually for the past decade.

Figure 2-3 ●● FDI Attractiveness

Rank	Countries	FDI Attractiveness Score
1	Ireland	67,53
2	Malaysia	63,46
3	Czech Rep.	62,07
4	Germany	60,50
5	Estonia	56,56
6	Hungary	56,56
7	Slovenia	54,18
8	Slovak Rep.	52,46
9	Portugal	51,33
10	China	48,90
11	Brazil	48,46
12	Russia	42,45
13	Poland	42,34
14	India	41,16
15	Turkey	37,23
16	Argentina	34,14

Source: TÜSİAD and YASED (2004), FDI Attractiveness of Turkey: A Comparative Analysis.

In order to address the complaints received from international investors about the difficulties in Turkey's investment environment, the government of Turkey in 2001 launched a Reform Program to improve administrative procedures. A new Foreign Direct Investment Act (Law No. 4875) took effect on June 17, 2003, which replaced legislation that governed foreign direct investment practices in Turkey since 1954 and which took significant steps forward in harmonizing Turkey's legal framework for FDI with international standards. Such initiatives are meant to not only lift administrative barriers, but also to strengthen the legal protection of FDI that could make the difference between being an attractive location for investment and one that is not competitive. Complex and time-consuming administrative procedures have been known to be among the most important disincentives to investment that can discourage investors despite other attractive features that a country might have to offer.

The Free Trade Zone Law was established in 1985 to help increase investment and export-oriented production, speed up the flow of foreign capital and technology, provide a steady and cheaper flow of input materials, as well as make better use of foreign financing and trade opportunities. Free Trade Zones are defined as special sites within the country but deemed to be outside of the customs territory.<sup>14</sup> Despite the proliferation of Free Trade Zone Law, they still remain under-exploited.

The incentives for FDI also include customs duties and fund levies exemption on imported machinery, VAT deferral on imported and domestically purchased machinery and equipment, soft loans for investments, administrative streamlining, an end to foreign investment screening, as well as strengthened intellectual property legislation, etc. Nonetheless, the Reform Program to increase both domestic and foreign investments still lacks the aggressive packaging that ED can provide to attract desired investment—this is also true of the Free Trade Zones, as well.

14 \_ Turkey's first free zones were opened in Mersin and Antalya in 1987. There were 21 free trade zones by the end of 2002.

## 4. Policy Recommendations (Based on Korean Experiences)

### 4.1 Focused Development Plan and Strategy

#### 4.1.1 Public Policy Making and Implementation

##### *1. Develop private sector in line with national development goals*

Korea's economic development can be said to have begun with the First 5-Year Development Plan (1962-6) and the move toward an export-oriented economy under the direction of President Park Chung-Hee (1961-1979). Korea completed six 5-Year Development Plans, with the Seventh 5-Year Development Plan (1992-) scrapped and replaced by a New Economy Five Year Plan (1993-7) under President Kim Young-Sam.<sup>15</sup> What is worth mentioning is that the private sector in Korea has always been instrumental in the realization of national development goals and strategies. Today, the private sector continues to be a great source of income and wealth for the Korean economy. In this respect, it is recommended that Turkey include as much as possible the role of the private sector in the development process.

#### **Box 2.1 | Goals of Economic Policy in Korea (Featuring ED)**

1960s: Export-promotion Strategy  
 1970s: Heavy and Chemical Industry (HCI) Drive (1973-1979)  
 & Saemaul Undong  
 1980s: Technologically advanced manufacturing (e.g., automobile, electronics, household appliances, etc.)  
 1990s: IT & Communication leader, Movie industry  
 2000s: Cultural leader ('Hanryu')

**Box 2.1 |**

It is worth pointing out that in order to implement the government industrial policy, Park Chung-Hee set up the Economic Planning Board (EPB) in 1961 as a kind of "super ministry"

15 \_ Chapter 8 of Song (2003) is an excellent summary of Korea's development plans.

with elite bureaucrats playing a pivotal role in development planning, budgeting, and policy coordination. The Ministry of Commerce and Industries, which was in charge of monitoring the export figures and pushing the relevant parties to achieve targets, and later in overseeing the HCI Drive, as well as the Ministry of Home Affairs, which was responsible for the Saemaul Undong, were also other important ministries that carried out ED. The effectiveness of Korea's policymaking machinery seems to stem from the fact that not only were technocrats at the various ministries relatively detached from political decisions, but also because all economic agents, public and private, functioned under a well-defined reward and punishment system based on performance criteria. Needless to say, the President's vision and leadership also helped encourage the "can-do" spirit of government officials and the private sector that worked together toward national development.

## *2. Detach egalitarianism (especially populism) from the economic policymaking process*

Korea has been regarded as a shining example of democracy in Asia. The turning point for Korea was the culmination of 1987 nationwide pro-democratic movement that pushed for the revision of the constitution. Over the years, since the late 1980s, public opinion has increasingly championed egalitarianism through democratic machinery. Although on the one hand this has helped strengthen individual liberty, it has, on the other, blunted the discrimination power of public policy (see Corollary 1).<sup>16</sup> The political change is most welcome, but good politics does not necessarily translate into good economics.

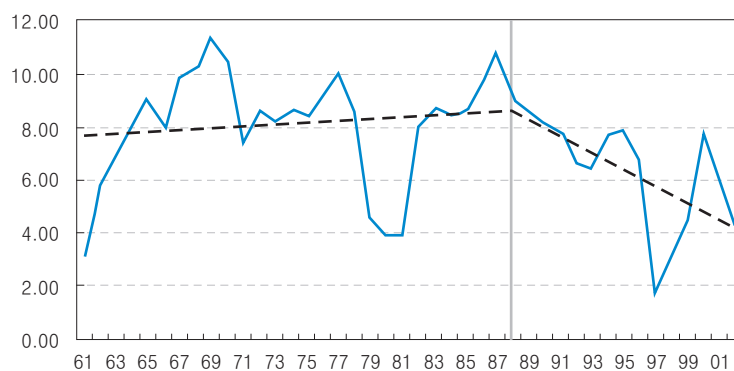
Most critical was the amendment in 1987 of Paragraph 2, Article 119 of the Korean constitution that reads, "the state may regulate and coordinate economic affairs in order to maintain the balanced growth and stability of the national economy, to ensure proper distribution of income, to prevent the domination of the market and the abuse of economic power and to democratize the economy through harmony among the economic agents". Quite significantly, many of the ideals of what a modern society should be can be literally read of this Act: Economic policy, and Korea's public policy at large, has since come under the influence of such terms as "regulation", "balanced growth", "proper income distribution", "domination of market", "abuse of economic power", "economic democratization", and so on and so forth, which are accepted as "norms" even by the general public and media.

The lean toward egalitarianism has mitigated ED in economic policy, which has resulted in a slowdown of economic performance in Korea over the past couple of years or so (see figure

16 \_ The democratization machinery in Korea is far from perfect. Kim (2003) is a lively contribution to the growing literature on Korean democracy.

below). Not disregarding the various factors that could have pushed growth rates downwards, the ED paradigm explains this slowdown as a result of strengthening egalitarianism. Turkey, which is a much more advanced democratic society compared to Korea, is perhaps even more likely to experience the negative impact of democracy, and particularly, egalitarianism.<sup>17</sup> For example, the emphasis on balanced regional development and reduced income gaps in Turkey is an example of the country's inclination toward egalitarian sentiments. But, focusing on balanced growth does not easily translate into economic growth (this is the classical equity Vs. efficiency debate). It is therefore recommended that public policy remove itself from egalitarianism (and populism), especially if it is necessary to do so in order to realize economic growth and development. It should also be noted again that economic development is a very lop-sided affair. Disparities should be expected, if not encouraged.

Figure 2-4 ● Korea's Real GDP Growth Rates (3-Year Moving Average: 1961-2001)



### 3. Sharpen the discrimination power of public policy

ED provides incentives for the private sector to actively participate in public policy. Sharpening ED therefore increases incentives. In practical terms this means aligning reward with better economic performance. The best example of aligning policy tools to economic performance in Korea was perhaps the export-promotion strategy and the Saemaul Undong (see Box 4.2 and 4.3 below).

17 \_ For further discussion, see Jwa and Yoon (2004b).

## **Box 2.2 | Korea's Export-Promotion Policy**

The shift to an export-led development strategy, which replaced the import strategy of the 1950s, was perhaps one of the most decisive decisions by the new leadership under Park Chunghee. The spectacular story is that prior to the 1960s, Korea had virtually no exports. In 1962, total exports were a minuscule US\$54 million, made up of fishery products, silk, and tungsten. Over the 1960s and 1970s, much changed and government policy undoubtedly was the most critical factor behind the export growth. From an annual export growth rate of less than 3% in the 1950s, annual export growth jumped to reach 30% and 40% in the 1960s and 1970s, respectively.

In line with the export-orientation strategy, the government provided a variety of incentives for exporting firms including tax benefits and financial support. Tax benefits included the reduction or exemption of corporate and income taxes and other indirect taxes such as commodity and business taxes, as well as depreciation allowance for invested capital. Financial supports were extended in the form of direct subsidies for exports, as well as automatic export loans provided at preferential rates. In addition, an export-import link system in which import quotas were proportionally given to exporters according to their export performance was utilized to strengthen export incentives. The export promotion policy was highly discriminatory containing the needed incentives for entrepreneurs to strive for better and better performance. It is also interesting to note that by placing a simple, well-defined target (i.e. export sales) which transcended the confines of any particular sector of the economy, the “export contests” effectively discouraged rent seeking behavior of protected or monopolistic firms.

At the end of each month, the Export Promotion Committee sat together with leaders from the business community, political parties and representatives from academia in meetings headed by the President to review progress and prepare necessary measures toward export targets. Such monthly meetings provided current information to ministries and firms on export performance, discrepancies between targets and achievements, and most importantly, appropriate guidelines for action from both the government and the exporting firms. As a result, rules and regulations became clear and transparent to every major economic player.

Even more dramatically, at the end of every year, the government reviewed the performances of exporting companies after which public recognition was bestowed on successful exporters by awarding them with achievement medals—a citation that provided entrepreneurs with enormous social prestige. With such information, investors and banks as well as all government supporting institutions followed to support those high performing exporters. In this way, ED was firmly placed in the entire economic system—economic institutions and the policy framework had been aligned to fully support the best performing

exporters, without sacrificing rivalry.

| Box 2.2 |

### | Box 2.3 | Saemaul Undong (New Village Movement)

Policy in the 1970s not only attempted to speed up industrialization, but also aimed at modernizing the rural areas as well. Under the Saemaul Undong (New Community Movement), the Ministry of Home Affairs aimed specifically to modernize rural villages. The Saemaul Undong is an exemplary government policy that embodies the spirit of ED.

The mechanics were rather simple. In the first year of the Movement, 34,000 villages throughout the country were provided government support more or less equally. After the first year, evaluations were carried out and all the villages were classified on the basis of their level of development into three categories: 1) basic (underdeveloped) village, 2) self-help (developing) villages, and 3) self-reliant (developed) villages. Basically, 16,000 villages were classified as either self-reliant and self-help villages, i.e. villages that were considered to have achieved some level of progress, while a majority 18,000 villages, which didn't actively participate, were classified as basic or underdeveloped villages.

Despite much pressure by the ruling political party leaders and the high government officials to release another round of support to all the villages, the President decided to support only the deserving self-help and self-reliant villages that had made good use of the government's earlier assistance. The remaining 18,000 underdeveloped villages were simply left out in the cold. It was further announced that there would be no government assistance going to these underdeveloped villages without their own genuine effort to elevate themselves from misery. This was a precise decision in favor of ED.

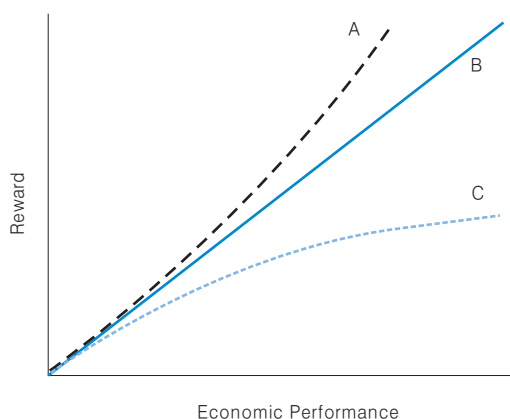
Interestingly enough, after the second round of support (with support going only to developing and developed villages), almost a third (6,000) of the left out basic villages, through their own efforts, began to show signs of improvement and were later classified as either developing or developed villages at the end of that year. They then became eligible for government support together with the other 16,000 progressive villages. Again, the remaining 12,000 basic villages did not receive any form of government assistance the following year.

Through such a discriminatory system, within 5 years, nearly all the remaining basic villages succeeded in moving up the ranks into either self-help or self-reliant villages, which resulted in much reduced income disparities between urban and rural areas. ED works in mysterious ways.

| Box 2.3 |

The figure below shows the relationship between economic performance and reward. For all cases, there is a positive relationship between reward and economic performance. We can distinguish between the 3 cases shown, A, B and C. Case B provides constant reward for marginal gain in economic performance. This is consistent with ED. Case A is super-consistent to ED; it has increasing reward for a marginal gain in economic performance, i.e., it encourages even the attainment of higher levels of economic performance. Case C is a mild egalitarian system in which reward diminishes as marginal gains in economic performance increase.

Figure 2-5 ● Economic Performance, Reward and ED



Regarding Turkey's development mechanism, the best case of ED seems to be Case C, a mild form of egalitarianism.<sup>18</sup> This, however, may be insufficient for "catch-up" economies to achieve desired and often ambitious goals in a limited time and with limited resources. It is therefore recommended that discriminatory power of public policy for at least some sub-sectors/firms in the private sector be encouraged.

#### *4. Encourage a more focused strategical framework*

Industrialization in Korea can be said to have begun with the so-called Heavy and Chemical Industry (HCI) Drive (1973-1979). Notwithstanding the efforts to increase exports in the 1960s, Korea remained a predominantly agricultural country. In a way, the real switch to

18 \_ It is easy to see how widespread egalitarianism would be opposed to stronger forms of ED (case B and A).

industrialization started with the HCI Drive, which was endorsed by Park Chung-Hee under both economic and national defense considerations.<sup>19</sup>

#### **Box 2.4 | The Heavy and Chemical Industry (HCI) Drive (1973-1979)**

The HCI Drive was carefully planned down to its finest details. Oh Won Chol (from the Ministry of Commerce and Industry with a background in engineering) had been brought into the Blue House in 1971. The HCI plan (perhaps following the path of the Japanese MITI) set out which industries were to take priority, with the anticipated shares of each sector in HCI investment indicated in parenthesis: steel (22.7), non-ferrous metals (3.6), machinery (22.8), shipbuilding (8.0), electronics (12.7), and chemicals (22.8).<sup>20</sup> At times, the government even determined the appropriate scale at which each factory was to be built. Interestingly, many of the projects were not put out for bids, but instead competence-proven individual corporations were approached and asked to carry assigned projects.

The HCI Plan also stated that companies wishing to enter the HCI projects should have procured at least 30% of total investment with their own capital. In this way, mainly enterprises that had grown in the 1960s were selected again, because these companies were the only ones able to put out such a large amount of capital, which they acquired under the export wave of the 1960s.<sup>21</sup> Be that as it may, once a firm agreed to carry out a project, the government saw to it that they received wide ranging support including loans at preferential rates, import licenses, corporate tax incentives, etc.<sup>22</sup> To this extent, the HCI industries were expected to meet the same criteria as their 1960s predecessors in light industries—they were expected to export and become competitive in international markets. If a project failed, the support system was promptly removed from the company's existing enterprise.<sup>23</sup>

19 \_ Defense considerations and economic considerations in reality could not be viewed separately at the time, but roughly speaking, Park's motivation include his wish for Korea to move into the next level of economic development and to overtake North Korea's performance. Also, military considerations were important with the U.S.'s withdrawal from the Vietnam War as well as the Nixon doctrine.

20 \_ Kim, J. H (1990).

21 \_ One more reason was that the heavy and chemical industries required a large production scale and, therefore, large amounts of money, giving a relative advantage to the big enterprises that had financial and managerial experience and ability.

22 \_ Stern et al. (1995, p. 102) estimate that the average rate of protection for HCI industries stood at 43.2% in 1978, compared to 3.6% for other manufacturing industries. State owned banks were directed to provide credit (at preferential interest rates) to firms undertaking HCI projects and their share of allocated credit went up from 36% in 1973 to 68.4% in 1982 (Stern et. al. p. 48). It is also estimated that HCI industries were subject to effective corporate tax rates of 16-19% in the late 1970s, contrasting with the rates of over 50% for non-HCI industries (Yoo, 1990, p. 35).

23 \_ See Jones, Leroy P. and Il SaKong (1980), pp. 357-58.

Although the HCI drive pushed for rapid amalgamation of economic resources (Corollary 2), which greatly helped the take-off of companies, there had also been some negative consequences which led to the surge of what is known as chaebol problems.<sup>24</sup> What needs emphasis, however, in the context of the developmental theory provided here, under both the export promotion and HCI Drive, is that ED was fully set into motion.

#### Box 2.4

The HCI Drive can be seen as a kind to follow-up to the export-promotion policy of the 1960s, which was a focused incentive-driven strategy based on ED. Given the limited resources going into private sector development, such a focused and selective strategy could be more effective for Turkey's catch-up. It is true that some of the policy measures undertaken by Korea, such as the export drive through subsidies and setting up of entry barriers, and directed credit to selected industries and firms, might no longer be feasible given today's international trade practices and the increasingly globalizing world. Be that as it may, flexibility and the willingness to respond to the changing environment through ED is the best possible way forward.

### *5. Encourage economic as well as regional amalgamation (or concentration)*

Corollary 2 has important implications for Turkey. Turkey is much larger than Korea in terms of geographical size. As such, Turkey's population densities and industrial concentration are lower than Korea's. It is recommended that Turkey create "pockets" in which important economic resources are in close proximity and access. This should allow for the creation of a "critical mass," which is indispensable in overcoming economic barriers and other inefficiencies.

Industrialization regions have also been important for Korea since the First 5-Year Plan.<sup>25</sup> For example, Seoul is a center of apparel and knowledge-based service industries, Busan a center of marine logistics, Daegu a center of the textile industry, Incheon a center of the air logistics industry, Ulsan a center of the automobile industry, Changwon-Gimhae a center of the machinery industry, Pohang a center of the metals industry, Gumi a center of the electronics

24 \_ In the literature, chaebol problems refer to negative consequences of government support of large corporations and include over-investment, over-capitalization, unrelated diversification, the bailing out of bankrupt firms, the "too-big-to-fail" syndrome, etc. See Chapters 1 and 3 in Jwa (2002a) for further discussion.

25 \_ See Hong and Kim (1997).

industry, Daejeon a center of research and development, and Gwangju a center of optical and cultural industries.<sup>26</sup> What is special is not only the natural advantages or historical circumstances of the cities that took on special roles, but rather that ED was built through selecting and promoting firms that became instrumental to the city's developmental objectives and plans. That is, all regions benefited from serious promotion and assistance from government policies, which helped establish key industries, backward and forward industries, innovation network, linkage of related policies, business startups and implementation systems.

Not unlike Turkey, the Korean government, increasingly so in recent years, has also emphasized balanced regional development. Despite various efforts however, regional disparities in Korea have not diminished significantly. Infrastructure investments continue in major cities, especially Seoul and other key cities including Pusan. The main stumbling block to balanced growth has been limited resources. The ambition for balanced regional development has been plagued by unclear (or too many) priorities,<sup>27</sup> which has made it impossible to identify and direct scarce resources to specific cities besides Seoul. Although Seoul continues to grow, despite the balanced growth strategy, other key cities like Pusan, Daegu and Gwangju continue to suffer from lack of economic concentration and insufficient support. This is an important lesson for Turkey given its overwhelming concern for “balanced regional development.”

#### 4.1.2 SME Promotion

The composition of SMEs in the Korean economy has certainly varied over the years. Since the 1950s the share of SMEs in manufacturing employment and value added first rose until the mid 1960s, then fell substantially to a low in the mid 1970s, and again rose to a high in the mid-1990s. But since then they have been declining again. According to a recent survey by the Korea National Statistical Office of the manufacturing sector as a whole, SMEs make up about 99.4 percent of all establishments, 77.0 percent of employees, 51.0 percent of gross output, 51.9 percent of value added and 46.3 percent of tangible assets in 2002.<sup>29</sup>

26 \_ This is not unique to Korea. Detroit of the USA has served as a capital of automobile industry, Rotterdam of the Netherlands as a capital of logistics industry and Tskuba of Japan as a capital of research and development, for example.

27 \_ This is a typical problem of the balanced development strategy influenced by egalitarian ethos.

28 \_ SME denotes an establishment that has 5 to 299 employees and this criterion is based on two factors. First, the Korean government's definition of SMEs in the Article 2 of the Framework Act on Small and Medium Enterprises and Article 3 of its enforcement decree: “establishments have less than 300 regular employees or paid-in-capital less than or equal to 8 billion Won (about 8 million U.S. dollars)” and; second, the Report on Mining and Manufacturing Survey by the Korea National Statistical Office covers mining and manufacturing establishments that engage five or more workers.

**Table 2-4 ●● SME Shares in Number of Establishments, Employment, Production in Manufacturing 1952-96 (Percentage)**

	Manufacturing establishments		Manufacturing employment		Manufacturing value-added		Manufacturing production	
	Small and medium	Large (300+)	Small and medium	Large (300+)	Small and medium	Large (300+)	Small and medium	Large (300+)
1952	95.8	4.2	61.5	38.5				
1955	97.2	2.8	63.3	36.7				
1960	97.6	2.4	67.7	32.3	57.0	43.0		
1966	98.3	1.7	60.3	39.7	42.5	57.5	45.6	54.5
1970	97.1	2.9	49.0	51.0	28.5	71.5	30.3	69.7
1973	97.0	3.0	46.3	53.7	33.9	66.1	33.8	66.2
1975	96.2	3.8	45.7	54.3	31.7	68.3	30.7	69.3
1980	96.6	3.4	49.6	50.4	35.2	64.8	31.9	68.1
1985	97.5	2.5	56.1	43.9	37.6	62.4	35.4	64.6
1990	96.1	3.9	61.7	38.3	44.3	55.7	42.7	57.3
1991	98.5	1.5	63.5	36.5	45.8	54.2	44.6	55.4
1992	98.6	1.4	65.8	34.2	47.6	52.4	45.8	54.2
1993	98.9	1.1	68.9	31.1	50.3	49.7	47.8	52.2
1994	99.0	1.0	69.1	30.9	49.2	50.8	47.9	52.1
1996	99.1	0.9	69.2	30.8	47.2	52.8	46.8	53.2
1997	99.1	0.9	69.3	30.7	46.5	53.5	46.3	53.7

Note: Definition of small and medium-sized enterprise changed: 5-200 workers before 1973 and 5-300 thereafter.  
Source: Nugent, Jeffrey B. and Seung-Jae Yhee (2001).

The institutional beginnings of Korea's SME support system can be traced to the late 1960s. The Korean Credit Guarantee Fund (KCGF), for example, was created to facilitate the provision of bank credit to SMEs. A special trading corporation had also been set up for assisting SMEs in export marketing. The beginnings of the SME reservation scheme and of another to foster vertical integration (subcontracting) with large corporations were established in the mid-1970s, and in 1979 the Small and Medium Industry Promotion Corporation (SMIPC) was established for the purpose of providing technical assistance and training programs to SMEs. But most of the machinery for SME promotion remained dormant during the 1960s and 1970s.<sup>29</sup> Rather,

29 \_ It has been argued that SMEs were neglected. For example, they had access primarily only to credit on the informal or curb market at interest rates perhaps double those in the formal credit market. But this applied to all types of firms that were not part of the government's programs, i.e., the exporting firms, for example. It just happened to be that those were mostly SMEs.

economic policy at the time was directed at providing credit and other kinds of support to those participating in government programs, whether large or small. That is, SMEs as well as the few large corporations that agreed to become instruments of the government's export growth strategy were often turned into bigger, exporting firms, through government-assisted M&A, and other kinds of support.

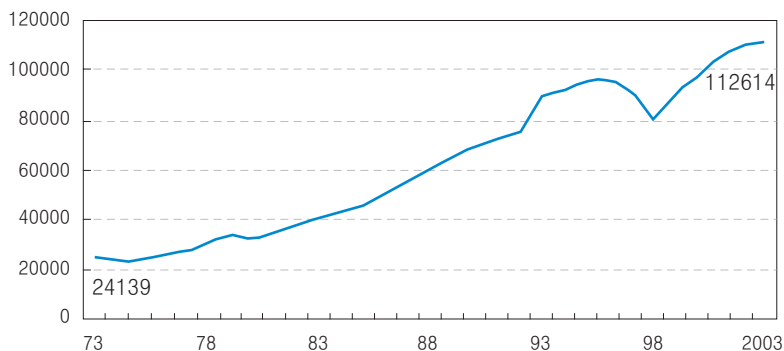
Although the Korean constitution had already stipulated under President Park that the protection and promotion of SMEs be included among the basic responsibilities of the government, it was not until the late-1980s that a noticeable shift toward stronger SME support system and policies became noticeable. This has continued until today. Many specific-purpose credit funds have been set up, for example, to help rural industries, to foster venture capital designed to assist small high tech startups, to foster collective or cooperative activities among SMEs, to help SMEs update their technology, and even to help some existing SMEs to relocate some of their operations abroad. An ambitious system for identifying and providing various kinds of support for "promising SMEs" was established, and, even more important, both commercial banks (city banks) and rural local banks were required to allocate minimum specified percentages of their loans to SMEs. Such quotas were even forced on non-bank financial institutions, such as insurance companies. Various tax breaks to SMEs (accelerated depreciation allowances, deductions from taxable income, tax moratoria, and tax rate reductions) for special purposes were also implemented.<sup>30</sup>

The 1980s and 1990s also saw a proliferation of technical research centers, institutes, standards centers, productivity centers, and a design and packaging center organized as either government or nonprofit agencies. Although not developed exclusively for use by SMEs, several of these agencies were in fact fairly heavily used by SMEs. Moreover, as the internal capabilities of large corporations increased with accumulated experience and staff additions, they had less need to rely on those external agencies, such as the Korean Overseas Trading Association (KOTRA), which had earlier catered almost exclusively to large corporations.

The result of all these supports, not surprisingly, has been the acceleration of the number of SMEs in Korea.

30 \_ For further details of the government programs and policies in support of SMEs, see Seong (1995) and Kim and Nugent (1999).

**Figure 2-6** ●● Number of SMEs (Employment Less than 299, Mining and Manufacturing) in Korea (1973-2003)



Source: Authors' own calculation from the (Korea Information Services) KIS Database.

What is clear is that financial supports of virtually every type, but especially general commercial bank loans, were very highly evaluated and widely used. Some of these were made possible by guarantees on loans to SMEs from the Korean Credit Guarantee Fund (KCGF) and other smaller and more specialized agencies. The KCGF, whose guarantees go almost exclusively to SMEs, grew rapidly; its outstanding guarantees grew (in nominal terms) 10-fold between 1976 and 1984 and almost another 15-fold by 1998. Expansion of the KCGF has been heavily dependent on new infusions of government funds since the fees have generally been insufficient to cover losses and other sources of funds have been quite small.

**Table 2-5** ●● Share of SME Loans in Total Credit Extended by Commercial Banks, 1979-95

(unit: 100 million Won)

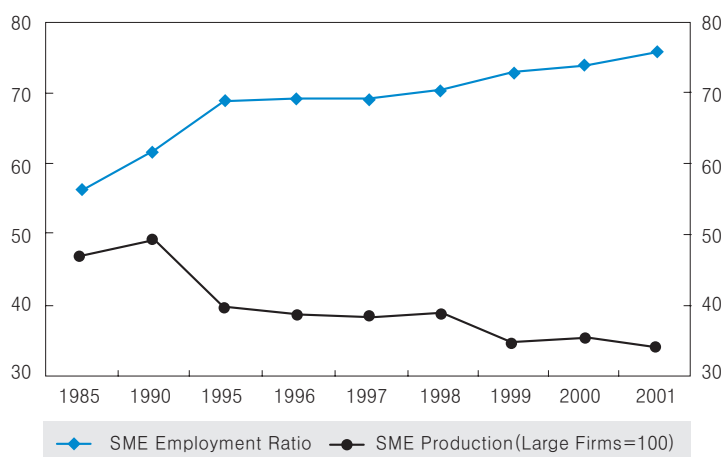
	1979	1985	1988	1989	1990	1991	1992	1993	1994	1995.6
Total loans	71.7	257.9	356.2	462	54.02	649	745	834.1	992.9	1054.4
Loans to SMEs	27	111	171.3	231.3	300	368.5	419.7	494.2	583.4	632.2
SME Share(%)	37.7	43.1	48.1	50.1	55.5	56.3	56.3	59.3	58.8	60.0

Source: Nugent, Jeffrey B. and Seung-Jae Yhee (2001).

Besides institutional supports, another important factor supporting SMEs has been the policy of the government to impose gradually increasing minimal credit allocations to SMEs on

commercial and regional banks and to a lesser extent on some other financial institutions.<sup>31</sup> The result has been a strong upward trend (at least until 1996) in the percentage of commercial bank loans allocated to SMEs.

Figure 2-7 ●● Trend of SME Employment Ratio and Labour Productivity (%)



Under egalitarian motives, the emphasis on SMEs increasingly took a central role in the new balanced growth strategy. Despite their promotion, generally, the sector remains somewhat weak. As shown in Figure 4.4, labor productivity steadily declined, while the sector continued to absorb more and more workers. Their export performances, technology-levels, and impact on the overall economy continued to lag somewhat behind.

The main weakness has been that SME policy packages were set under the general criteria allowing SMEs access to governmental support and privileges regardless of their capacity or economic potential. Moreover, the policy packages were mainly applied in a uniform and non-discriminatory manner, which, for example, has been a major stumbling block to upward mobility or “graduation of SMEs.” Simply put, the constant evaluation and reward system of ED as in the earlier developmental policies was largely missing under the SME promotion strategy.

31 \_ A program called the Compulsory Lending Ratio stipulates that commercial (nationwide) banks must allow more than 35% of their total loans to SMEs, and that regional banks must provide more than 80% of their total loans to SMEs.

Salient features of Korea's SME policy which Turkey should avoid are:

1. *SME Sanctuaries*: The idea of an SME sanctuary is important when understanding incentives for SME promotion. Basically, SMEs have received government support due to the fact that they are SMEs with little regard to their economic performance. Such a non-discriminatory system that shelters firms merely because they are SMEs can and does lead to moral hazard.
2. *Reverse-discrimination*: In Korea, special regulations have been applied to large firms since the late-1980s, which, have acted as disincentives and inconveniences for large corporations, while not necessarily helping SMEs. For example, large corporations have been subject to various kinds of regulation on their business activities with the aim of de-concentrating their economic power.<sup>32</sup>
3. *Uniform Treatment (No ED)*: SME policy packages often lack continuous evaluation and reward, an important feature of the Export-promotion, HCI Drive and Saemaul Undong Movement mentioned earlier. This leads to moral hazard.

### 6. Place ED in SME promotion policy (Policy cycle)

In light of the rather lengthy discussion on SME promotion experience in Korea, it is recommended that ED be made to feature strongly in Turkey's SME promotion policy. SME policy should parallel the "policy cycle" of Korea's "export contests," the HCI-Drive, and the Saemaul Undong Movement, for example.

#### **Box 2.5 | Policy Cycle**

The essence of ED in public policy is captured in the "policy cycle." In the context of promoting firms, the policy cycle consists of the following rounds:

- Rd. 1) Firms to be evaluated by market competition and performances.
- Rd. 2) Recognition of good performance in line with national development goal(s) through public policy, e.g. banks and policy are lined-up to support these firms.
- Rd. 3) Re-evaluation (back to Rd. 1) with exit and new-entry according to performance [keep competitive pressure up!]

32 \_ Korea's movie industry is an interesting example. During the early stages of economic growth, the movie industry was assigned as a SME sector. Despite much support, the movie industry did not develop. The turning point seems to have come when the regulation was scrapped and large corporations were allowed to enter the industry. Today, Korea's movie industry is among the growth industries that enjoy success not only domestically but internationally as well.

ED means CONTINUOUS evaluation-reward process on the implementation level!

Note) Only through such a cycle's competitive pressure on firms to perform well and to avoid undesirables (rent seeking/corruption) possible.

| Box 2.5 |

Turkey should try its best to avoid the policy mistakes of Korea regarding SME promotion. Specifically, SME sanctuaries, reverse discrimination and uniform treatment should be avoided. Currently, for Turkey, the warning against uniform treatment is highly relevant. Turkey has recently made much effort to help SMEs, but many of the policies lack discriminatory power (evaluation and reward mechanisms). Well-intended policies such as encouraging banks to provide loans to SMEs will remain ineffective under uniform treatment. Furthermore, the system is somewhat passive, and there is need for authorities to “go out into the field” to kick-start the SME's vitality.

## 4.2 Creation of “Superstars”

### 4.2.1 Building Role Models

#### *7. Create a “Firm Evaluation Body” for SMEs*

It is debatable whether development policy should address mainly macro- or even sectoral-issues. We ask why not focus on firm-level problems and issues.

### | Box 2.6 | Infant-industry Protection Vs. Firm Protection

Chang (2003) correctly argues that nearly every industrialized country today has followed some kind of infant-industry protection. In this sense, Turkey's road to industrialization could benefit hugely from similar kinds of protection.

Given Korea's experience, a slightly different approach is evident, namely a firm-protection policy. In the case of Korea, it could be argued that in many cases the growth of firms was no different from the growth of industries, as many of the sectors were underdeveloped and led by individual firms. Be that as it may, under the ED Principle, the “discriminatee” has been essentially the firm or corporation. Hence, identifying and supporting the firm eligible for government support can be an effective way to promote ED.

| Box 2.6 |

The staffs of KOSGEB and the Ministry of Industry and Trade, as well as other SME supporting institutions in Turkey, are very aware of SME support programmes in Europe, North America and Asia. The major programmes operated by KOSGEB and its Enterprise Development Centres (IGEM) and Technology Development Centres (TEKMER) are structured much like successful programmes in a number of OECD countries. The laboratories operated by KOSGEB are similar to centres operated by Japanese prefectural governments and provide SMEs with access to state-of-the-art testing and analysis equipment and methodologies that would otherwise not be available to most small firms. All of these programmes appear to be well designed and effectively managed according to international standards. The technological and managerial assistance provided to the limited numbers of SMEs enrolled in the programmes appears to have helped a number of firms to cope successfully with their business problems. Such public support is highly commendable.

On top of this, however, we recommend that a “Firm Evaluation Body” be set up that will evaluate, identify and promote, in a consistent and comprehensive manner, those firms that prove to exhibit strong economic performance. Such a Firm Evaluation Body should consist of public and private participants that can align the nation’s planning, commercial and financial institutions to support best-performing firms. This way, Turkey can catapult and support those firms and industries that are doing well not only domestically, but also in the international market.

### *8. Support and encourage large corporations*

The creation of large corporations to lead the economy can have far reaching synergies as Korea’s experience has shown. Korea’s large corporations or chaebols have acted as role models for private sector development, and as global leaders taking Korean products to the international market.

The chaebol are a creation of the government. In the 1970s, as the Korean government steered the focus of the economy from light industries to heavy and chemical industries, it allocated resources and industries to specific firms that eventually grew into the industrial conglomerates known as chaebols. As we have already mentioned, to ensure the growth of the targeted heavy and chemical industries, preferential treatment in terms of credit access, tariffs and tax benefits was usually extended to the selected firms (see Box 4.4). Since these industries were subject to huge economies of scale, the size of the corporations could not but grow larger. This practice set the stage for further government intervention in the course of national economic development. Subsequently, the larger corporations were given preferential entry into other targeted industries, which restricted entry to other private firms that could not easily meet the capital requirements. The chaebols thus benefited from further financial benefits, giving them every incentive to diversify their operations according to the government’s industrial

targeting policy. These large business groups were also reinforced by the government's policy of transferring the ownership of insolvent firms to the ever-growing chaebols.

The chaebols were not only at the forefront of expanding production and exports in the 1960s and 1970s, but have also played a pivotal role in developing high technology industries in Korea in the 1980s and 1990s. Often, chaebols were aggressive in diversifying their sources of technology. First, several major chaebols set up outposts in advanced countries like the U.S and Japan to help "leapfrog" into the state-of-the-art technologies. Second, chaebols also succeeded in developing ties with MNCs like IBM, Hewlett-Packard, Honeywell, ATT, Monsanto, Hitachi, Toshiba, etc., which have provided important inputs in developing Korea's high technology. Third, facing greater challenges in acquiring licensing, chaebols also took important steps to merge, acquire and engage in strategic alliances with foreign firms to gain access to frontier technology. Fourth, chaebols have also invested aggressively in developing in-house R&D centers in order not only to absorb, assimilate, and adopt imported technology, but also to strengthen their own innovative capabilities.

### **Box 2.7 | Samsung Corporation<sup>8</sup>**

The Samsung Group is the oldest of the big chaebols. In 1997, the Samsung Group had 80 affiliates, assets worth 50 trillion won, and sales of 60 trillion won. It has engaged in diverse businesses such as trading, food processing, electronics, petrochemicals, machinery, shipbuilding, financial services, hotels, department stores, and the media. Its founder, Byung-Chul Lee, inherited land from his father during the Japanese occupation and ran small shipping businesses. When he established a trading company in 1938, now known as the Samsung Corporation, it originally focused on the export of Korean agricultural products.

After Korea was liberated from the Japanese occupation in 1945, Samsung expanded into the exporting of goods that were not available in Korea. It imported daily necessities such as sugar, fertilizer, paper, wool, nylon, and medicines. With the profits earned from the business, Samsung expanded into manufacturing. It first established Cheil Jedang (CJ) in 1953 and built a factory that built sugar, which until then had been imported. Its chairman's close relationship with Korea's president helped it secure foreign currency. In 1954, it received a million dollars in aid from the US and used this money to purchase the manufacturing facilities for its new subsidiary, Cheil Industries, Inc., which produced woolen goods. At the same time, the government banned the import of woolen goods and sugar. Samsung soon took over Ankuk Fire Insurance Company, now known as Samsung Insurance, and also bought more than half the

33 \_ Adopted from Chang (2003).

shares of three banks.

Samsung initially faced many difficulties when Park took power in 1961. The Park regime charged Chairman Lee (and other chaebol chairmen) with corruption. But Park quickly compromised with the chaebols to achieve his economic objectives. Lee actively accommodated the government's goals. Lee assembled the businessmen of all other chaebols and organized the Federation of Korean Industries (FKI). Lee eventually handed over his banks to the government. Later, as a goodwill gesture, Lee established Hankuk Fertilizers and donated it to the government. In 1969, Samsung established Samsung Electronics, Dongyang Broadcasting Station, and Joongang Daily Newspaper.

Like other major chaebols, Samsung invested heavily in government-designated strategic sectors during the 1970s. It diversified into petrochemicals (Samsung Petrochemical), machinery (Samsung Heavy Industries), and shipbuilding (Samsung Shipbuilding). Samsung Corporation was the first chaebol subsidiary to be registered as a general trading company.<sup>34</sup> At the same time, Samsung vertically integrated into parts-manufacturing businesses such as Samsung SDI, Samsung Corning, and Samsung Electro Mechanics.

As the government scaled back its economic intervention in the 1980s and 1990s, Samsung continued to expand. It diversified into semiconductors, financial services, and automobiles. The last market entry was costly, and, in 1999, Samsung Motors filed for bankruptcy. It has been taken over by Renault. Also, Samsung Group spun off Shinsegae and Cheil Jedang in the late 1990s.



#### | Box 2.7 |

The large holding companies that are a leading feature of the Turkish economic landscape are not at the cutting edge of quality management and business practices, and in many ways remain tied to traditional patterns of family ownership and control. Few companies, for instance, have sought to attract equity financing from foreign investors. Be that as it may, major private enterprises continue to contend with a high degree of policy uncertainty and economic vulnerability in their dealings with the state. Such uncertainties can be diminished through closer cooperation and understanding between the private and public sectors.<sup>35</sup>

34 \_ The general trading companies enjoyed the full support of government backing to companies that specialized in exports. Many were granted permission to participate in the HCI Drive thereby becoming deeply involved in Korea's industrialization.

35 \_ Although the recent efforts to create "steering committees" consisting of public and private institutions are encouraged, we feel that a more proactive and discriminatory approach is needed, which will make incentives more effective.

## 4.2.2 Law and Regulation

### *9. Simplify rules, regulations and procedures*

It is now widely accepted that a country's legal, regulation and operational system is a critical factor affecting a country's development. The bureaucracy and complicated procedures in Turkey had for many years been a huge barrier to an efficient private sector. The recent reform to simplify the workings with public institutions is highly commendable.

Regarding ED, it is recommended that rules and procedures be simple, clear and precise. This should allow different firms to easily understand and abide by policy prescriptions, as well as keep public and private interaction as direct and effective as possible. Complicated rules and procedures can be a huge burden to both private and public sectors.

### *10. Promote competition in private sector*

Korea's first serious attempt at checking monopoly was with the amendment of the Law on Monopoly Regulation and Fair Trade Law (MRFTA) in 1986 (originally set up in 1980) through which special regulations were placed on large chaebols such as the prohibition of the establishment of holding companies, ban on mutual shareholdings between subsidiaries of the same chaebol, limit placed on amount of investment and equity participation in other companies by subsidiaries, etc. Korea's industrial organization has since been affected by the Fair Trade Laws, which with the backing of the "economic democracy" doctrine, as well as the almost atavistic fear of big businesses, has taken on as its responsibility to check corporate expansion and growth. The Korea Fair Trade Commission (KFTC) established in 1981 is the main body that carries out these laws and since 1987 classified on an annual basis the top 30 chaebols by asset size to which special regulations, many of them aimed at de-concentrating economic power of large corporations, were uniformly applied.<sup>36</sup>

A close inspection of the actual contents of the MRFTA reveals two contradictory theoretical and empirical perspectives on industrial organization (see Table 4.3 below). On the one hand, it features measures that aim to regulate the economic power of large corporations through direct intervention,<sup>37</sup> and on the other hand, it contains measures that attempt to tackle monopoly issues by enhancing competition.<sup>38</sup> Although both aspects are constituted in the

36 \_ Starting April 1, 2002, in a change from the previous policy that ranked the chaebols by asset size, all Korean firms were now placed under the special regulations if their total assets exceeded 3 trillion Won.

37 \_ Among some of the most controversial methods are policies that aim to curtail firm size, regulate ownership and control, and intervene in corporations' financial, investment and diversification decisions.

38 \_ Industrial organization policy regimes that aim at enhancing competitive environment include building

MRFTA, the government has so far emphasized the former approach of directly regulating large corporations, while policies aimed to enhance the competitive environment have taken a somewhat secondary role.

**Table 2-6** ●● Comparison between Two Industrial Organization Policy Regimes

	<b>Regulating Concentration of Economic Power<sup>a</sup></b>	<b>Competition-Promotion<sup>b</sup></b>
Objective	Pursue economic democracy + contain economic power	Contain monopoly and oligopoly
Policy direction	Limit corporate growth + directly regulate corporate strategies	Enhance competition
Policy measures	Regulation and direct intervention on corporate structure, ownership and control, finance and investment decisions, internal transactions, specialization and diversification strategies, etc.	Removal of entry barriers, market-opening, FDI promotion, regulation of monopoly and anti-competitive behaviour, consolidation of exit mechanisms, etc.
Effects	Corporate regulation acts as barrier to corporate growth and national economic development: difficulties in policy implementation including time-inconsistency problem → stop-go pattern in policy formulation and implementation Mitigate entrepreneurship and competition	Enhance the discrimination function of markets Stimulate entrepreneurship, corporate growth and national economic development Sustain economic dynamism and consumer welfare, etc.

Notes: a. For example, Germany, Japan, Korea.

b. Anglo-American countries.

Source: Jwa (2004)

Efforts at restricting economic concentration of large corporations have however been ineffective, and have not equalized outcomes. For example, the proportion of value-added for the 30 largest chaebols and 5 largest corporations actually increased from 39.3% and 21.7% in

economic institutions that help remove entry and exit barriers, open markets, promote foreign direct investment, etc.

1986, to 51.5% and 25.0% in 2001, respectively. The share of value-added of Samsung Corporation (currently the No. 1 Corporation in Korea) to total national product increased from 4.7% to 9.0% over the same period. More worryingly, direct regulations usually distort the economy's incentive structure. Hence, in addressing monopoly issues, it is better to strengthen the country's competitive environment than adhere to direct rules and regulations (i.e., 'policy makers should not conceive of appropriate competition policy as a simplified version of extant antitrust regimes'.)<sup>39</sup>

More recently, following the 1997/98 Korean financial crisis, the restructuring of large corporations, which were identified as the culprits of the crisis, became a huge concern of the government. The response to criticisms of the *chaebol*, both within and outside the country, was a flood of reform measures for corporate restructuring from the then Kim Dae Jung government under the recommendations of the international financial community, especially the IMF. The main features of the new corporate policy are threefold: 1) the reduction of chaebols' debt-equity ratios to below 200 per cent 2) the importation of the Anglo-American corporate governance system and 3) the introduction of a mandatory BOD (Board of Directors) for all listed firms. Broadly speaking, the attempt to restructure Korean chaebols has been the full-scale introduction of the Anglo-American corporate governance system as part of the post-crisis reform effort, which, among other things, emphasizes shareholder rights and interests, transparency and disclosure, and the incorporation of an outside board of directors and independent auditing boards.<sup>40</sup>

Over the past two decades or so, although Korea has witnessed a complex maze of regulations, which in essence have some similar characteristics: 1) they pay too much attention to changing outward symptoms rather than addressing the fundamental causes of the problems 2) they emphasize regulation of concentration of economic power rather than competition promotion 3) they seek 'homogenization of behavior' (say, 'global standards');<sup>41</sup> and 4) they are uniformly applied. Nonetheless, Korea's restructuring of the private sector, including large corporations, has continued at a reasonable pace.

39 \_ See, for example, Singleton (1997).

40 \_ A copy of the 'OECD Principles of Corporate Governance' (1999) can be downloaded from: [www.oecd.org/daf/governance/principles.html](http://www.oecd.org/daf/governance/principles.html)

41 \_ For further discussions on 'global standards' and criticisms of post-crisis corporate reform efforts, see Jwa (2003).

## 4.3 Informal Sector, Infrastructure and FDI-Promotion

### 4.3.1 Informal Sector

#### *11. Incentives for economic actors to participate in the formal sector*

Microeconomic factors that drive firms into the informal sector should be reversed. These include an unfavorable tax system and rigid labor conditions that have driven many businesses into the informal sector. It is therefore recommended that tax and legal systems aim at reducing transaction costs in the private sector.

The issue of how to reduce the informal sector in Turkey is a perennial one. The definition of the informal sector for Korea and Turkey, as with other countries, tends to differ.<sup>42</sup> Nonetheless, during the early stages of economic development, the Korean government did experiment with amnesty programs, for example, to formalize the financial sector. Such measures are usually tricky and demand a high tolerance for government command. Although implementing such measures might be outside the scope of what is feasible for Turkey today, the lesson is that strong ED measures, however unpopular, do increase the chances of achieving desired results. Moreover, when trying to reduce the informal sector, carefully designed incentives should be applied that will induce informal sector activities to come forward and comply with the government's design and intentions. This often means credibility is a critical factor, which involves not only giving mandates and taking up responsibility, but also undertaking the necessary steps needed to accomplish the goals.

### 4.3.2 Infrastructure for Private Sector

#### *12. Encourage privatization of state owned enterprises (SOEs)<sup>43</sup>*

It is often argued that Turkey's government and bureaucracy need to be reduced. To complement this, a properly functioning infrastructure is important in reducing private sector operational costs and inefficiencies.

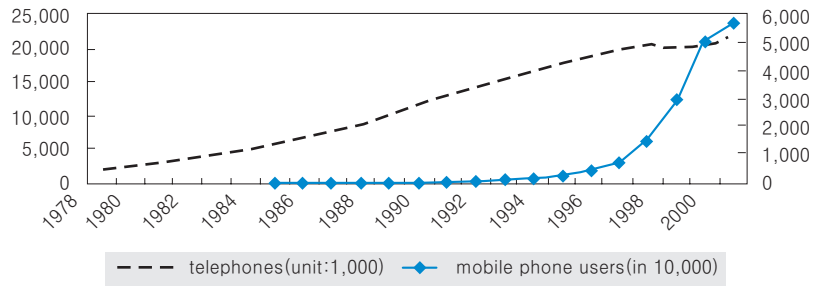
Infrastructural developments in Korea have been critical for private sector development. For

42 \_ In fact, in Korea, the term "informal sector" is not used.

43 \_ This section draws heavily from Baietti, A. (2001). For a background of Turkey's privatization efforts, although somewhat out-dated, it is worth looking at Tecer (1992).

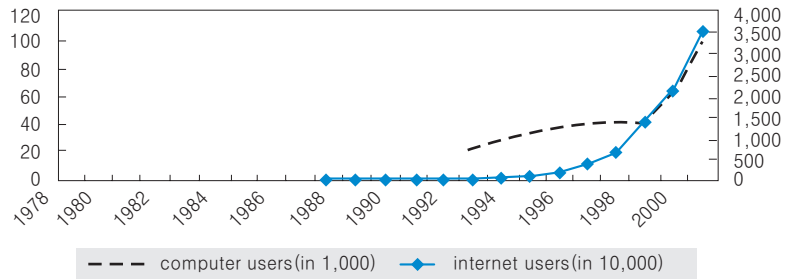
example, Korea is now the number 1 IT (broadband penetration and computer literate) country in the world.

Figure 2-8 ●● Number of Telephone Users and Mobile Phone Users



Note: Left axis indicates telephone users, and the right axis indicates mobile phone users.  
Source: Korea Statistical Information System

Figure 2-9 ●● Number of Computer and Internet Users



Note: Left axis indicates telephone users, and the right axis indicates mobile phone users.  
Source: Korea Statistical Information System

The cheap and effective communication system now augments the transport network, which was built with Korea's First Five-Year Development Plan (1962-66). With the Second Five-Year Development Plan (1967-71), investment in railways continued and highway construction

was accelerated in line with the export-promotion strategy laid out in the previous Plan. Korea's first major highway project was to connect the country's two largest cities, Seoul in the northwest and Pusan in the southeast.<sup>44</sup> Korea's investment in infrastructure during the 1960s was certainly not enough. More infrastructure for development was required to build the heavy and chemical industries. Comprehensive programs were planned to develop the country's airports, seaports, highways, railways, and telecommunications systems to support these industries. With the first Ten-Year Comprehensive National Physical Plan in 1972, the government also decided to develop major industrial estates with new deepwater harbors, primarily along the southeastern coast near the ports of Pohang, Ulsan, and Masan. These areas experienced rapid growth during the 1970s and remain important backbones of the Korean economy today. In addition, the authorities initiated major port projects in Incheon and Pusan, added 487 kilometers of highways in the south, and built a subway system in Seoul.

In the period between the early 1960s to the late 1980s, several factors enabled Korea to realize sizable economic benefits from infrastructure investments. Among these factors, strong leadership and efficient coordination for installing the infrastructure necessary to spur economic performance, a well-defined focus and priorities on infrastructure development, and willingness and flexibility were critical. On the other hand, Korea has made significant strides in increasing private participation in infrastructure (PPI) by reforming infrastructure sectors from the early 1990s.<sup>45</sup> In 1994, the Private Capital Inducement Promotion Act was introduced to encourage private participation in infrastructure, primarily for greenfield investments in transportation.<sup>46</sup> It is strongly recommended that Turkey develop its infrastructure through private sector participation to solve the infrastructural bottlenecks, which must involve deregulation and a well functioning market economy that is open to the world.

### **Box 2.8 | Privatization in Korea (sector-by-sector overview)**

(a) *Power generation and distribution.* Korea Electric Power Corporation (KEPCO)—the largest state-owned enterprise in Korea—has been the dominant player in power generation (94 percent), transmission (100 percent) and distribution (100 percent). The government has a direct

44 \_ This project was particularly momentous because not only did it establish a vital industrial corridor in Korea, it also served as a symbol of Korea's emerging self-confidence.

45 \_ Not all cases are successful; some reform programs that have been implemented are limited in size and limited to a particular sector. Besides, most reform activities have been in the telecommunications sector, with other infrastructure sectors yet to take off.

46 \_ The government targeted 40 primary infrastructure facilities for private participation. But because of a number of weaknesses in the act and the opaque selection process, only five of the targeted transportation projects went into the construction phase. But all have been on hold since the East Asian crisis erupted in 1997.

58.2 percent stake in KEPCO. Foreign ownership in KEPCO was authorized in 1994, but initially limited to 8 percent of total equity. Foreign investors now own 16.3 percent. While foreign ownership of KEPCO is restricted to a 30 percent cap, the sale of individual generation and distribution assets is considered to be private investment and foreign investors can purchase up to 100 percent of them. According to the “Power Sector Restructuring Plan” recently prepared by the Ministry of Commerce, Industry and Energy (MOCIE), KEPCO’s generating assets will be split into several subsidiaries by the end of 1999 and by 2002, KEPCO will separate its distribution assets into subsidiaries and gradually sell off these assets. The target is to open up the distribution market by 2009.

b) *Oil & gas.* Korea imports almost all supplies of oil and natural gas. The government is encouraging the use of liquefied natural gas (LNG) to reduce dependence on oil and nuclear power. Korea Gas Corporation (KGC), which is owned by the central government, KEPCO, and local governments, has monopolized the import and wholesaling of LNG, while 32 general city gas suppliers, which exclusively supply LNG, have monopolized resale. KGC has been a target of the Korean Privatization Program since 1993. However, the privatization of KGC has been postponed until after the national gas pipeline is completed.

c) *Transportation.* Transportation services are delivered largely by the private or quasi-private sectors, except for rail transport and subways. The transportation services run by the private sector operate in a fairly competitive environment, and are considered to be efficient. However, transport services are greatly limited in their ability to improve their service because of restrictive price controls.

d) *Roads.* The road network is the sector in which most infrastructure projects have been lined up. Korea believes that the main cause of its heavy logistic costs (about 17% of GDP) is a direct result of poor road facilities. This sector is the core area in which Korea is most interested in drawing foreign investment.

e) *Ports.* Construction and management of ports is administered by the Ministry of Maritime Affairs and Fisheries (MMAF). Each regional office is directly under the supervision of the Minister. The Ministry is very much interested in private participation in ports. Nevertheless, due to national security concerns, privatization remains a distant possibility.

f) *Railway.* High Speed Rail projects are administered by the Ministry of Construction and Transportation, while all other railways are run by the Korea National Railroad. Korea’s High Speed Railway project has been one of the most problematic projects and suffers from a serious shortage of funds.

g) *Subway.* Construction of Korea’s subway system is handled by local city governments.

The most troublesome case is the Seoul Metropolitan Subway Corporation (SMSC). Tariffs do not cover construction costs, and attempts to adjust tariffs have not been successful in the past. SMSC's known overseas borrowings amount to over \$409 million and 60 billion yen.

h) *Light rail transit*. Currently, 3 projects are being administered by local governments. No private participation has been attracted because the projects lack profitability.

i) *Airports*. Privatization of airports is not an urgent issue in Korea for national security reasons. The government representatives here are the Civil Aviation Authority of the Ministry of Construction and Transport, and the Ministry of Defense. Incheon International Airport, located near Seoul, was built under the BOOT method with large significant amounts of private capital. The airport project, constructed between 1997 and 2001, includes a comprehensive business complex with hotels, offices, exhibition and conference centers, and a shopping mall.

j) *Telecommunications*. The Korean telecommunications industry underwent serious changes in the 1990s. The monopoly by state-owned Korea Telecom (KT) was broken up when international and long distance service liberalization took place in 1991. Dacom, the second primary telecommunications business operator, entered these two markets in 1991 and 1996, respectively and now competes with KT. In 1997, local calls were liberalized and a second operator entered the market. The mobile phone segment (18 million mobile phone subscribers) has attracted considerable FDI in spite of the economic crisis of 1997. Major foreign investments in this sector include a \$396 million stake in LG Telecom by British Telecom. The most important issue preventing greater private involvement in this sector is regulatory independence and the creation of a more level playing field.

Box 2.8

### 4.3.3 FDI Promotion

Korea aims at becoming a logistics hub in North East Asia. This ambition has spurred efforts to attract FDI. Although Korea is dedicated to providing the best business environment for international investors, the country has still to realize the full potential of FDI. So, in a sense, it is still premature to look for lessons from Korea's FDI promotion experiences. Nonetheless, in the face of various impediments to FDI that Turkey currently faces, it is important to specify that Turkey's climate for FDI is determined not only by its formal policy, as embodied in its constitution, legislation, and public statements, but also by its practice in putting policy into effect, and the perception of policy and practice by the investing community. Simply, ED in FDI promotion is a must if Turkey is to attract scarce FDI. We provide briefly two policy recommendations regarding FDI in Turkey.

### *13. Approach and attract “target/desired” foreign firms into Turkey by ED*

Treating foreign firms differently can be a powerful incentive to attract desired FDI e.g., provide free land, tax exemptions, tax holiday for a certain start-up period, etc. On top of this, given scarce FDI in today’s global investment market, it might be necessary to approach individual MNCs with highly favorable packages to entice them to invest in Turkey. Simply put, investment incentives should be presented and backed by aggressive public campaigns and policies to secure FDI. Simplifying and lowering the tax burden, as well as providing financial support, all on a highly discriminatory level, should launch rapid FDI inflow into Turkey.

### *14. Adopt “export contests” to introduce competition in export zones*

The “Export Contests” (see Box 4.2) suggest a potential strategy. Namely, Turkey can encourage competition between various Free Trade Zones by providing discriminatory incentives to exporting foreign firms and MNCs. Discriminatory incentives could be supported through a “Firm Evaluation Body” (see recommendation No. 7 of this report) that will have the responsibility of identifying and determining the reward due to best performing firms within Free Trade Zones, as well as across all industries in the private sector.

The message here, and this applies to the private sector at large, is that economic discrimination (ED) should be made to feature throughout the economy. The economy should be turned into an arena for free and fierce rivalry of private and public entities, not unlike the “beauty contests” of the Miss Universe pageants in which every economic agent will rival each other for the “economic prize.” The quest for the “economic prize” through rivalry in free and fair economic contests, enforced by economic discrimination (ED), is what is needed to place the right incentives to encourage economic actors to make sincere effort toward improving their material well-being for a better society for themselves.

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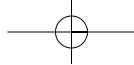
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A Way Forward for the Turkish Economy:  
Lessons from Korean Experiences



## Chapter 3

# Technology Development and Innovation System



1. Introduction

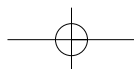
2. Conceptual Framework

3. Evolution of Korea National Innovation System and Policy Framework

4. Turkish National Innovation System and Policy Framework

5. Future Challenges of Turkish NIS

References





# Technology Development and Innovation System

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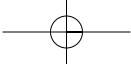
## 1. Introduction

The Turkish innovation system and the Korean innovation system have many similarities. Both countries transformed from agrarian economy to industrial economy during the last 50 years. They exploited the late-comer's advantage in industrial technological capability building by absorbing and assimilating foreign technology effectively. They built export-oriented manufacturing industries to finance the importation of oil and raw materials. FDI and technology licensing are important channels of technology transfer. They had to build science and technology infrastructure for absorption and assimilation of imported technology from scratch. In the two countries, R&D was initiated by the government in the early stage of industrial development although R&D by the private sector is showing an increasing trend in recent years.

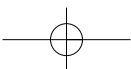
In the course of economic development since the 1960s, Korea has outperformed other competing countries with respect to building industrial technological capability and fostering international competitiveness of export industries. Korean conglomerates in such areas as electronics and automobiles have become major players in the global economy and compete with MNCs of advanced countries. The Korean industrial structure successfully transformed from low-tech based to medium and high-tech based.

Korea's rapid industrial development and technological capability building would not have been possible without the active role of government in industrial policy and science and technology policy. The government was a facilitator of science and technology infrastructure for industrial innovation. The government established public research institutions and supported research and development in the universities and industry. It also adopted deliberate industrial policy to promote strategically important industries and infant industries.

The purpose of this report is to compare the Korean innovation system and Turkish innovation system and to discuss governmental policy options for Turkey, utilizing Korean experience as a reference. In the following, a conceptual framework section for the analysis of National Innovation System is provided. In section 3, the evolution of Korea's national



innovation system is summarized, focusing on the role of the government in each stage of innovation. In section 4, the Turkish innovation system and government policy framework is presented. In the last section, policy options for Turkey are discussed.



## 2. Conceptual Framework

### 2.1 National Innovation System

The concept of “National Innovation System” was developed to identify the nation-specific factors of innovation and innovation environment. The rate and direction of industrial innovation is greatly influenced by the socio-economic external environment for the firms implementing innovation. For example, the intensity of market rivalry greatly influences innovative behavior of all related firms in the market. Countries with strong scientific and technological infrastructure will likely perform well in industrial innovation. The list of examples may be endless. In other words, the National Innovation System is a very complex-system, in that many agents- industry, university, and research institution- and social institutions interact.

The National Innovation System theory was initiated by European Scholars in the 1980s to find the cause of the rapid growth of the Japanese economy after World War II. They wanted to identify backgrounds that facilitated Japan’s superior performance in industrial innovation and international competitiveness, surpassing the US and most European countries. It was against common belief that countries with better scientific and technological capability will out-perform other countries with poor scientific and technological backgrounds. There must be some unaccounted factors that made Japan a power-house of industrial innovation, which have become the core subject of research in the study of the National Innovation System.

It should be noted that globalization tends to weaken the relevancy of the National Innovation System. Global outsourcing tends to overcome the limitation of the country-specific nature of innovation systems. Due to technological breakthroughs in telecommunication and transportation, the transaction cost of global outsourcing for industrial technology has become much cheaper. Global outsourcing is a wide-spread strategy not only for large conglomerates but also for many SMEs.

Nonetheless, globalization does not vindicate the concept of national innovation. Innovation requires continuous interactions among technology suppliers and recipients. Thus, geographical and cultural proximity is essential for successful innovation. In addition, social institutions influencing innovation are inherently local and nation specific. Examples of social institutions in the national innovation system include: tax incentives for corporate R&D, financial market structure, competition policy, and intellectual property protection, to name only a few important ones.

## 2.2 Catching-up Product Cycle Model of Industrialization

The catching-up product cycle model was developed to explain Japanese industrial development after World War II. This thesis was originally introduced by Akamatsu(1943) as the “flying wild-geese pattern of industrial development. Kojima(1958) renamed it the “catching-up product cycle model” after its association with the product cycle model of Vernon(1964). Yamazawa(1984), Pasha(1987), and Chen(1989) have further extended the model to explain the industrialization of East and Southeast Asian countries.

The Model suggests that industries in developing countries evolve following the sequence of import, import-substitution, and export. A developing country imports a new product from a developed country because the developing country does not have the technological capability to produce the product. Usually this coincides with the emerging or fluid stage of the product life cycle. As the technology matures and the product is standardized, the developing country can acquire the technological capability to produce the product for import substitution. Technologies at this stage usually are reverse-engineered or transferred through diverse channels such as the importation of capital goods, foreign direct investment, and technology licensing. The accumulation of experience in production for import substitution enhances domestic technological capability, thus leading to the next stage of exportation. The industry grows at the maximum rate at this stage, but growth of the industry is eventually halted, giving way to the declining stage. The production site then is transferred to late-starting countries, completing the sequence at the stage of reverse import.

The model implies that the industrialization of developing countries is heavily associated with the restructuring of industries. Comparative advantage in the different stages of the product life cycle shifts from one country to another.

The Korean economy has undergone rapid structural change as implied by the catching-up product life cycle model. During the 1960s, light industries such as textiles, footwear, clothing, and plywood expanded. Coming into the 1970s, heavy and chemical industries emerged to replace light industry. In the 1980s and 1990s, computer, semiconductor, and telecommunication industries came to the fore.

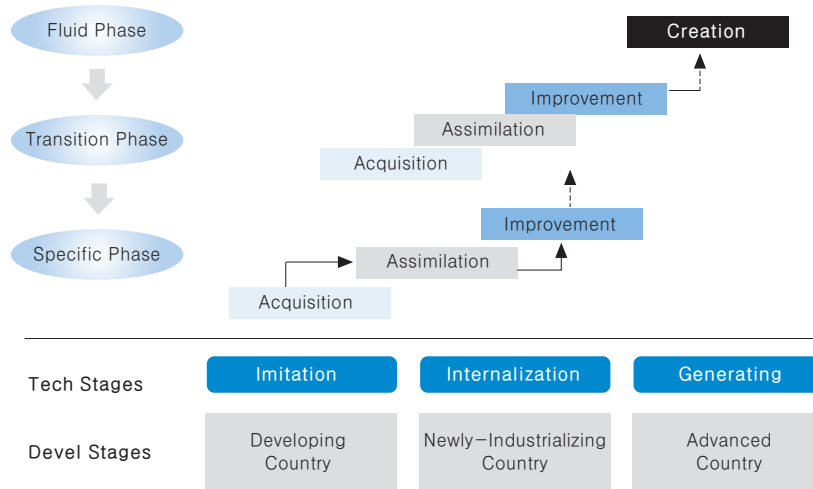
## 2.3 Technological Trajectory in Catching-up Countries

The dynamic innovation model by Abernathy and Utterback (1978) suggests that the process of innovation in advanced countries undergoes three phases: the fluid phase, the transition phase, and the specific phase. Many important industrial innovations have followed the path suggested by the model.

Innovation of automobiles in the 20th century, for example, confirms the thesis in that the three phases proceeded sequentially. In the early phase of automobile innovation, the architecture of automobiles is not well specified. For example, gasoline engine was not a norm at that time. Automobiles powered by electronic engines or steam engines were also in contention in the market. In other words, technology and product design in the early stage of innovation is fluid. This is why this phase is called the fluid phase. As the production and consumption experience of automobiles accumulated, gasoline-powered engines dominated the market. The competition of product architecture almost halted and competition shifted to cost reduction. Process innovations become more prevalent. This phase is called the transition phase. As the industry matures, both process innovation and product innovation almost halt. This last phase is called specific phase, in that product architecture and production process have become specific.

The innovation processes of catching-up countries are much different from the process implied by the Dynamic Innovation Model of Abernathy and Utterback. Based on the experience of Korean industrial development and technological capability building, a model of technological trajectory in catching-up countries was introduced by Linsu Kim(1980) and Jinjoo Lee et. al.(1988), which is described as follows.

Figure 3-1 ●● Technology Development Model of Developing Countries



## 2.4 Role of Government

The government is a promoter of innovation. The government promotes innovation by giving tax and(or) financial incentives. In many countries, tax credit is given for corporate R&D, which lowers the cost for R&D investment. In some other countries, subsidies for R&D in the form of matching funds are offered. Financial incentives are also offered to promote innovation. The most commonly used financial incentive is the provision of venture capital funds at lower interest rates or tax credit given to private venture capital. The government provides intellectual property protection to promote innovation.

The government is a producer of innovation. Public research institutions engage in research and development in the area of public technologies such as research and development for national standards, national defense, public health, and environment protection. In many countries, including Korea and Turkey, future-oriented, long-term industrial R&D is carried out by public research institutes financed by the government.

The government is a user of innovation. The government can stimulate innovation through procurement programs. The policy of promoting innovation through procurement had significant impact in Korea. Government purchase of Korean-made products, such as computers and software, helped the technological capability building in those industries in the 1990s. Many Korean firms invested heavily to develop application technology of the CDMA telecommunication system because the government promised to adopt the system if technology development succeeded.

The government is a pacer of innovation. The government can influence the rate and direction of innovation through various policy instruments. The main purpose of industrial policy to promote strategic industry is to localize industry and to increase production. This offers opportunity for technological learning through production experience. Korean strategic industrial policy in the 1970s and 1980s has been criticized for distorting allocation of resources, but it paid off in the long-run as the industries built up their own technological capability through learning by production. Another example of the role of the government as a pace of innovation can be found in the area of environment protection policy. The government can formulate policy in such a way to be conducive to innovation in environment related technology.

### 3. Evolution of Korea's National Innovation System and Policy Framework

This section discusses the evolution of Korea's national innovation system and policy framework in the three stages of technology development: the imitation stage, the internalization stage, and the generation stage. In the next section, periodic division of the three stages is discussed. Then, in the following sections, innovation systems and governmental policy framework in three stages are reviewed.

#### 3.1 Stages of Technology Development

Jinjoo, Lee and et al (1988) identify the three stages of technology development during the course of industrial development: the imitation stage, the internalization stage, and the generation stage. During the imitation stage, foreign technology imitation is the predominant means of acquiring technological capability. The internalization stage starts when local engineers are capable of developing products or constructing new plants through indigenous efforts, or when domestically manufactured products became technically superior to products manufactured initially. The generation stage begins when a nation is capable of introducing market-leading products and state-of-the art core technology.

The three stages mentioned above are consistent with the stages introduced by Kim and Dahlman(1994), who theorize that the evolutionary path of technology in developing countries follows three stages: the mature stage, the consolidation stage, and the emergence stage. Terminologies in Jinjoo Lee and et. al. emphasize technology strategy while those in Kim and Dahlman focus on technology characteristics. Criteria for stage classification in the two papers are very similar.

Periodic division of stages is proposed as follows. The transition from the innovation stage to the internalization stage took place in 1980. The transition from the internalization stage to the generation stage occurred in 1990. So, the period from 1962 to 1979 was the imitation stage; the period from 1980 to 1989 was the internationalization stage; and the generation stage started in 1990 and continues to the present.

The year 1980 is proposed as a transitory period for the following reasons. Technology strategy of Korean firms began to change in the 1980s. Indicators for innovation activities in Table-1 show that a drastic jump occurred from 1980 to 1985, implying that major structural change occurred during that period. Most significant is the increase in private R&D investment,

which increased from 0.21 percent of gross national product (GNP) in 1980 to 1.17 percent of GNP in 1985. Another significant change was the proliferation of the own-brand-name (OBM) strategy that replaced the original-equipment-manufacturers (OEM) strategy. Leading firms began to introduce their own original models in the late 1970s. The strategy subsequently diffused to other competitors in the early 1980s. LG electronics was able to market own-brand name color TVs in 1976. The firm had been producing TVs as a subcontractor for foreign brands since 1965. Samsung developed its own model of microwave oven in 1978, followed by LG and Daewoo four years later. Hyundai developed the first automobile with its own brand name, PONY, in 1975.

There was also a significant change in the channel of technology transfer in the early 1980s. Formal mode of technology played an increasing role by the late 1970s. The amount of technology licensing and direct foreign investment increased very rapidly in the 1980s. It should be noted that Kim and Dahlman (1992) also designate the early 1980s as the turning point from the mature stage to the consolidation stage.

The year 1990 is proposed as being a turning point in the transition from the internalization stage to the generation stage. Technology strategy of Korean firms began to change from dependant strategy to defensive or offensive strategy around 1990. Samsung Semi-Conductor was able to introduce the 4 mega dram (MDRAM) chip into the market in 1989, almost in parallel with competitors in the United States and Japan. Korea was capable of producing its own models of large scale computers in 1991. It was an outcome of joint R&D efforts by the government and industry. The G-7 project, aimed at developing core industrial technologies, was launched that same year. The total number of corporate research labs exceeded 100 in 1991. The Korean government set up the National Strategies for Information Industries in 1992.

In 1990, the high wage period started. That means Korea could no longer continue the catch-up industrial development strategy taking advantage of low labor costs. Unit labor costs increased by 17.7% annually on average during the period from 1988 to 1990.

Table 3-1 ● Major Indicators of Innovation Activities

	70	75	80	85	90	95	00	04	
Total R&D (A)(Billion Won)	105	427	283	1,237	3,350	9,441	13,848	22,185	
Private R&D (B)	25	141	103	930	2,699	7,659	10,023	16,631	
Governmental R&D (C)	80	286	180	306	651	1,781	3,817	5,446	
A/GNP	0.39	0.44	0.58	1.56	1.88	2.71	2.39	2.85	
B/GNP	0.09	0.15	0.21	1.17	1.52	2.20	1.72	2.14	
C/GNP	0.30	0.29	0.37	0.39	0.36	0.51	0.62	0.71	
C / Total governmental budget	2.2	2.0	2.8	2.8	2.3	2.2	2.5	2.9	
Number of researchers	5,628	10,275	18,434	41,473	70,503	128315	237232	312314	
	Governmental/public Institutions	2,458	5,308	4,598	7,154	10,434	15,007	13913	24057
	Universities	2,011	2,312	8,695	14,935	21,332	44,686	51727	121968
	Private sector	1,159	2,655	5,141	18,996	38,737	68,625	94333	166289
Researcher / 10,000 popular	1.8	2.9	4.8	10.1	16.4	28.6	34.0	43.7	
Number of corporate R&D Labs	0	12	54	183	966	2,270	7,110	10,270	
Tech Licensing (import) amount (Million \$)	5.1*	26.5	107	296	1,087	1,947	3062	4147	
number	84	99	222	454	738	236	80	44	
Tech Licensing (export) amount (Million \$)	-	-	-	11.2	21.8	112.4	211.0	1416	
number	-	-	-	7	50	123	29	421	
Applied Patents	1,846	2,914	5,070	10,587	25,820	78499	102010	140115	
Utility Models	6,617	7,290	8,558	18,548	22,654	59866	37163	37753	
Industrial Design	4,522	6,707	10,075	18,949	18,769	29978	33841	41184	
Trademark	5,124	9,476	13,558	26,069	46,826	71582	110073	108464	

\* statistics for 1972

## 3.2 Innovation Policy during the Imitation Stage

The first five-year economic plan started in 1962. At that time, total R&D investment amounted to 0.2% of GNP. There had been virtually no R&D activity in industry and universities. Only public research institutes, whose primary functions were testing and inspection, undertook small-scale R&D projects.

The government recognized the importance of S&T in industrial development. Following the completion of the first five-year plan in 1966, it was determined that more technological manpower and research capability were needed to implement and assimilate foreign technologies. President Park Chung Hee, the architect of Korea's early industrial development, initiated and supervised the establishment of the science and technology infrastructure in the 1960s and 1970s. The Korea Institute of Science and Technology (KIST), the first modern, integrated technical center, was established in 1966. The Ministry of Science and Technology (MOST), whose primary function was to integrate plans for S&T development, coordinate governmental R&D, international S&T coordination and research on nuclear energy, was established in 1967. The building of S&T infrastructures continued throughout in the 1970s. The Technology Development Law and the Engineering Services Promotion Law were enacted in 1972. The Korea Advanced Institute was set up to carry out high-caliber masters and doctorate education in 1971. Many specialized research institutions funded by the government were established in the 1970s.

The Korean Government invested a larger portion of its budget in S&T compared to other developing countries at that time. The government budget for S&T promotion increased from 0.18% of GNP in 1964 to 0.3% of GNP in 1970, and 0.37% in 1980. The proportion remained at that level until the 1990s. Korea was also the first developing country to have a ministry-level administration for S&T.

It is well known that S&T policy, the supply-side of technology, played only a minimal role during the imitation stage because private demand for R&D was almost nonexistent. Nevertheless, policy-makers, including president Park had strong faith in investing in S&T. The government did not demand immediate return from Government Funded Research Institutes (GRIs), who consumed most of the government's R&D funds. GRIs had full autonomy in the allocation of funds earmarked by the government. Progress would not have been possible without the complete trust of the government.

The major contribution of GRI during this period was to provide a S&T pool to be utilized for the absorption and assimilation of foreign technology and to carry out contract research for the private sector. This alone may not be sufficient to justify the efficacy of resources reserved

for the GRIs. Investments in the GRIs during the 1960s and the 1970s paid off for other reasons. GRIs attracted many Korean scientists and engineers from abroad who otherwise would have not returned. Many of them later played key roles in the development of the heavy and chemical industries and high-tech industries. GRIs also contributed to heightening the social status of scientists and engineers. They received high salaries and enjoyed a high-degree of social prestige. As a result, university engineering and science related departments attracted the best students.

Despite strong commitment by the government on the supply side of technology, its actual role during the imitation stage is believed to have been minimal (Kim, 1997). On the other hand, industrial policy, the demand side of technology greatly influenced the rate and direction of technological advancements in Korean firms. Among the many important aspects of industrial policy, industrial targeting deserves closer attention.

Korean industrial policy is unique in that both export promotion and import substitution are simultaneously pursued. This would not have been possible if Korea resorted to only trade policy instruments to carry out industrial policy objectives. It was possible because Korea mobilized other policy instruments such as preferential financing, provision of cheap industrial land, and relaxation of antitrust regulations to name only a few important ones. Labor intensive export industries were targeted in the 1960s, while the heavy and chemical industries were targeted in the 1970s.

The main objective of industrial targeting is to expand production capacity. Additionally, it also stimulates technological capability building. The Korean experience shows that targeted promotion of industries influences technological learning in two ways. First, the interaction with foreign buyers or suppliers provides the opportunity to absorb foreign technology. A survey on the source of technology of exporting Korean firms found that trade related activities such as employee training abroad, technical assistance from suppliers of parts and raw materials, and technical assistance from buyers are very important modes of technology transfer. For some product innovation, trade related contacts comprised 95 percent of source of foreign technology transfer (Westphal, Pursell, Lee, 1981). Second, increase in production enhances technological learning a la Verdoon's law. Experiences in the automobile industry and the electronics industry support this hypothesis.

The Heavy and Chemical Industry Drive in the 1970s was initially much criticized by many economists because it distorted the market mechanism. They insisted that the nation's scarce resources would be wasted by over investment in these industries. As predicted, these industries indeed suffered from over-capacity and weak technological competency. In the late 1970s, the average capacity utilization rate dropped to less than 70%. These industries, however, overcame most problems by the mid-1980s, becoming the major source of export growth in the following years.

It should be noted that industrial policy and S&T policy were not closely coupled. Industrial policy was mainly administrated by the Ministry of Trade and Industry, while S&T policy was under the control of the Ministry of Science and Technology. The two ministries rarely consulted with each other. Furthermore, the Economic Planning Board, the coordinating ministry of economic related matters, was preoccupied with other tasks.

S&T policy would have been better served in assisting technological development in industries if industrial policy and S&T policy were closely coupled. S&T policy could have paid more attention to the technological needs of industries were it closely coupled with industrial policy. The GRIs were often criticized by industry because they tended to choose projects that were of little commercial value.

However, this arrangement also produced some benefits. Most importantly, S&T policy was able to be consistent. S&T policy would never have gained stability were it is too closely coupled with industrial policy, which has been very unstable. Korea's industrial policy was very much influenced by the business cycle and the political situation.

Direct foreign investment and contractual licensing have been recognized as important channels of international technology transfer from the beginning of industrial development. Korea, however, adopted the selective approach in approving the entry of foreign firms to its domestic market. Experiences under the Japanese colonial period bred apprehension toward foreign ownership of domestic firms.

Legal provisions for regulating foreign investment were installed by enacting the Foreign Capital Investment Act. At that time, entry regulation and quality control of foreign investment were not of primary concern. After normalizing diplomatic relations with Japan, measures to regulate entry of foreign investment were introduced, which lasted until 1984. Joint ventures were preferred to wholly owned enterprises. Government authorities had the discretionary power to reject "undesired investment." Performance requirements such as local contents requirement and mandatory export quotas were imposed.

Policies toward technology licensing were more lenient. Technology licensing required approval from government authorities, but the criteria for approval were minimal. The approval process was not intended to discourage technology licensing per-se, but to help the domestic licensee in reducing royalty payments or shortening contract duration. It was also possible to impose performance requirements through this approval process.

Korea's policy at that time was characterized by a restrictive policy towards direct foreign investment (DFI) and lenient policy toward technology licensing. This policy as a whole is often called unpackaging strategy because foreign capital and technology are acquired through

separate channels (Lee, 1980).

Restrictive policy toward DFI, fortunately, did not discourage the flow of capital and technology in significant proportions. Supply of foreign investors was plentiful, while potential recipients of these investments were scarce during the 1960s and 1970s. Unpackaging also turned out to be a less costly means of financing because the world interest rate at that time was low. Unpackaging also contributed to internalizing transferred technology. Studies show that the technological absorption level is negatively correlated with the degree of foreign control (Yong, 1983).

Technology policy during the imitation stage can be summarized as follows. First, Korea committed a relatively large amount of the government budget to building the S&T infrastructure. GRIs, which spent the bulk of the government's S&T investment, were an important institutional innovation. Second, industrial policy, the demand side of technology, played a more crucial role in building technological capability of strategic industries. S&T policy, however, was not closely coupled with industrial policy. Third, policy toward DFI was selective. In other words, investments that met the various governmental restrictions were allowed to enter.

### 3.3 Innovation Policy in the Internalization Stage

The Korean economy experienced a negative growth rate in 1979, for the first time since Korea began active industrialization. Many industries suffered from overcapacity. The newly installed government in 1980 realized that the extensive intervention during the heavy and chemical industry (HCI) drive created too much distortion in the market mechanism. Stabilizing measures were introduced, which included financial market liberalization, trade liberalization, and devaluation of the won. Industrial targeting was gradually phased out. Functional incentives were emphasized instead of sectoral incentives.

Tax incentives for R&D were extended. Tax credit for R&D was excluded in accounting the upper ceiling of the total tax exemption a firm could receive under corporate taxation. Custom duties on R&D equipment were either abated or exempted. Tax credits for corporate expenditures on human resources development were also introduced. Policy loans to support technological development were expanded despite the fact that policy loans in general were shrinking at that time. To assist commercialization of technology, venture capital companies were promoted. The government relegated administration of policy finance to public venture capital companies. Legal foundations for private venture capital companies were introduced. This policy had significant impact since the entry of financial institutions had been very tightly

controlled. From 1987 to 1992, over fifty new venture capital companies were created.

These policies may have contributed to the fast increase in the private sector's later R&D investment. However, they also resulted in disguising non-R&D investment as R&D investments, exploiting the incentive scheme by firms. A popular scheme was to shift testing and quality control functions to the R&D units. In Korea, R&D expenditure for tax purposes is defined as expenditures by R&D units.

The administration of government R&D was also changed. The most significant change in the scope and direction of governmental R&D investments was the establishment of the National R&D Programs (NRDP) in 1982, by MOST. The NRDP under MOST included six research categories. Among these, the HAN project was the most unique. The main objective of the HAN project was to develop industrial technologies of strategic importance. Private sector participation was encouraged in the project. Private companies provided some proportion of the research funds and they were able to claim ownership of the research results in return. It was also the first large-scale inter-ministerial R&D program.

The introduction of the national R&D programs brought two important changes. First, universities and private firms could participate in governmental R&D programs. They could compete against GRIs to acquire R&D projects. Direct subsidy to the GRIs, on the other hand, shrank. Second, the government was able to pursue technology targeting that was of strategic importance. In the past, the GRIs had autonomy with little control by the government. Now, the government was able to take the initiative in planning and implementing R&D projects.

The introduction of the NRDP opened a whole new issue regarding the orientation of S&T policy. The introduction of the NRDP and the initiation of the HAN project signaled that Korea's S&T policy was shifting closer to being mission-oriented. The shift was favored by bureaucrats because it increased their discretionary power.

In principle, it was an improvement, but it also created many undesirable consequences. Consistency in policy became a major problem in planning government projects. It became common for newly appointed ministers or high ranking government officials in charge of the NRDP to change concepts and alter priorities, which in turn created instability. It should also be noted that positions in the government, including ministerships, changed very often. Secondly, introducing NRDP schemes raised administrative costs of R&D projects. Researchers became too much occupied in getting projects, leaving little time for research. To remedy this problem, monitoring and evaluation were emphasized, but it turned out to be very difficult. Lastly, the introduction of NRDP resulted in the increased allocation of funds to help Chaebols who had greater lobbying power than small and medium-sized companies.

One of the most expensive S&T projects during this stage was the construction of the Daeduk Science Town located near the city of Taejon. One intention of this project was to relocate the GRIs to Daeduk. Many GRIs were located either in Metropolitan Seoul or the Changwon industrial complex. The primary purpose of the project was to encourage mutual cooperation among the GRIs. However, a more important reason for this project was to disperse people from the over-populated Seoul Metropolitan area. The project officially started in 1974, but actual construction and relocation mostly took place in the 1980s.

The Daeduk Science Town project was a failure for the following reasons. It did not generate as much cooperation among the GRIs as the government had intended. Joint projects involving multiple GRIs were still very rare. Nor did it contribute to down-sizing of the GRIs. The number of administrative and support personnel at the relocated GRIs did not decrease. GRIs found difficulty in attracting qualified scientists and engineers, who usually prefer to live in the Seoul Metropolitan area. The relocation also made industry-GRI cooperation more difficult. Daeduk is not close to any of Korea's large industrial complexes. The government did try to incubate new technology based firms around Daeduk, but it did not generate significant results.

The building of the Daeduk Science town surely contributed to dispersing the population from Seoul. However, it is doubtful that this benefit sufficiently compensates for the costs stated above. In recent years, construction of local innovation systems has become an important issue. The role of the GRIs is very limited because they are concentrated in one location.

Policies regarding DFI and technology licensing were revised considerably during this period. The Korean Government has gradually liberalized its foreign investment policy since 1980. The Foreign Capital Inducement Act, for example, was revised in December 1984 to encourage direct foreign investment. One of the most important changes was the introduction of a negative list of industrial activities, which, in effect, made it easier to lower the number of activities that were prohibited or temporarily restricted to foreign investors.

Another significant change concerns the new time-saving approval system. Projects that are not on the negative list, that have a foreign equity share of less than 50 percent, that involve foreign investment amounting to no more than one million U. S. dollars, and that do not require tax exemption, will be immediately and automatically approved by the Ministry of Finance without having to go through a committee review or reference to the relevant ministries. Furthermore, restrictions concerning the proportion of externally owned equity have been greatly relaxed, except in a few limited cases.

Although provisions for exemption and reduction of customs duties on imported capital goods for foreign investment projects are still retained, various tax advantages given exclusively

to all foreign investments have been abolished to provide a fair environment for competition among foreign and domestic firms. Special tax concessions, however, may still be granted.

Policies regarding technological licensing also have been much less restrictive since the revisions of 1978 and 1979. Automatic approval is given for licensing arrangements that meet the following criteria: first, the life span of the project must be less than ten years; second, the running royalty payments must be less than 10 percent of the total sales value; and third, front-end payment must be less than one million U.S. dollars.

Further liberalization was introduced in 1984. The approval system has been replaced by a reporting system. Companies that want to import foreign technology only have to report their intention to the relevant ministry. If the ministry makes no objections and requests no additional information or changes within twenty days after the report is submitted, arrangements for technological import are considered to be accepted.

The main theme of S&T policy in the internalization stage can be summarized as enhancement of the private firm's capacity for innovation. Tax and financial incentives for R&D expenditure and manpower development were reinforced to help the private firm's efforts to accumulate in-house R&D capabilities. Technology acquisition through DFI and licensing contracts were encouraged. The government significantly reduced entry barriers to DFI. Regulation measures to control the quality of DFI and technology licensing were also reduced.

The role of the government as a supplier of technology was less emphasized. The ratio of government R&D investment to GNP and to the total governmental budget outlay had not increased during the 1980s as already shown in Table-1. To be precise, the ratio had declined in the first half of the 1980s and recovered in the latter half of the 1980s. Government R&D investment did not increase primarily because of the small government policy of the 1980s. However, that also reflects that the policy-makers' attitude toward government R&D had significantly changed. They began to pay more attention to efficacy of investment.

### 3.4 Innovation Policy in the Generating Stage

The primary goal of S&T policy in this stage was the building of the national innovation systems similar to those of highly advanced countries. Balanced development of research capability among industry, academia, and public research institutions is an important policy goal. Furthermore, networking among the main actors of R&D is emphasized.

This intention was clearly reflected in the 7th Economic and Social Development Plan, which

covers the period from 1992 to 1997. The most important policy objective is to enhance research capability in universities. Universities primarily had been educational institutes with little research activity despite the fact that they have the largest proportion of qualified scientists and engineers. Universities hold about 80% of all of the Ph. D's in science and engineering. Nonetheless, universities received 7% of total government R&D funds.

To promote cooperative research, the government introduced the Cooperative R&D Promotion Law in 1993 to provide the legal basis for priority funding of cooperative R&D. MOST introduced a new R&D program to support research in the universities. Science Research Centers and Engineering Research Centers were created in 1990 to help finance basic research in the universities. The Ministry of Education also introduced a new program to support research-oriented universities in 1995. Under this program, six research units in five universities received 5 billion won for five years. These funds were to be used to upgrade the infrastructure for R&D and to hire more researchers.

The policy for enhancing research capability in universities did not progress as intended due to the following reasons. First, those ministries in charge of government R&D were more interested in funding GRIs associated with respective ministries rather than the funding of universities' R&D. Second, built in rigidity in allocating the government budget hindered any significant increase in investment for the enhancement of research capabilities at universities. As a consequence, the allocative pattern of governmental R&D has not changed significantly. GRIs still received 79% of the total governmental R&D expenditures in 1994. The proportion was 90% in 1990. Third, the universities were very slow in adapting to the new environment. Universities did not have the capability nor the will to adjust to the changing environment. Korean universities are notorious for inept management. The concept of efficiency and competition are absent in all aspects of university administration. Professorship is a guaranteed life-time job. Universities do not have to compete to attract students since there is a highly excessive demand for university education in Korea. Too many regulations on the management of universities by the government also contributed to the passive management style.

Another significant change that took place at this stage was the diversification of government R&D programs. Many ministries began hosting R&D programs of their own: the Ministry of Information, Ministry of Agriculture and Forestry, Ministry of Environment, Ministry of Health and Welfare, and the Ministry of Ocean and Fisheries. This reflects that R&D policy had come to be considered by the ministries as a viable instrument for carrying out policy objectives.

Among these, the R&D program hosted by the Ministry of Information is by far the largest and most important. The Telecommunication Technology Program, started in 1992, has brought about many successful results. R&D projects such as BISDN and CDMA are good examples.

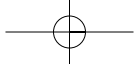
The Ministry of Information program has two advantages over other programs. It is possible to put a relatively large amount of money in a narrowly defined area because funding originates not from the government budget but from the proceeds of the Korea Telecommunications Corporation. Second, marketing the R&D results is supported by the procurement policy. The ministry is the largest buyer of telecommunications equipment.

Coordination and cooperation among ministries have become important issues as the number of participating ministries has been rising. The Inter-ministerial Council on Science and Technology, chaired by the Prime Minister, is responsible for this task. However, it has not been able to function adequately because the Budget Office, under the Ministry of Finance and Economy, does not recognize the recommendations of the council. To cope with this problem, Korea established the Ministerial Meeting of Science and Technology in 1996, chaired by the Deputy Prime Minister. The budget office is under the control of the Deputy Prime Minister, who is also the Minister of Economy and Finance. It is still too early to tell whether this new arrangement will produce better results. The key issue is whether MOST will be able to be effective. Legally, MOST is responsible for coordinating government R&D programs and hosting Ministerial Meetings. However, MOST lost credibility as a neutral coordinator because it has its own R&D programs that compete for funds with other ministries.

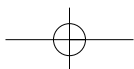
A notable change at this stage regarding technology transfer was the globalization of Korean firms. Chaebol's have been quite active in pursuing global networking and technology outsourcing. Ernst and O'Conner (1992) concluded that the major source of rapid development of the electronics industries in East Asian countries turned out to be the active acquisition of technological sources as well as successful utilization of international networking. Study on technological building of Samsung in the production of semiconductors also confirms the importance of international sourcing and networking (Choi, 1994).

Government policy responded to accommodate this new trend. "Segewha," a Korean term for globalization, has become an important slogan since 1995. The policy package for Segewha includes a diverse spectrum that covers almost all aspects of government policy.

Segewha in S&T includes the following. The Korean Government's R&D is open to foreign nationals. It was a significant departure, although the areas open to foreign researchers are somewhat restricted. The role of government-supported technical information centers has been expanded. Many regional technical centers were established to help small and medium-sized companies. Programs to support inviting foreign scientists and engineers have been expanded. Cooperation with former communist countries such as Russia and China has received special attention. The policy package of "Segewha" also includes the reform of laws regarding intellectual property rights protection and a strategic approach to standardization.



Protection of Intellectual Property Rights (IPR) has received increased attention as the Korean technological strategy shifts from imitation to innovation. During the imitation stage, protection of IPR was not regarded to be important because Korea generated few patents or other forms of intellectual property. The government tried instead to minimize IPR protection to help domestic firms use foreign intellectual property. Laws and regulations were formulated in such a way to meet minimal international standards. Furthermore, enforcement of the law was stepped up.



## 4. Turkish National Innovation System and Policy Framework

This section explains the main characteristics of the Turkish national innovation system and governmental policy framework.

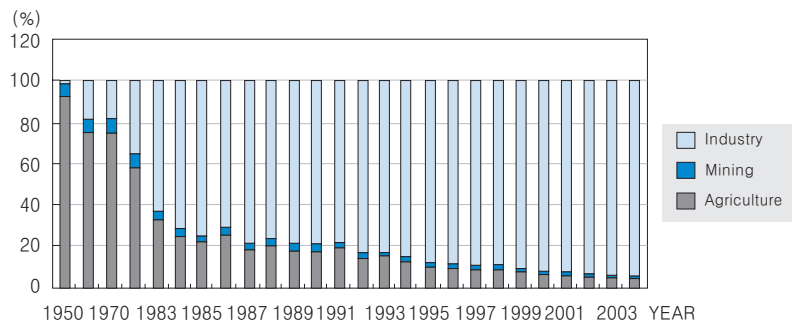
### 4.1 Pattern of Industrial Development

#### 4.1.1 Industry Structure

Turkey is an industrialized country in that the GDP share of industry is 24.8% employing 18.3% of the total employment pool in 2004. Within the industrial sector, the share of the manufacturing industry is 74%, amounting 20.4% of GDP. The GDP share of industry has shown an increasing trend at the expense of GDP share of agriculture during the last 25 years. The GDP share and employment share of industry was 22.3 % and 13.0 % respectively in 1980 while those of agriculture were 25.1 % and 60.0 %.

The rapid growth of manufacturing export was the main engine of economic growth. Textile and garment, iron and steel, and food-processing industries were the leading contributors of the expansion of manufacturing production and export in the 1980s. In recent years, the composition of manufacturing has changed in favor of increasingly sophisticated products. Metal products, machinery and equipment, transportation equipment and professional and scientific measurement and control devices, have become leaders in the manufacturing sector.

Figure 3-2 ● The Share of Exports by Main Sectors



In 2003, 2004 and 2005, the manufacturing industry has grown 9.3%, 10.4% and 4.9% respectively (see Table 2), while its share of GDP remained around 20%. The increase in exports has continuously progressed in 2005 to reach 68.5 billion US. Imports also increased to 93.6 billion US. On average, manufacturing industry exports account for more than 90% of total exports and the import of manufactured goods accounts for more than 80% of total imports.

**Table 3-2 ●● Key Statistics of Manufacturing Industry**

Indicator	2003	2004	2005
Share in GDP (Current Prices)	20.0	20.4	20.5 <sup>(1)</sup>
% Change in Production (Constant Prices)	9.3	10.4	4.9
Exports (Million USD-Current Prices)	44,378	59,579	68,515
% Change in Exports (Current Prices)	31.7	34.2	15.0
Share of Total Exports (%)	93.9	94.3	93.7
Imports (Million USD-Current Prices)	55,690	83,447	93,577
% Change in Imports (Current Prices)	34.6	49.8	12.1
Share of Total Imports	80.3	85.6	80.6
Share of Total Private Sector Fixed Investments (Cur. Pri.)	39.5	42.2	41.4 <sup>(2)</sup>
% Change in Employment	-2.7	3.7	6.4
Number of Firms Established	12,623	13,351	13,362
Number of Firms Closed	2,542	3,106	3,091
Private Sector Capacity Utilisation Rate	75.3	79.9	78.9
Partial Productivity Growth per Unit of Labour	7.4	8.2	4.6 <sup>(3)</sup>

(1) As of September 2005

(2) SPO estimate for the year.

(3) First 9 months of 2006 / first 9 months of 2005

Growth in the manufacturing industry triggered growth in employment in that sector, which increased 3.7% in 2004 and 6.4% in 2005. Along with the increase in employment, the increase in labour productivity was also high in 2003 and 2004.

In the period from 2003-2005, the composition of the manufacturing activity shifted slightly in favour of intermediate-goods and investment-goods industries (from consumption-goods industries). However, the share of consumption-goods industries is still around 42% and that of investment-goods industries is around 26%. Food and beverages, textiles and apparel industries

accounted for more than 90% of the consumption-goods industry production during the 2003-2005 period. Automotive and machinery industries accounted for more than 50% of the investment-goods industry .

**Table 3-3** ●● Composition of Manufacturing Industry Production

Million USD (1998 Prices)

	2003		2004		2005		Growth rate(%)	
	Actual	Share (%)	Actual	Share (%)	Estimate	Share (%)	2004	2005
MANUF. IND.	142.157	100	157.499	100	165.701	100	10,8	5,2
Consumption Goods Ind.	65.961	46,4	68.091	43,2	69.385	41,9	3,2	1,9
Intermed. Goods Ind.	45.252	31,8	50.224	31,9	53.135	32,1	11,0	5,8
Investment Goods Ind.	30.944	21,8	39.184	24,9	43.180	26,1	26,6	10,2

Note: Estimates of SPO

The value of manufacturing industry exports rose from 20.5 billion USD in 1996 to 68.5 billion USD in 2005. Manufacturing industry imports also rose from 35.2 billion USD in 1996 to 93.6 billion USD in 2005. In 2005 more than 50% of the exports were accounted for by 4 sectors<sup>1</sup>: automotive, textiles and apparel, and basic metals industries. Similarly, about 50% of imports were accounted for by four sectors: chemicals and chemical products, basic metals, automotive, and machinery and equipment.

<Table-4> shows the composition of export and import in broad economic categories. The share of investment (capital) goods in imports is higher than that of exports. This implies that industry imports capital goods to produce consumer goods for export and domestic production.

1 \_ In the following, the figures in parentheses represent the corresponding ISIC Rev.3 codes.

Table 3-4 ● Export and Import Shares

(%)

	Export			Import		
	1996	2004	io2005	1996	2004	2005
Investment (Capital) Goods	4.8	10.3	10,9	23.9	17.8	17,4
Intermediate (Raw) Goods	42.0	41.1	41,2	66.4	69.3	70,1
Consumer Goods	53.0	48.3	47,4	9.2	12.4	12,0
Goods n.e.c.	0.1	0.3	0,5	0.5	0.5	0,5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: Estimates of SPO

The composition of production and trade reveals that the Turkish manufacturing industry is currently located at the lower end of the global value chain of productive activity. This segment, in general, is characterized by labor-intensive industry, relying on low-wage-based competitive strategy. A potential threat to this segment is the pressure from late-industrializing countries where labor is cheaper. Countries which rely on low wages as a competitive advantage in international markets for extended periods can be trapped in what is referred to as a “race to the bottom.”

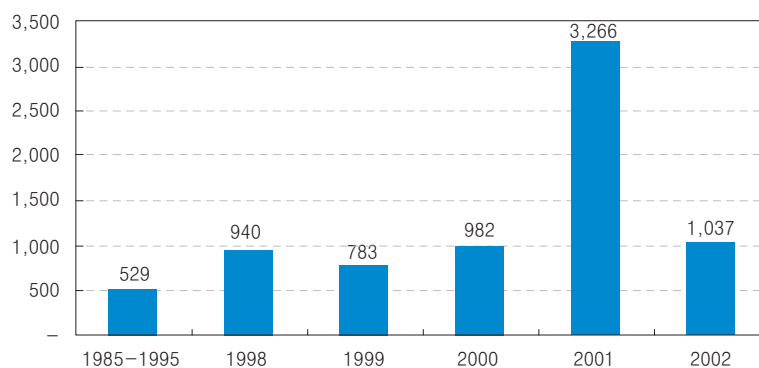
The recent change in the composition of imports and exports implies that Turkey is climbing up in the value chain from consumer goods production to capital goods production, although the pace of the climb is very slow. The amount of imports required for a unit of export declined from 1.7 in 1996 to around 1.4 units in 2004.

#### 4.1.2 Foreign Direct Investment

Chart 1 shows the trend in Turkish inward FDI over the past 20 years. The accumulated amount of inward FDI in 1985 to 1995 was only US 529 million dollars while it amounted to US 940 million dollars in 1998. Turkish inward FDI dramatically increased in 2001 to exploit the devalued Turkish Lira.

Figure 3-3 ● Turkish Inward FDI by Year

(US \$ million)



Source: UNCTAD, World Investment Report 2003

Table-5 shows the sectoral breakdown of FDI Inflow for the last ten years. The share of the services sector has steadily been higher than that of the manufacturing sector, except for 1998, 2000, and 2003

Table 3-5 ● Sectoral Breakdown of FDI Inflow by Year (US \$ millions)

	Manufacturing	Services	Other	Total
1995	388	534	12	934
1996	424	467	23	914
1997	349	456	47	852
1998	553	362	38	953
1999	353	447	13	813
2000	932	763	12	1,707
2001	846	2,439	3	3,288
2002	78	510	2	590
2003	338	196	12	546
2004	272	766	71	1,109
Total	4,533	6,940	233	11,706
Share	39%	59%	2%	100%

Source: <http://www.hazine.gov.tr/english/forinvest.htm>, 01-16-2006

### 4.1.3 Technical Structure of Manufacturing Activity

Turkish performance in industrial transformation and upgrading, however, is not as good as other countries at a similar stage of industrial development. A study by Lall(2000) compares technical structure of manufactured exports of leading developing countries and concludes that Turkey ranks among the poor performing countries in upgrading manufacturing industry from resource-based industry and low-tech industry to medium-tech and high-tech industry, as shown in Table-6.

**Table 3-6** ●● Technical Structure of Manufactured Exports by Leading Developing Countries (%)

	1985				1996			
	RB	LT	MT	HT	RB	LT	MT	HT
Turkey	22	62.3	13.4	2.3	17.5	63.9	12.8	5.7
Hong Kong	2.1	64.3	14.2	19.3	4.4	52.7	14	28.9
Singapore	42.3	10.8	14.6	32.3	12.7	7.9	14	65.4
Korea	7.8	59.9	12.2	20.1	9.4	28.4	26.6	35.7
Taiwan	8.7	57.3	13.3	20.7	5.1	33.9	20.2	40.9
Indonesia	72.2	19.2	5.9	2.8	34.9	41.9	8.5	14.7
Malaysia	53.7	9.7	5.5	31	17.8	13.1	8.7	60.4
Thailand	42.1	38.2	6.6	13.1	14.5	35.6	13.5	36.3
China	11.7	57.1	21.8	9.4	9.8	56.3	13.4	20.6
India	40.3	46.1	10.6	3	31.1	52.3	13.1	4.4
Argentina	67.5	15.6	11.8	5.1	49.1	18.8	28.8	3.3
Brazil	32.6	33.3	27.1	7.1	25.6	31.8	34	8.6
Mexico	20.2	15	29.2	35.6	7.1	20.9	35.2	36.9
Average	32.6	37.6	14.3	15.5	18.4	35.2	18.7	27.8

Source: Lall(2000)

Note: China's export structure for 1985 is based on 1990 figures.

During the 11 year period from 1985 to 1996, the combined share of mid-tech and high-tech industry increased from 15.7% to 18.5 %. On the other hand, during the same period, most leading Asian developing countries performed much better than Turkey in upgrading the technical structure of the exporting industry. The share of combined mid-tech and high-tech industry increased from 32.3% to 62.3% in Korea and from 34.0% to 61.1% in Taiwan during

the same period.

Table-7 supports although only partly the arguments above. An indication of low levels of (technological) capability building activities within the Turkish manufacturing industry can be observed through the export and import shares of sectors, which are classified with respect to research and development (R&D) intensity.

**Table 3-7** ●● Exports and Imports with Respect to R&D Intensities of Sectors Million USD (Current Prices)

	1996	%	2004	%	2005	%
Exports						
High-Tech	577	2.81	4,002	6.76	4,098	6,0
Medium High-Tech	3,730	18.17	16,583	28.00	19,519	28,5
Medium Low-Tech	4,308	20.99	15,151	25.58	18,414	26,9
Low-Tech	11,909	58.02	23,489	39.66	26,483	38,7
Total	20,526	100.0	59,225	100.0	68,515	100.0
Imports						
High-Tech	5,179	14.8	12,865	16.0	13,403	16,0
Medium High-Tech	17,521	50.0	34,473	46.6	42,959	46,6
Medium Low-Tech	6,510	18.6	19,481	24.2	25,208	24,2
Low-Tech	5,804	16.6	10,626	13.2	12,006	13,2
Total	80,447	100.0	30,015	100.0	93,577	100.0

Note: Information as to which sectors are included in each category is provided in Appendix.

It can be seen in <Table-7> that the export share of the high-tech sector -the sector with high research and delopment - is 6.0 % as of 2005, which was a significant improvement compared to 2.81% in 1996. However, it is still far behind European Union countries', which is around 20%.

It should be noted, however, that, despite the currently weak structure of the manufacturing industry with respect to technological competitiveness, the pace of growth and the current level of exports (and as a consequence the productive activity) in high-tech and medium-high-tech sectors (such as electronics, automotive, machinery and equipment) provides an important opportunity/potential for the manufacturing industry.

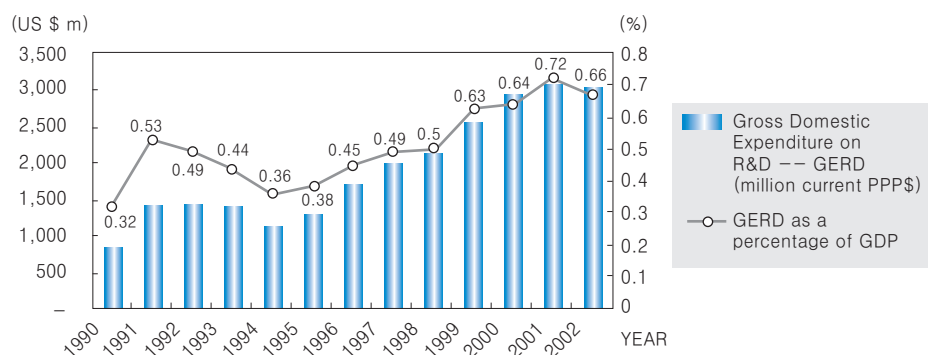
## 4.2 Innovation Strategy and Innovation Indicators

### 4.2.1 Innovation Strategy and R&D

As explained in “Technology Development Model of Developing Countries” in section 1, domestic R&D plays a relatively small role for industrial technology development for countries at the imitation stage, while absorption and assimilation of foreign technology plays a much larger role. Foreign technology can be transferred through formal modes such as FDI and licensing, or informal modes such as apprenticeship pattern and imitation.

The Turkish experience also followed a similar path implied in the Technology Development Model of Developing Countries. During the transitory period from agrarian economy to industrial economy, technology for industrial restructuring and upgrading was mostly acquired from abroad. Foreign direct investment and technology licensing have been a more important source of industrial technology than domestic R&D. Domestic R&D has not been activated. The ratio of R&D to GDP remained below 50% until the late 1990's. It shows an increasing trend coming into the 1990s raising the percentage of total R&D to GDP at 0.66 % in 2002, implying that R&D is becoming an important source of industrial innovation. Nonetheless, the ratio is still much smaller than that of advanced countries, in that the major source of industrial innovation comes from R&D.

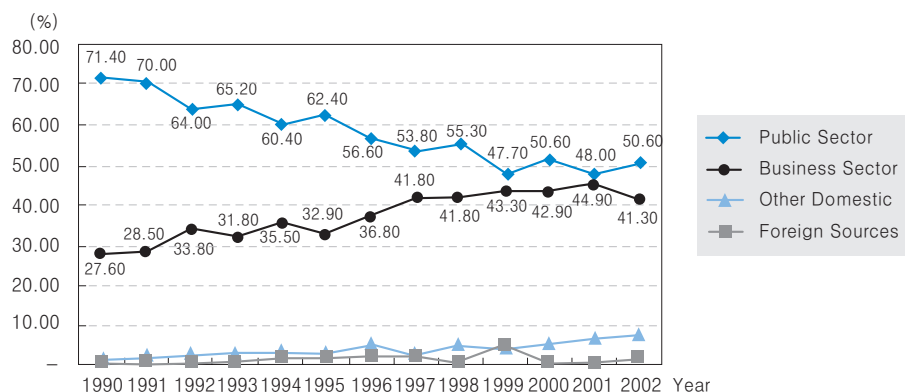
Figure 3-4 ● Gross Domestic Expenditure on R&D and the Percentage of GDP



If we look at the trend of R&D investment financing in the following chart, the government was the major provider before 1990. During the 1990s the share shows a clear decreasing trend helped by the rapid increase in R&D investment by the private sectors. It changed from 71.4%

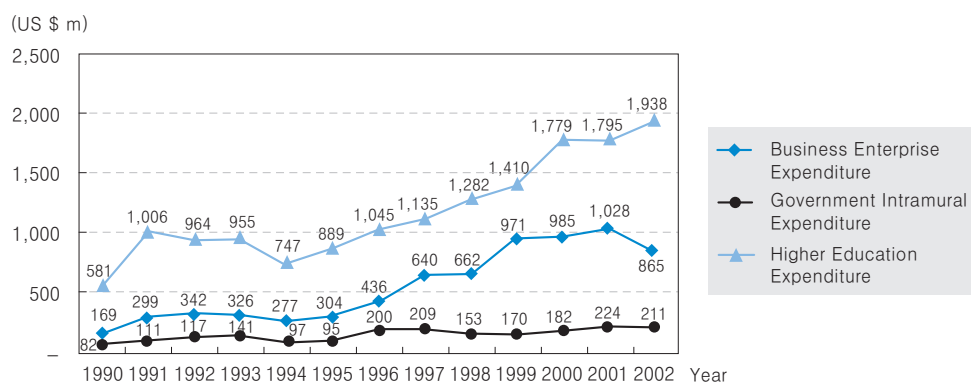
in 1990 to 50.6% in 2002, but the government share is still much higher compared to Korea, where government share was around 30% in 2004.

Figure 3-5 ● The Contribution Ratio of the Sectors to the Finance of the R&D Expenditure



The Chart below shows the distribution of R&D expenditure by sector. Universities spent 64.2 % of the nation’s total R&D investment in 2002. The share of industry amounted to 28.7% and that of intramural government expenditure was 7.0%.

Figure 3-6 ● R&D Expenditure by Each Sector



## 4.2.2 Innovation Indicators and International Comparison

<Table-8> shows key innovation indicators for Turkey. The table contains innovation indicators for the input side and output side. Innovation indicators from the input side are: Gross Expenditure on R&D(GERD) as a percentage of GDP, Total Number of Researchers(FTE), Business Expenditure on R&D as a Percentage of GERD, Government Expenditure on R&D as a Percentage of GERD, and Higher Education Expenditure on R&D as a Percentage of GERD. Innovation indicators from the output side are: Number of Triadic Patents, SMEs Innovating in house, Sales of New to the Market Products, and Share of Manufacturing Value-added in High-tech Sectors

Table 3-8 ●● Innovation Indicators of Turkey

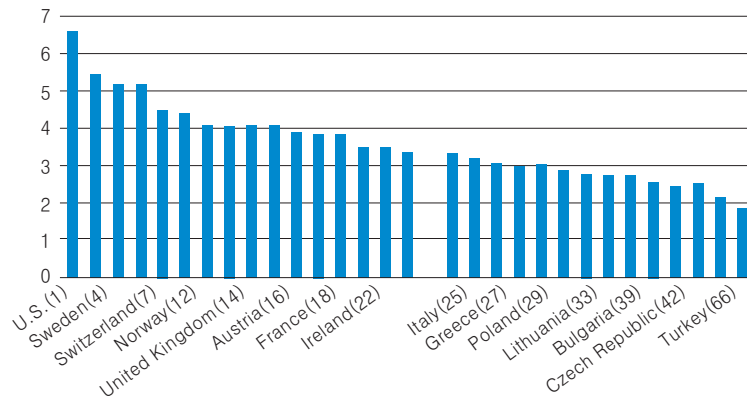
Composition by Ownership (%)

Indicator	Value	Year of value
Gross Expenditure on R&D(GERD) as a percentage of GDP	0.66	2002
Total Number of Researchers(FTE)	23995	2002
Business Expenditure on R&D as a Percentage of GERD	28.7	2002
Government Expenditure on R&D as a Percentage of GERD	7.0	2002
Higher Education Expenditure on R&D as a Percentage of GERD	64.3	2002
Number of Triadic Patents	7	2001
SMEs Innovating in house(% of all SMEs)	24.3	2003
SME's Involved in Innovation Cooperation(% of all SMEs)	1.8	2003
Sales of New to the Market Products(% of Total Turnover)	9.4	2003
Share of Manufacturing Value-added in High-tech Sectors	6.6	2000

In recent years, international comparisons of innovation indicators have become popular as a means to evaluate strength and weakness of national innovation systems of various countries. The following is a brief summary of the three most prestigious reports on the comparison of competitiveness and innovation indicators.

In the Competitiveness Report, prepared by IMD of Switzerland, Turkey is ranked lower than many other countries, including some eastern European countries. Innovation indicators in this study include both the quantitative and qualitative indexes to estimate future potential.

Figure 3-7 ● Innovation Index of the Global Competitiveness Report(2002)

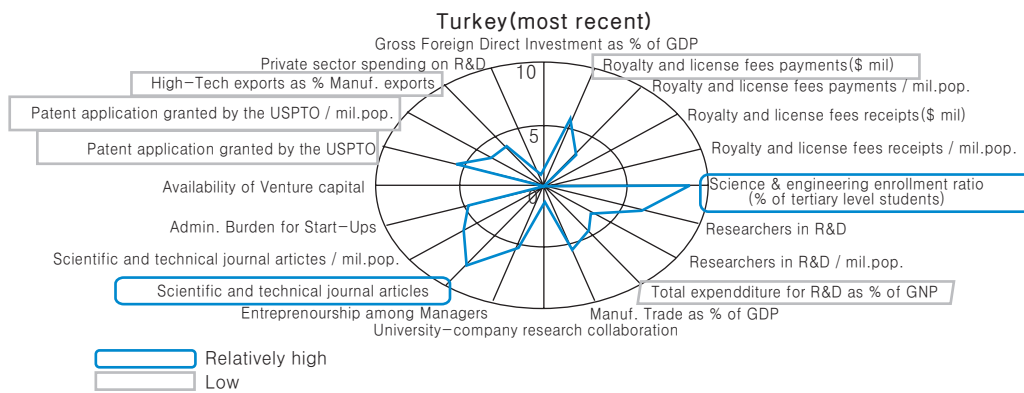


Source: Global Competitiveness Report 2002. World Economic Forum. Number between brackets indicates overall position of country in index.

The results of the GCR Innovation Index for 2002 presented in the diagram above underline the low position of the candidate countries and the extent of catching up required.

The Innovation Scoreboard, published by World Bank, characterizes the Turkish innovation system as follows. Turkey scores highly in the area of science and engineering enrollment ratio, and scientific and technological journal article publication, but Turkey scores poorly in high-tech export as % of manufacturing exports, patent applications granted by USPTO, royalty and license fees payment and total expenditure for R&D as % of GNP.

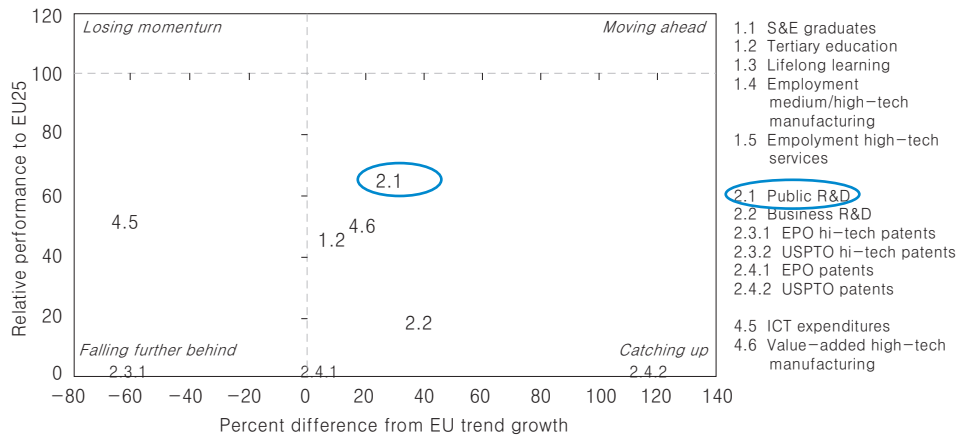
Figure 3-8 ● Turkish Innovation Variables(World Bank Institute Scoreboard)



Source: The World Bank

The Innovation Scoreboard, published by EU, compares trends in innovation indicators. In terms of rate of improvement of innovation indicators, Turkey performed better than the EU average in most areas. Turkey is catching up in public R&D, value-added high-tech manufacturing, tertiary education, business R&D, and USPTO patents. Turkey is falling behind in ICT expenditure and EPO hi-tech patents.

Figure 3-9 ●● 2004 European Innovation Scoreboard-Turkey



### 4.3 Science and Technology Policy of Turkey

#### 4.3.1 Overview

##### A Brief History

The search for a national policy in science and technology and first attempts for policy formulations have started with the planned economy period in Turkey. One of the most important steps in this respect is establishment of the Scientific and Research Council of Turkey (TUBITAK) in 1963 as a result of the First Five-Year Development Plan (1963-1967), in order to prepare and coordinate implementation of Turkish Science and Technology Policy.

In The Second and The Third Five Year Development Plans (1968-1977), technological development and technology transfer were taken into consideration, and in The Fourth Five Year Development Plan (1979-1983), for the first time, the concept of “technology policy” was mentioned and “integration of the technology policy with the industry, employment and investment policies and enhancing the technological abilities of certain industrial sectors” was envisaged; but in the 1960s and in 1970s, the basic policy in science and technology was the promotion of basic and applied research in natural sciences.

At the beginning of the 1980s, Turkish Science Policy for 1983-2003 was prepared. This was the first time that a detailed science and technology policy document had been attempted. In this document, technology was considered as a basic motif and priority areas of technology were put forward. This new approach has created a new institution: The Supreme Council for Science and Technology (BTYK), which enabled design of science and technology policies with the participation of ministers, high level bureaucrats and representatives of non governmental organizations who take roles in the management of the economy and arrangement of the main fields of social life activity.

However, the Turkish Science Policy of 1983-2003 could not be implemented. The Supreme Council for Science and Technology, established in 1983 held its first meeting on 9 October, 1989. In its second meeting on 3 February, 1993, the document entitled “Turkish Science and Technology Policy: 1993-2003” was approved by the Council.

“Turkish Science and Technology policy: 1993-2003”, which was approved by The Supreme Council for Science and Technology at its meeting of 3 February, 1993, was elaborated on and based upon solid ground with, “The Project for Impetus in Science and Technology”, in the scope of Fundamental Structural Transformation Projects involved in The Seventh Five Year Development Plan (1996-2000). This project constituted one of the main headlines of The Seventh Five Year Development Plan.

The document entitled Science and Technology Policy of Turkey was approved by The Supreme Council for Science and Technology at its meeting on 25 August, 1997, and with this document, National Science and Technology Policy and Agenda for implementation of this policy took its final form. The “Science and Technology Policy Document” of Turkey was amended in 1999 based on developments and results of the meeting of the BTYK in 1998 that reviewed progress and made the necessary amendments to the former decisions. The decisions of the BTYK, released after its meetings in 1999, 2000 and 2001 again protected the theme of an innovation policy and strategy.

### *Formulation of S&T Policies*

The policy development process in science and research in Turkey can be summarized as a cycle, which consists first of the development of the framework for science & research policies with the Development Plans and iteration of these policies with the Medium-term Programs. These are supported by implementation policy proposals (action plans and detailed cooperation programs for the execution process) formulated by the institutions under the coordination and guidance of the Supreme Council of Science and Technology (BTYK). Then, the individual institutions execute these policies with the financial resources allocated with Public Investment Program and private sector incentives. Finally, the cycle repeats with the feedback provided to the Mid-term Programs by i) the evaluation of the implementation results, ii) monitoring of the new developments in the science & research area, iii) inputs from the modifications of the Strategic Plans of the individual institutions and iv) new policy proposals prepared at BTYK each year. Also, before the following Development Plan, a specialized (ad-hoc) commission (composed of all stakeholders) on the science & technology is formed to provide feedback in addition to the mentioned mechanism.

The Development Plan is the principal managerial, budgetary and political means for the economic, social and cultural development of the country. Development Plans take force from the Constitution, by article 166, and are approved by the Grand National Assembly of Turkey. The Development Plan is the framework policy document determining the macro-economic policies and sectoral policies, including science and research. Including all of the socio-economic sectors such as industry, agriculture, health, education, environment, energy, etc., the development plan provides the opportunity for harmonizing science and research policies with other interrelated policies and the macro-policies of the country. Development Plans are orders the public sector while they guide the private sector.

To date, eight-five-year development plans have been prepared. A long-term socio-economic strategy comprising the years from 2001 to 2023 has also been developed simultaneously with the Eighth Five Year Development Plan in 2001. Beginning in 2006, the development plans will be seven years in order to harmonize with the European Union's planning period. By the third quarter of 2005, the preparations for the 9<sup>th</sup> Development Plan were initiated with the meetings of the specialized sector commissions. The specialized commission of Science and Technology consists of representatives from all of the stakeholders, from government to private sector to non-governmental organizations.

The framework policies determined by the Development Plans have been reflected and iterated into policies each year by the Yearly Programs. Starting in 2006, the Yearly Program will transform into a Mid-Term Program, which covers a 3 year period in a rolling manner, ie. each year, a new yearly program will be developed by updating the following two years and

adding a new one. Also, concordant with the policies of the yearly program, the Public Investment Program will be prepared in the same rolling manner, with the definite first year allocation and the following two years estimated values. The Public Investment Program consists of all the investment projects of all the public institutions, so that the plan-program-application and investment link is maintained. DPT is responsible for preparation of both the Mid-term Program and Public Investment Program. In this process, DPT asks the institutions for their policy and financial demands. Both the Mid-Term Program and Public Investment Program are endorsed by the Council of Ministers and take force as a Decree of the Council of Ministers.

Complementary to the Mid-term Program and Investment Program, the Ministry of Finance prepares the Mid-term Fiscal Plan and Yearly Budget in a similar rolling manner. The Mid-term Fiscal Plan lays-out the framework of financial requirements institution by institution to accomplish the policy targets of the Mid-term Program, so the policy-budget link is provided. The budget is endorsed by the Grand Assembly of Turkey and also includes the Public Investment Program prepared by the DPT. So, the yearly budget inclusively forms the total amount of financial sources of each public institution for actualizing the policies. Additionally, the budget also consists of the state incentives to the private sector and all the expenditures of the State that year.

The Strategic Plan is a new means for the policy planning process starting in 2006. Strategic Plans will be prepared by the implementers, the public institutions, for themselves. The Strategic Plan will provide the active involvement of the public institutions to the planning and programming process. Within the strategic planning process, they will decide on their vision, mission, principals, targets and strategies, and actions to reach those targets. They will have detailed business programs and budget requirement plans. These issues will be an additional input into the planning and programming process, which currently depends on inputs from macro-economic, sectoral and regional policy requirements.

The Supreme Council of Science and Technology (BTYK), chaired by the Prime Minister, is the highest level policy coordination body for science & research in Turkey. BTYK is responsible for executing the science & research policy. It provides the necessary coordination medium upon application regarding the development plans and programs, assisting the government for the determination of long-term science & research policies, establishing sectoral targets, providing feedback and advising new policies for the following plans and programs, assigning tasks for the public institutions, developing of the researchers, founding research centers, and identifying research areas. BTYK decisions take force as a circular of the Prime Ministry.

BTYK is chaired by the Prime Minister and the remaining participants are the several

ministers, Head of TÜBİTAK, Undersecretary of DPT, Undersecretary of Treasury, Undersecretary of Foreign Trade, Head of Turkish Atomic Energy Institute (TAEK), Higher Education Council representative, General Director of Turkish Radio and Television (TRT) and Union of Chambers and Commodity Exchanges of Turkey (TOBB).

### *Recent Developments*

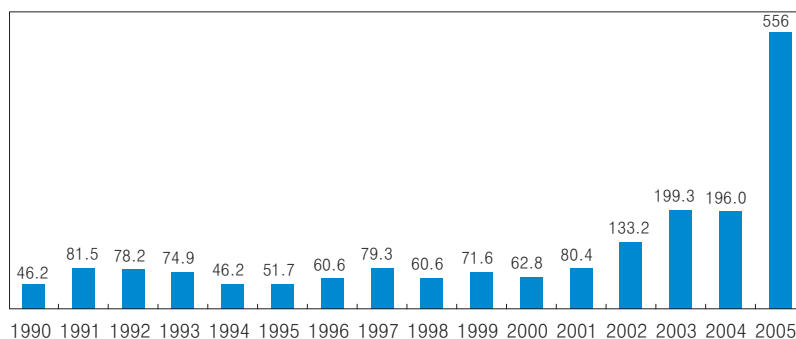
The main objective of Turkey's science, technology and innovation policy outlined in The 8<sup>th</sup> Five-Year Development Plan is "to achieve competitiveness at an international level through scientific and technological developments with the aim of becoming an information society". The plan considered science and technology to be one of the sectors, which has the highest priority.

The same Plan also required that the joint R&D activities within university-public-private sector cooperation be encouraged and supported, considering that universities are initiators of R&D activities. Also, information and communication technologies, new materials, aerospace and space technologies, nuclear technologies, oceanography, technologies for utilizing and exploiting sea and underwater riches, mega science, and clean energy technologies were determined priority areas for support.

The 8<sup>th</sup> Five-Year Development Plan foresees two main targets: 1.the ratio of Gross Expenditure on Research and Development (GERD) to Gross Domestic Product (GDP) would be 1.5% and, 2.the number of R&D personnel (full-time equivalent) per ten thousand labor force researchers would be 20 by the end of 2005. As of 2002, the mentioned criteria were % 0.67 and 13.6, respectively.

The amount of public science and research investments in the Public Investment Program gradually increased, starting from the initiation of the 8<sup>th</sup> Five Year Development Plan period, and made an important jump in 2005 with the initiation of the Turkey Research Area (TARAL), the counterpart to ERA in Turkey.

Figure 3-10 ●● The Public Investment Budget for Science and Technology Sector(Million YTL, All Years are with 2005 Values)



Until the year 2004, around \$120 million in public funding was provided annually for academic and public research in Turkey. (It should be noted that, because of the funding mechanisms, personnel costs of research are not included in this amount.) With the 2005 budget, this amount was increased to \$ 420 Million.

“Vision 2023: Science and Technology Strategies” was approved by the BTYK Council in its seventh meeting in December 2001. The “Vision 2023” project involves the first-ever Turkish national foresight exercise, together with three more sub-projects that aim at collecting and evaluating data on the current science, technology and innovation capacity of the country. The strategy document, which was presented for consideration to the member establishments of the Supreme Council for Science and Technology (BTYK) in April, 2004, should have been finalized in line with the official opinions and recommendations, and was to be presented in the SCST meeting due in March, 2005.

In the BTYK meetings in 2004 and 2005, the Council approved the National Science and Technology Strategy and set policy targets.

The main objectives of National Science and Technology Strategy are:

- To raise public awareness for science and technology
- To increase the number of qualified researchers/scientists
- To support results-oriented research
- To activate National Science and Technology Management
- To strengthen scientific and technological performance of the private sector
- To improve the research infrastructure and environment

- To activate both national and international ties

Also, priority areas were determined by the Council under Vision 2023 Technology Foresight Study:

- Information and Communication Technologies
- Biotechnology & Genome Technologies
- Material Technologies
- Nanotechnologies
- Design Technologies
- Mechatronics
- Production Process and Technologies
- Energy and environmental technologies

BTYK also set the target for Gross Expenditure on R&D (GERD) as percentage of GDP as 2% and simultaneously aims to increase the number of researchers to 40,000 by the year 2010. In 2002, these indicators were 0.67 % and 23,995 respectively.

The policy framework of the Mid-Term Program 2006-2008 is listed below:

The fundamental objective of science and technology policy is to increase the Turkish capacity for science, technology and innovation and transform this capacity into socio-economic added value.

- A national innovation system that improves the coordination between institutions and increases the active involvement of the private sector will be constituted.
- The private sector will be supported to increase its capacity and demand for R&D.
- The amount and effectiveness of incentives to support cooperation between the private sector—universities & research institutions will be increased.
- Incentives to provide solutions to problems and requirements of public institutions through the use of R&D will be increased.
- The dependence of the defense sector on foreign procurement will be reduced through the increase of related domestic R&D incentives and the transfer of the technologies developed within the defense sector to other sectors, universities, research institutions and SME's will be provided.
- Cooperation with countries and international structures that are successful in R&D will be increased, particularly the ones within the European Union.
- Awareness for science, technology & innovation in society, mainly within primary & secondary education, will be improved.
- Measures will be taken to provide flexibility for the expenditures within the budget & contracting mechanisms for R&D.

### 4.3.2 Public Support for Public Research

Support for R&D projects in Turkey is classified into two categories: The support for the public sector and support for the private sector. The public sector stands for public institutions, public research institutions and universities, where as the private sector stands for private companies.

Support for public sector from the state budget is determined in a single, inclusive document titled the *Public Investment Program*.

Support for the private sector is on the other hand, provided by direct transfer to the related funding institution and put into use in a grant or credit scheme.

#### *Public Investment Program*

The financial resources to accomplish the desired results of the policies are from the Public Investment Program, which is prepared by SPO and approved by the Council of Ministers. The scientific & technological research part of the Public Investment Plan is composed of research projects and research programs. Science & technology research projects of public institutions and universities are proposed with detailed proposal documents (and with feasibility reports if the project is a large-scale one) before the preparation of the Public Investment Program and their budget & execution period is determined in the Public Investment Program. There are on average 500-600 science & technology projects in the Public Investment Program. The project budgets may vary from project to project, starting from about 20.000 Euro to 20 million Euro, with the larger number laying in the 200.000 to 2 million Euro range.

The research programs, on the other hand, take place with lump-some program budgets & do not involve pre-determined projects. Public Investment Program here determines the sub-programs (with their budgets) and the criteria framework for the selection of the projects. The projects are admitted throughout the year to the research programs by the institution to which execution of the research program is assigned. The research programs of the Public Investment Program consist of the ones that are carried out by TUBITAK, TAEK and BOREN. TUBITAK carries out research programs within TARAL activities, which will be described in more detail in the last part of this section. TAEK is responsible for supporting the nuclear research projects submitted by other institutions and the program budget is between 500.000 to 1 million Euros yearly. Similarly, BOREN is responsible for supporting projects on boron and the project budget is 1.75 million Euro.

## *Important Programs*

*Centers of Excellence and Strategic Research Institutes* are large-scale projects that deal with strategic areas and/or of the type of frontier research. The total budget of each project is generally in the range of 10 to 20 million Euro. The support for the excellence centers started from the second part of the 1990s and increased substantially within the last five years. Excellence Center projects include a high percentage of research infrastructure investment, but also involve research headlines & some specific research sub-projects. Also, they have a complimentary researcher increasing part. One important aspect of the excellence centers is that they cooperate with private firms in joint research projects and also provide technical support to them. Another point worth mentioning is that they are the leaders for the admitted projects to the EU 6<sup>th</sup> Framework Program from Turkey. Currently, about 30 excellence center projects are in the Public Investment Program spread among the universities and public research institutions. They vary by the scope of area, such as nanotechnology, biotechnology, advanced materials, supercomputing, MEMS, agriculture, automotive, etc.

Some of the Excellence Center projects also involve a researcher development portion. Three major projects are carried out in this context. The first started in the Istanbul Technical University in 2001 and covered 400 researchers with a budget of 25 million Euros. Six sub-programs (computer sciences, computational science & engineering, material science, aeroplane & space engineering and satellite telecommunication & remote sensing) and five directed sub-projects with industry partners are executed within this project. The second one is in Gazi University, with a budget of 9 million Euros and researcher scale of 250; its focus is on semi-conductors, composite materials, industrial gases & dyes and laser. The third one is the establishment of the Biotechnology Institute in Ankara University and involves a project budget of 20 million Euros and about 200 researchers.

*Researcher Development Projects (ÖYP)* involve one main university that has well-established education capacity & research infrastructure and several partner universities in need of academicians with high research capacity. The academician-nominees coming from the partner universities set their masters and PhD education in the main university and then return to the partner university. The main and partner universities select the nominees together. The research topic of the nominee is selected under the context of the research priorities of the Development Plan and yearly programs. The nominee also has an opportunity for up to 1 year complimentary research in a foreign institution. ÖYP is an alternative to directly sending students to PhD programs in foreign countries for up to six years, which is substantially more costly and causes many problems, ie. some of the students do not return to Turkey, and also, different scope of research in those countries most times can not be iterated and made use of after returning to Turkey, etc. ÖYP started in 2001 with the initiations of DPT & Middle-East Technical University and this first project reached 19 partner universities and 650 PhD students

within the project budget of 15 million Euros. In 2005 two more ÖYP projects were initiated with two main universities, Ankara University and Ege University respectively.

*Industrial PhD Projects* started by 2004, and similar to ÖYP, they involve increasing the number of potent researchers, but this time the objective is to have the researchers work in the industry, instead of staying as academicians in the university. Also, cooperation with the private sector is much closer. The first industrial PhD project is in Anadolu University and focuses on the ceramics sector. The project started in 2004 with a budget of 5 million Euros and 30 researchers, and each graduate's employer will be one of the private firms participating as a partner in the project. Also, firms pay the salary of the PhD students from the start of the program. This ensures dedicated involvement of the private firms to this instrument and is considered to be a good example to be reflected in many other sectors.

*Integrated National and International Research Projects (YUUP)* were initiated first in 2004 by DPT and Middle-East technical University. YUUP projects should involve more than one university or research institution and preferably all the related research teams on the subject topic and some firms & other stakeholders, be inter-sectoral and aim to solve a major problem of the industry/region/country and produce great socio-economic value. The leading institution should be any institution in the consortium. YUUP projects have priority over the projects coming from single institutions or involving limited cooperation. So YUUP is an instrument, which aims to increase the networking of the research teams spread throughout Turkey both with each other and with industries & stakeholders on concrete and productive projects. By 2005, 11 YUUP projects had started.

### 4.3.3 Public Support for Private Sector and Public-Private Cooperation

Financing of innovation and technological cooperation activities in the private sector is mainly executed through programs run by the Ministry of Industry and Trade (MoIT), TUBITAK-TIDEB, TTGV and KOSGEB.

#### *Ministry of Industry and Trade*

#### *Technology Development Zones (TDZs)*

Turkey, like many developing countries, started to use technoparks (so called Technology Development Zones as defined by the Law) as its primary strategy for: promoting R&D and technology transfer, creating jobs for high-skilled IT and R&D personnel, attracting FDI, and generating sustainable economic growth and local know-how

Law 4691 covers the foundation of the TDZs and their manner of operation, administration and control. The tasks, competencies and responsibilities of the persons and institutions involved are also covered by this law.

This legislation promotes the use of high/advanced technologies and the development/production of technology or software in technology development zones, and the related R&D capabilities, through cooperation between universities, research institutions, and the production sector.

The aim of this Law, through the cooperation of universities, research institutions and the production sector is: to produce technological information, to develop innovations in products and production methods, to increase standards of products and productivity, to decrease production costs, to commercialize technological information, to support technological production and enterprise, to achieve the adaptation of small and medium scale enterprises to the latest and advanced technologies, to create investment possibilities in technologically intense areas considering the determinations of the Scientific and Technical High Commission, to provide job opportunities for qualified and inquisitive people, to help technology transfer and provide technological infrastructure, and to provide high and advanced technology that will speed up foreign capital inflows.

Tax exemptions provided with this Law (till the end of 2013) are:

- income and corporate tax exemptions for the managing company
- the income that the tax payers in the zone have obtained from the production activities based on the software and R&D is exempt from all kinds of income and institution tax
- income tax exemptions for the salaries of the researchers, software engineers, and R&D personnel working in the zone
- value added tax (VAT) exemptions for the software development activities

This Law also provides incentives for mobility of researchers to work with private companies located in technoparks. These incentives include:

- retaining the earnings from such companies by the researcher if she/he works at the company part-time
- permitting the full-time recruitment of researchers by companies without paying the salaries by the university/research institute while they are still accepted as staff at the university/research institute
- allowing the academics to complete their studies that have to be conducted through temporary recruitment in the country or abroad, at the companies in the technoparks
- retaining the earnings of academics generated from such studies as described above
- allowing academics to start up a company to commercialize research results in the technoparks and/or to become a shareholder in companies located in technoparks and/or

to take part in the management of such companies

The Ministry of Industry and Trade provides the main financial support mechanism for TDZs. Financial support is granted for land procurement, infrastructure and construction of management buildings.

There are twenty TDZs in Turkey that were established mainly by the universities in order to help close the gap between the research community and the business sector. Actually, half of them are operating and there are 395 firms totally in TDZs. As can be seen from the figures given below, most of the companies in TDZs are in Software&IT (266 firms), Electronics (54), Defense (42) and Telecommunication (22) sectors.

In total, 3458 R&D staff and 1426 support personnel are working in TDZs. There are 21 firms, established by academicians and 27 firms in which academicians are partners. 18 patents have been taken by the firms at TDZs in the last 4 years.

### *SAN-TEZ*

Additionally, a new project called “SAN-TEZ” has been launched by the Ministry of Industry for developing university-industry collaboration. The aims of this project are : to commercialize academic knowledge, to transfer academic knowledge into high value added technological products, to solve in cooperation with the universities the problems of industry during the production process, and to provide R&D and technological culture for SMEs. With this concept, 104 projects were taken into consideration by the Ministry of Industry and Trade in 2005.

### *TUBITAK - TIDEB*

TIDEB’s vision is to strengthen industrial research and technological development ability in accordance with National S&T Policy. TIDEB’s mission is: to develop and apply tools for the stimulation of industrial R&D, to involve all the partners in accomplishing the mission, and to accomplish the mission at a high quality public service level

Under the ‘State Support for R&D’ program financed by the DTM, TUBITAK -TIDEB provides grant support for the projects proposed by the industry. The total amount of funds available each year for the program is determined by the annual national budget. Grant financing of up to 60% of the budget of an R&D project is provided by TUBITAK-TIDEB while the rest is financed by the company itself.

TUBITAK-TIDEB also cooperates with HM to implement the ‘Support for R&D

Investment' program for financing the procurement of R&D related equipment by industry. Under this scheme, 50% of machinery, equipment and software expenses are financed as loans. Tax exemption is also applied to purchased goods.

In Turkey, the 'R&D Tax Postponement' measure has been applied by the Ministry of Finance (General Directorate of Revenues). TUBITAK-TIDEB assists the Ministry in the implementation of this scheme. Through this measure, 20% of yearly corporate tax that should not exceed the total annual R&D expenses is postponed for a period of three years without interest, to be paid nominally.

Again, TUBITAK-TIDEB assists the Ministry of Finance in the implementation of the 'R&D Tax Reduction' scheme, which is very new. With these measures put into the corporate and income tax laws, the Ministry of Finance provides tax reduction for the R&D expenditures of private firms at a ratio of 40%.

TUBITAK-TIDEB is the coordinator of the EUREKA program, too. The Turkish companies involved in EUREKA are financially supported by TUBITAK-TIDEB and TTGV through the resources of DTM.

### *University-Industry Joint Research Centers Program (USAMP)*

The 'University-Industry Joint Research Centers Program' (USAMP) has been implemented by TUBITAK-TIDEB (Technology Forecasting and Assessment Directorate) since 1996.

The centers are jointly funded by TUBITAK, the private sector and universities. The aims of USAMPs are: to stimulate university - industry collaboration, to concentrate on industry activated projects, to have graduates experienced in industrial research activities, and to increase and strengthen university research potential

At least three companies or an umbrella organization (association, chambers of industry, etc.) collaborating with a university have to be represented in each centre. The participating university provides the research infrastructure as well as the space and human resources.

The research topics are determined by the technical committees composed of experts from both industry and university, based on the common demand of the sector and implemented together with the R&D staff of the partner companies of the centre. Pre-competitive research is the main activity of these centers, although it is possible to conduct contract research for a partner company.

All partner companies use results of the R&D projects. The first three centers established

under this initiative are the Ceramics Research Centre at Eskisehir Anadolu University, the Textile Research Centre at Ege University and the Adana Cukurova University-Industry Joint Research Centre. Later, in December 2003, the Automotive Technologies R&D Centre was established at Istanbul Technical University, and in June 2004, the Biomedical Technologies Centre at Hacettepe University and the Advanced Manufacturing Technologies Centre in the OSTIM Industrial Zone in co-operation with the Middle East Technical University (METU) were founded. In addition, the new measure of TUBITAK-TIDEB on technology management contributes to the efforts of intensified co-operation between research and business sectors.

### *Technology Development Foundation of Turkey (TTGV)*

Technology Development Foundation of Turkey (TTGV) is an independent non-profit organization. The foundation's aim is for Turkey to reach the level of developed countries by increasing the competitive advantage of Turkish enterprises through research, technology development and innovation.

TTGV was established in 1991. The founders are composed of 29 private companies, 6 public institutions, 7 umbrella organizations (sectoral organizations, chambers, etc.) and 14 individuals.

The foundation has the following objectives: 1) to create awareness among Turkish enterprises about the need for and benefits of investing in research, technology development and innovation (RTDI), and to encourage them, predominantly SMEs, to invest in RTDI, 2) to propose and help development and implementation of national RTDI policies and strategies, 3) to design and employ the mechanisms needed to develop and commercialize competitive technologies, and dissemination of RTDI results, 4) to encourage and support technology based entrepreneurship, and help creation and growth of innovative enterprises, 5) to work for improvement of the competitive environment, and legal, regulatory and institutional framework to make them conducive to innovation, 6) to help development and dissemination of innovation culture and creation of a society open to innovation, 7) to work for the establishment of strong linkages between key actors and interfaces of the innovation system, and 8) to promote international cooperation in RTDI and help Turkish enterprises lead and/or become partners of international RTDI projects and exploit the results.

TTGV supports technology development activities of the industry including lending of funds and taking credit risk. TTGV covers its administrative expenses from its income and does not receive budgetary support from the government.

### *Technology Development Projects Funding*

Supporting technology development activities of the private sector is the core activity of TTGV. TTGV supports R&D and technological product and process innovation projects of industrial companies. Financing of these schemes is provided by HM from the resources of the World Bank and by DTM from the national budget. The HM and World Bank financed 'Technology Development Support' program launched in 1999.

TTGV finances up to 50% of the total cost of technological product/process innovation projects of the private sector up to a maximum of US\$2.0 million. The maximum duration for a project is 2 years and the amount provided by TTGV is repaid by the company in installments in 4 years, including a 1-year grace period after completion of the project.

The DTM financed program 'State Support for R&D' has been implemented since 1995 and the total amount of funds provided is determined by the annual national budget. In both schemes, R&D and technological innovation projects are co-financed with the proponent companies with up to 50% of a project's budget as a soft loan. TTGV has supported 452 projects and allocated approximately US\$158 million as of 31 July 2005. With the remaining 50% contributed by firms, total funding for technological innovation amounts to around \$325 million.

External independent experts from universities, as well as private and public sectors in the technological field of the project concerned, evaluate and supervise each project.

Collaboration between the private sector and public research institutions and universities is encouraged by TTGV through joint research projects to facilitate technology transfer within the country. A special emphasis on promoting linkages between the R&D institutions/universities and Turkish industry is pursued through the continued participation of researchers and scientists in the evaluation and monitoring of TTGV sub-projects, as well as in the provision of advice to entrepreneurs on technical issues.

### *Technoparks and Technology Centers*

TTGV's role in promoting technoparks is catalytic. Given the large scale and high risk of such investments as evidenced by international experience, these efforts are piloted selectively. Each proposal has been examined for technical and financial feasibility, and even if each of them satisfies the criteria in isolation, a strategic and holistic view is taken to ensure that the investments together are not unnecessarily duplicative. TTGV has provided international expert assistance to the sponsoring institutions to design their technopark proposals with international best practices.

TTGV has allocated US\$8 Million and US\$4 Million to Bilkent Cyberpark in Ankara and ITU Ari Teknokent in Istanbul, respectively. On the other hand, TTGV has contacted technopark companies and related universities to create cooperation among technoparks, to establish more effective lines of communication, to ensure their wide recognition, to take the necessary steps to design effective procedures, to adapt international best practices, and to lobby when necessary, etc.

### *Venture Capital Funds*

Venture capital is being supported as commercial and private sector activity in Industrial Technology Projects. It is considered to be one of the most important income generating activities of TTGV, which has two VCC investments. In the first one, 'Is Risk', TTGV's share is US\$3.7 Million. 'Is Risk' has invested in 5 firms up to now. TTGV's second VCC investment is in the 'Turkish Private Equity Fund' (TPEF), with US\$3.3 million. The fund had funded two firms as of 2005.

### *Start-up Funds*

TTGV is aiming to support newly established high-tech firms, which need to overcome the initial financial burden during the setup phase, through start-up funding. There are more than 50 firms that have applied for start-up funding up to now. One of those firms has been found eligible for funding and the investment is to be finalized soon.

### *KOSGEB*

KOSGEB (Small and Medium Sized Industry Development Organization) is a non-profit semi-autonomous organization, affiliated with the Ministry of Industry and Trade, established by the Government by special Law 3624. KOSGEB was established in 1990 with the aim of helping Small and Medium Enterprises with their rapid adaptation of technological innovations, and enhancing their efficiency and competitive capacity in order to increase their contribution to the national economy.

### *Technology Development Centers (TEKMER)*

KOSGEB's incubators (called 'Technology Development Centers' -TEKMERS) are the first initiatives in the country for supporting the start-up of technology-based companies. As of 1991, KOSGEB established 14 TEKMERs jointly with universities TEKMERs of KOSGEB established with and located in universities create an environment for stimulation of university-company co-operation.

By means of TEKMERs, entrepreneurs are provided with business-incubator services, services of common facilities, technical/ financial/ managerial consultancy assistance, information services, training programs, laboratory and prototype manufacturing workshop facilities including the financial support for equipment/ material, participation at fairs, software acquire, and qualified workforce together with professional personnel recruitment.

Some of these centers are quite successful in promoting spin-offs and new technology based firms. For example, 80 percent of the tenants of METU-KOSGEB TEKMER are new companies and 40 percent of these companies are university spin-offs.

TEKMERs help close cooperation between the research community and the business sector. The total employment is 5081 and there are 842 firms supported in these 14 TEKMERs.

In the provinces in which TEKMERs are not established yet, the same services and support programs are provided to SMEs through a program called “Technology Incubators without Walls” (DTIs) in their own units aiming to develop advanced technology in manufacturing and carry on R&D studies. There are 15 Technology Incubators without Walls. 164 firms have graduated from TEKMERs and 33 firms from DTI. There are also three private incubators established by Erickson, Koç Holding and Siemens.

### *Technology Development and Innovation Incentives*

KOSGEB has two ‘Technology Development and Innovation Incentives’.

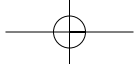
#### 1) Technology Research and Development Incentive

For establishing and developing competitive enterprises that have new ideas and creations based on science & technology and for production or development of new products Technology Research and Development Incentives are given to enterprises.

Technology Research and Development Incentives are given under the scope of technology development centers, technology incubators without walls, technology innovation centers and the partnership protocols for R&D projects. These incentives include incentives for materials, equipment, quality improvement, buying technological equipment, consultancy services, publishing R&D results: technopark rent, office & workshop space, and incentives for attending congresses, conferences, panels, symposiums and technology fairs.

#### 2) Industrial Property Rights Incentive

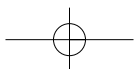
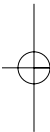
If an invention or design with a patent document, utility model document or industrial design document is a result of research by enterprises, an incentive is given for the cost of patent



registration, utility model registration, industrial design registration and integrated circuit topographies registration.

Besides these two incentives, in June, 2003, KOSGEB launched the ‘New Entrepreneur Support’ to provide loans and grant financing for start-up companies of entrepreneurs who graduated from KOSGEB’s ‘Young Entrepreneur Development Program’, as well as those located in the Business Development Centers and entrepreneurs who prepared a business plan successfully under the ‘Small Business Start-up Consultancy Support’ of KOSGEB.

Regarding the credit guarantee mechanisms in Turkey, the Credit Guarantee Fund (KGF), established in partnership between six organizations including KOSGEB, guarantees up to 50 percent of SME loans (to a maximum amount of EUR 400,000) to facilitate risk sharing and lending among Turkish banks.



## 5. Future Challenges of Turkish NIS

### 5.1 Promoting Industrial Restructuring and Upgrading

#### 5.1.1 Main Findings

Turkey needs to upgrade its industrial structure to sustain economic growth in the future. Most Turkish export industries are low value added and labor intensive, and face severe competition from many developing countries in the world including eastern European countries, China, India, and Asian countries.

The past record, however, shows that Turkish performance in industrial upgrading by restructuring industry is not as good as South Korea or other East Asian Dragons. Korean industrial development was possible by introducing new industries at each stage of industrial development. This is often referred to as “flying-geese pattern of industrial development”, in that leading industries emerge continuously, replacing old industries that lose international competitiveness due to wage increases in the course of economic development.

Turkey needs to find a way to stimulate industrial restructuring and upgrading to prepare for the next stage of industrial development. The experiences in many developing countries show that market mechanism alone is not sufficient to create new emerging industries for industrial upgrading. It is well known that experience in production fosters technological capability building, but production will not start without some technological capability. This may be the primary reason why no developing country has become an advanced country in the 20th century. Market mechanism alone cannot break this vicious cycle between production experience and technological capability building. This justifies some form of government intervention.

#### 5.1.2 Korean Experience

Industrial restructuring and upgrading formed the main engine of economic growth in Korea. In the early stage of industrial development, Korea upgraded industrial structure by relocating declining or mature industries from advanced countries. Japan was the most important partner of alliance for restructuring. The Japanese economy was very dynamic and created many declining industries, that were eventually replaced with emerging high-tech industries. During the 1960s and 1970s, many Japanese declining industries such as textiles, garments, electronic parts and components, and metallic products, were relocated to Korea, and grew as export

industries. Geographical and cultural proximity helped relocation of Japanese declining industries and transfer of technological know-how.

In the latter stage of industrial development in the 1980s and 1990s, the relocation of Japanese declining industries slowed down. Korea is no longer considered a good place for relocation of declining industry by the Japanese due to the increase in wages. Having acquired technology at the mature stage, Korea, at that time, needed technology of the emerging stage or the fluid stage that Japanese were not willing to transfer. Japan was afraid of a so-called “boomerang effect”, which means transfer of technology to Korea will strengthen international competitiveness of Korean firms in the global market that, in turn, have a detrimental effect on the Japanese economy. Alternatively, Korean firms sought strategic alliances to acquire technology from all-over the world. For, example, key technology in the semi-conductor industry was acquired from a US engineering company, which did not worry about the boomerang effect because it had no interest in production. Key technology for automobile engines was transferred from Germany through technology licensing contracts.

Korean industrial transformation would not have been possible without active governmental promotion policy. In the early stage of industrial development, Korea adopted strategic industrial policy to promote strategically important industries, which lasted until the 1980s. Various policy instruments, such as trade protection, policy financing, zoning regulation, R&D, and education and manpower training, were utilized.

Specialized GRIs, in such fields as machinery, chemical, biotechnology, electronics and telecommunications, were established during the HCI drive period to provide a S&T pool to be utilized for the absorption and assimilation of foreign technology and to carry out contract research for the related industries. Export promotion in the earlier stages of industrial development facilitated exposure to foreign sources of technology. Interaction with foreign buyers or capital goods suppliers was conducive to technology transfer. The Heavy and Chemical industry drive in the 1970s created over-investment, but it paid-off in the 1980s because these industries accumulated technological capability and obtained competitive advantage through learning by doing.

Coming into the 1980s, the Korean policy of industrial targeting was abandoned because of the following reasons. First, the government learned that industrial targeting may create distortion in resource allocation and over investment, as happened in the Heavy and Chemical Industry Drive. Second, industrial targeting violates world trade order and may create retaliation by trading partners. Liberalization and globalization were adopted as the governing principles of economic policy.

The abandonment of industrial targeting does not mean that the government has stopped

promoting industries of strategic importance. The industrial targeting policy was replaced by the industry promotion policy. The government provides assistance for strategically important industries with policy instruments that do not directly conflict with world trade rules, which include R&D subsidy, education and training, provision of cheap land, and high priority in government procurement. For example, Samsung Semiconductor company was allowed to set up production facilities in Yongin near Seoul in exception to the zoning regulation. Telephone Exchange System (TDX) and TDMA technology received market support through governmental procurement policies.

“National Strategy for the Development of Information Industry” in 1992 is a good example of strategically important industry promotion policy. It was not a formal government plan. It was a vision initiated by the private sector and approved by the government. The vision contained basic strategy and direction of the Korean information industry for the next 10 years. It identified key products and technologies of particular importance, which include: hand-held devices, peripheries for computers, semi-conductors, satellite communication, wireless telecommunication, BISDN, computer-based Korean language processing technology, and software engineering.

Many prominent experts from industry, academia, government research institutes, and the government participated in the making of this vision. Industry associations played an important role as coordinators and financiers of the project. The essence of the vision was reported jointly to the President of Korea by the participating ministries: Economic Planning Board, Ministry of Finance, Ministry of Science and Technology, Ministry of Education, Ministry of Industry and Ministry of Telecommunication.

The vision making was an interactive learning process between industry, academia, and the government. Industry can have more confidence in starting a new business if it is identified as a promising area in the vision. The ministries participating in vision making can also make decisions with much clearer direction and objectives in mind. The vision also provides a favorable environment for the harmonization of R&D policy, education and training policy, government procurement policy, competition policy, etc. Many experts who participated in this vision making process have been promoted to higher positions, and they became evangelists of the vision.

Another example of industry promotion policy is “National Vision for Next-Generation, Engine-of- Economic-Growth Industries” in 2003. Ten industries are listed in the vision: digital TV, display, intelligent robots, next-generation automobiles, next-generation mobile telecommunication, intelligent home network, next-generation pharmaceutical products, digital contents and next-generation battery. This vision was also jointly prepared by the private sector and the government.

### 5.1.3 Policy Options

Turkey needs an industry promotion policy for restructuring and upgrading. Some form of governmental intervention is recommended to create and promote new industries of the future. However, policy instruments available for this purpose are very limited. The protection of domestic industry by trade policy instruments violates world trade rules; thus, they cannot be used to promote industries. Nor can the government provide subsidies to the export industry. In this regard, Turkey cannot emulate the industrial targeting policy of Korea in the 1970s and 1980s.

Functional incentives for industry are acceptable according to the world trade rules and they can be used for industry promotion purposes. Examples of functional incentives are: provision of R&D subsidies or assistance for training and education for private enterprises, etc. These functional incentives have already been adopted in Turkey for industrial development purposes, but it seems that these incentives are not systematically organized to promote industries of strategic importance.

A newly emerging industry usually needs more governmental attention than existing industries. A new industry based on a new technological paradigm many times requires reform in socio-economic institutions. Many governmental regulations based on an old technological paradigm may not suit in a new technological paradigm.

The government also needs to pay attention to the development of a cluster of related industries as opposed to the development of a single, isolated industry. Concurrent development of down-stream and up-stream industry is important to maximize the benefit from innovation in the user-producer interaction. It is also important to have related domestic service industries such as advertising, software, and system engineering. If we look at the pattern of industrial competitiveness of advanced countries, their competitiveness is usually based on the development of a cluster of related industries.

It is recommended to make a long-term vision of strategically important industries jointly with the private sector and the government. Vision making can be an effective instrument for industry promotion, as happened in Korea. A vision made jointly by the private sector and the government offers opportunity to share information between the related parties and produces consensus for the direction of future industrial development by the private sector and the government. It reduces uncertainty faced by private enterprises in investing in new industrial areas. It will also provide common ground for functional incentives that are administered by various ministries. The priority in R&D subsidies can be set in such a way as to help restructure the industries. Education and manpower training can be adjusted to meet the future demand of industry more effectively. It will open ways for institutional and legal reform and development

of related industries.

Another policy option is to set up “industrial technology centers” for strategically important industries. The primary mission of the centers is the development of industrial technology. In addition, the centers will have secondary missions such as: technical consulting, management consulting, training, testing, policy research, and international marketing. In terms of remedying a missing link in the governmental policy of industry promotion, the secondary mission may be more important than the primary mission.

The advantage of the “industrial technology center” approach is to be able to offer packaged service for strategic industries. In addition, it can accumulate industry specific knowledge of various kinds, which generate externality. It is well known that the combination of marketing knowledge and technical know-how is the essence of innovation strategy in knowledge-based industries. The policy research function is also a very important mission of industrial technology centers, so that they can work as an intermediary between the private sector and the government.

## 5.2 Promoting International Technology Transfer

### 5.2.1 Main findings

Technology development strategy of developing countries takes two different routes: MNC-led strategy and nation-led strategy. If MNCs are leaders of innovation and industrial development, it is called MNC-led strategy. On the other hand, if national firms lead innovation, it is regarded as Nation-led strategy. Nation-led strategy does not mean the sources of technology for innovation are entirely of national origin. National firms import technology through licensing and strategic alliances in nation-led strategy, although some indigenous R&D efforts are also carried out. Singapore and Malaysia followed MNC-led strategy, and Korea and Taiwan pursued nation-led strategy.

The strategy of Turkey during the last 50 years can be classified as MNC-led strategy in that MNCs are major players in industrial innovation. Innovative capability of national firms is not high and R&D activity of national firms as well as MNCs is sluggish.

An obvious advantage of MNC-led strategy is that the host country can exploit ready-made technological and marketing capabilities of MNCs. MNCs bring capital, technology, and managerial know-how as a package. However, MNC-led strategy also has drawbacks. Technology may be confined to MNCs without spill-over effects to other domestic firms and

industries. MNCs will not likely transfer high value added activities such as R&D and design to the host country and will not contribute much in continuously upgrading industry structure.

## 5.2.2 Korean Experience

In the early stage of Korea's industrialization, technological upgrading was mostly carried out by the absorption and assimilation of foreign technology while domestic R&D played a relatively small role. Exporting of manufactured products on OEM basis offered opportunity for technological learning through an apprentice pattern

Foreign direct investment and technology licensing were important instruments to absorb technology in the fluid or transitory phase. Korea relied more heavily on technology licensing by adopting a selective approach in the approval system of foreign direct investment. Entries of foreign firms were selectively allowed. Consequently, capital and technology were imported separately, the former by foreign loans and the latter by technology licensing. This policy did not hamper the transfer of technology, mainly because Korea had the managerial capacity to carry out unpackaging. In addition, Korea was lucky in that there had not been many competitors in the world successful in getting foreign investment or technology. Low world investment in the 1970s also provided favorable conditions for this strategy. This policy induced the rise of Korean global enterprises such as Samsung Electronics and Hyundai Motor Company

To increase absorptive capacity of technology transfer, GRIs in strategic technology areas were established. GRI's primary function was to do contract research with the private sector and provide technical consultancy in the 1970s, but this policy strained technology capability building of universities and industry-university cooperation. Coming into the 1990s, as the technological demands of industry became more sophisticated and diversified, GRIs alone could not meet the demand of industry. The government began to promote industry-university cooperation and invest heavily to upgrade research capability of universities.

## 5.2.3 Policy Options

In the early stage of Turkish industrial development, the MNC-led strategy was a fast and effective way to industrialization. MNCs are an efficient vehicle to transfer technology belonging to a specific phase in the "Dynamic Innovation Model". However, technologies in the fluid or transitory phase are not likely to be transferred by MNCs, because MNCs tend to keep high-value added operations at home or in other advanced countries. Subsidiaries of MNCs tend to maintain the status quo and are reluctant to adopt innovation actively. This may be the reason

for slower restructuring of industries in Turkey compared to Taiwan or Korea.

Fostering of globally competitive “national champions” is an important task for future Turkish industrial development. They require many traits such as ability to finance large-scale investment, new product development capability, international out-sourcing of technology, and international marketing skills, to name only a few important ones.

MNC-led strategy is still a viable strategy to be pursued in the future. Turkey cannot emulate the Korean policy of unpackaging in the importation of technology and capital from abroad in that technology and capital are separately imported due to differences in the global investment environment.

MNCs are the main source of industrial technology and managerial know-how for future industrial development. Continuous inflow of FDI in manufacturing is vital to industrial technological upgrading. In this respect, it is an important task for Turkish industrial development to improve the investment environment in order to attract as much FDI as possible. The investment environment in Turkey has been significantly improved in recent years, but more improvement is needed in the areas of reducing red tape and building infrastructure for transportation and telecommunication. More incentives should be provided for export-oriented FDI in the manufacturing industry.

MNC-led strategy and nation-led strategy can be complementary. Capability accumulated for nation-led strategy increases capability for the absorption and diffusion of MNC-led innovation. It can be advantageous in attracting FDI in high-tech areas. Strong local technological capability increases the likelihood of emerging domestic enterprise emulating foreign firms

The importance of increasing investment for technological capability building cannot be over-emphasized. More incentives should be applied for private R&D. Governmental R&D investment has to be increased and more focused on the areas directly helping industrial technological capability building. If we categorize industrial technology into process technology, product technology, and investment technology, more emphasis should be put on process technology and product technology, which tend to be neglected in academic research. To expand the role of universities and public research institutes in the absorption and assimilation of foreign technology, the government should promote contract research and technology extension services within industry.

## 5.3 Enhancing Cooperation Between Industry and University

### 5.3.1 Main findings

Modern innovation process is best described by the interactive model. Actors participate in the interactive process of innovation together, and ubiquitous cooperation is a norm in all stages of innovation. Feedback and interaction in all phases are common characteristics of modern innovation.

Innovation does not progress linearly from basic research to applied research, and then to development research as the linear model of innovation implies. Thus, role sharing of actors by the linear model has become old tradition, in that universities specialize in basic research, the government engages in applied research, and industry takes charge of development.

Private R&D investments in Turkey are not activated as yet. The nation's total R&D investment amounts to 0.66% and the private sector share is less than 40% of the total R&D. Industry-academia cooperation is not well established. Turkey ranks 71st out of 80 countries in a Global Competitive Report with respect to cooperation between industry and universities. A major proportion of governmental R&D is allocated to universities, but its contribution to industrial innovation is not quite satisfactory. The Turkish innovation system has progressed impressively with respect to scientific publication, but has not been successful with respect to commercialization. The number of patent applications by domestic residents has not increased much.

Many important policy innovations have been introduced by the Turkish government, such as TDZ, TEKMER, TTGV, and University-Industry Joint Research Centers Program, to promote industry academia cooperation since the late 1980s. Despite such governmental programs, industry-university cooperation is still not activated because of the lack of private initiatives.

### 5.3.2 Korean Experience

Korean universities did not have the capability to support industrial innovation in the early stage of economic development. Korea coped with this problem by establishing government-funded research institutes, whose primary function was to do contract research with the private sector and provide technical consultancy in the 1970s. However, this policy strained technology capability building of universities and industry-university cooperation.

Coming into the 1990s, as the technological demands of industry became more sophisticated and diversified, GRIs alone could not meet the demand of industry. It became an important task of the national innovation system to utilize high-quality manpower in universities, which had more than 80% of Ph. Ds in science and technology. An increasingly large proportion of Korean government R&D investment was allocated to university research and joint research between universities and industry.

Despite such governmental efforts since the 1990s, industry-university cooperation is probably the weakest point of the Korean national innovation system. Most universities have long traditions as educational and academic institutions and do not have adequate incentive systems or managerial practices to reward industry-academia cooperation.

The Korean education and training system is also criticized for not being attuned to the needs of the economy. This is primarily caused by the lack of competition among universities and professors and the equalization principle of education policy. Governmental regulations and control on higher education also has contributed to this criticism of not being attuned to the market. For example, the government still controls student quotas in various departments in universities.

The government drastically increased the number of science and engineering enrollment in 1980s without paying much attention to the labor market situation and capabilities of universities. This created a decline in the quality of graduates. In addition, an over supply of science and engineering majors caused a severe unemployment problem for science and engineering graduates. At present, high quality students prefer such majors as law, business and economics, and medicine rather than science and engineering.

### 5.3.3 Policy Options

The government cannot force cooperation between industry and universities if they do not have self-interest for cooperation. Industry will not seek cooperation with universities if universities do not have the technological capabilities industry wants. Universities will not actively promote industry cooperation if it is not vital for their survival or reputation.

Governmental policy has to address the problem caused by the lack of self-motive for cooperation in the universities. Universities have to have a managerial philosophy that honors industry cooperation. Universities' capability for contract research and technology extension service need to be strengthened. The university reward system should be changed to provide more incentives for professors who are active in industry cooperation

In allocating governmental R&D grants, higher priority should be given to joint research programs between universities and industry. To encourage university-industry cooperation for the firms in Technology Development Zones, in the screening process of applicants for TDZs, give high priority to those firms active in industry-university cooperation.

It is also important that university education be attuned to the needs of industry. To encourage cooperation between industry and universities across a wide spectrum of university management (curriculum, contents of teaching, research, on the job training, etc), competition among universities should be encouraged.

Enrollment in science and engineering should be adjusted to avoid over-supply. Over-supply will lower quality of education and will create a social environment in which science and engineering majors fail to attract highly talented students.

## 5.4 Improving the Effectiveness of SME innovation and Venture Business Support Systems

### 5.4.1 Main Findings

The Turkish government introduced many important institutional innovations to support SME innovation and new startups since the early 1990s. TTGV supports techno-parks and technology centers to enhance industry-university cooperation. TTGV also provides venture capital funds and new start-up funds. KOSEB runs TEKMER to promote spin-offs and new technology based firms. These programs have been quite successful and cost effective if we take account the relatively small amount of governmental funds allocated to these programs, but there is still a long way to go for these programs to have a significant impact on industry structure upgrading and economic growth.

The main obstacle for the success of those programs has been the lack of private initiatives. R&D is not the core of competitive strategy for most companies as yet. Many established companies want to move into TDZ and technology parks to enjoy the benefits provided by the government, such as preferential tax treatment, with little interest in collaboration with the research community.

Many new start-up companies or spin-off companies are hosted by the program, but the success rate measured by the rate of graduation is not high. Interviews with employees of new-start up companies reveal their future growth potential is strained by the lack of expertise in marketing and red-tape associated with importation of equipment and raw materials for new

product development.

## 5.4.2 Korean Experience

The Korean government has put a high priority on the promotion of innovation in SMEs. SMEs receive about 80% of government R&D subsidies for private firms. The government sponsors research in universities and GRIs to develop technologies commonly used by SMEs. It allocates funds to Small Business Corporation and other similar institutions to provide technology extension services for SMEs.

A large-scale, systematic venture business promotion officially began in 1997 when the government introduced the Special Law on Venture Business Promotion. In the law, venture business is defined as enterprises that receive equity investment from venture companies, or enterprises whose ratio of R&D to sales exceeds 5%, or enterprises with more than 50% of sales volume coming from new technology development and patents, or enterprises evaluated as having superior technological capability by the Institute of Venture Enterprise Evaluation. The number of venture businesses has increased since the introduction of the law as shown in <Table 3-9>.

Table 3-9 ● Number of Venture Enterprises

	1998	1999	2000	2001	2002	2003	2004	2005
Number	2,042	4,934	8,798	11,392	8,778	7,702	7,967	9,732

Data: Small and Medium Business Administration

For those enterprises designated as venture enterprises, the government provides support in the areas of financing for capital investment, R&D, technology extension services, education and training, and marketing. Venture capital companies have also benefited from this policy since enterprises seek funds from venture capital companies to be designated as venture businesses.

The policy seems to have a significant impact if we look at the trends in the number of venture enterprises in Table 9, but we have to be cautious in explaining the real impact of the policy. First, the increase in the number of venture enterprises includes firms that have already been established. Thus, it is not a real increase in the number of venture enterprises. Second, the timing of the law and promotional policy coincided with the rapid growth period of IT industry in Korea, which consists of more than 50% of newly established venture enterprises;

thus, the increase in the number of newly established venture companies may have happened without the promotion policy.

Nonetheless, it cannot be refuted that the policy had significant impact and certainly contributed to a boom in venture businesses from 1998-2001. However, it may have also helped to create the bubble that burst in 2002, when the stock prices of venture businesses fell dramatically.

### 5.4.3 Policy Options

In section 2, the role of the government is defined as promoter, producer, pacer, and user. First, the role of government as pacer needs to be expanded. I have already emphasized the importance of industry promotion policy and vision making in previous sections. The same applies to the formulation of SMEs innovation policy. The government has to have a clear vision as to the course of industrial development and the pattern of cooperation and specialization between the large firms and SMEs. In promoting SMEs innovation in high tech or emerging industries, the government has to have priorities based on long-term vision of industrial development.

SME innovation has a close relationship with innovation of large firms. In many cases, SMEs are subcontractors of large conglomerates, and SMEs and large conglomerates interact as users and producers of innovation. For example, innovation in automobiles requires innovation in parts and components. In this respect, innovation policies of SMEs cannot be separated from innovation policies of large firms. This implies that promotion of joint technological development projects among SMEs and large firms can be very effective means to promote innovation in SMEs and technology transfer from large firms to SMEs.

Second, the role of government as a user needs to be emphasized. The government can utilize procurement policy to encourage innovation, including preferential acquisition of new products or technologies of Turkish origin. Government procurement policy could have big impact on the IT industry because the government is the largest buyer and user of IT products.

In regard to the management of TDZs, TEKMERs, Technoparks, and Technology Centers, the government has to continuously monitor the requests and complaints of enterprises. If they face difficulty in marketing of their products, the government has to respond to resolve the difficulty as much as possible. If they complain about red tape in relation to governmental regulations, the government has to find ways to improve. It is also important to enforce the management of TDZs and TEKMERs to graduation principles. If a firm becomes competitive after the incubation period, it has to graduate to make room for other eligible companies.

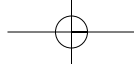
The current situation of the Turkish venture business sector is somewhat similar to Korea in the 1990s. The Korean government introduced many policy measures to promote venture business: institutional reform for legal base of venture capital, creation of second tier stock market(KOSDAQ), over-the-counter stock market, introduction of tax incentives for new high-tech based start-up companies, and promotion of university- industry cooperation to name only a few important ones. But these policies had only marginal impact in stimulating venture business until the late 1990s. The boom in venture business in Korea started in the late 1990s, led by IT-based industry development. Policy reforms in the 1980s and 1990s have paid-off in the long-run.

It is important for Turkey to continue institutional reforms conducive to innovation and venture business, even though they may not create significant impact in the short run. Turkey needs continuous effort to develop modern innovation financing system for early stage finance, business angels, and venture capital. Do not expect quick results, but it will pay off in the long run. In the long run, it will be an important asset when the Turkish innovation system transforms from imitation oriented to innovation oriented.

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A Way Forward for the Turkish Economy:  
Lessons from Korean Experiences



## Chapter 4

### Industrialization and Human Resources Development: Korean Experiences and Policy Recommendations for Turkey



1. Introduction

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2. Human Resources Development in Korea

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3. Human Resources Development in Turkey

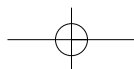
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4. Policy Recommendations

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# Industrialization and Human Resources Development: Korean Experiences and Policy Recommendations for Turkey

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## 1. Introduction

In spite of its long history and cultural heritage, the Republic of Korea was one of the poorest countries in the world since its liberation from Japanese colonization in 1945 until the early 1960s. The Korean War (1950~1953), which erupted shortly after the liberation, left Korea in economic devastation. Because of a weak industrial foundation and a vulnerable financial structure, Korea had to depend on foreign assistance for its reconstruction. Until the early 1960s, Korea exhibited the typical pattern of developing countries: severe poverty and high rates of unemployment.

Since then, Korea has successfully transformed the country from a major ODA (Official Development Assistance) recipient country to an ODA donor country in a single generation. After adopting an export-driven economic strategy in the 1960s, the Korean economy took off. After a period of rapid economic development, the Korean economy now ranks among the mid-level OECD countries in terms of GDP and trade volume. The Korean GDP was merely \$1.3 billion in 1953 and \$2.3 billion in 1962, but skyrocketed to \$680 billion in 2004.

Korea owes much of its economic success during the past four decades to the cooperation and support of the international community. Korea's experience as a foreign ODA recipient country began at the end of World War II. The first foreign assistance Korea received was in the form of Government and Relief in Occupied Area (GARIOA) from the US Military Administration. By 1960, the accumulated amount of grant aid Korea received from the international community (including the United States) was equivalent to \$3 billion. Korea's average aid/import ratio between 1953~1960 was 71%; the total foreign aid amounted to 8% of GNP, equivalent to almost 80% of the nation's total investment. Such inflows of development assistance played a critical role in Korea's survival and reconstruction of the war-stricken economy.

Starting in 1962, the Korean government implemented a series of Five-Year Economic Development Plans partly financed by foreign aid. Due to the effectiveness of these Plans, the economic conditions in Korea experienced drastic changes. In total, Korea received \$1.76 billion in aid during 1961~1970, which was mainly used for building basic industrial facilities. This investment financed by foreign aid enabled Korea to establish a firm foundation for the country's economic growth. With the economic basis established through the Five-Year Economic Plans, Korea pursued an export-oriented economic policy in the 1970s, which resulted in rapid economic growth in the following decades.

Many factors are often cited as major sources of Korea's remarkable economic success. One of the factors leading Korea's economic success was Korea's efficient human resource development. During the take-off period, the Korean economy heavily relied upon abundant labor supply for its economic development. Although the Korean workforce initially lacked the kind of training and education that generally was conducive to economic development, labor market conditions nonetheless increasingly pointed toward industrialization and development.

During the 1950s, the Korean labor market displayed the following characteristics: first, labor supply by far exceeded demand; second, over 70% of the workforce was in primary industry; third, the unemployed rural labor flooded urban areas that were not yet sufficiently industrialized; fourth, there was substantial under-employment in both agricultural and non-agricultural sectors; and fifth, despite these adverse labor market conditions, the rapid and comprehensive expansion of educational opportunities strengthened the basis for the development of human resources. (There was a strong desire for parents to educate their children to ensure a better life for their children.)

The years from 1961 through 1987 are characterized by the expansion of employment. With the establishment of the First Economic Development Plan in 1963, employment steadily increased. As such, the proportion of wage earners to total employed almost doubled in about thirty years, from 31.5% in 1963 to 61.0% in 1993.

Among other factors, the annual GNP growth rate of 8% during the same period was critical in sustaining the employment growth rate at 3.3%. It is also important to note the rate of urbanization that accompanied economic growth, as employment in the manufacturing sector increased from 7.9% of the total employed in 1963 to 27.8% in 1989.

In examining Korean economic growth, analysts were especially interested in locating the specific point at which the Korean labor market passed the so-called unlimited labor supply. With regard to this question, the agricultural sector was argued to have passed through that phase in the late 1960s and the entire labor market around 1975. These observations are grounded on the following changes: first, the elasticity of labor supply with respect to wages

drastically declined in the mid-1970s; second, the wage rate increased sharply, reaching two-digit figures in the late 1970s; third, the wages of production workers in comparison to those of professionals and administrative staff began to rise after 1975; and finally, the ratio of job offers to seekers increased immensely after 1975.

The year 1975 was an important turning point not only in terms of labor supply but also changes in wage structures. Wage differentials by education, occupation, and gender narrowed substantially after 1975. The foregoing changes were symptomatic of the development of human resources necessary for rapid economic progress and resulted from constant government efforts to alleviate unemployment and underemployment.

In making sense of the Korean labor market during the years of economic development, it is important to note the role of extensive government planning in creating employment. Indeed, between the late 1960s and mid 1980s, the creation of employment opportunities lay at the heart of economic development planning. In order to generate employment and growth, it was deemed critical to prioritize export-oriented policies for employment expansion. The downside of this policy, however, was that the government failed to work out adequate relief measures for unemployment and thereby relied on largely makeshift measures such as provisions of public works for the poor. Likewise, government subsidy was unreliable and employment service centers were poorly managed.

Aside from the creation of jobs, the Korean government was highly aware of the significance of education as a necessary condition for economic development. As such, the expansion of formal education and vocational training constituted a major part of Korean developmentalist thinking. Thus, as early as 1967, the Park regime legislated the Vocational Training Law. In 1968, the government established the Central Vocational Training Center with aid from the ILO and the UNDP to cultivate vocational training teachers. In a related vein, the Korean government in 1973 implemented a policy that emphasized technical high schools and started to place as many resources as possible in vocational education such as mechanical high schools. These initiatives were initially welcomed and did generate a measure of success, but with the onset of the 1980s, they proved to be lacking in terms of relevance, responsiveness, and efficiency.

The foregoing problems became more pronounced as the Korean labor market underwent major structural changes and began to feature imbalances after the mid-1980s in terms of the following aspects: first, medium and small businesses suffered from serious labor shortages; second, the employment of youth and highly-educated women stagnated; and third, employment in the manufacturing sector began to drop after 1987 due to the significance of knowledge-based industries and the service sector.

Along with measures for dealing with the foregoing problems, the Korean government became more aware of issues concerning equal employment for female workers, the physically disabled, and the elderly. As such, a series of relevant legislation followed since the late 1980s, including the 1988 Equal Employment Act, the 1992 Employment Promotion Act for the Handicapped and the Employment Promotion Act for the Elderly, etc. At the same time, the government began to accommodate the growing presence of foreign workers who were becoming indispensable to the country's small and medium businesses. The government has also tried to reform the nation's vocational training programs to accommodate the rise of information technology and the advent of a knowledge-intensive economy. Despite these efforts, there is much to be desired in the quality of Korean human resources development.

In this paper we will review how human resources development in Korea evolved during its economic expansion periods. We will see the close relationship between human resources development and Korea's industrialization, role of education for Korea's human resources development, and finally recent trends in Korea's human resources development. Korea's experiences will provide some insights for those countries that need to develop human resources development to ensure their sustainable economic growth.

Then we will review the current situation of human resources development in Turkey. The education sector and the vocational training system in Turkey will be analyzed in detail. After examining the problems in Turkish human resources development, policy recommendations will be given.

## 2. Human Resources Development in Korea

### 2.1. Industrialization and Human Resources Development

#### 2.1.1 Human Resources Development Trends in Korea

The process of Korean industrialization can be divided into the following three periods, each of which is characterized by a distinctive approach to human resource management and vocational training on the basis of shifting economic priorities and goals.

- A. Take-off phase between 1961-1972 [labor-intensive]
- B. Heavy-chemical industry (HCI) phase between 1973-1979 [capital-intensive]
- C. Rationalization and liberalization phase since 1980 [technology and skill-intensive]

The take-off phase (1961-1972) was marked by an export-oriented economic policy and protective measures for the domestic market. These approaches generated substantial growth rates, which were sustained at 8.9% during this period. During this period, the Korean economy enjoyed an ample supply of cheap and modestly educated semi-skilled labor. In contrast, only a handful of innovative economic specialists, professionals, and clerical personnel were available. With the onset of the 1970s, however, the demand for skilled labor accelerated with the promotion of chemical, machinery, and steel industries, as dictated by the Second Five Year Development Plan (1967-71). This necessitated the improvement of vocational education and training (VET) both within and outside the formal education system.

The heavy-chemical industry (HCI) promotion phase (1973-1979) aimed to deepen the industrial structure around HCIs such as chemicals, basic metals, general machinery, shipbuilding, and electronics. Under this policy reformulation, the government intensified its interventionist posture based on special tax treatments and preferential access to credit via various forms of policy loans. The HCI drive reaped its share of success from 1970-80, during which the export ratio of the heavy-chemical industry rose from 7.4% to 19.3%. The heavy industry ended up surpassing the light industry in its share of total output by 1980. Although in retrospect, the policy seems to have been misconceived as a result of such problems as misallocated intersectoral resources and external debts, it nonetheless enabled the transition from a labor-intensive economy to a capital and skill-intensive economy.

The shift concomitantly generated the need for more skilled workers, which the government tried to cater to by launching comprehensive VET programs. Under the initiative, technical high schools and public vocational training were made exclusively responsible for the cultivation of

an industrial workforce. Along with these institutions, junior technical colleges were further developed with IBRD funding in order to accommodate the growing need for mid-level technicians. Higher education was also expanded at the tertiary and graduate levels, with a special emphasis on science and technology. As a result, the proportion of scientists and engineers engaged in R&D in Korea came to surpass that of other East Asian NICs (Newly Industrialized Countries) by the late 1970s. Despite certain negative consequences, the HCI drive nonetheless was critical in expanding Korea's human resource base as middle-school-level universal education was achieved by 1980 and high school enrollment ratio reached 63.3% in 1980.

The rationalization and liberalization phase is characterized by a shift toward technology- and skill-intensive industries, which was introduced as a response to structural and macroeconomic problems such as escalating inflation, faltering exports, and over-capacity in the HCIs. As an institutional basis for the readjustment, the Industrial Development Law of 1986, the Fair Trade Law of 1981, the Import Liberalization Program of 1983, and Revised Foreign Capital Inducement Act of 1984 were enacted. Likewise, the Fifth Five-Year Development Plan (1982-1986) also stressed financial and import liberalization. Despite the emphasis on liberalization, government intervention in the economy persisted and compromised free market principles via such measures as forced mergers, mandatory capacity reduction, and a general support for commercial banks.

During this period, the quality of Korean human resource development continued to improve, which was most notably indicated by the rapid expansion of private sector institutions and private financing for education and skill training. In general, however, problems that had chronically plagued the Korean education system, such as the lack of long-term government planning in manpower management and the reliance on student tuition as the primary source for university financing, persisted during the 1980s. Even as the private sector began to gradually supplement the government's primary role in vocational training, the government nonetheless was able to enhance the overall technological capacity of Korea. Under the Fifth Five-Year Plan, the national science and technology investment was increased from 0.9% to 2 % of the GNP. In addition, the National Project for Research and Development was established in 1982 to fund public as well as public-private joint projects in such fields as electronics, fine chemistry, and engineering.

<Table 4-1> shows the classification of industrial products by physical and human capital intensities that is used by the Korean Government in pursuing economic development strategies. <Table 4-2> and <Table 4-3> show trends of Korean economic growth.

**Table 4-1 ● Manufactured Products by Physical and Human Capital Intensities**

		Physical Capital (K)	
		Low	High
Human Capital (H)	Low	(I) textiles, clothing footwear, leather products assembled metals	(II) electrical/electronic non-metallic mineral food, tobacco
	Medium	(III) general machinery papers, printing	(IV) petro-chemicals transport equipment electronics, primary metals
	High	(V) R&D-based manufactured (pharmaceuticals)	(VI) Aircraft & aerospace

**Table 4-2 ● GDP and Growth Rate: Korea (1960-1995)**

(Unit: %, 1,000 \$US)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Growth	2.1	9.1	9.7	5.7	12.2	5.9	11.3	13.8	8.8	8.5
GDP	0.66	0.70	0.75	0.77	0.85	0.87	0.95	1.06	1.13	1.20

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Growth	8.1	6.6	11.8	10.3	9.4	7.1	-2.7	6.2	7.6	11.5
GDP	1.45	1.52	1.67	1.82	1.96	2.07	1.98	2.07	2.19	2.41

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Growth	11.6	11.5	11.3	6.4	9.5	9.1	5.1	5.8	8.6	9
GDP	3.01	3.33	3.67	3.86	4.19	4.53	4.71	4.94	5.32	5.74

Note: GDP is per capita income,  
Source: National Accounts of Korea, the Bank of Korea

**Table 4-3** ●● Growth Rate by Industrialization Phase

Phase	1963-1972 (Take-off)	1973-1979 (HCI drive)	1980-1989 (Rationalization)	1990-1995 (Liberalization)	1963-1995
Growth Rate	8.93	8.87	9.00	7.48	8.47
per capita GDP	6.46	7.14	7.70	6.51	6.79

Source: National Accounts of Korea, the Bank of Korea

## 2.1.2 The Expansion of Education Training

Rapid economic growth played a very important role in human resource development in Korea. Especially as the manufacturing sector rapidly expanded, workers` skills were improved through on the job training. There is no doubt that this on the job training was crucial in the skill formation of Korean workers. The expansion of formal education and vocational training in Korea contributed not only to improving the quality of workers but also to providing the basis for effective on the job training.

Korean educational policy in the 1960s and 1970s aimed at achieving early mass education, so that its investment priorities were on elementary and secondary education rather than higher education. These policy orientations, raising the average educational level of the Korean workforce rather than a selected few, contributed to providing a sufficient pool of industrial manpower necessary for economic growth.

The Korean educational sector expanded rapidly in step with economic growth. The percentage of elementary school graduates who entered middle school sharply increased to 99.9% in 1993 from 54% in 1965. Furthermore, the percentage of middle school graduates who entered high school jumped to 98.2% in 1993 from 69% in 1965.

The Korean educational system was successful in improving average abilities of students for industrial workplaces rather than in cultivating the creative mind for technological development. From this perspective, educational development in Korea somewhat corresponded to the stages of economic development.

The Korean government took a leading role in developing industrial manpower, especially during the 1970s when it emphasized promoting exports and fostering heavy and chemical industries. In 1973, the Korean government announced a policy that emphasized technical high

schools and started to place as many resources as possible in vocational education such as mechanical high schools. At the same time, the government established public vocational training centers and introduced a training system for in-plant vocational training centers by legislating the basic law on vocational training.

After the First Five-Year Economic Development Plan was completed, but before the implementation of the second plan, the issue of the need for technical manpower was raised, leading the government to legislate the Vocational Training Law in 1967. Later, the government constantly expanded vocational training facilities by drawing domestic capital as well as loans and aid from foreign countries and international organizations. In 1968, the government established the Central Vocational Training Center with aid from the ILO and the UNDP to cultivate vocational training teachers. In 1971, the government signed a contract for technical cooperation with the German government and opened the Korea-Germany vocational training center in Pusan. In 1973, the government founded the Chung Su Training Center with aid from the US government and opened up centers in Chunchon and Taegu with loans from the ADB. The vocational training centers established with international cooperation and foreign loans were equipped with excellent training facilities compared to Korean standards at the time. Some were even evaluated as having better facilities than public vocational high schools.

Until 1974, the government did not impose any restrictions on private vocational training centers run by private companies. However, from 1974, the government tried to expand the basis for vocational training by forcing private companies to assume responsibilities for parts of vocational training that public vocational training could not fully supply.

At that time, the Korean vocational training system had three major characteristics. First, the government stressed the supply of insufficient technical manpower according to national manpower planning. Second, it cultivated quality manpower in public vocational training centers rather than in company-run centers. Third, problems in company participation and quality improvements were raised as companies were forced to take responsibility for vocational training under government restrictions.

In this way, Korean vocational training was government-led, based on governmental regulations and central planning. This vocational training policy was once well matched with the positive roles of government in economic development, especially in the 1970s, during which heavy and chemical industries were fostered. However, as the 1980s set in, many problems began to rise and still exist to this day.

Government restrictions on in-plant vocational training were imposed in the following order. First, the obligation of vocational training was imposed on private companies. In the beginning, companies with over 300 ordinary workers had such an obligation. In 1992, this obligation was

extended to those with over 150 workers. Second, the different amount of training obligations for companies was decided according to various categories of industry and firm size. Third, companies had to follow government restrictions on teachers, texts, facilities, and curriculum for vocational training programs. Finally, not all expenses actually incurred by companies for vocational training programs were acknowledged as expenses. Instead, only part of the expenses was acknowledged based on government criteria. In each of these stages, the government seemed to have impeded companies' willingness to provide better training programs by imposing too many restrictions.

Many problems were also noted in central planning of manpower. First, manpower planning was quantity rather than quality oriented, so the developing manpower was unable to meet the demand of industries. Second, manpower planning considered only the number of workers, ignoring the wage level they should receive. Third, manpower supply provided by formal educational institutions or vocational training institutions was considered, but apprenticeship and on-the-job training provided within companies was ignored. Fourth, training and education were treated separately and their connection was not considered. Fifth, centralized decisions made over human resource development by the central government did not respond to the diverse needs of industry.

The vocational training system, in general, should be evaluated based on the following criteria: (1) 'relevance', which evaluates how well the system is linked to the needs of industry; (2) 'responsiveness', which considers how quickly the system responds to the demand by industries; and (3) 'efficiency', which judges how much output the system produces with limited resources. The vocational training system in Korea, which was based on governmental regulations and central planning, was once acknowledged as successful, but under the changed environment after the 1980s, the system was evaluated as unable to meet to the above-mentioned three criteria.

### 2.1.3 Human Resources Planning with Special Reference to Technical Education

During the Fourth Five-Year Development Plan period (1977-81), the Korean economy started to show signs of strain due to adverse changes in domestic as well as international business environments. The effects of these changes have been especially pronounced in the domestic labor market, as conditions worsened due to the excess demand for college graduates and an excess supply of high school graduates. This drove up wage levels and in turn eroded labor competitiveness. Both in terms of the demand and supply of college graduates, the Korean labor market suffered from problems closely associated with inadequate training and education policies.

On the demand side, the criteria for recruitment, promotion and compensation privileged college graduates at the expense of equally skilled but under-educated workers, and the opportunities and incentives for non-formal education and training were sorely lacking. Business management still lacks adequate division of labor, and personal ties such as school alumni dominate personnel management.

On the supply side, vocational training at various levels neglected practical training and continued to be disoriented about what their educational goals should be, all of which was aggravated by the presence of excess high school graduates who were at once under-trained and under-appreciated. In order to revamp economic competitiveness in the face of such a predicament, it was essential for Korea to improve the quality of its human resource management programs. In order to do this, it was critical to forge a linkage between formal education and vocational training and reform the vocational training system at large. More specifically, Korea needed to reorient its technical education and vocational training in the following ways:

First, vocational training and formal education was institutionally linked. There are four main aspects to this institutional linkage.

- A. Vocational junior colleges and high schools each set out different goals to cater more specifically to the vocational needs of their respective student body. To obviate the overlap in training between vocational high schools and vocational junior colleges, they needed clear goals that were different enough from those of high schools to be considered attractive to business employers. High schools focused on training craftsmen who had been trained more broadly with theoretical knowledge in comparison to trainees at vocational training centers.
- B. There was an effort to expand educational opportunities for those already employed. Non-formal training programs for the employed needed further development in order for them to gain more recognition from employers who tended to privilege formal training diplomas in wage distribution and recruitment. Instead of aiming at diplomas from formal education institutions, the courses offered in these programs were linked to the National Technical Qualification Tests. Aside from industrial skills, these courses were expanded to such training as commercial, business, technical, and personnel management.
- C. There was a conscious effort to create more jobs for high school graduates by incorporating foreign language education into the curriculum and combining intensive vocational training and comprehensive education.
- D. In a related vein, the training facilities in vocational high schools were improved, especially in light of the fact that vocational training centers (VTCs) offered superior facilities in some instances.

Second, the vocational training system was reformed along the following lines.

- A. While the Fourth Five-Year Development Plan (1977-1981) made the in-plant training system compulsory for firms with more than 300 employees, there was not enough business motivation or incentive to conform to legal regulations regarding this matter. In order to ensure the observation of this law and the quality of these in-plant training systems, the government needed to conduct a mandatory skill test for trainees and impose levies on failed trainees. At the same time, the government also needed to impose heavier levies to enforce the adoption of in-plant training programs. It is noted that in 1979 alone, the average unit training cost was estimated at 540,000 Won, but the actual average levy on a worker was about 132,000 Won, or less than 25% of the unit training cost.
- B. Aside from imposing levies, the government needed to provide a system of fiscal incentives for the voluntary adoption of in-plant training programs on the part of Korean enterprises. In particular, the government looked into tax deductions that covered twice the amount of all expenses (both recurrent and capital) incurred in training their work force at all levels (entry level and employed) up to a certain limit of their taxable income. As for quality control, training expenses were to be computed on the basis of the number of trainees who passed the national skill test in those fields for which a test was offered by a public testing agency. Although short-term losses in tax revenue were expected, these training programs needed to be considered in light of longer-term benefits to be accrued from enhanced competitiveness and productivity.

Third, the operation of public training institutions was rationalized in terms of the following aspects:

- A. While there was a steady increase in the number of public vocational centers established at both central and provincial levels, the quality of these centers needed to be improved. In order to do this, relevant public agencies had to forge closer ties with private businesses in the selection and placement of trainees. It was considered more desirable to select trainees on the basis of referrals from private enterprises and other potential employers. Likewise, these public training centers had to be able to provide research and consulting services for private enterprises.
- B. Public training centers sought various ways to aid the transition from rural/agricultural employment to urban/industrial employment with the adoption of mobile training.
- C. International cooperation can render technical assistance and training more effective, which will be highly conducive to the promotion of exports in the long run. Japan's OETC, USASID, ODM, CIDA or Spain's Ministry of Labor can be instructive examples of such international cooperation. In Korea, the Central Vocational Training Institute can serve as their counterpart.

Fourth, the government established an autonomous public agency that handles both training as well as skill testing. Combining training and testing functions will have the benefit of alleviating the confusion arising from different testing and training standards. The same agency can also take primary responsibility for undertaking the foregoing reform proposals, which include identifying training needs, developing training and personnel management, providing consulting services for training, extending training networks, adopting mobile training and international cooperation.

## 2.2. Education and Human Resources Development

### 2.2.1 Overview

Education provides an important basis for economic progress by nurturing such critical conducive elements as scientific knowledge, entrepreneurial acumen, efficiency, etc. The “human capital approach” is a theory postulating such a relationship with a specific focus on the ways in which improvements in the quality of workforce leads to economic development.

Assuming that high returns necessarily follow enhanced productivity in a competitive market, the theory confirmed that in all countries, including Korea, higher education resulted in higher income. This is because educational requirements for employment tend to rise as technological changes create a need for more highly skilled workers. These assumptions, however, raise further questions and hypotheses. First, is it possible to clarify the sequence of events in the relationship between education and economy While in some cases, education provides required skills once new technologies have been introduced, the reverse can also hold true in other cases. Second, it is plausible that education provides the skills necessary for an economic take-off, indicating that the presence of a reasonably skilled workforce must precede the take-off period. Third, insofar as Korea is concerned, flexible curricular offerings provided either the specific skills required for technological advancement or aided the acquisition of new technological abilities.

The growth of the Korean economy since liberation provides an apt setting for an analysis of the role of education. The Korean economy has grown steadily since liberation in 1945. On the basis of growth trends, the postliberation era can be divided into three periods:

- A. Economic instability and destruction from 1945-1953
- B. Reconstruction and expansion of the economy from 1954-1961
- C. Accelerated economic growth after 1961

It is during the third period that the Korean economy embarked on a developmental path in earnest. The annual GNP growth rate averaged 9.8% between 1962-1975 (7.8% during the First Five-Year Plan period, and 10.5 % during the Second Five-Year Plan Period), accompanied by dramatic increases in investment levels, domestic savings, exports, and imports. In making sense of this rapid development, proponents of the human capital approach introduced above would argue that export oriented and labor intensive industries capitalized on the abundance of relatively well-educated people. The expansion of education, especially at secondary and higher levels, generated a skilled work force and honed managerial/entrepreneurial talents. The rapid growth of the economy provided ample opportunities for their training and skill to be utilized, as indicated by a steady decline in unemployment rates from 8.1% to 4.1 % between 1963 and 1975. By 1970, there were nearly 3.9 million more educated workers as total employment rose by 3.1 million, and some 700,000 unschooled workers were replaced by those who had at least some formal education.

To quantify the contribution of education to economic progress between 1960 and 1974, Denison's measurement can be employed. This line of theory is based on the following assumptions and methodology:

- A. The labor share is assumed to constitute 60% of value added in Korea.
- B. The distribution of employment by education level is drawn from data provided by the Population Census Reports and the Employment Survey conducted by the Economic Planning Board.
- C. Qualitative and quantitative changes in education are assumed to have occurred over time.
- D. In computing wage differentials (drawn from data provided by the Office of Labor Affairs's Report of Occupational Wage Survey 1972), three-fifths are assumed to represent differences in earnings due to non-educational factors such as native ability, family background, and other income-associated factors.
- E. Female workers are given 45.6 percent of the weight given to male workers; the number of female workers steadily increased during the period under examination, with a share in the total employment rising from 29% to 37%.

On the basis of these data conditions, methodology, and assumptions, the contribution of education to economic progress was calculated by multiplying the annual average growth rate of the education quality index by the share of labor earnings in the total value added of Korea (assumed to be 60 percent). The central findings are as follows:

Between 1960 and 1976, GNP growth averaged 9.07% per year, while fixed capital, employment, and the quality of labor due to education increased by 7.19%, 3.55%, and 1.18%, respectively.

The increase in capital is estimated to have contributed 31.8% to GNP growth rate, i.e. 2.88% points, and the increase in labor 23.5 %, i.e. 2.13% points.

Of the remaining 4.06% points, 2.18 % points of the GNP growth rate was posited to be associated with the quality improvement of labor due to education. The contribution of education to growth appears to have been more significant from 1960-1976.

While these findings hold the contribution of education to economic progress higher than that in European countries or the US, they also tend to understate the actual contribution of education to economic development. This is noted especially in light of the methodological weakness in drawing these tentative conclusions on the basis of Denison's framework, which slighted such factors as qualitative improvement in education, wage differentials not reflected in actual income, the relationship between education and such factors as political stability, administrative efficiency, entrepreneurship, and people's responsiveness to economic opportunity. Likewise, the relationship between education and productivity remains underspecified.

Table 4-4 ● Rising Private Educational Expenditures

(Billion won, %)

Description	1977	1982	1985	1990	1994
Total Private	1,708	3,988	7,711	12,152	17,464
Private / GDP	2.19	3.98	5.84	5.50	6.03
Education Budget / GDP	2.74	3.67	3.19	2.95	3.82

Note: Private expenditure includes tuition fees paid to regular schools and all other expenses incurred in relation to formal or non-formal schooling activities such as commuting, stationery, uniforms and fees for private instruction.

Source: Kong and Baik (1994)

Table 4-5 ● Enrollment Trend by School Level

(%)

	Kindergarten	Elementary	Middle (Jr. High)	High	Tertiary
1960	N.A.	86.2	33.3	19.9	6.4
1965	N.A.	91.6	39.4	27.0	6.9
1970	1.3	100.7	50.9	27.9	8.8
1975	1.7	105	71.6	40.8	9.5
1980	4.2	102.9	95	63.3	16

1985	18.9	100.4	100	79.5	35.6
1990	31.5	101.4	97.8	87.6	38.1
1995	42	98.7	100.6	89.9	54.6

Note: High includes vocational and academic high schools; Tertiary includes all 2-year colleges.

Source: Educational Indicators in Korea (1995) for 70-95, McGuinn et al. (1980) for 60-65

## 2.2.2. Korean Education at a Glance

### 2.2.2.1 School System

Since 1945, the school system in Korea has undergone several major changes. However, the system has never changed its principles that a school system should fully develop the ability of individuals, promote equal educational opportunities, be responsive to the changing conditions of society, and meet international standards of education. The current school system was established according to the Education Law enacted in 1949. It adopted a school ladder following a single track of 6-3-3-4: six years in elementary school, three years in middle school, three years in high school, and four years in college or university. Each level of education will be described.

Although compulsory education was supposed to be enforced as of June 1, 1950, it was delayed because of the Korean War. When the war ended, the government launched a 6-year-plan (1954-1959) to enforce compulsory education. As a result, school attendance at the primary school level reached 96% of the eligible population by 1960. The Constitution, amended in 1972, provided a legal basis to expand compulsory education to the middle school level. In 1985, free, compulsory education at the middle school level was enforced on islands and remote rural areas. And in February 2001, the Korean Government announced the full application of free compulsory education at the middle school level from 2002. Currently, over 99% of those completing primary school go on to middle school. The following <Table 4-6> shows the number of schools by types.

**Table 4-6 ●● Number of Schools by Type, 2002**

Classification		Total	National	Public	Private
Grand total		19,124	103	12,807	6,214
Kindergarten		8,343	3	4,237(51%)	4,103(49%)
Elementary School Course	Total	5,385	17(0.3%)	5,291(98.3%)	77(1.4%)
Middle School Course	Total	2,824	10(0.3%)	2,131(75.5%)	683(24.2%)
High School Course	Total	2,060	17(0.8%)	1,093(53.1%)	950(46.1%)
Special School		136	5(3.7%)	44(32.4%)	87(63.9%)
Junior College Course	Total	160	7(4.4%)	9(5.6%)	144(90%)
Under-Graduate Course	Total	198	44(22.2%)	2(1%)	152(76.8%)
Graduate school Course	Total	946	152(16.1%)	13(1.4%)	781(82.6%)

Note: The figures in parenthesis are % shares.

Source: Brief Statistics on Korean Education, MOEHRD & KEDI (2002).

### Pre- School Education

Students in pre-school education are those children aged three to five. The curriculum is composed of five domains: health, society, expression, language, and exploration. The education goals are:

- A. to gain experience that helps children’s sound growth in mind and body
- B. to develop basic experience that will help children use language correctly, and
- C. to help children nurture the propensity to independently reflect on the matters of everyday life

26.1 percent of the kindergarten-aged-children (or 56.2% of the population of five-year old children) are enrolled in 8,407 kindergartens nationwide, as show in <Table 4-7>.

Table 4-7 ● Changing Enrollment in Kindergartens, 1980-2001

Year	Number of Kindergartens	Number of Classes	Children (Age 3~5)	Ratio of Children Age 5
1980	901	1,906	60,665	7.3%
1981	2,950	4,116	151,471	17.3%
1982	5,516	8,199	298,871	31.4%
1984	7,962	12,974	460,346	45.1%
1986	9,762	16,695	553,056	57.1%
1988	10,501	18,754	604,526	56.4%
1990	10,400	19,088	564,697	55.4%
1992	9,655	17,878	527,884	47.6%
1994	8,940	17,696	509,686	44.3%
1996	8,443	19,220	551,886	44.8%
1998	8,976	20,107	534,060	42.7%
2000	8,494	20,723	544,771	43.2%
2001	8,407	21,122	545,142	56.2%

Source: Ministry of Education & HRD (2001). Education in Korea 2000-2001.

### Elementary Education

In 1945, there were 2,807 elementary schools with a total enrollment of 1,570,000. As of 2001, the number of elementary schools and branch schools was 5,322 and 631 respectively, with a total enrollment of 4,064,429. The enrollment rate of the relevant aged population rose from 64 percent in 1945 to 99.9 percent in 2001.

There was a great deal of improvement in the environment for elementary education. First, the sudden increase in the school population and drift of the rural population into cities left rural schools under-populated and urban schools over-crowded, which was the major obstacle in development of education. Second, the government created an education tax in 1982 to finance the expansion and modernization of physical facilities. As a result, the number of pupils per class dropped from 65 in 1965 to 34.8 in 1998. The 'July 20, 2001 Initiative' has reduced the number of pupils per class to under 35 nationwide. As of 2002, the average number of students per class is 34.9 at the elementary school level.

English is being taught one to three hours a week beginning in the third grade (1997). English teachers and native speaking teachers are placed in schools. Home room teachers are in principle made responsible for teaching English, but new methods such as exchanging classes and team teaching are also available to suit the unique situations of individual schools.

## **Secondary Education**

### *Middle schools*

Since 1969, there has been no limitation on entrance to middle school and all who want to enter middle school have been assigned to the school nearest their residence. There were 2,824 middle schools nationwide in 2002.

Entrance to middle school by elementary school graduates reached 99.9 percent since 1995. Free and compulsory middle school education began in farming and fishing areas and has been expanded to all middle school students nationwide from 2002.

### *High Schools*

Middle school graduates or those with equivalent academic background may enter high school. Admission into high school is different between the equalization-applied areas and anti-equalization areas. In equalization-applied areas, after a screening test, students are assigned to schools by lottery, and in anti-equalization areas, student are supposed to take the high school entrance exam.

Since 1998, independent private schools, financed from their own foundations and tuition have had the right to set their tuition and to select students. 99.5 percent of middle school graduates advanced to high school in 2002. There are academic, vocational, science, and special high schools.

### *Academic High Schools*

Curriculum for the first year of academic high school consists of common subjects, while the curriculum for the second and third years includes humanities, natural sciences, vocational training, and other necessary subjects. Starting from 2002 when the Seventh Curriculum became effective, school subjects were diversified, so that the second and third year students could choose from various subjects to satisfy individual aptitudes, abilities, and career goals. Most students prepare for the college entrance exam.

### *Vocational High Schools*

Vocational High Schools provide advanced general education as well as vocational training in agriculture, technology, commerce, fishery and oceanography, industry and home economics. The principals of vocational high schools enjoy a greater degree of autonomy in recruiting students; within the policy frame-work, they are allowed to make decisions based on student achievement in middle school or screening test scores as the basis for determining eligibility.

There are six kinds of vocational high schools in Korea

- A. Agricultural high schools: provide education and training for the basic functions and skills needed to perform various tasks in agriculture.
- B. Technical high schools: provide education and training for the basic functions and skills needed to perform various tasks in technical industries.
- C. Commercial high schools: provide education and training designed to raise the ability to do work related to information processing and business management, including cyber communication and graphic design.
- D. Fishery and oceanography high schools: provide education and training for basic knowledge and skills in the field of fisheries including marine farming, marine product processing and marketing, and the fields of oceanography, including storage, safe maritime transportation, and so on.
- E. Vocational high schools: offer more than two vocational courses among agriculture, fisheries, technical industry, and commerce.
- F. Comprehensive high schools: feature a combination of academic and vocational courses, located in rural areas or small and medium-sized cities for the young people there to have an equal educational opportunity

### *Science High Schools*

Science High Schools were established to provide good places for the education of youngsters with scientific talent. There are 16 science high schools throughout the nation, including Seoul Science High School. Those who have completed two years in a science high school can be admitted to the bachelor's program at the Korea Advanced Institute for Science and Technology.

### *Special High Schools*

High Schools with special purposes are foreign language high schools, arts high schools and athletics high schools. Students study foreign language, music, arts, sports, dance, etc.

## **Higher Education**

### *Universities*

Universities are 4 year institutions of education. There was intensive investment by the government since the early 1990s. Before the 1990s, admission to good universities was very competitive. Since then, however, admission has become rather easy. There are 197 universities of various kinds and 18 independent graduate schools. Among 197 universities, 151 are private. The direction for Korea's university education is:

- ▶ To raise excellence of higher education through diversification and specialization of university education.
- ▶ To improve the quality of university education by strengthening autonomy and accountability.
- ▶ To raise efficiency in higher education through innovation in university management and restructuring
- ▶ To help shape an atmosphere in the university that is conducive to research and learning
- ▶ To expand the scope of university education in order to cope with a lifelong learning society
- ▶ To advance the globalization of university education

Since 2003, university students have exceeded the eligible number of students; local universities are experiencing difficulties in recruiting students.

### *Junior Colleges*

The present junior colleges are a merger of the earlier two-year junior colleges and the 2-3 year professional high schools. The number of junior colleges had grown to 160 as of 2002. Their specialized courses are grouped into professional majors such as humanities and social studies, natural sciences, engineering, arts, physical education, and medical studies, which take 2-3 years of study.

Admission to junior colleges is determined on the basis of school achievement, the scholastic achievement test, and the entrance examination score. 30-50 percent of the freshman quota is reserved for graduates of vocational high schools in the same fields, and workers with a qualified industrial experience.

Junior colleges develop and operate a practical curriculum through on-site training via school-industry cooperative programs and vocational specialist training plans.

### 2.2.2.2 National Curriculum

Korea has adopted a national curriculum, which is developed and monitored by the ministry of Education and HRD. The national curriculum provides general guidelines for educational programs, textbooks, and teaching-learning materials. Curricula are revised on a periodic basis to reflect the emerging needs of the changing society and the new frontiers of disciplines. Since the Republic of Korea was established, there have been seven revisions of the curriculum, with the last revision being made in 1997. The newly revised seventh curriculum introduced a basic common curriculum that covers the ten years from the first year of primary school to the first year of high school, and the elective curriculum for the final two years of high school.

### 2.2.2.3. Textbooks

Textbooks are developed within the framework of the national curriculum. The textbooks compiled within the framework of the curricula are classified into the following three types:

- textbooks whose copyrights are held by the MOEHRD ( Ministry of Education and Human Resource Development)
- textbooks published by private publishers and authorized by the MOEHRD
- textbooks recognized by the MOEHRD or superintendents as relevant and usable

For the textbooks of the second and the third types, individual schools have the choice to best fit the characteristics and the needs of the students.

The following tables show various trends of education in Korea.

Table 4-8 ●● Percentage of Student Entering Higher Level Schools (%)

Year	Elementary to Middle School	Middle to High School	General High to College/Univ.	Vocational High to College/Univ.
1970	66.1	70.1	40.2	9.5
1975	77.2	74.7	41.5	8.8
1980	95.8	84.5	34.0	10.1
1985	99.2	90.7	53.8	13.3
1990	99.8	95.7	47.2	8.3
1995	99.9	98.4	72.7	19.1
1996	99.9	98.9	77.8	21.9
1997	99.9	99.4	81.4	29.1
1998	99.9	99.4	83.8	35.6

Year	Elementary to Middle School	Middle to High School	General High to College/Univ.	Vocational High to College/Univ.
1999	99.9	99.4	84.5	38.5
2000	99.9	99.5	83.9	41.9
2001	99.9	99.5	85.2	44.9
2002	99.9	99.5	86.9	49.8

Note: Percentage of students entering higher level school  
 Source: Education in Korea 2001-2002.

Table 4-9 ●● Students per Class by Year (Person)

School	Year											
	1965	1970	1975	1980	1985	1990	1995	1998	1999	2000	2001	2002
Elementary	65.4	62.1	56.7	51.5	44.7	41.4	36.4	34.9	35.4	35.8	35.6	34.9
Middle	60.7	62.1	64.5	62.1	61.7	50.2	48.2	40.8	38.9	38.0	37.3	36.7
High	57.1	58.2	58.6	59.8	56.9	52.8	47.9	48.2	46.2	42.7	39.7	33.9

Source: Brief Statistics on Korean Education, KEDI & MOE (2002).

Table 4-10 ●● Employment Rate of Graduates (%)

School Level	Year											
	1965	1970	1975	1980	1985	1990	1995	1998	1999	2000	2001	2002
General High	31.6	17.3	16.9	15.7	16.2	18.7	26.4	18.5	18.1	15.5	18.9	18.1
Vocation High	43.4	56.4	56.1	58.2	60.4	84.0	90.9	84.7	83.4	88.8	88.2	90.0
Junior College	57.5	72.6	58.3	50.3	57.2	71.8	74.2	66.3	68.1	79.4	81.0	80.7
College & University	44.0	70.6	71.8	73.0	52.1	55.0	60.9	50.5	51.3	56.0	56.7	60.7

Source: Brief Statistics on Korean Education, KEDI & MOE (2002).

## 2.2.3 Educational Administration System

### 2.2.3.1 Educational Administration System

The organization of educational administration comprises three layers of administrative authorities: the Ministry of Education and HRD, City and Provincial Offices of Education, and Regional Offices of Education.

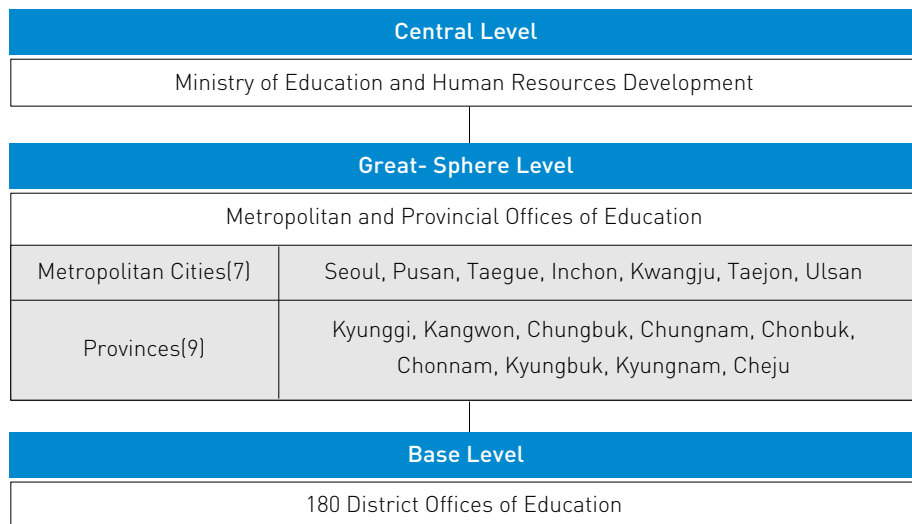
#### The Ministry of Education and HRD

The government body responsible for the formulation and implementation of policies related to education is the MOEHRD. MOEHRD plans and coordinates educational policies for elementary, secondary and higher education as well as lifelong education.

IT coordinates human resource development policies scattered to different ministries. MOEHRD also publishes and approves textbooks, provides administrative and financial support for all levels of schools, supports local educational agencies and national universities, and operates the teacher training system.

MOEHRD is headed by the Deputy Prime Minister and Minister of Education and HRD, who is a member of the Cabinet Council and is assisted by a Vice-Minister.

Figure 4-1 ● Organization of Educational Administration

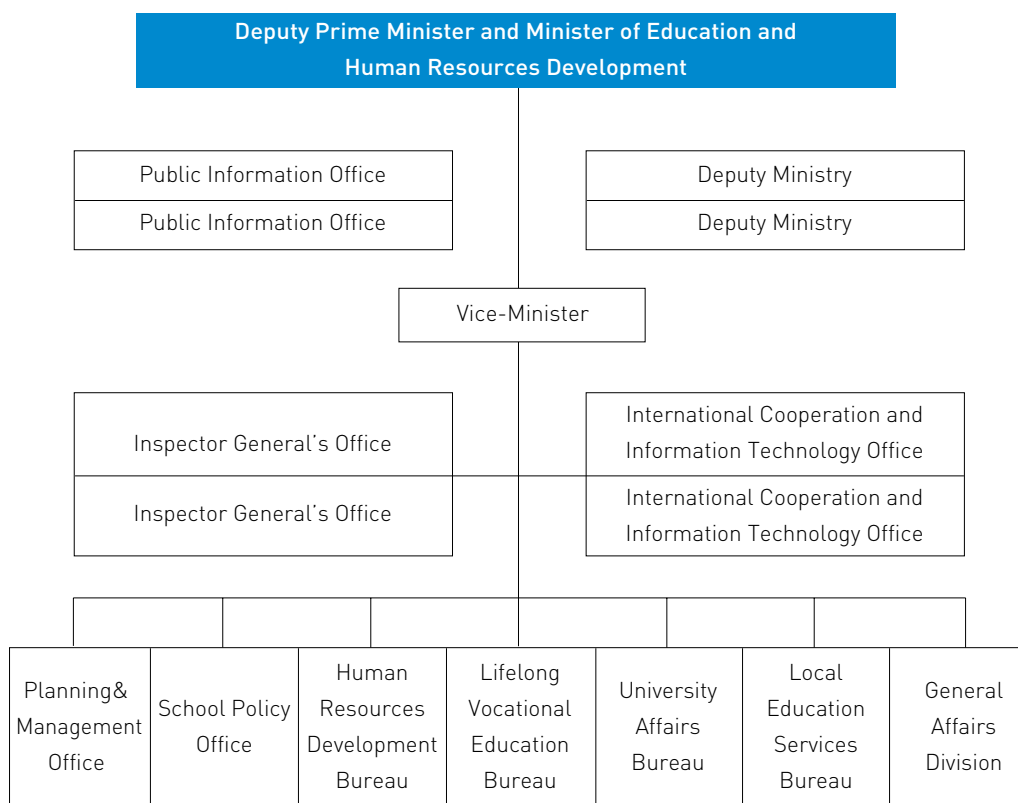


### Office of Education

With the legislation of the local autonomy law in 1991, educational autonomy at the local level was promoted along the line of implementing new modes of operation. Accordingly, educational administration became decentralized and the MOEHRD delegated much of its budget planning and major administrative decisions to local authorities. In response to the heightening concern for the diverse needs of local education and the required skills, district offices of education have been established in seven major metropolitan cities and nine provinces as well as regional offices in equivalent administrative areas. Major characteristics are as follows:

- The Office of Education makes decisions regarding education, art, and science pertaining to the respective local area
- Board members are elected by the local council and make decisions on education matters

Figure 4-2 ●● Organization of the MOEHRD



- Board members are honorary unpaid positions, with 7-15 members, depending upon the size of the city or province
- MOEHRD evaluates 16 metropolitan and provincial offices of education to provide graded financial assistance

One of the weakness in the Korean education system is the lack of cooperation between local governments and the local office of education.

### 2.2.3.2 Educational Finance

#### Education Budget

The Korean government has greatly increased the education budget for the improvement of the quality of education in accordance with the emphasis on quality in recent education. From 1996 to 1998, the government made every endeavor to increase the education budget to 5% of GNP, and in 2000, the size of the education budget reached 4.3% of GNP.

The central government education budget provides funding for offices of education, which control elementary and secondary school education, the operating finance of the national universities, some support for private universities, and education administrative and research organizations.

The central government education budget is supported by the nation's tax. Local government education funds are designed for elementary and secondary school education; the financial resources are made up of 85% from the central government and 15% from parents and local government.

#### Private Sector's Contribution to Educational Development

Private schools exist at every level of education from elementary to college. Up to 80% of junior colleges and universities are private schools. Funding for private schools mostly depends on tuition from parents, support from national or regional entities, resources from parents, support from national or regional entities, and resources from the school foundations.

The private sector in Korea has played a pivotal role in pushing the national education platform to a higher level by reducing the financial burden on the government. Thus, it has made a critical contribution to equalizing access to education in general and, more specifically, to post-secondary education. In general, private sector contribution to the development of Korean education is advocated on the following three grounds.

- *Mobilization of extra-budget resources for mass education*

By relying on private education, Korea has been able to accommodate the growing demand for education without a dramatic increase in expenditure. Thanks to extra-budgetary resources, public finance could concentrate on the education investments needed for more efficiency and equity (i.e. textbooks and lunch programs rather than constructing more school buildings).

○ *Broadening educational opportunities*

Private schools increased access to various educational opportunities by expanding the education system. Thanks to the private sector, everyone could gain access to basic education in Korea, regardless of their financial ability, gender, disability, and so on.

○ *Diversifying education system*

Private schools with autonomous status contributed to diversifying the system whereby parents and students could have more options from which to choose. Moreover, the private sector tended to be more cost-conscious and more responsive to local communities. This stimulated competition within the entire education system.

Past policies on private education reveal that the government has played a mixed role in private schools. On the one hand, the government has tried to foster private initiatives in providing education. This was done through various tax incentives, subsidies, and loans. On the other hand, the government has tightly held the reins of the private sector. The government has administered a set of norms and standards regarding tuition fees, curriculum, faculty recruitment, facilities, and so forth (Kim, 1998).

Fiscal incentives for private schools are summarized as follows:

- Direct subsidies for secondary schools.
- Grants to higher education institutions to stimulate innovation, teaching, and R&D activities.
- Tax incentives: All taxes involved in operation of private schools are waved. Businesses and assets owned by school foundations are subject to lower rate taxes. This has been the most important contribution the government has made to the development of private schools.
- Government loans: Government loans and student loan programs are made available to private schools and students.

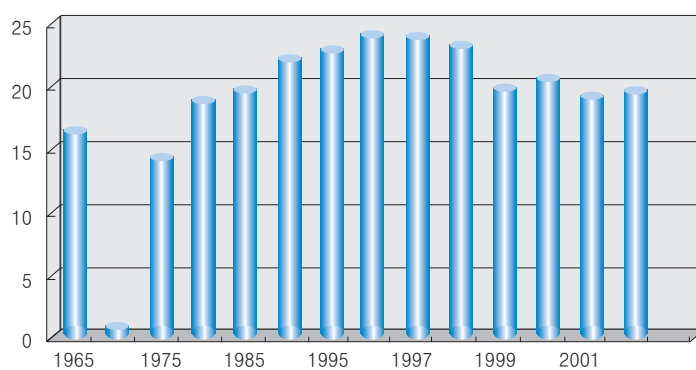
**Table 4-11 ● Government Budget vs. Ministry of Education Budget by Year**

(Unit: Million Won)

Classification	Government Budget (A)	MoEHRD Budget (B)	B/A (%)
1965	94,652	15,331	16.2
1970	446,273	78,478	17.6
1975	1,586,931	227,926	14.4
1980	5,804,061	1,099,159	18.9
1985	12,532,362	2,492,308	19.9
1990	22,689,433	5,062,431	22.3
1995	54,845,022	12,495,810	22.8
1996	64,926,818	15,565,217	24.0
1997	76,639,467	18,287,609	23.9
1998	77,737,582	18,127,838	23.3
1999	88,302,428	17,456,265	19.8
2000	93,937,057	19,172,028	20.4
2001	102,528,518	20,034,365	19.2
2002	113,898,884 (\$90,124,136,730)	22,278,358 (\$17,628,072,479)	19.6

Source: Brief Statistics on Korean Education, KEDI & MOE (2002).

**Figure 4-3 ● Government Budget vs. Ministry of Education Budget by Year(Korea)**



**Table 4-12** ● Relative Proportion of Public and Private Expenditure on Educational Institutions, 1999

	Pre-primary education (for children 3 years and older)			Primary, secondary and post-secondary non-tertiary education			Tertiary education		
	Public Source	Private source	Private: of which subsidized	Public Source	Private source	Private: of which subsidized	Public Source	Private source	Private: of which subsidized
Germany	62.2	37.8	-	75.6	24.4	-	91.5	8.5	0.3
Ireland	32.3	67.7	-	96.7	3.3	-	73.4	26.6	4.0
Korea	23.2	76.8	0.5	80.2	19.8	1.0	20.7	79.3	1.3
Mexico	87.5	12.5	0.2	85.2	14.8	1.9	71.8	28.2	2.7
Spain	77.9	22.1	-	87.9	12.1	-	74.2	25.8	3.2
Switzerland	99.9	0.1	0.1	87.7	12.3	1.2	96.7	3.3	3.3
England	95.6	4.4	-	88.2	11.8	0.0	63.2	36.8	10.7
Average	82.2	17.8	0.1	92.1	7.9	0.5	79.2	20.8	2.1

Note: Distribution of public and private sources of funds for educational institutions after transfers from public sources, by level of education and year.

Source: Education at a Glance (2002)

**Table 4-13** ● Relative Proportion of Public and Private Expenditure on Educational Institutions for All Levels of Education, 1999

	Public source	Private source	Private: of which subsidized
Germany	77.9	22.1	0.1
Ireland	89.6	10.4	1.2
Japan	75.6	24.4	a
Korea	58.7	41.3	1.1
Mexico	82.6	17.4	1.9
Spain	82.3	17.7	0.7
Switzerland	90.0	10.0	1.7
England	83.7	16.3	2.2
Average	88.0	12.0	0.7

Note: Distribution of public and private sources of funds for educational institutions after transfers from public sources, by year

Source: Education at a Glance (2002)

Table 4-14 ● Expenditure on Educational Institutions per Student, 1999: OECD Countries

	Pre-primary education (for children 3 years and older)	primary education	Lower secondary education	Upper secondary education	All secondary education	All tertiary education
France	3901	4139	6657	7766	7152	7867
Hungary	2458	2179	2017	2756	2368	5861
Ireland	3386	3018	4401	4362	4383	9673
Italy	5133	5354	6206	6741	6518	7552
Japan	3154	5240	5612	6460	6039	10278
Korea	1752	2838	3208	3597	3419	5356
Norway	11699	5920	7387	7819	7628	12096
Switzerland	2764	6663	7824	11819	9756	17997
Average	3847	4148	5210	5919	5465	9210

Note: Annual expenditure on educational institutions per student in equivalent US dollars converted using PPPs, by level of education, based on full-time equivalents.

Source: Education at a Glance (2002)

## 3. Human Resources Development in Turkey

### 3.1. Factors Related to Human Resources Development

#### 3.1.1 Demographic Factors

For more than a decade at least, Turkey has recognized that Human Resources do play an indispensable role for sustainable economic and social development. Given the significance of human resources development in boosting national competitiveness, the Turkish government has been keen to formulate policies accordingly. Despite such awareness, however, it still remains questionable as to how well Turkey has managed to relate human resources to economic added value. The contribution of human capital to Turkish growth is less than that of comparable countries, which stems from external as well as internal reasons.

Table 4-15 ● Overall Competitiveness Rankings for Selected Three Countries (2000-2004)

Description	2000	2001	2002	2003	2004
TURKEY-	44	48	49	56	55
UNITED KINGDOM	15	17	16	19	22
USA	1	1	1	1	1

Source: IMD WORLD COMPETITIVENESS YEARBOOK 2004

Studies in the literature have shown that the demographic structure of a country can provide significant opportunities and make significant contributions to economic development. This was very much pronounced in the positive effects of demographic transitory stages in some Asian countries. Turkey is progressing through a rapid demographic transition that is generating a surge of youthful entrants to the labor market as well as social life. The following facts indicate these important demographic changes. First, while Turkey's population constituted 12.2% of EU 15 population in 1980, it was 18% of EU 15 for 2000 and it will be 22.4% of EU 15 in 2020. Second, it should be noted that figures are even more drastic for youth age groups. In 2002, while the 0-14 age group was 17.3% of the EU 15 total population, this ratio was 30% for Turkey. Third, population growth has outpaced employment growth for many years in Turkey. Between 1980 and 2004, the working age population grew by 23 million, whereas only 6 million jobs were created. Turkey must be able to take advantage of these demographic changes effectively by transforming the population into human capital that will be an important asset not only for development but also for EU partnership.

Table 4-16 ●● Population Trends in Turkey

	Population Growth (%)	Urban Population Growth <sup>1</sup> (%)	Crude Birth Rate(per 000)Crude	Death Rate(per 000)	Infant Mortality Rate (per 000)	Total Fertility Rate(Child)	Life Expectancy at Birth(Years)
1965-1970	2.52	5.3	30.0	13.5	158.00	5.31	54.91
1970-1975	2.50	5.4	34.5	11.6	140.40	4.46	57.88
1975-1980	2.06	3.9	32.2	10.0	110.79	4.33	61.20
1980-1985	2.49	7.7	30.8	9.0	82.96	4.05	63.00
1985-1990	2.17	4.5	29.9	7.8	65.22	3.76	65.58
2000 2)	1.47	3.3	20.2	6.3	30.2	2.28	70.10
2001 2)	1.44	2.7	19.9	6.3	29.4	2.26	70.2
2002 2)	1.41 2.6	19.7	6.3	28.5	2.25	70.4	
2003 2)	1.38	2.6	19.5	6.3	27.7	2.23	70.5
2004	1.35		19.2	6.4	26.9	2.22	70.7

Note: 1) Urban refers to areas with population of 20,000 or more.  
 Source: Economic and Social Indicators 1950-2004, SPO, Turkey

### 3.1.2 Urbanization

The foregoing demographic changes are accompanied by a transformation of a rural-agrarian society into an urban-industrial one. This urbanization has led to a marked change in Turkey's economic structure. While agriculture was the largest employer in 1980, accounting for 9 million jobs or 50% of the total, agricultural employment had declined in absolute terms by 2002, shedding 1.6 million jobs to 7.4 million or 35%. During this time, real agricultural GNP grew by 26%. While the urbanization rate was 43.8% in 1980 (EU 15 was 72.2%), it increased to 66.6 % in 2002 (77.3 % for EU). This, however, is still low compared to other EU member countries. This in turn had consequences not only in the employment structure but also in a series of economic and social policy dimensions such as educational planning.

### 3.1.3 Labor Force

One of the major structural problems of Turkish employment is the chronic decline in the level of its Labor Force Participation Rate (LFPR). Exceptionally low by international

standards, it stood at 48%, which was the lowest among OECD member nations and twenty percent below the OECD average. The following tables illustrate this problem in a comparative context. Employment rates will be broken down by several factors generally considered to have a significant bearing such as age, education, etc.

**Table 4-17 ●● Developments in Domestic Labor Market**

	1988	2004
Civilian Labor Force	19,391	22,732
Civilian Employment	17,755	19,902
Unemployment	1,638	2,830
Unemployment Rate	8.4	12.4
Underemployment	1,281	1,175
Underemployment Rate	6.6	5.2
Unemployment + Underemployment Rate (%)	15.0	17.6

Source: Economic and Social Indicators 1950-2004, SPO

The labor force grew from 19.4 million to 22.7 million between 1988 and 2004, whereas employment grew by 2.2 million during this period.

**Table 4-18 ●● Employment Rates for Selected Countries:**

	Employment/Population					
	1990	1999	2000	2001	2002	2003
Korea	61.2	59.6	61.5	62.1	63.3	63
Turkey	54.5	5.08	48.9	47.8	46.7	45.5
United States	72.2	73.9	74.1	73.1	71.9	71.2
E-15	61.4	62.6	63.6	64.3	64.4	64.8
Total OECD	65.1	65.4	65.7	65.5	65.1	65

Source: Economic and Social Indicators 1950-2004, SPO

**Table 4-19** ●● Labor Force Participation Rates (LFPR) for Selected Countries

	Employment/Population					
	1990	1999	2000	2001	2002	2003
Korea	62.8	63.8	64.2	64.7	65.4	65.3
Turkey	59.4	55.2	52.4	52.3	52.3	51.1
United States	76.5	77.2	77.2	76.8	76.4	75.8
E-15	67.1	69	69.4	69.4	69.8	70.3
Total OECD	69.3	70.1	70.1	69.9	70	69.8

Source: Economic and Social Indicators 1950-2004, SPO

When the LFPR is compared with that of EU and OCED countries, it is noted that Turkey’s LFPR is well below the average rates of these countries. Another important conclusion drawn from the foregoing table is that Turkey’s LFPR has decreased since 1990. Urbanization played an important role in this pattern since the LFPR for women in rural areas is moderately high when compared with that of urban female residents. As a result of migration from rural to urban areas, women are likely to be less visible in the labor market.

**Table 4-20** ●● Unemployment Rates for Selected Countries

	Unemployment Rate					
	1990	1999	2000	2001	2002	2003
Korea	2.5	6.6	4.3	3.9	3.2	3.5
Turkey	8.2	7.9	6.7	8.6	10.6	10.8
United States	5.7	4.3	4	4.8	5.9	6.1
E-15	8.4	9.3	8.3	7.4	7.8	7.8
Total OECD	6	6.7	6.2	6.3	6.9	6.9

Source: Economic and Social Indicators 1950-2004, SPO

Aside from general cross-national comparisons, domestic unemployment rates also warrant a closer analysis. For example, when these data are classified by age groups, it can be concluded that the 15-24 age group in Turkey is in a more disadvantaged situation. Although youth unemployment is also a phenomenon for other countries, Turkish youth suffer more from labor market conditions. While the unemployment rate was 16% in 1990, it reached 20.5% in 2003. This is 5-7% higher than EU15 and OECD averages. The following table demonstrates

employment and population ratios and activity and unemployment rates for the 15-24 age group.

**Table 4-21 ● Employment/Population Ratios, Activity and Unemployment Rates for 15-24 Age Group**

	1990	2000	2001	2002	2003
<b>Turkey-</b>					
Unemployment rates/	16	13.1	16.2	19.2	20.5
Labour force participation rates-	54.7	42.5	42.1	40.9	38.4
Employment/population ratios-	45.9	37	35.3	33	30.5
<b>EU 15 -</b>					
Unemployment rates/	16.2	15.6	14	14.7	14.7
Labor force participation rates-	53.8	48.4	47.7	47.4	50
Employment/population ratios-	45.1	40.8	41	40.5	42.6
<b>OECD Total -</b>					
Unemployment rates/	11.7	11.8	12.2	13.1	13.3
Labor force participation rates-	55.4	51.8	51.1	50.4	50.3
Employment/population ratios-	48.9	45.7	44.9	43.8	43.6

Source: Economic and Social Indicators 1950-2004, SPO

With regard to the relationship between education and employment, it is once again clear in the Turkish case that labor statistics tend to improve significantly as the education level of the labor force increases. This is even more pronounced for female workers. As such, the educational attainment of females significantly increases their participation in the labor force.

The data shows that while the LFPR is 24% for women with less than upper secondary education, it goes up to 71% for university graduates. This is very similar for employment rates also.

**Table 4-22** ●● Employment/Population Ratios, Activity and Unemployment Rates by Educational Attainment, 2002

	Toplam - Both sexes		
	Less than secondary	Upper Secondary	Tertiary
<b>Turkey-</b>			
Unemployment rates/	8.8	8.6	7.3
Labour force participation rates-	54.6	67.4	82.1
Employment/population ratios-	49.8	61.6	76.1
<b>EU 15 -</b>			
Unemployment rates/	9.8	6.5	4.4
Labour force participation rates-	61.1	79.7	88.2
Employment/population ratios-	55.1	74.5	84.3
<b>OECD Total -</b>			
Unemployment rates/	7.8	6.5	3.8
Labour force participation rates-	61.6	78.4	85.2
Employment/population ratios-	56.8	73.3	82

Source: Economic and Social Indicators 1950-2004, SPO

**Table 4-23** ●● Employment/Population Ratios, Activity and Unemployment Rates by Educational Attainment, 2002

	Men		
	Under secondary	Above Secondary	Tertiary
<b>Turkey-</b>			
Unemployment rates/	9.5	7.1	6.5
Labour force participation rates	82.5	86.7	88.3
Employment/population ratios	74.7	80.5	82.6
<b>EU 15 -</b>			
Unemployment rates/	8.3	5.8	3.9
Labour force participation rates	77.3	86.5	91.4
Employment/population ratios	70.9	81.5	87.8
<b>OECD Total -</b>			
Unemployment rates/	7.4	6.3	3.6
Labour force participation rates-	79.3	87.4	92.1
Employment/population ratios	73.5	81.9	88.7

Source: Economic and Social Indicators 1950-2004, SPO

**Table 4-24** ●● Employment/Population Ratios, Activity and Unemployment Rates by Educational Attainment, 2002

	Women		
	Under secondary	Above Secondary	Tertiary
<b>Turkey-</b>			
Unemployment rates/	6.1	16	9.2
Labor force participation rates	24.2	32.2	71.1
Employment/population ratios	22.8	27	64.6
<b>EU 15 -</b>			
Unemployment rates/	12	7.4	5
Labor force participation rates	46.6	72.4	84.6
Employment/population ratios	41	67	80.4
<b>OECD Total -</b>			
Unemployment rates/	8.4	6.8	3.9
Labor force participation rates-	45.3	69.2	77.9
Employment/population ratios	41.5	64.5	74.8

Source: Economic and Social Indicators 1950-2004, SPO

## 3.2. Education

In the previous chapter we demonstrated the demographic patterns and employment structure in Turkey. In order to link the demographic changes to economic growth, Turkey is trying its best to increase educational facilities and enhance the quality of education. Considered to be one of the most important catalysts for economic development, education has been a top priority for those policy makers who are keenly aware of the close link between sustainable development and the transition to a knowledge-based economy. This line of policy prioritisation is clear not only from policy papers aimed at the accession to the EU, but also in national policy documents such as the Development Plans. The 8th Five-Year Development Plan (FYDP) states that “through the improvement of the educational system, the need for qualified labour power necessary for economic development shall be met and competitiveness shall be acquired.”

In the same vein, the 59th Government of Turkey, as mentioned in Government Program, places special emphasis on education as demonstrated by the following :

“Our government treats education as the most important thing in every means of

development. Countries cannot compete unless they use human resources effectively. The deficiencies in the field of education cannot be eradicated by the relative power in other fields. On the contrary, progress in education increases the overall quality. Approaching education in this manner, priority is given to eradicating all deficiencies related to education.”

### 3.2.1 Turkish Education System

The Turkish education system consists of formal and non-formal education. There are four different levels in formal education, starting with pre-school education, which covers voluntary education for children aged 48-72 months. These children have yet to reach the age for compulsory primary education and the schooling rate at this level is 20%. Primary education is for the education of children in the 6-14 age group. The Turkish government provides an eight-year compulsory primary education for all citizens. The rate of schooling at this level is 98.6%. This compulsory primary education is then followed by secondary education, which includes general, vocational, and technical high schools that provide at least four years of education. The rate of schooling at this level is 80.02%. Higher education in Turkey comprises all post-secondary education programs, consisting of the three main cycles and the short cycle in the terminology of the Bologna Process.

Non-formal education also constitutes an important part of Turkey’s education system and its significance is analogous to that of EU countries. It covers the educational activities provided in line with the interests and needs of the individual along with or apart from formal education for those who never had the chance to attend school.

Turkey’s formal and non-formal education is based upon a set of legal frameworks, which include the Basic Law (Law No.1739) on national education (other than higher education), Law No. 3308, Basic Law on higher education, and Law No.2547.

In the last decade, Turkey has exerted considerable effort to enhance the educational level of the population. This new policy shift has generated the following positive outcomes. First, the duration of compulsory primary schooling was increased from 5 to 8 years. Second, public educational spending has increased significantly, which is indicated by the fact that the share of total MoNE and CoHE budget in the total consolidated budget was increased from 9.8% in 1996 to 13% in 2005. Third, parallel to these, enrollment ratios also increased. Public campaigns such as “100 % Support Campaign for Education and Girls! Let’s Go To School” had positive effects in this leap.

**Table 4-25** ● Level of Educational Attainment of the 25 to 64-Year-Old Population (1991-2002)

	1991	1995	1998	1999	2000	2001	2002
Below Upper Secondary	82	77	78	78	77	76	75
Upper Secondary	11	15	14	14	15	15	16
Tertiary	6	8	8	8	8	9	9

Source: Economic and Social Indicators 1950-2004, SPO

Fourth, the vocational and technical education system was made more compatible with the priorities of EU. In order to do this, several projects such as the Project on Strengthening Vocational Education and Training System (SVET) and the Project on Modernization of Vocational and Technical Education (MVET) and cooperation with CEDEFOP-ETF were set up. Fifth, the quality of secondary vocational education was enhanced with an emphasis on dual education, greater link between education and employment, and preparation for the National Vocational Qualification Systems. Other important developments include the extension of the duration of secondary education from 3 to 4 years and enabling vertical and horizontal transitions, active participation in the Community Education and Youth Programmes, active involvement in Bologna Process in higher education, focus on IT classes, efficient use of ICT technologies in education, introduction of new primary education curricula, reduction in the side-effects of dropping out, design of secondary education based on ISCED-97, and free-of-charge course books.

### 3.2.2 Reform Areas

Despite the positive developments that the Turkish government has been able to foster in the last decade or so, the education system still needs improvement on many different fronts. This section deals with the main areas of reform.

First, the effectiveness of vocational and technical training must be strengthened so as to increase its appeal. For this to happen, several factors, such as the problems in transition to higher education and a weak link between the labor market and higher education, must be adequately addressed. Also, a National Qualification System is called for. Second, a real change in terms of increasing schooling rate in pre-school education is also necessary, given that it currently stands at a low 15%. Third, the performance of higher education institutions must be enhanced. In particular, the demand-supply imbalances in university entrance exams must be addressed. There should also be a closer linkage between university and industry. It is also noted that the education system is not very competitive, which is compounded by the increasing

instances of brain drain of the nation's talent. Fourth, there are serious problems at the secondary level that must also be addressed, which include poor quality (PISA Tests), and inefficient usage of IT in education. Fifth, the current system of financing education also needs to be reconsidered in light of the need to encourage more private contribution and funding for higher education and bring in performance-based budgeting. In addition, Turkey must be able to promote an accurate manpower projection that matches the needs of the economy with those of entrants in the labor force. Also, the education system must be production-oriented and nurture entrepreneurial skills.

## 4. Policy Recommendations

Turkey has a relatively young population compared to other European countries. The share of 0-14 age group in the total population is 28.4%, whereas the EU average is 15.7%. In addition to this figure, it is also important to note that almost 20% of the total population is a part of formal education.

In a report prepared by SPO experts, the Turkish government determined that the following achievements were attained and co-operations established after a decade of setting education as a priority and implementing policies accordingly:

- The duration of compulsory primary schooling was extended from 5 to 8 years in the 1997/1998 education year.
- There has been a significant increase in educational spending, which is mainly public.
- While the rate of total MoNE and YOK budget to consolidated budget was around 9.8% in 1996, this rate reached up to 13% by 2005.
- A significant increase in enrolment ratios has succeeded. (100% Support to Education and Girls! Let's Go to School campaigns, which were initiated in 2003-2004)
- The following projects and activities have contributed to the harmonization of the vocational and technical training system to the priorities of the EU and the developments in the European Union:
  - a. Project on Strengthening Vocational Education and Training System (SVET)
  - b. Project on Modernization of Vocational and Technical Education (MVET)
  - c. Cooperation with European training institutions such as CEDEFOP ETF
  - d. National Vocational Qualifications Draft Law
- The quality of secondary vocational education, through more emphasis on dual education, has been raised and a greater link between education and employment has been established (Law No 4702).
- Active participation in the Community Education and Youth Programmes.
- Active involvement in Bologna Process since 2001.
- Primary and secondary schools were equipped with IT classes for more efficient use of ICT technologies in education.
- New primary education curricula have started to be used in all primary education schools from the 2005/2006 education year. In the process of designing the curricula, international comparison of pre-school, primary, and secondary education and vocational training was made. The EU objectives and linkage with the economy were taken into consideration. Concepts are learning to learn, active and student-centred learning, lifelong learning, knowledge-based society, democratic culture, and economic sensitivity. They also reflect integral reasoning as targets of pre-school, primary, and general education and vocational

training.

- Designing secondary education programmes based on ISCED-97, by taking a holistic approach rather than a fragmented one, will also have positive side effects in terms of reducing the dropout rate at the secondary level. A similar side effect is observed with the programme of “course books free of charge,” which has been implemented nationwide since 2003.
- The duration of general, vocational and technical secondary education was extended in June 2005 from 3 years to 4 years, starting from the 2005/2006 school year. The preparatory year 9-10, mainly for foreign language teaching, has been eliminated and will be a common level to ensure vertical and horizontal transitions from general high school to vocational high schools and vice versa. Pilot implementations are going on based on ISCED 97.
- European references for foreign language teaching have been adopted from the primary education through secondary education, taking class hours into consideration accordingly.
- More financial provision for the education of children with special needs has improved early diagnosis and schooling for them. Inclusion of families and social partners in the process improved some issues regarding schooling, transportation, and physical facilities.
- There have been promising developments in favour of girls’ schooling (additional 5.8% increase in enrolment rate).
- Three fourths of the schools were connected with Internet access as of 2005. MoNE plans to provide all schools with Internet access in 2006. Besides hardware provision, MoNE is working on producing educational software for each educational level to ensure the use of ICT technologies in classes. This is a part of an integrated series of projects aiming at integration of ICT into education through several programmes such as expanding Internet access, training teachers, developing distance learning in foreign languages and vocational training, expanding learning centres and establishing an e-learning education portal.
- As for the initial training and professional standards of teachers, a Draft of General Competencies for the Teaching Profession was prepared last year. This document sets the necessary European and international standard criteria for the teaching profession to be considered by the teacher training faculties. From July 2004 there is a new career system for the teaching profession, which encourages teachers’ professional development, improves their status and facilitates salary increases accordingly.
- MoNE is also developing vocational education standards based on job requirements in cooperation with ISKUR and the related sector representatives and other social partners to meet the needs of the labour market and to establish the substructure for a new vocational qualification system by developing competence-based modular programmes.
- Work within MVET project helps increase the quality of teacher training in the field of vocational training and harmonizes the vocational and technical teacher training system to the developments in the EU. This work will ensure that the tertiary dimension of vocational and technical education will have a standard modular structure combining

reflections towards the European and international validity of the diplomas acquired by graduates.

And, for the last decade in higher education, the following achievements were found:

- 43.9% increase in in-class undergraduate students
- 252% increase in students enrolled in master's programmes
- 68.3% increase in students enrolled in PH.D. programmes
- 81.49% increase in the number of scientific papers published in journals covered by SCI, consequently climbing to the 22nd place in 2003 from 37th place in 1993. (Taking into consideration that 90% of the contribution comes from five countries in the world: the USA, the UK, Japan, Germany and France. Turkey's 0.94% share may be regarded as a significant contribution among the rest of the countries.)
- Increasing awareness of the quality culture in higher education institutions (Establishment of a national quality assurance system in accordance with the rules and guidelines of ENQA (the European Association of Quality Assurance)), which are the accepted rules and guidelines by Bologna countries)
- New rules and regulations for higher education student representatives with the purpose of having student representation in higher education at the national level
- Establishment of a strategic development committee in YOK (with external members) with the assignment of enquiring about the present state of the higher education system in Turkey in depth and coming up with a report composed of short-medium-long term suggestions
- Out of 77, 24 are foundation (private non-profit) universities currently. The number of students enrolled in foundation universities is around 5%.

However, it should be noted that there is still room for improvement in various levels of education. Among these, the followings are particularly important:

- ▶ Further efforts are needed for a better functioning link between the vocational training and the labour market.
- ▶ The improvement in education quality is not satisfactory yet.
- ▶ Despite recent improvements, there are still spatial and gender differences in terms of enrolment rates.
- ▶ The existing higher education system has a high degree of centralized structure and needs improvements in vital issues such as administrative and financial autonomy and response to the needs of society by meeting the demand of the respective sectors in addition to more diversified higher education institutions. Systems having accountability rather than being subject to rigid regulations work more efficiently.
- ▶ Finally, more private fund resources should be utilized in the education sector.

After reviewing the above findings, we will examine possible policy recommendations based upon Korean experiences.

## 4.1. Strengthening the Linkage between Vocational Training and the Labor Market

Turkey's vocational training policy is managed by the Ministry of National Education (MoNE), which is currently failing to check unemployment due to the undue amount of emphasis placed on a supply-driven policy. In other words, the policy objective of supplying as many vocational schools as possible has caused high unemployment rates for upper secondary graduates. Furthermore, it is generally observed that the female unemployment rate is higher among (vocational and general) secondary school graduates. The unemployment rate among vocational secondary school graduates tends to be at about the same level as the unemployment among general secondary school graduates—in fact, in some cases, vocational school graduates are much more likely to be unemployed. However, some qualification is also warranted in understanding these findings since there is a clear distinction between their overall unemployment rates (low compared with others in the sample) and youth unemployment rates (very high at around 35 percent). However, overall unemployment rates are lower, as one would expect—skilled individuals have more opportunities in the labor market and this seems to dominate other factors when it comes to determining observed unemployment rates. Finally, among individuals who have completed higher education, the female unemployment rate is much higher, despite the lack of a gender difference among the younger cohorts. The following table illustrates this point.

Table 4-26 ●● Employment Status by Education Level

	Total	Illiterate	Below Secondary	Upper Secondary	Tertiary
<b>1990</b>					
LFPR	56.6	38.8	59.6	65.6	87.4
Employment Rate	52.1	37.1	55.1	54.9	81.4
Unemployment Rate	8.0	4.4	7.6	16.4	6.9
<b>2000</b>					
LFPR	49.9	31.5	50.0	55.3	78.2
Employment Rate	46.7	30.4	47.2	49.4	72.8
Unemployment Rate	6.5	3.4	5.7	10.6	7.0

	Total	Illiterate	Below Secondary	Upper Secondary	Tertiary
<b>2001</b>					
LFPR	49.8	30.3	49.9	56.0	79.2
Employment Rate	45.6	29.4	46.0	49.6	73.1
Unemployment Rate	8.4	3.1	7.8	13.3	7.8
<b>2002</b>					
LFPR	49.6	28.8	49.2	55.2	79.6
Employment Rate	44.4	27.5	44.5	47.0	70.1
Unemployment Rate	10.3	4.6	9.6	14.7	11.1
<b>2003</b>					
LFPR	48.3	28.2	47.5	53.3	77.7
Employment Rate	43.2	26.2	42.7	45.4	69.1
Unemployment Rate	10.5	7.0	10.2	12.8	11.1
<b>2004</b>					
LFPR	48.7	24.4	48.2	56.6	80.0
Employment Rate	43.7	23.5	43.8	48.1	70.1
Unemployment Rate	10.3	3.7	9.1	15.1	12.4

Source: Economic and Social Indicators 1950-2004, SPO

In order to forge a closer tie between vocational training and the labor market, the government needs to institute a demand-driven training policy. The objective here will be to mold and supply a labor force that suits the actual needs of Turkish industries. Therefore, vocational training policies must be a part of Turkey's industrial development policy.

More specifically, the following three aspects of the policy that must be given immediate attention are: first, regional vocational training facilities should be inter-connected to regional industries; second, regional industries must inform regional vocational training facilities of jobs needed; and third, job placement functions at each vocational training level must be reinforced.

From Korea's experiences, we experienced that the success of vocational training was closely linked to its relationship with local industries.

At the national level, the medium and long term economic development policy had to include sectoral labor force demand by industry. This overall labor force demand should be reflected in the vocational training policy.

At the regional level, regional training facilities should be inter-connected with regional industries. With this linkage, the vocational training facilities can have much better and well-functioning job placement rolls. In Korea, when a company needs specific labor forces, the company asks for applicants from regional vocational training centers. The vocational training centers play the roll of head-hunter sometimes. They maintain databases of regional industries.

In these DB, they keep (1) what kinds of jobs each industry demands, (2) how many employees they want, (3) what kinds of skill level they require, and (4) what kind of compensation, etc.

In summary, the vocational training policy should be changed from a supply-driven policy to a demand-driven policy at the national level, and at the micro level. A job placement relationship between the vocational training facilities and the regional industries should be constructed.

## 4.2. Enhancing the Quality of Education

The Turkish education system is mired in a discrepancy between quantitative improvements and qualitative strain. The former aspect of public education has indeed reached a satisfactory level recently, with enrollment rates at near 100% at both primary and secondary schools. However, class sizes are still too big to offer quality teaching and the number of students per teacher is also too high. The following survey results demonstrate the kind of discrepancy as raised here.

Table 4-27 ●● Problems with School—Survey Results

Percent	Wealth Quintiles (based on household possessions index)			
	Poorest	Group 2	Group 3	Richest
No problem	44.51	66.41	69.10	73.81
Lack of Books/Supplies	29.08	14.54	10.94	6.13
Poor Teaching	10.39	10.68	9.19	11.79
Lack of Teachers	7.42	2.83	3.01	3.06
Facilities in Bad Condition	8.31	4.63	6.34	3.98
Other Problems	0.30	0.90	1.43	1.23
Total	100	100	100	100
Sample size	674	777	631	653

Source: Turkey Joint Poverty Assessment Report, World Bank 2005

Table 4-28 ● Number of Students per Classroom by Location

Years	Location	Primary School			Secondary School			General High School			Voc.&Tech. High School		
		Student	Class Room	Student Per Class	Student	Class Room	Student Per Class	Student	Class Room	Student Per Class	Student	Class Room	Student Per Class
2001 - 2002	Total	10,323	265,602	38.9	2,317	77,481	29.9	1,490	46,031	32.4	827	31,450	26.3
	Urban	7,523	155,871	48.3	2,217	72,064	30.8	1,428	42,476	33.6	790	29,588	26.7
	Rural	2,819	109,731	25.7	99	5,417	18.3	62	3,555	17.5	37	1,862	19.9
2002 - 2003	Total	10,332	280,257	36.9	3,035	80,002	37.9	2,054	47,140	43.6	981	32,862	29.9
	Urban	7,417	158,973	46.7	2,730	73,290	37.3	1,813	42,687	42.5	917	30,603	30.0
	Rural	2,915	121,284	24.0	305	6,712	45.4	240	4,453	54.0	64	2,259	28.5
2003 - 2004	Total	10,480	279,289	37.5	3,014	86,002	35.1	1,964	49,450	39.7	1,050	36,552	28.7
	Urban	7,697	166,195	46.3	2,888	80,236	36.0	1,895	46,337	40.9	993	33,899	29.3
	Rural	2,782	113,094	24.6	126	5,766	21.9	69	3,113	22.2	57	2,653	21.5
2004 - 2005	Total	10,565	286,290	36.9	3,039	88,937	34.2	1,937	51,215	37.8	1,102	37,722	29.2
	Urban	7,783	172,496	45.1	2,907	82,442	35.3	1,866	47,791	39.0	1,041	34,651	30.0
	Rural	2,783	113,794	24.5	132	6,295	20.4	71	3,424	20.8	61	3,071	19.9

Source: Turkey Joint Poverty Assessment Report, World Bank 2005

Table 4-29 ● Satisfaction with Education in Turkey

Percent	Wealth Quintiles (based on household possessions index)			
	Poorest	Group 2	Group 3	Richest
Completely Satisfied	11.57	16.75	11.11	13.94
Satisfied	29.82	33.77	39.28	36.82
No Idea	17.80	15.96	12.36	11.06
Dissatisfied	34.27	27.04	30.67	30.76
Completely Dissatisfied	6.54	6.46	6.57	7.42
Total	100	100	100	100
Sample Size	674	758	639	660

Source: Turkey Joint Poverty Assessment Report, World Bank 2005

According to the foregoing survey results, household members are more likely to report problems with public schools compared to private schools. The leading problems are lack of books and supplies, reported as a problem for 15 percent of children enrolled in public schools and 10 percent of children enrolled in private schools. The next major problem, in both public and private schools, is poor teaching, which was reported in about 10 percent of cases. The urban/rural differences are unequivocal. Only 45 percent of responses indicated “no problems with school” in rural areas, compared to 68 percent in urban areas. In rural schools, both lack of books/supplies (22 percent) and poor teaching (15 percent) are widespread. In fact, in more than 7 percent of cases, “lack of teachers” was reported as a problem.

Several fundamental measures need to be considered in order to close the gap between quantitative improvement and qualitative problems. First, more classes should be set up by using various funds. Second, the government must encourage the establishment of private schools. Third, the government should consider raising tuition at both secondary high schools and universities.

### 4.3. Narrowing Spatial and Gender Differences in Education

The existence of spatial and gender differences at every level of schooling is another persistent problem in Turkish education. For example, a 2005 World Bank study found that being male increases the probability of secondary school enrollment by 7-8%. Likewise, there is significant room for improvement when it comes to secondary school availability. As opposed to primary school availability, secondary school availability is correlated with household wealth; 59 percent of the poorest quarter of households reported secondary school availability in their area, while 69 percent of the wealthiest did the same. Only 50 percent of rural households reported availability, while 67 percent of urban households did so.

Table 4-30 ● Spatial and Gender Differences in Education

	Attending or Already Completed Primary Schooling	Not Attending and Never Completed Primary Schooling
<b>Gender</b>		
Male	51.82	27.79
Female	38.18	72.21
<b>Mother's Schooling</b>		
Illiterate	26.37	55.75
Literate without Diploma	6.01	7.45
Primary	54.06	28.23
Junior Secondary	4.55	6.54
Secondary	6.82	0.38
More than Secondary	2.19	1.64
<b>Father's Schooling</b>		
Illiterate	5.24	18.83
Literate without Diploma	5.95	15.33
Primary	56.91	52.67
Junior Secondary	11.41	3.69
Secondary	14.31	8.47
More than Secondary	6.19	1.01
<b>Residence</b>		
Urban (more than 200,000)	39.98	33.32
Rural	60.02	66.68
<b>Household Poverty Status</b>		
Poor	33.69	53.15
Non-poor	66.31	46.85
Sample-size	6.587	205

Source: Turkey Joint Poverty Assessment Report, World Bank 2005

Table 4-31 ● Illiteracy and Literacy Rate, 1935-2000

Census Year	Illiteracy Rate (%)			Literacy Rate		
	Total	Female	Male	Total	Female	Male
1935	80.8	90.2	70.7	19.2	9.8	29.3
1940	75.5	87.1	63.8	24.5	12.9	36.2
1945	69.8	83.2	56.3	30.2	16.8	43.7
1950	67.5	80.6	54.5	32.5	19.4	45.5
1955	59	74.4	44.1	41	25.6	55.9
1960	60.5	75.2	46.4	39.5	24.8	53.6
1965	51.2	67.2	39.5	48.8	32.8	64.1
1970	43.8	58.2	29.7	56.2	41.8	70.3
1975	36.3	49.5	23.8	63.7	50.5	76.2
1980	32.5	45.3	30	67.5	54.7	80
1985	22.6	31.8	13.5	77.4	68.2	86.5
1990	19.5	28	11.2	80.5	72	88.8
2000	12.7	19.4	6.1	87.3	80.6	93.9

Source: Economic and Social Indicators 1950-2004, SPO

In order to address the gender imbalance in education, there needs to be more incentives for educating girls. In addition, there should be more jobs created for educated females. Education authorities should also consider introducing the air and correspondence school system, which would be particularly effective in rural areas and more cost-efficient as a means of investing in education.

Turkey is a big country and has a huge mountainous area. This characteristic is a kind of limitation in expanding schools in rural areas. So, for the 40% of population living in rural areas, the accessibility to formal education is very poor. In reality, it is almost impossible to build enough schools all over the rural areas within a short period of time. Korea had similar problems and found a solution to tackle this problem by introducing an air and correspondence high school system.

This system is very useful for expanding education accessibility in rural areas of very low student density. It has become more effective now since it adopted the cyber education system. Air and Correspondence High School (ACHS) contributed to the improvement of education welfare through the provision of educational opportunities to those groups who had limited education and access to a formal education.

There are 39 ACHSs nationwide in Korea, and ACHSs graduated a total of 181,533 graduates since 1973. ACHSs in Korea are operated by regional public high schools. The MOEHRD and the provincial offices of education appoint public high schools as regional ACHSs for a specific region. Students take courses through radio and TV broadcasting and/or the Internet. At the end of the semester, students are called to take off-line examinations at their schools located regionally. ACHSs in Korea established a cyber education system in accordance with the parodying of knowledge and information-based society. Through this cyber education system, the ACHSs in Korea have evolved as the primary and secondary lifelong learning system needed to create a lifelong learning society. This system is suitable for an information-based society and can offer diversified educational currency that is capable of being customized to meet students' individual needs. The Cyber School in Turkey, which will be created through the construction of a cyber education system, will exhibit the following features:

### **Enrollment**

This cyber school is originally designated for those groups who had difficulties in attending leading formal schools for various reasons, such as long commuting distance and time, religious reasons, customs, female physical disabilities, poverty, etc. However, it is open to everyone including adult re-education for adults of non-school age, school-age adolescents, and juvenile delinquents. The Cyber School supports lifelong learning, and it has similar application and close linkage to regular schools.

### **Cyber Learning**

The Cyber School classes are customized to fit individual students' levels. It encompasses basic learning, previous learning, current learning and in-depth learning. Cyber learning includes learning with teachers and friends. There should be teachers, lectures, discussions and chatting with friends, and curricula-related counseling with teachers. A learning manager is responsible for helping students regarding learning timetables, learning tools, evaluation and grading.

### **School life**

School life in a Cyber School consists of counseling cyber activities and school activities. Using cyber community blogs, students can enjoy their school life. Sometimes students can gather to go on picnics, play sports, etc.

### **Graduation**

The Cyber School gives higher education guidance and job placement help. With this cyber

school system, Turkey can improve the special and gender differences in education with limited investment.

#### 4.4. Decentralization of Education Policy

With 90% of primary and secondary schools, as well as 75% of universities, owned by the central government, Turkey's education system is highly centralized. As such, many central government bodies are involved in managing Turkey's education system, including the Grand National Assembly, the Council of Ministers, the State Planning Organization (SPO), the Ministry of National Education (MoNE), and the Council of Higher Education (CoHE). The Grand National Assembly is charged with the determination of a general legal framework. The Council of Ministers is responsible for the adoption of general policy. The State Planning Organization assumes the role of advising the government in determining the policies and objectives of the country, which include long-term development plans and annual programs.

In addition, it also allocates resources for economic and social sectors. In cooperation with these agencies, the Ministry of National Education engages in policy making within the framework of legislation and related documents. It also authorizes the establishment of formal and non-formal education institutions and oversees various relevant planning, programming, conducting, monitoring, and controlling of educational activities. In addition, the ministry also conducts vocational training activities as stipulated by Law No. 3308. Instead of the ministry, it is the Council of Higher Education (CoHE) that is responsible for the country's higher education. This is a constitutionally autonomous body without any political or government affiliation. Composed of twenty-one members, the president, and rectors, it is a self-regulatory agency that runs on elections. Despite such organizations as the MoLSS (ISKUR), which strengthens the link between vocational training and employment, or private sectors and NGOs, it is the central government that figures most predominantly in determining the orientation of the country's education policy.

Turkey's centralized education system aims to enlarge pre-school education, strengthen the link between education and the labor market, develop a vocational proficiency system based on professional standards, diversify secondary education programs, promote the extensive usage of ICT, and strengthen competitiveness through specialization, autonomy, and academic freedom. As discussed earlier in the present study, the government has launched a major education reform through which important developments have been made. In recent years, there have been special efforts made to fulfill the Lisbon Agenda, which envisages a highly competitive Europe in terms of building a knowledge-based economy. As a major step toward the achievement of that objective, Turkey has been placing special emphasis on investment in education and

training, early drop-outs, graduates in mathematics, science, and technology, upper secondary education graduates, key competencies, lifelong learning, and informational and communication technologies.

While the central government's role in education policy should never be downplayed, certain problems can be better addressed through decentralization. In this vein, it is important to promote administrative and financial autonomy in secondary and tertiary education. Also, local (provincial) governments should have their own agencies for implementing customized education policies.

Based upon Korean experiences, a centralized education system functions well in the early stage of economic development. The centralized system turned out to be very efficient in manpower planning that is needed for sustainable economic development.

However, once urbanization has reached a certain level, and the private sector's role has become more important in human resource development, the centralized education system no longer works efficiently.

Thus, Korea decentralized its education management system since the mid 1980s. So, Turkey should prepare for decentralization. For this purpose, we suggest first a road map for decentralization. We think now is the right time to do this in Turkey.

## 4.5. Increasing Private Participation in Education

The Turkish education system depends excessively on the public budget for construction, operation, and maintenance. This is most noticeable in the fact that tuition fees made up only 4.1% of public university income in 2003, which indicates that more benefits are accrued by higher income groups. The following table illustrates these problems.

**Table 4-32 ● Sources of University Income and Its Distribution**

Year	Total Income of Public Universities and Its Distribution					Income Distribution Per Student in Formal Education	
	Total Income (Million TL)	Public Budget (%)	Revolving Fund (%)	Tuition Fee (%)	Other (%)	2005 Constant Prices (Million TL)	US Dollars
1998	687,483,109	61.5	31.5	4.8	2.2	5,675	3,013
1999	1,124,376,252	60.2	33.0	4.6	2.3	5,818	2,895
2000	1,915,400,371	55.1	37.4	4.8	2.8	6,777	3,186
2001	3,162,909,996	51.5	41.7	4.3	2.5	5,760	2,516
2002	4,275,510,547	58.4	34.9	4.5	2.2	5,279	2,616
2003	6,053,648,161	55.3	39.1	4.1	1.6	6,358	3,466

Source: Economic and Social Indicators 1950-2004, SPO

**Table 4-33 ● Incidence of Public Spending on Education in 1994**

	Household Income Quintiles				
	1(poorest)	2	3	4	5(richest)
<b>1994-Turkey</b>					
Basic Education (Eight years, Primary and Middle)	15.8%	21.1%	22.2%	20.6%	20.3%
Secondary Education	8.7%	16.2%	22.3%	25.4%	27.5%
Total Public Expenditures	13.5%	19.5%	22.2%	22.2%	22.7%
<b>1992-94 Average Statistics for Lower Middle-Income Countries</b>					
Primary	25.4	22.4	20.0	18.4	13.7
Secondary Education	14.0	17.4	21.3	23.3	24.0
Tertiary	4.5	10.0	14.4	25.5	45.5
<b>2001-Turkey</b>					
Basic Education (8 years)	21.7%	21.4%	21.0%	22.0%	13.9%
Secondary Education	13.0%	14.6%	25.4%	22.8%	24.2%
Total Public Expenditures	19.2%	19.4%	22.3%	22.2%	16.9%

Source: Turkey Joint Poverty Assessment Report, World Bank 2005

According to a 1997 University Student Survey published by the Council of Higher Education in 1998 under the title “Parental Income, Educational Expenditures, Financial Aid and Job Expectations of University Students,” students coming from high income families are much more likely to be enrolled in private universities and they are more likely to be enrolled in “well-established” and “new and developing” institutions. Thus, university enrollment of students coming from poor households should be interpreted with the understanding that these students do not enroll in universities of the same quality as wealthier students. One way to relax the capacity constraint in higher education is to allow and encourage the establishment of private higher education institutions, as is happening in Turkey.

Table 4-34 ●● Public Expenditure on Education

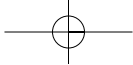
(Unit : YTL)

Year	GNP	Ministry of National Education Budget	Higher Education Council Budget	Total	Total Education Expenditure/ GNP (%)
1985	27,796,800	465,982	151,714	617,696	2.22
1990	397,177,500	8,506,541	2,505,362	11,011,903	2.77
2000	125,970,544,000	3,350,330,000	1,054,610,700	4,404,940,700	3.5
2001	184,766,666,000	4,046,305,625	1,364,901,500	5,411,207,125	2.93
2002	280,550,667,000	7,460,991,000	2,495,967,700	9,956,958,700	3.55
2003	357,045,000,000	10,179,997,000	3,346,669,000	13,526,666,000	3.79
2004	419,692,000,000	12,366,236,188	3,689,754,700	16,055,990,888	3.83
2005	489,963,000,000	14,882,259,500	5,218,465,000	20,100,724,500	4.18

Source: Economic and Social Indicators 1950-2004, SPO

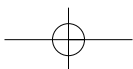
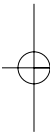
Given the forgoing problematic budgeting patterns, it is clear that students are willing to make more contributions for their education. In addition, the establishment of private schools should be encouraged through various incentives.

Even though the provision of education is the role of the government, the private sector should play some role in higher education. In Korea, more than 50% of high schools are private, and 80% of colleges and universities are private. Funding for private schools mostly depends on tuition. Even in public schools important sources of funds for operating schools are coming from private sectors. As we have seen in the previous chapters, the private sector in Korea has played a pivotal role in pushing the national education platform to a higher level by reducing the financial burden on the government. Similar logic can be applied to Turkey. On the basis of a



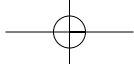
benefit principle, students' burden should be increased. For students from low-income families, tuition should be waived.

Also, an incentive scheme should be imported to encourage the establishment of more private schools. This will contribute to improvement of both quantity and quality of Turkish education. Incentives may include (1) direct subsidies, (2) favorable tax treatments, and (3) low cost rooms, etc.



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A Way Forward for the Turkish Economy:  
Lessons from Korean Experiences



## Chapter 5

# Administrative Response to the Public Management Reform



Introduction

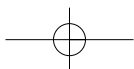
### **Part A. Personnel Management Reform**

1. Korean Experiences
2. Turkey's Status Quo
3. Policy Recommendations for Turkey

### **Part B. Empowerment to Local Governments**

1. Korean Experiences
2. Turkey's Status Quo
3. Policy Recommendations for Turkey

References





## Administrative Response to the Public Management Reform

*Jin Park, KDI School  
Anil Yilmaz, SPO*

### *Introduction*

What should be done to maximize the effect of the wide range of public management reforms currently underway in Turkey?

Without changing the civil servants, it is hard to expect any meaningful performance improvement of the government through public management reform. Personnel management is a key to changing civil servants, and is therefore one of two pillars of public management reform.

It is the local government that has more direct contact with the people. Therefore, hands-on improvement in government service can better be measured at the local level. Reforming local governments, therefore, is another pillar of public management reform.

This paper consists of two parts. Part A covers personnel management reform for the government and Part B covers empowerment to local governments. Each part has three chapters: Korean experiences, Turkey's Status Quo, and Policy Recommendations for Turkey. Among these chapters, Turkey's status quo is mainly based on the paper submitted by Anil Yilmaz, the Turkish counterpart in SPO and the rest of the paper is written by Jin Park.

## Part A. Personnel Management Reform

# 1. Korean Experiences

## 1.1 Performance Agreement System

### *Background*

The Korean central government has used the Management by Objectives (MBO) system when conducting performance evaluation for Korean government officers at Grade 4 and above. Since 2004, the Republic of Korea Ministry of Government Administration and Home Affairs (MOGAHA) and the Civil Service Commission (CSC) have undertaken government reform of the Human Resource Management (HRM) system, and have studied strategies for its successful application. CSC has introduced the Senior Civil Service system and the Performance Agreement System (PAS) for the purposes of achieving a clean and efficient government and developing an HRM system of global standards. The Senior Civil Service, often called Senior Executive System, is a personnel system for high-ranking officials to strengthen their competitiveness, and PAS is a mechanism to assess performance of higher level officers and agencies.

When the CSC designed a framework for PAS application, it analyzed a variety of senior civil service or senior executive service programs in advanced countries, in particular the United States, the United Kingdom, Canada, and Australia. Two of the most popular models adopted in these countries are Balanced Score Card (BSC) and Logic Model. BSC is a management system that enables organizations to clarify their vision and strategy and to translate them into action. This model is widely adopted in the private sector because it emphasizes balanced development in all dimensions of not only finance, but also of customers, processes and training. However, due to its complexity, it is practiced less often in the public sector than the Logic Model. The Logic Model is a systemic tool used to visually describe the linkages among program goals, activities, and expected outcomes. Since this model is easier to implement and to evaluate outcome, it has been applied to governments more often than BSC.

### *Application of PAS*

The CSC formulated its mission, strategic goals and objectives for outcomes and outputs. Since October 2004, every CSC officer holding the posts of deputy director or above has been obliged to sign a performance agreement with the CSC chairman. The continuing development of HRM and the expanded application of PAS to all central government ministries were encouraged. In January 2005, the CSC launched a bureau of the Senior Civil Service program, and it emailed the information on PAS, including its future plans and changed roles, to civil servants at Grade 4 and above.

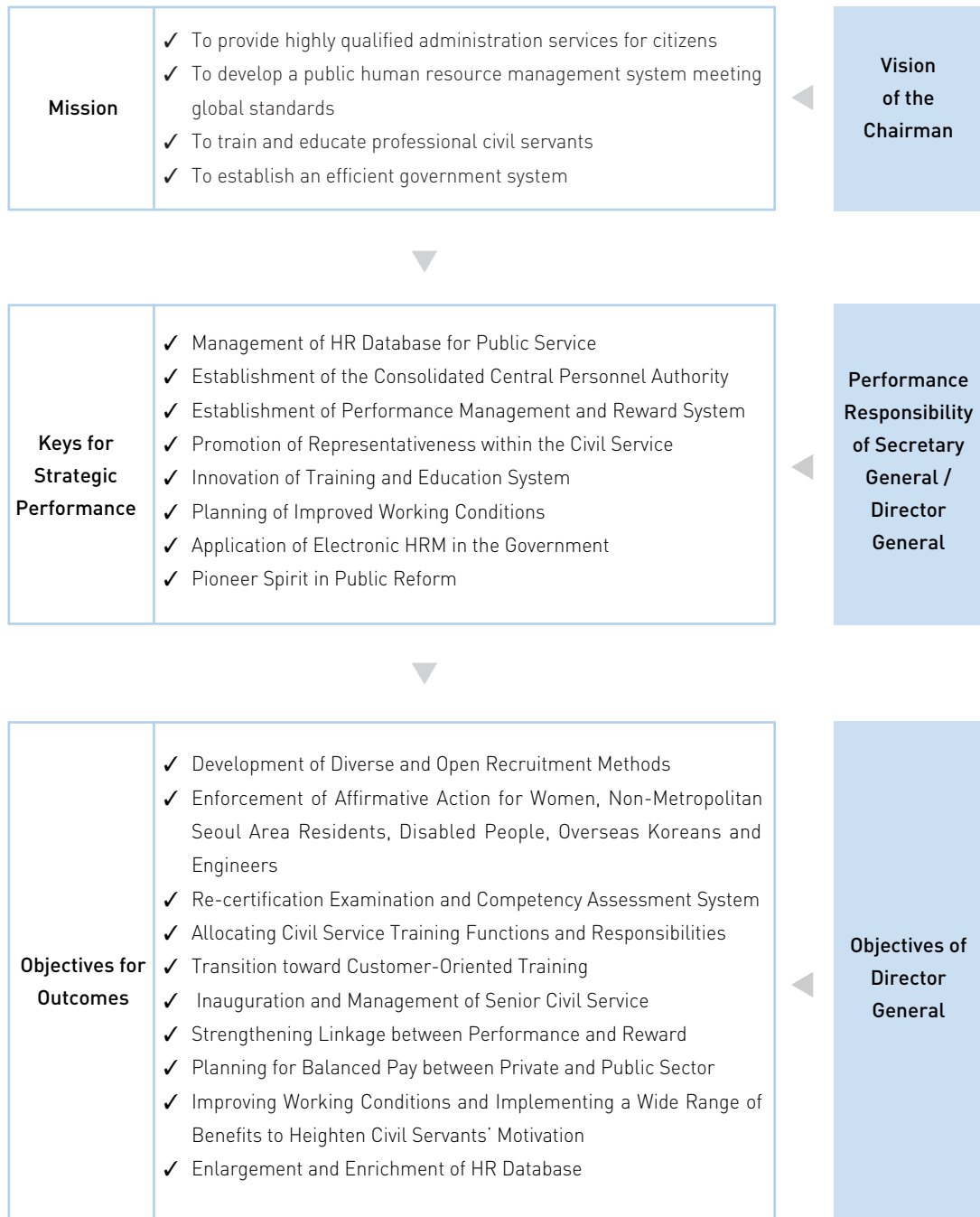
PAS is an HRM mechanism that assists the central government in assessing chief executive officer and agency performance. PAS ensures that both the responsible authority and chief executive officers are clear about not only individual goals to be achieved, but also organizational goals pertaining to its mission. Each SCS official is given an individual performance plan with performance elements and requirements, and plans are developed in consultation with a direct supervisor of the official. An interim assessment of the signed agreement is carried out between the above parties during July and August of each year. In the interim assessment, two parties discuss current or potential challenges to achieving the goals, and they modify the signed agreement if needed. The final assessment occurs at the beginning of the next year, and annual performance is evaluated using four absolute grading scales, which are based on quantitative and qualitative measurement methods.

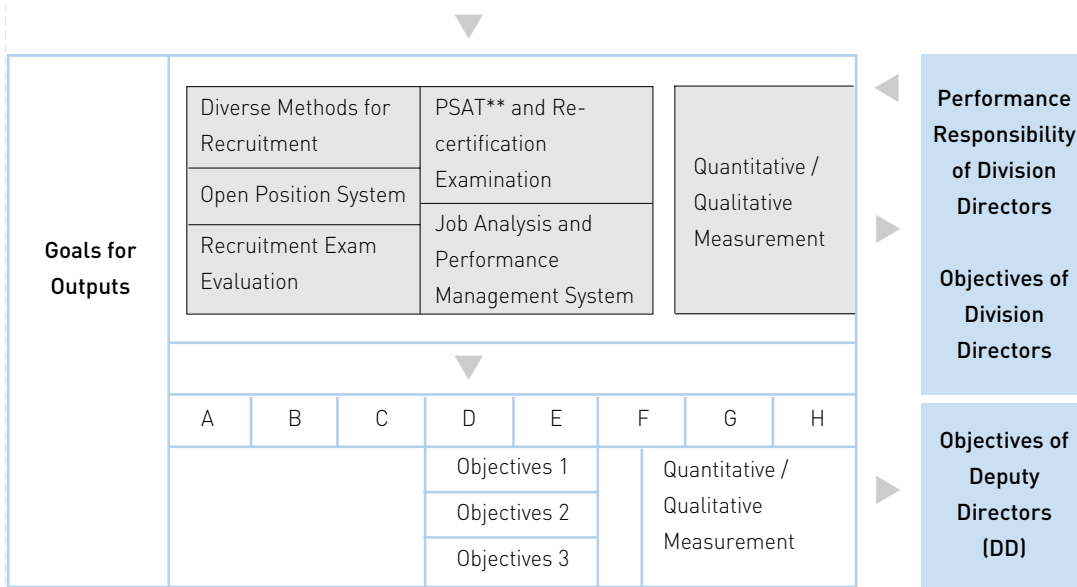
### *Prospective Outcomes and Future Steps*

Changes made by PAS are not significant yet because it was introduced only recently. However, it is expected that civil servants will be more productive and efficient because PAS asks them to have clear understanding about organizational and individual goals and also makes them more aware of the performance evaluation and reward system.

For further development of PAS, the CSC will look into best practices and consistently share them with every ministry and government agency. The CSC will continue monitoring the PAS management of each ministry, and also will develop manuals that cover case studies, specific strategies and guidelines required for a successful competency assessment.

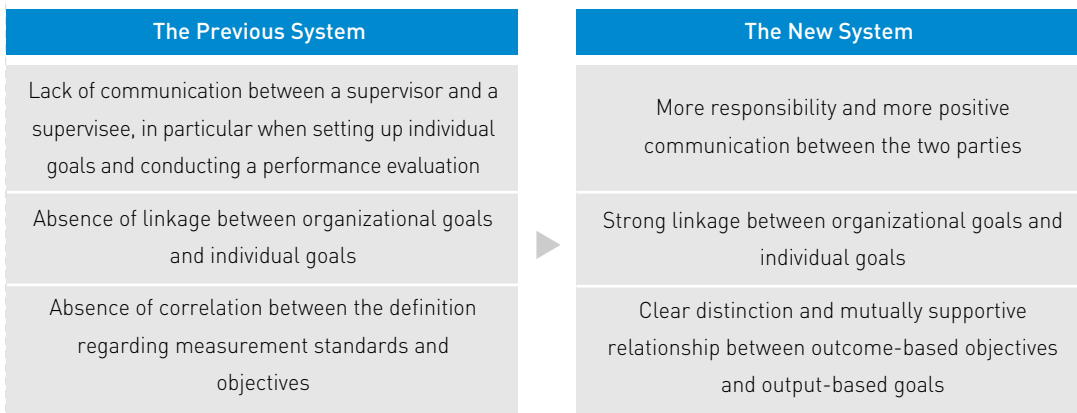
Figure 5-1 ● The Performance Agreement System(CSC Case)





Source: CSC White Paper, 2004 & 2005

**Figure 5-2** ●● Comparison between the Previous Personnel Management System and the New Performance-Based Management System



Source: CSC White Paper, 2004 & 2005

## *Reform of the Rank Classification System*

Since 1961, the Rank Classification System (RCS) has been implemented when the Korean ministry and/or agency determines the promotion of civil servants at Grade 5 and below. The system is primarily based on rank and seniority, so it has discouraged civil servants from developing competency and professionalism. The CSC analyzed problems in the previous RCS, such as excessive complexity or seniority-based promotion system, and introduced a more modern means of selecting qualified candidates, based on their merits and qualifications. Under the new RCS, there are more opportunities for civil servants to build professionalism, as they have to continuously develop their human capital in order to be promoted.

In order to successfully innovate the RCS, the Presidential Committee on Government Innovation and Decentralizing (PCGID) analyzed the current RCS implemented in the Korea Coast Guard, the Korean Intellectual Property Office, National Tax Service, MOGAHA, and other ministries.

Innovation of the RCS aims to give greater autonomy and flexibility to each ministry. The authority of human resource management (HRM) will be delegated from the CSC and the MOGAHA to each ministry and agency. Each ministry and agency will be encouraged to develop and practice its own performance and personnel management system, reflecting each different working condition and culture. Innovation of the RCS also aims to enforce the Performance-based Evaluation System by establishing fair, transparent and open recruitment programs. The newly revised RCS is expected to eliminate increasingly discredited traditional ways of job allocation, and to encourage each ministry and agency to adopt performance-based evaluation systems.

## 1.2. Performance Reward System

### *Annual Pay System*

The seniority-based compensation system in Korea has discouraged civil servants from being highly productive and efficient in their performance. Since the financial crisis of 1997, the government has been asked to reform the existing personnel management system from seniority-based to performance and position-based. As a way of reforming the personnel management system, the government has modified the pay system and introduced three different types of annual pay system: Fixed Annual Pay System (FAPS), Performance-Related Annual Pay System (PAPS), and Annual Incremental Pay Increase System (AIPIS). In addition, this reform in the pay system fundamentally aims to strengthen professionalism and

competencies meeting global standards.

Annual pay rates for Korean civil servants are determined by a number of factors including individual competency, seniority, private sector pay schedule, financial state of the government, and standard cost of living.

**Table 5-1** ● Compensation Structure

Types of Pay	Classification of Application	Pay Determining Factors
Fixed Annual Pay System(FAPS)	Political Appointee	Position
Performance-Related Annual Pay System(PAPS)	Director General and Above	Length of Service, Position, and Performance
Annual Incremental Pay Increase System(AIPIS)	Division Director and Below	Length of Service, Position, and Performance

Note: The grades for civil servants in the Ministry of Foreign Affairs and Trade (MOFAT) are divided into 14 categories. FAP is applied to civil servants at Grade 14, the Annual Incremental Pay Increase System (AIPIS) is applied to employees at Grade 7 to 13, and the seniority-based pay system is applied to workers at Grade 6 and under.

**FAPS:** As performance reward may be difficult for politically appointed civil servants such as ministers and vice-ministers, FAPS is provided based on the level of difficulty and responsibility of the position. The amount is adjusted according to the annual pay increase rate at the beginning of each year. Ministers receive the same level of annual payment except for a few cases. FAPS is, therefore, not a performance reward system.

**PAPS:** Senior civil servants receive performance-related annual salary that is divided into basic pay and variable performance-related pay. The basic pay rates are estimated according to their ranking and seniority, and performance-related pay is determined by the performance reward through the Management by Objectives system, and the amount varies across individuals. Performance-related pay accrues each year and becomes the next year's base.

**Table 5-2** ● PAPS Rates (as of 2005)

(Unit: USD, Exchange Rate: 1 USD=1,000 Korean Won)

Grade \ Rate	1	2	3	4
Maximum	78,336	72,367	67,823	62,045
Minimum	52,224	48,246	45,217	35,789

**AIPIS:** Division directors and under receive basic salary, allowances and performance-related bonus. The rates of basic pay are determined by the position, difficulty of responsibility, and length of service. Allowances vary according to the post and living conditions of each employee.

**Table 5-3 ●● Performance Bonus Rate**

Grade	Excellent (S)	Outstanding (A)	Normal (B)	Understanding (C)
Range	Top 20 %	Next 30 %	Next 40%	Bottom 10 %
Pay Rate	+ 7 %	+ 5 %	+ 3 %	0 %

FAPS and PAPS have been successfully managed so far because they have been applied to director generals and above, high-ranking posts, and most of them are also familiar with the MBO system. On the other hand, when AIPIS was introduced to division directors and below, there were objections to the new pay system.

The CSC has conducted a survey on the new annual pay system and its outcomes. According to the survey results, the annual salary rates among employees have been differentiated according to each individual’s performance results, and the productivity in workplaces has improved overall.

In order to attract competent and talented individuals and to utilize their existing resources to improve the quality of public service delivery, the methods of recruitment have been diversified, and the rates of annual compensation have also been increased. In general, pay rates for contract-based officials at deputy director and under are flexible by up to 130% of the career civil servant’s rate in the comparable position. For division director and above, there are no fixed rates. Furthermore, in order to prevent an experienced person from having potential disadvantages when he/she is newly hired as a division director or above, the government increased the minimum rates of annual pay for those contract-based civil servants.

**Table 5-4 ●● Pay Rates (as of 2004)**

(Unit. USD, Exchange Rate: 1 USD=1,000 Korean Won)

Classification	Contract-based	Career Civil Servants	Others
Normal	74,960	63,904	Minister: 83,106 Vice-Minister: 77,863
1	88,847	72,484	
2	74,615	65,888	
3	67,111	59,665	

Many countries, such as the United States, England, and Japan, have implemented the Performance-based Reward System. Since 1999, the Republic of Korea government has adopted this system as well. However, the share of the performance-based reward should be increased accordingly, and Performance-based Evaluation should be transparently and fairly conducted in all workplaces. For transparent and fair performance evaluation, implementing the Multi-faceted Evaluation System and innovating the MBO system are suggested.

### *Performance Bonus System*

In order to recruit qualified individuals from various areas of expertise and to enhance their competitiveness the Korean government has also introduced performance bonus, a payment made once a year during February. It is not cumulative, therefore, this year's decision does not constitute a base for the next year.

Ministries used to provide performance bonuses only to the top 10% of civil servants in each bureau or office. The pay rates were so irrationally low that the incentive program was insufficient to attract competent workers and to motivate employees. The Korean government has revised the system, including the name change, and it experimented with the system in certain selected ministries or agencies.

According to the first revision, the coverage was restricted to the top 50% of civil servants, and the pay ranges were 50~200% of their monthly base pay. The central government revised it again because the bottom 50% of civil servants could experience a relative sense of deprivation and this could cause a problem in an organization.

From April 2000 to May 2000, the government conducted a survey on the performance bonus system. The survey included approximately 5000 civil servants working in the central and provincial governments. According to the survey, 55% had a negative image of the system. Forty-nine percent (49%) of respondents supported extending its beneficiaries, while 36% and 15% answered 'no changes are needed' and 'should be reduced', respectively. Sixty-five percent (65%) of respondents answered that the current pay ranges (50-200%) should be decreased. Regarding the pay methods, 40% supported the combined methods of the individual performance-based method and division performance-based one, while 25% and 19% respectively supported the division performance-based one only and the individual performance-based method only.

In order to reduce the sense of deprivation, the coverage was extended from 50% to 70%, and the pay ranges were reduced from 200% to 150%. Ministries and agencies were authorized to distribute the bonus budget to their divisions. Furthermore, a question asking how much an individual contributed to division performance was newly inserted in the individual

performance evaluation.

**Table 5-5** ●● The First Revision (as of 2000)

<b>Before</b>	Coverage	Top 10%	Next 15%	Next 25%	Bottom 50%
	Pay Rate	200%	100%	50%	0%
<b>After</b>	Coverage	Top 10%	Next 20%	Next 40%	Bottom 30%
	Pay Rate	150%	100%	50%	0%

Autonomy of each ministry and agency has been respected. The four methods are now offered to each Ministry: they are Individual Performance-based Reward System, Division Performance-based Reward System, Combination of Individual and Division Performance-based Reward System, and Division-based then Individual Performance-based Reward System

**Table 5-6** ●● The Second Revision of the Performance Bonus system (as of 2002)

<b>Before</b>	Coverage	Top 10%	Next 20%	Next 40%	Bottom 30%
	Pay Rate	150%	100%	50%	0%
<b>After</b>	Coverage	Top 10%	Next 30%	Next 50%	Bottom 10%
	Pay Rate	More than 110%	80%	40%	0%

The performance bonus system has lost its impact on civil servants in most ministries. The bonus is given to more people with a smaller monetary gap among them. This egalitarian trend shows how difficult it is to introduce a performance-based payment system in the public sector. There were cases like MOGAHA in early 2006 that expanded the pay range, and it was a great shock to the whole ministry.

The Ministry of Education and Human Resources Development (MEHRD), on the other hand, implemented the performance bonus system with two modified versions called Plan A and Plan B because of the Teachers Union’s severe objection to the performance bonus system. Therefore, schools were permitted to implement either Plan A or Plan B according to their decisions. However, the Teachers’ Union is still fighting against the introduction of the performance bonus system.

Table 5-7 ● The Modified Performance Bonus System for Teachers (as of 2001)

Classification		Coverage				
		Top 10%	Next 20%	Next 40%	Bottom 30%	
Pay Rate	Before 2001	150%	100%	50%	0%	
	Revised Plan	Plan A	65%		40%	30%
		Plan B	90%	65%	45%	30%

## 1.3. Job Analysis

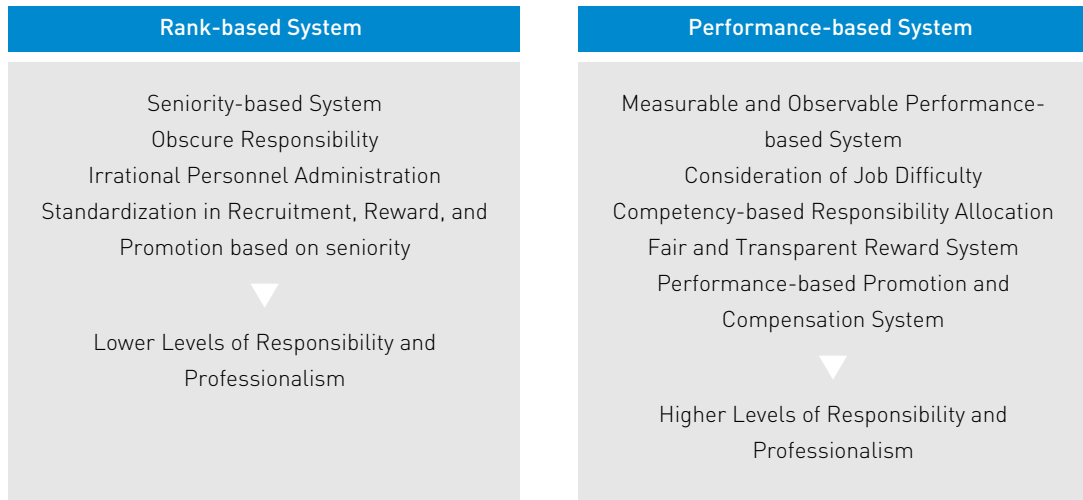
### *Background and Progress*

Previously, the Korean government adopted a rank-based personnel management system. In order to cope with challenges in the information-oriented society, the rank system, which causes great bureaucratic rigidity in the Korean government, has been deemphasized, and a more flexible job classification system, which is based on individual performance and competency, has been introduced. Job analysis has been carried out as a foundation for personnel reform and performance-based personnel management.

It was in 1963 that Job Analysis (JA) was introduced to the Korean government, and the first JA was based on the Job Grade Classification System. Due to different barriers and objections against JA implementation, the Korean government, however, nullified the plan that intended to implement it in public service in 1967. The Korean government conducted JA from 1996 to 1997, and it introduced the Open Recruiting System, which was designed as a way to recruit outstanding talent and expertise from both the private and public sectors. In 1996, the Korean government organized the JA Planning Committee, and created 201 open professional posts in different public service sectors, such as foreign affairs, law, public transportation, information technology, environment, science and technology, and urban planning.

In 2000, the Ministry of Foreign Affairs and Trade (MOFAT) and the Korea Meteorological Administration (KMA) conducted job analysis. Based on the results, the MOFAT has reformed the annual pay system from the seniority-based to performance-based, and it designed a framework replacing the existing rank system to the new Job Grade Classification System. KMA conducted job analysis in order to enhance the quality of weather forecasting service, and 151 job descriptions came out through the analysis.

Figure 5-3 ● Changes in the Korean Government



Source: CSC White Paper 2005

In 2001, the National Tax Service (NTS), the Ministry of Construction and Transportation (MCT), and the Civil Service Commission conducted job analysis. Based on JA results, the MCT established a foundation for Personnel Management System reform. In 2002, the Rural Development Administration, the Public Procurement Service, and the Korean Coast Guard followed.

According to the Roadmap for Civil Service Reform of the Korean government, all division directors or above were obliged to participate in job analysis. The results have been used for performance evaluation systems.

Job Analysis is a process to identify and determine in detail the particular job duties and requirements and the relative importance of these duties for a given job. JA has introduced a pay system based on job value and performance to the Korean government. The Hay Method, which analyzes the relative worth of evaluation factors emphasizing ‘equal pay for equal work’, was adopted. The CSC has consistently communicated with other agencies for the successful implementation of JA.

The JA Task Force Committee is composed of the CSC, a job analysis task force team in each different bureau, professional consultants, and job analysis advisors from academia. The CSC takes charge of the overall administration and planning of JA. A JA task-force in each

different bureau conducts job analysis in its workplace. Professional consultants educate civil servants on the job analysis, and they also assist civil servants in writing job descriptions. JA advisors evaluate the quality of job analysis results conducted in each bureau, and also suggest strategies for further development.

### *Contents of the Job Descriptions*

Job descriptions point out the general tasks and responsibilities of a position. They also include the job title, name of a direct supervisor, and job qualifications.

Job statements contain the name of the bureau, title and position. They also describe not only primary, current, normal, daily duties and responsibilities of the position, but also working conditions, implementation strategies, expected outcomes, values of the position, and purposes of the position.

Job difficulties, which are included only in the job descriptions for senior civil service, focus on measuring a job size. Job difficulties ask to describe technical and managerial know-how in the input section and, in the process section, environment and challenge are asked. In the outcome section, job difficulties include questions asking about freedom to act, the scope and degree of impact by the job implementation, and job magnitude.

In the position requirements section, certain criteria or skills needed for the job are described. Language skills, types of license, and knowledge about an individual's specialty are types of questions asked in this section.

### *Steps in Conducting Job Analysis*

Job Analysis is conducted through five steps: Planning, Education, Writing a Job Description, Evaluation, and Implementation. In the Planning phase, an organization designs basic plans, such as date or position for the job analysis. In the Education phase, opportunities for education and training are provided by the job analysis task force. In the Writing a Job Description phase, characteristics of a position, job responsibilities, difficulties of a position or responsibility, and criteria are asked. In the Evaluation phase, job size and grade are estimated. Depth of knowledge, planning and organizing, communication, environment and challenge, freedom to act, the scope of the roles and the nature and area of impacts are exercised as standards of the job evaluation.

Table 5-8 ●● Elements of Job Evaluation

Evaluation Factors		Contents	
Inputs	Know-How	Depth and Breath of Know-How	Specialized knowledge, skills and techniques required to do a given job
		Planning and Organizing	Requirements of jobs for planning and organizing
		Communicating and Influencing	Requirements within jobs for working with, and through, others to achieve end results
Process	Problem Solving	Environment	The extent to which the jobholder has rules, instructions or policies to define issues which should be addressed
		Challenge	The complexity and variety of the tasks that the jobholder is required to tackle and the extent to which innovation and originality are necessary
Outcomes	Accountability	Freedom to Act	The extent to which the jobholder can make decisions within limits defined by rules, policies, precedent, or senior direction
		Job Magnitude	The scope and magnitude of the job impact
		Nature and Area of Impact	The impact of the job and the area of the organization upon which the job has an impact

Source: CSC White Paper, 2005.

The job analysis provides a framework for performance-based personnel and reward management systems. Job analysis is also useful for position allocation, promotion, education and training, open position system and senior civil service in particular.

### *Future Steps*

The job analysis system has been implemented in ministries or agencies that voluntarily adopted it. However, in the near future, job analysis will be conducted for all posts in all ministries and government agencies.

The CSC will cultivate job analysis specialists in each ministry and agency, and will provide job analysis manuals. Finally, so far, the CSC has been the agency that has mainly managed the job analysis system. However, in the long term, each workplace will be encouraged to autonomously conduct job analysis, and the CSC will focus on the support and consulting tasks.

## 1.4. Training System for Civil Servants

### *A Brief History*

The history of training & education of government officials can be divided into 3 periods from the establishment of the South Korean government. The first period, dating from 1949 to 1966, started with the establishment of the National Officials Training Institute—the original name for the current Central Officials Training Institute. With a support of the U.S., the Institute brought in new training tools and methods, introducing new conceptual perceptions of ‘public service management’ to the Korean government. Up to 1961, the National Officials Training Institute focused mainly on management skills for high-ranking officials. In 1961, however, with the outbreak of the military coup, training patterns for public services were affected by the advanced training practice of the military, and bringing transformations in legal, systematical, and organizational aspects. In May 1963, the Officials’ Training Law was enacted, enforcing employers to receive certain training for efficient task performance. This law also set the legal basis for the establishment of government official training institutes in central administrative organizations and provinces, and extended the boundaries of training centers, allowing officials to be dispatched to both domestic and overseas centers. It was during this period that the National Officials Training Institute was expanded and renamed as the Central Officials Training Institute.

The basic framework of government official training in Korea that had been built during the first period was refined and expanded in the second (1967~1980). Whereas training in the first period focused on quantitative aspects rather than qualitative, from 1967, with the commencement of the Second ‘Five Year Plan for Economic Development’, the government executed training & education programs based on detailed research of the demand for such programs, therefore bringing significant progress in qualitative development of government official training. From the mid 1970s, the Revitalizing Reform and Saemaeul (‘New Town’) Movement gave the official training system an emphasis on mental education, and training places were broadened from training institutes to external organizations such as universities, or foreign countries as well.

The third period dates from 1981 to 2002. The 1980s opened a new era for government official training. In 1981, training was focused primarily on values education i.e. national ideology, moral standards, and innovative spirit for all public service officials. In the following year, the Five Year Plan for the Development of Officials’ Training & Education was launched, with an ambition to arrange and instruct staff with the best quality. This Plan required all new government employees to receive training & education before being appointed to their workplaces.

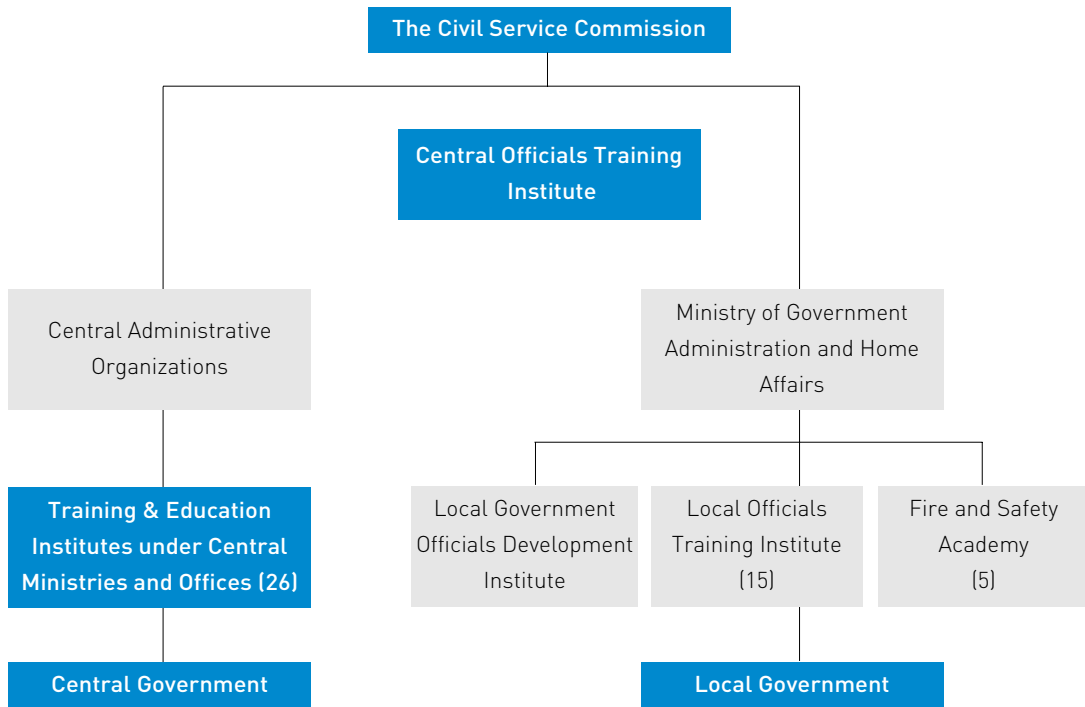
### The Current Status

Training & Education of officials can be divided into different categories depending on the supervising body. First of all, training programs can be divided into three: those supervised by the Civil Service Commission (including the Central Officials Training Institute), by the line Ministries, and by the Ministry for Government Administration and Home Affairs.

The Civil Service Commission takes care of government official training & education in general, while the line Ministries' centers for official training & education run various programs designed to develop professional abilities to handle specific conditions that may occur at work.

Training & education of officials can also be divided into 'basic education', 'professional education', and 'other education', depending on its content. Basic education teaches newly appointed civil servants and those who have received promotions the basic abilities needed to work in public service, and is regularly conducted by the Central Officials Training Institute and other training centers for public service workers. Professional education concerns working

Figure 5-4 ● Public Service Workers' Training & Education System



abilities required in specific policy fields. These programs are conducted not only in officials' training centers, but also domestic and overseas organizations committed to taking care of the training.

### *Problems*

Problems that have been pointed out in the existing systems of government official training can be summarized as follows: First of all, training was heavily based on the supplier, and it consisted of mostly theoretical content delivered by lecture rather than by the other methods that would contribute to officials' problem-solving abilities in real-life cases. As a result, training was merely perceived as a way of gaining extra points for promotion. Second, officials' training centers held a monopolistic position in official training, leading to inflexibility in dealing with administrative demands. Not enough efforts for self-improvement were made, and instructors were switched much too often to provide professional, high-quality education. Third, ministries/offices and employees lacked interest and enthusiasm in improving their skills. Most were inactive in the regard that training didn't immediately display noticeable outcomes. Last, investment and support for officials' training were scarce because the government has perceived training expenses as 'costs' rather than investment. Especially since the economic crisis in 1997, the budget for officials' training has remained at an insufficient level.

**Table 5-9** ●● Changes in Budget and Numbers of Regular Staff at Officials' Training Institutes

(million USD exchange rate, USD=1,000 korean won, number of people)

Criterion	1997	1998	1999	2000	2001	2002	2003
Budget	76,330	60,719	60,681	57,601	77,303	89,246	88,693
Number of regular staff	2,230	1,747	1,535	1,688	1,615	1,615	1,609

### *The Direction of Reform*

According to research (CSC Policy Research Report 2003-3) conducted by the Civil Service Commission in March 2003, among the required tasks for personnel reform, redesigning the government officials training system ranked as most crucial (25.3%). To identify the problems with the present system and to benchmark successful training systems of the private sector and foreign countries, Training Innovation T/F was established in February 2004, consisting of members from both the public and private sectors.

In April 2004, the T/F visited private sector training centers that were known for their excellent human resource development systems, and conducted research on plans for reform of

the Central Officials Training Institute (CSC Policy Research Report 2004-2). Furthermore, the T/F benchmarked the training systems of the U.S. by actually participating in training systems, and visiting training institutes. These visits proved that the course of plans the T/F was preparing for training officials in the Roh government corresponded with those of the training systems in developed countries.

The government aims to develop talented and competent human resources that have the creativity to improve work performance and actively pursue goals of the organization. In order to produce such personnel, a fundamental reform of the training paradigm of the last 20 years was necessary. The basic courses of the reform were: reinforcement of the training infrastructure, reform of training & education programs, and active participation of officials.

The focus of reform education was adjusted from quantitative participation in reform to systematic education in accordance with the appropriate level of reform progress in each ministry. In addition, Action-based learning methodologies of leading companies that reinforced output-oriented training and problem-solving skills were introduced in public official training. These new methods encouraged trainees to find solutions to problems encountered in the actual working environment.

Despite the importance of officials in higher positions of public service, systematic training programs for those levels have been relatively limited. The essence of reforms in training systems for high-ranking officials is to develop distinctive training programs that strengthen their much needed capabilities such as conflict management or negotiation. The Central Officials Training Institute developed a program that can test and reinforce the ability needed in each individual worker, which will be expanded and applied further into training programs for officials in higher positions.

Efforts to create a culture for learning in the public service started in 1999 when the government began supporting research groups started voluntarily by civil servants. These research groups have brought significant progress in cultivating a learning culture and nowadays many attempts to institutionalize such movements are being made.

The changes in the international perspective of governmental personnel have shown the following pattern: personnel administration(1950~60s) → personnel management(1970s) → human resource management (1980~90s) → human capital management(2000s). Operating expenses for welfare, education, or other personnel expenses that had been perceived as ‘costs’ are now realized to be ‘investment’.

The task of promoting professionalism and competitiveness of training centers is composed of three needs: 1) the need to continuously expand the market for public official education, 2)

the need to increase exchange and cooperation with private education and training centers, and 3) the need to strengthen infrastructure.

### *Securing the Budget for Training & Education*

Compared to employee training in private companies, investment in training & education of government officials has been far from satisfactory. While the total government budget in 2003 increased 62% compared to 1998, expenditure on the training & education of government officials increased only 46%. Moreover, after the Korean financial crisis the number of officials' training centers has decreased.

**Table 5-10** ●● Comparison of the Government and Private Companies in Investment in Training & Education (2003)

Criterion	Government officials	100 major companies
Compared to labor costs	0.7%	1.66%
Expenses of Training & Education per worker	270thousand Korean won	730thousand Korean won

※ Officials: direct expenses for training & education of approximately 260,000 workers in 2003, excluding teachers and certain other positions.

※ 100 major companies: The direct costs of training & education at 26 sample companies out of 100 major companies in 2003

Noticing the downside of these situations, in 2005, the Civil Service Commission and the Ministry of Planning and Budget added an extra 15.45 billion Korean won on top of the existing budget for training & education. Government innovation calls for resourceful and sustainable learning on reform. In 2004, the government set a budget of 12.8 billion Korean won for the following year to train abilities to innovate administrative services.

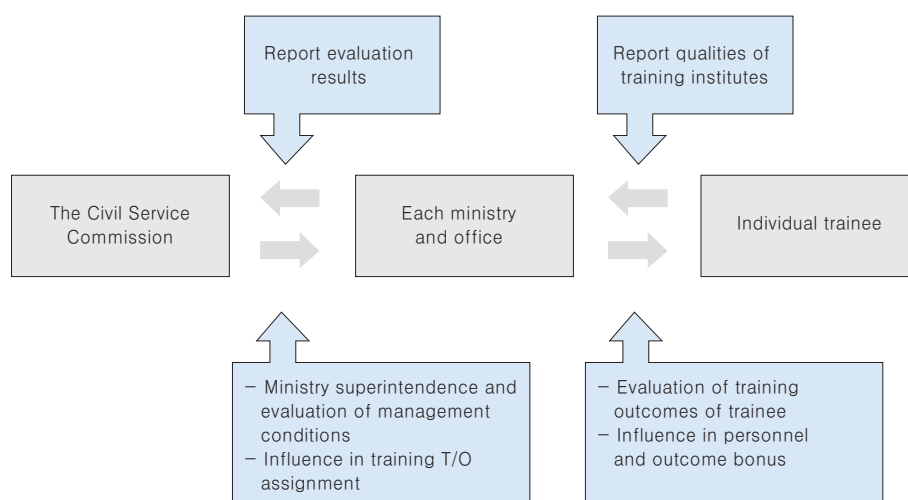
### *Reforms Accomplished*

The Civil Service Commission also works with other organizations, such as line ministry official training & education centers, universities, or private education centers. There are five categories of these commissioned education programs : 1) programs designed to strengthen leadership and policy management skills for high ranking officials such as directors and director-generals, 2) programs run by domestic universities, 3) language courses given by private education centers to cultivate professionals in the international arena, 4) professional programs of advanced educational content from the private sector and 5) online education using information technology in order to provide training opportunities regardless of time and place.

Online surveys and education advising systems were developed with the recognition that the government lacked a well-organized system that could examine the demand for training & education. The Civil Service Commission began developing these systems from 2004 and, in March 2005, the new systems were introduced on the Internet.

The Civil Service Commission is also working to improve systems of overseas training by institutionalizing screening procedures, supervising training processes, and evaluating outcomes of the training.

Figure 5-5 ● Training and Evaluation System



The Official Appointment Regulations were amended in January 2004, enforcing officials ranking level 4 or higher to receive training & education in order to obtain a promotion.

Table 5-11

● Criteria for Training & Education for Officials at Level 4 and Highers (as of 2005)

Level	Jan. 1, 2006~Dec. 31, 2007	From Jan. 1, 2008~
2	3points	5points
3	5points	8points
4	10points	15points

※ the Cabinet Minister may adjust required training & education within 1/3 of the criteria

Instead of granting points only on training & education held by professional training institutes, from Jan. 1, 2005, professional research activities conducted by public service workers that will contribute to the formation of a vigorous learning culture will also be approved for training & education points. Officials' participation in research groups will contribute to the formation of new models of learning.

As stated in the 2005 Guide for Training & Education of Government Officials', the Civil Service Commission appointed Chief Learning Officers (CLO) in ministries and offices to deal with the training & education duties in general. With the intention of institutionalizing such efforts, the Civil Service Commission plans to evaluate training & education performance of each ministry every year, or even legalize such measures if necessary.

Achievements in research group performance are now rewarded in the form of extra points of training, or the chance to take domestic or overseas research study courses.

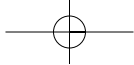
### *Plans for the Future*

Output-orientation implies a shift in the training & education paradigm. The new paradigm can be explained in three aspects: 1) that training & education should be interrelated with goals of the organization and individual capacity development, 2) education contents and methods must be useful for actual policy problems of the government, and 3) education systems must be developed based on a thorough diagnosis of the competency and needs of each individual.

Action Learning or problem-solving learning is a learning method that is gathering attention all over the world as a powerful tool for both private and public sectors. Working in small groups, people learn problem-solving skills that benefit each person as well as the organization as a whole.

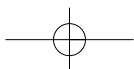
Action Learning was first introduced in Korea around the time Roh stepped into office. But, while it was an innovative and useful way of learning, it was new and unfamiliar and took a while to steadily set in as a training method in Korea. In applying Action Learning to the government sector, the following are necessary: 1) active support from ministers and vice-ministers to identify and solve policy problems, 2) selection of the appropriate learning content that corresponds to the characteristics of the government organization, 3) a competent facilitator that will generate the anticipated outcomes and 4) a demand analysis which will enable the selection of the best-fitting education program.

Recently, the concept of competency is growing popular in both public and private sectors. Developing a competency model is useful in various practices of personnel management such as employment, career management, education, evaluation, and compensation. With a systematic



focus on capabilities of the individual rather than the operation of the organization as a whole, which has been a typical approach of traditional training methods, competency-based curriculums can help overcome the gap between qualification and requirement.

The general steps in implanting a competency-based curriculum are as follow: 1) draw out a competency model with the knowledge, technique, and attitude the organization needs, 2) clarify the gap between the competency level required and an individual worker's status quo, and 3) develop various training & education systems and learning programs such as seminars, OJT, workshops, or lectures to narrow that gap.



## 2. Turkey's Status Quo

There have been various attempts to determine the problems in the Turkish public personnel management system and develop recommendations. One of the most prominent of such efforts is the report on improvement and restructuring of public administration prepared by the adhoc committee for the eighth five year national development plan. As stated in this report, public administrations' ability to fulfill duties in an efficient, productive and rapid manner is first of all dependent upon the existence of well qualified personnel. It is of great importance for all service units to have enough personnel with the necessary qualifications, who are continuously trained in line with scientific and technological advancements and are working in an environment that ensures a high level of motivation.

### 2. 1. Employment Policy

Employment policy can be examined under three headings: determination of the number of permanent positions, recruitment methods, and types of employment.

#### *Number of Positions*

In determining the number of permanent positions, there are multiple systems used as is the case with the compensation scheme. There are two major practices:

- For those public administrations that are bound by by-law no.190, the number of positions to be utilized by each administration is listed in an annex of this by-law. Utilization of these positions is subject to legislation through the parliament for central administrations. In the case of local administrations, a cabinet decision is required. A modification decision, usually in the form of an increase in the number of positions to be utilized by a central or local public administration, is generally not based on objective and sound criteria.
- In the case of other public institutions, which are not bound by by-law no.190, such as state owned enterprises (SOEs), the Central Bank, independent regulatory authorities, Turkish Radio and Television Agency (TRT), etc., the permanent positions are utilized within the framework of laws or cabinet decisions and the number of positions for each individual institution is stated in its own founding legislation. Again, there are almost no preliminary determined scientific and objective criteria for creating new positions.

Within the framework of previous unsuccessful reform efforts in the public administration

area, there have been attempts during the late 1990s and early 2000s to determine the optimal number of permanent positions that each administration should have. For this purpose, a large number of public administrations and the National Productivity Center carried out joint studies on norm cadre. However, there has been very limited success in implementing the results.

**Table 5-12** ●● Current Number of Civil Servants As of 2001<sup>1</sup>

<b>Grand Total</b>	3,075
<b>TOTAL</b>	2,576
<b>-SOEs</b>	499
<b>Civil Servant</b>	2,215
<b>-SOEs</b>	21
<b>Workers</b>	301
<b>-SOEs</b>	283
<b>Contracted personnel</b>	23
<b>-SOEs</b>	196
<b>Temporary personnel</b>	36

**Table 5-13** ●● Breakdown of Civil Servants by Central and Local Administrations As of 2001<sup>2</sup>

<b>Total</b>	287
<b>Central Government</b>	2,576
<b>Local Administrations</b>	2,289

1 \_ Excluding health, education and police. Source: TUSIAD, 2002.

2 \_ Excluding health, education and police, excluding state owned enterprises. Source: TUSIAD, 2002.

### *Recruitment Methods*

In Turkey, widespread clientalism and patronage in the recruitment of new civil servants has for many years undermined the achievement of qualified personnel. This led to low efficiency in many parts of the public sector and reduced confidence in the impartiality of decisions by public authorities.

The Turkish government shows a strong awareness of the need to address these issues. It took a major step in this direction in 1999, amending the by-law regulating public sector employment to improve the objectivity and consistency of the standards applied by ministries and allowing greater monitoring and control by the centre of government. Fundamental elements included:

1. Candidates take a general exam prepared by the Central Exam Unit (OSYM), an independent body attached to the Higher Education Council;

2. Individual agencies and departments send requests for new staff to the State Personnel Department;
3. The State Personnel Department allocates new staff slots to the applicant agencies and ministries;
4. The State Personnel Department publishes all vacancies;
5. Candidates apply for the vacancies to the State Personnel Department, which allocates candidates to vacancies according to an electronic system matching candidates' skills and exam scores with the requested skills profile.

A wide range of public sector agencies remain outside the scope of the by-law, including the armed forces, university lecturers, judges and public prosecutors. In addition, some public sector agencies and independent regulators have been exempted from the by-law. These bodies have—as required in their founding laws—set up specific tests relevant to their special skill requirements. However, these tests are also prepared or certified by the OSYM.

Also, some positions, known as exceptional positions for which recruitment can be done without any written exam or interview, are out of the scope of this system.

Despite these exemptions and limitations, the implementation of the by-law seems largely successful; notably, no central government agencies are exempt from its operations. It is likely that this success—perhaps surprising given that a by-law is a relatively weak requirement in the Turkish legal culture—is largely the result of the strong and continued support for it at the highest political levels.

### *Types of Employment*

Currently, there are four main employment types in public administrations and agencies. These personnel are classified as civil servants (mainly governed by Law no.657), contracted personnel, workers (permanent and temporary), and temporary personnel. It is a common practice that, for any given administration, a mix of all types of personnel is employed and there are differences among administrations in terms of utilizing these types of personnel.

## 2.2. Other Personnel Issues

### *Classification*

Personnel who are subject to the law 657, judges and public prosecutors, professors and academic personnel in public universities who are bound by the Higher Education Law,

personnel of the SOEs and other public administrations' personnel are classified in various ways specific to each group.

Current classifications do not meet the demand in terms of quality and quantity. Professions and areas of expertise are grouped together in such a way that their specifications are lost. Therefore, integrity and similarity within the groups is weak. Each group's level of responsibility and difficulty is not specified. Similar professions and professions that require similar qualifications are not grouped together.

### *Career and merit*

In Turkey, general practice is that, quite often, while recruiting or appointing personnel or even managers in public administrations and public institutions, criteria such as educational background, previous performance and success record or ability to accomplish the tasks required by the position are not taken into account. Consequently, this practice results in service below the desired level.

Advancement within a class and promotions are not directly based on personnel records. Personnel records, consisting of a questionnaire filled out by the immediate manager, are not designed to measure performance.

### *Compensation regime*

There is not a unified compensation system based on a single legislation used throughout the public sector. Moreover, compensation is provided on a fixed basis, not in a manner that is adjusted as a function of success level or qualities required for good performance. Only personnel listed in table II of SOE's personnel legislation are subject to an additional payment based on personnel records. However, such an exercise is not put into practice for the rest of the public personnel.

Compensation of public personnel presents some variation based on the different legislation they are subject to. These laws are:

- Law no. 657 on Civil Servants (main personnel law)
- Law no. 2802 on Judges and Public Prosecutors,
- Law no. 2914 on Higher Education,
- Law no. 926 on Turkish Armed Forces Personnel,
- By-law no. 399, which governs other public personnel and public workers (SOEs).

Although the compensation schemes for the above mentioned personnel groups are different, the ranking system is based on the principles of the main personnel law (657). Only those

personnel who are subject to table II of by-law no.399 are excluded from the ranking system. Personnel under table I of SOEs are also subject to the same ranking system as the rest of the public personnel.

The fundamental principle of law no.657, and other laws based on it, is that compensation is calculated as a function of rank, which in turn is tied to a salary indicator. The salary indicator is multiplied by a specific coefficient in order to find the amount of compensation. This amount, named basic pay, has come down to a low level over the years. Thus, many additional payment components emerged under various names such as basis pay, seniority pay, special service compensation, post compensation, additional compensation, and other compensations and increases. In aggregate, additional and supplementary payments amount to a few multiples of the basic pay. Also, other types of compensation provided on an institutional basis caused a disparity among public administrations. As a result, classification and ranking lost its significance in terms of compensation, while pay levels for medium to lower ranked civil servants dropped to very low levels. A large proportion of civil servants in the public sector are living below minimum living standards, some even two to three times below the poverty threshold.

Some proposed solutions to overcome the problems related to personnel management can be summarized as follows:

- 128<sup>th</sup> article of the Constitution mentions civil servants and other public personnel, but does not provide further explanation of these terms. Civil servant concept has to be redefined in an explicit manner and a compensation scheme should be redesigned according to the new definitions of civil servants and other public personnel,
- Overcome the disparities in public institutions,
- Workers in the public sector should be redefined, and assigning the same type of job to both public workers and civil servants should be avoided,
- Compensation disparity between public workers and civil servants, which is in favor of public workers, should be abolished,
- Provide more say to civil servants in determining compensation levels by legalizing unions,
- Changing the current personnel record system with a performance management system that can reflect level of success, innovative attributes, allowing the introduction of a bonus system based on this evaluation,
- Streamlining the compensation system which is currently composed of one hundred different payment components,
- Simplification of the legislation on public personnel through a united system and a single personnel law, preparations for which are carried out with the involvement and participation of all stakeholders and related groups.

These proposals to remedy the distorted personnel management system have been long proposed, but there has been very limited success during the last two decades in terms of realizing personnel reform.

### *Unions and political rights*

There is a dual structure in terms of organization of public personnel. Public workers are enjoying trade union rights in a free manner at par with private sector workers. On the other hand, civil servant unions have no say in determining compensation. Civil servants' compensation scheme and increase levels are unilaterally determined by the central government. These types of unions have been legalized without a right to strike, through an amendment of the 53rd article of the Constitution; nonetheless, there is not a specific legislation on the availability of collective talks.

### *Retirement*

Due to varying legal status of different groups of public personnel, different compensation schemes, and different affiliated social security institutions, there are variations in social rights during both in-service and retirement periods. There are large disparities among civil servants in terms of pension funds and retirement pay, which is a reflection of the distorted compensation scheme.

### *In-Service Training*

Public administrations and public institutions are facing problems of in-service training due to budget constraints and unavailability of qualified trainers. Organized training programs are insufficient in raising high level managers since an appropriate training needs-assessment has not been carried out. There are no ties between promotion and the amount of training personnel have gone through. Although there is an expressed need for a public administration academy for the purpose of training high level managers, it has not been realized yet. The Institute of Public Administration (TODAIE) is offering masters and PhD degrees for civil servants. However, this institute is not very much involved in designing in-service training programs.

## 3. Policy Recommendations for Turkey

In Turkey, the new Public Personnel Law was drafted in late 2004, but has not been legislated yet. The underlying principles of the new law are merit-based recruiting and promotion, performance-based pay system, creating job definitions, norm cadre implementation, and a simplified classification of public workers.

There are objections to the draft law raised by various groups of public personnel, especially the military personnel, as well as judges and prosecutors. There are obvious difficulties arising from attempting to unify a number of different personnel regimes into a single bill. The new Public Personnel Draft Law has many areas that should be improved. Here in this chapter, policy recommendations for each provision of the law will be offered.

### 3.1. Employment Policy

#### *Recruitment*

The draft Law says, “Those who will be recruited as first time public servants or contracted personnel must take and pass the written exam conducted centrally nation-wide”. This is a way to enhance transparency in the recruiting process. Since Turkey has suffered from widespread clientalism and patronage in the recruitment of new civil servants, this exam-based entry system to the government has many positive aspects. However, it also should be noted that this exam-based recruitment system is not appropriate for a new entry to mid or high level positions. To accommodate this limitation, exceptions are listed in the draft law, and those exceptions listed are all very high positions such as Ministerial or Vice-Ministerial posts.

The national exam is a fair and transparent screening device for young entrants. However, this recruiting system is a closed one, and it is not effective in maintaining competitiveness of civil servants. If one of two preconditions, competitive pressure and fair selection process for director-generals or above are not met, Turkey may want to introduce a new system such as SCS (Senior Civil Service).

SCS was first started in the U.S. in 1978 under the name of SES (Senior Executive Service), and was introduced in Korea starting in July, 2006. The main features of Korea’s SCS are as follows:

First, director-generals or above will be managed centrally by CSC. This means that a director-general position in ministry A can be staffed from ministry B or C. A Minister selects 3 candidates from the applicants in the SCS pool, and the Civil Service Commission is to select one among those candidates. Of course, candidates from that ministry will have an edge in relevant knowledge and experience, but a candidate from the other ministry with a broader perspective may be selected. This government-wide management of high-positioned civil servants will be an effective tool to check civil servants following their own ministry's interest and not the national interest. As a result, the wall between ministries will be weakened.

Second, there will be no distinction among degree 1~3 of the old system. In Korea, degree 1 is appointed to an assistant minister and degree 2 and 3 to a director-general. However, any senior civil servant can be appointed to an assistant minister or director-general position. This will increase competition among civil servants and make exceptionally speedy promotion possible.

Third, SCS members will be under performance management and competency development. There will be a very tough screening process for SCS candidates, and those who are in the SCS pool are considered the core group in the Korean government. A performance management system will be applied, which opens an exit path based on their performance for the first time in Korean administration.

Fourth, SCS members will be guaranteed their retirement age. The retirement age for higher civil servants has not been observed. Since Korean civil servants generally have only 1~2 years of tenure in positions at or above director-general, after serving as assistant minister for equivalent time, they had to leave the government in their early 50s, well before the retirement age of 60. Since there will be no distinction among degree 1~3 under SCS, a SCS can be appointed to other positions that he/she could not be in the past.

Together with SCS, an open system will be jointly applied. Since 1999, 20% of director-general or director level positions, currently numbering 153, should be appointed through open competition with candidates from the private sector. The appointee works under a 3 year renewable contract. Civil servants can of course apply for the open competition, and they were generally winners in the competition in the beginning. Around the year 2000, the ratio of civil servant winners was 85~90%, but now it is down to around 55%. Of course, there is some home court advantage for civil servants, but a more important reason for such a high ratio is that applicants from the private sector are not very competitive. There are many reasons why specialists in the private sector are not applying for those jobs. One is labor market inflexibility; if you cannot get a job easily after your service in the government, it will be hard to apply for the job. Another reason is obviously the low monetary compensation in the government. The third is the still conservative working environment in the government, which makes it hard for a

newcomer to adjust and perform well.

Geographical location is also very important. The draft Law of Turkey says “Appointment change of location shall be conducted in a just and balanced system between regions by grouping provinces similar in terms of economic-transport conditions.” This provision is an overly centralized system and, especially when there is a regional disparity in the preference of geographical location, it is hard to please people who are sent to unwanted areas. If a government cannot please internal customers, it is hard to please the main customers, citizens.

Korea has a centrally administered exam with location specification. Those who pass this exam are supposed to work only in the specified provinces. In 2006, 43 people for 5th degree, and 830 for 7th or 9th will be recruited through this location-specified national exam.

There are some problems in Korea’s system too. Those who pass the exam with specified location are to work in municipalities but try to move to provinces, higher level local government to create more promotion opportunity. Therefore, the specification should not be too narrow.

### *Contracted Personnel*

The draft Law defines contracted personnel: “They are personnel who are employed full time or part time... by a contract... to perform services which do not have to be performed by public servants.” This definition is not only very vague but also creates unnecessary misunderstanding of the role of public servants.

The current jobs of the contracted personnel, however, are not different from those of the public servants. Despite the division of status, there is no differentiation in personnel treatment between the public servants and the contracted personnel except payment structure; contracted personnel tend to get higher financial compensation than public servants. Of course, contracted personnel have renewable contracts and, therefore, have less job security than public servants. However, the contract is renewed almost automatically. Therefore, there is little difference in job security either.

In Korea, there are two kinds of contracted civil servants: Regular civil servants by contract and technical civil servants by contract. Regular civil servants by contract have been introduced to bring competition to the government. When a specialist in the private sector gets a government job through the open system, he/she becomes a regular civil servant by contract. There is no difference in their work from career civil servants. His/Her salary is slightly higher than career civil servants, and he/she generally stays in that position for 3~6 years. After the service, a regular civil servant moves either to another government position or to the private sector.

Technical civil servants by contract, on the other hand, are for positions that require special technique and knowledge, such as helicopter pilots in the Forest Administration. Their contracts tend to be renewed unless there are special problems.

Contracted personnel in Turkey should be divided into different groups, and different prescriptions should be offered to each group. For contracted personnel working as researchers, Turkey needs to establish a government-funded research institute like KDI (Korea Development Institute). To support the government's policy decision, extensive and intensive research is necessary, which can only be supported by highly-paid researchers. Considering the low payment level for Turkish government officials, it is not easy to recruit researchers of high caliber. Therefore, Turkey needs to have a government think-tank that supports all government ministries.

Contracted personnel in the decision making process, just like the other public servants, should be transferred to regular public servants. When they are doing similar jobs to public servants, there is no reason to differentiate them in terms of their status or payment. Another option is to convert those contracted personnel to regular civil servants by contract like the one in Korea. This will be a conduit to introduce high caliber personnel from the private sector to the government. However, since government jobs are very much preferred in Turkey, and since there are many highly capable employees in the government, the second option will most likely lead to a possibility of patronage.

### *The Number of Public Personnel*

There is no legal provision in Turkey to examine the adequate number of civil servants. We need to ask whether the current size of the Turkish government is adequate in terms of its number of staff.

In Korea, from 1998~2002, 10% of civil servants were reduced, generally through early retirement. Korea still has some slack, mostly in local branches and attached agencies of ministries. Also, 30% of staff in state-owned enterprises have been reduced, mainly through privatization and outsourcing during the same period.

The Turkish government, including SOEs, has more than 3 million staff. Since the roles of the governments differ from one country to another, it is hard to say that this number is too large for Turkey. However, Turkey needs an extensive examination of the optimal number of government employees. Of course, well-known restructuring methods such as outsourcing, privatization, contract-out, as well as deregulation, should be widely employed to diminish the size of the public sector.

It is also very important to reallocate personnel within a ministry in order to meet new administrative demand. When there is such a new demand for staff, a ministry simply asks for an increase in staff without considering reallocation of human resources within a ministry. There will always be a function of government that is no longer important. Therefore, each ministry should analyze its optimal size through a consulting firm before employing more staff.

## 3.2. Evaluation and Consequences

### *Evaluation*

The draft law classifies evaluation into 5 categories: Unsatisfactory (0~59 points, Negative), Needs improvement (60~69), Satisfactory (70~79), Good (80~89), Very good (90~100). This is an absolute evaluation, and thus creates no rankings among employees. Almost all staff members are evaluated as very good with few exceptions. Those who have worked on personnel evaluation matters can hardly remember any evaluation case of unsatisfactory in their entire career.

The Turkish government needs to introduce a relative evaluation system such as the best 10%, very good 40%, good 40%, and poor 10%. In this system, an evaluator should first divide his/her staff into two categories with a 50:50 ratio and then select the best and the poor among each category. This evaluation should be the basis for personnel decisions such as advancement, promotion and bonus payment.

At the same time, this paper recommends introducing a multi-dimensional evaluation. It is rather risky to introduce the multi-dimensional evaluation, so we need a phased approach. First, introduce the multi-dimensional evaluation but report the result to each individual for self-development purposes. The result should not to be reflected explicitly in personnel decisions during this first phase.

Second, start performance management by setting a target and link the multi-dimensional evaluation result to any kind of compensation to each individual. During this time, the separate evaluation system by a boss determines advancement, promotion and accumulative annual bonus salary. The evaluation by the boss is recommended to be relative so that it can generate ranking.

In the third phase, it is better to incorporate the two evaluation systems, that is, to formulate a multi-dimensional and relative evaluation that is used as a basis for not only setting bonus pay but also for advancement and promotion decision. It goes without saying that the success of the

evaluation system depends on training the employees so that they can fully understand the system.

### *Reward and Penalty*

Though evaluation should be linked with consequences, the draft law has neither non-financial or financial consequences. The draft Law states: “Those who work three years in the present step (1~10) shall be considered to have moved to a higher step unless their evaluation is negative (0~59 points).” However, as was discussed above, negative evaluation has never happened before. Even Satisfactory (70~79) evaluation is not very common, and most of the evaluations are either Good or Very Good. Accordingly, this provision will not work as a competitive pressure. Advancement, therefore, has been considered an automatic process. With the relative evaluation system suggested above, this provision should be changed to: “Those who work three years at the present step (1~10) shall be considered to have moved to a higher step unless their evaluation is Poor (the bottom 10%, for instance).”

The only consequence in the draft law is that “those public servants whose evaluation is negative (0~59) three years in a row and four times within 10 years are dismissed and never return.” Again, this is practically ineffective because there will be no one who will be given a negative evaluation. It is important to create a precedent. I suggest replacing the ‘negative’ with ‘poor 10%’ as was explained above. ‘Never return’ seems to be a little too strong, and had better be dropped from the law.

There is no explicit provision for reward in personnel decisions either. The best 10% should be given priority in promotion. The next 40% should be given the next priority on the waiting list for promotion.

Moral incentives also constitute non-financial reward as is stated in the draft law as: “Those who perform their duties through extraordinary effort and work can be given commendations by supervisors, and are announced through the media.” There is an unclear connection between the evaluation system and such a provision, for it only says extraordinary effort. The best 10% in the relative evaluation system could be the beneficiaries of the commendation provision. The criteria, which is an effort in the draft law, should also be changed to performance criteria.

As for financial consequence, the draft Law says “Monthly performance pay may be made within the year following the evaluation... not to exceed five percent of the basic salary.” However, the maximum level of five percent can hardly make a difference, and performance pay cannot work as an incentive scheme under the current draft law. However, the recommendation of this paper for the Turkish government is that the adoption of performance pay should be gradual.

Due to resistance in the public sector, the Korean government has made the distribution less competitive since the beginning of non-cumulative performance pay in 2000.

### 3.3. Training

The draft Law states “No education centers or facilities may be opened in order to provide in-service training. These needs may be met by procurement of services.” This provision is very cost effective if there are enough private providers that can meet the needs of the government. Also, financial capacity is another hurdle for the training system in Turkey. However, training institutes in the private sector and universities are not focusing on the short-term training programs that are necessary for civil servants. This paper suggests strengthening short-term training programs for both central and local government officials.

The draft Law says: “The State Personnel Administration (SPA) is charged with the duty of … training programs inside and outside the country… supervising such activities.” However, there is no specific regulation for domestic training, which is less attractive than international training for both a trainee and his boss. Therefore, Turkey needs to adopt minimum annual short-term training hours required for promotion. Also, SPA needs to evaluate the performance of each line ministry’s training achievements in order to facilitate domestic education.

As for overseas training, the draft Law states: “Public servants whose candidacy has ended may be dispatched abroad for less than a year… by being successful in the competitive exams administered by their institutions.” However, there are several problems with this provision: first, the cost effectiveness of this universal overseas training should be reviewed. Second, going abroad right after candidacy may be less effective. In Korea, public servants are dispatched after several years of service, which is a good way to make applicants have a clearer purpose of study. Third, the selection criteria should include performance evaluation within each ministry in a more explicit manner. Fourth, there should be competition not only within a ministry but also across ministries, and there should be both ministerial quotas and open competition across ministries.

## Part B: Empowerment to Local Governments

# 1. Korean Experiences

## 1.1. History of Local Governance in Korea

Unlike the previous Koryo Dynasty, the Josun Dynasty (1392~1910) was a centralized state, and the King dispatched governors and mayors to each local government. However, there were many self-governing organizations in the grass-roots local government. During Japanese colonization (1910~1945), local councils were first introduced in which some of the members were elected by people paying local tax. The council was not like that of a modern democratic state, but was just an advisory committee to local governments.

A Local Government Act (LGA), a legal foundation for local autonomy, was first introduced in 1946, a year after the liberalization from Japanese colonization. There are three levels of local government: (1) 7 Metropolitan City and 9 Do (province), (2) City, and (3) Dong. The heads of each level of government are called governors, mayors and chiefs in that order. Governors of metropolitan cities were supposed to be appointed by the President, whereas city mayors were to be chosen by the local council elected by the people. Dong chiefs were to be appointed by city mayors. The first local election, however, was not held until 1952 in the middle of the Korean War. Through the revision of the LGA in 1956, the city mayors started to be elected by a direct vote of the people, not by the local council. The dictatorship led by President Rhee was losing people's support toward the end of the 1950s, and changed the LGA again in 1958, so that city mayors were appointed by the President.

A new democratic government established by the Citizen's Revolution of April 19th, 1960 revised the LGA in a way that governors, mayors and dong chiefs were all directly elected by the people. These elected heads of local governments did not, however, have a chance to serve due to a military coupe that occurred a year later. They abolished all local elections and established a hierarchical structure as practiced in the army. The president appointed governors, and they appointed mayors who in turn chose dong chiefs. All local councils were, of course, abolished.

Autonomy for local governments was not an attractive agenda for the ruling party and the President. Local elections were reinstated during the 1990s, 30 years after the military coupe. The 1991 the election for city and metropolitan city councils was the ice breaker followed by

the 1995 election for governors and mayors. Governors and mayors as well as city councils of provinces and cities are all elected by people's direct votes now in Korea.

## 1.2. Administrative Empowerment

A local government in Korea cannot form an independent court and, in this respect, does not have judicial power independent from the central government. In the constitution, however, local government has independent power of legislation and administration, including fiscal management, to the extent that relevant law permits. Therefore, the self-governance of a local government is still heavily dependent upon the willingness of the central government.

There are two types of administrative empowerment: positive system and negative system. In the positive system, the national parliament enacts special laws that specify administrative jurisdiction of each local government. Since the job of local government is clearly stated in the law, it is hard to have flexibility in its operation. But, in a way, this system strengthens local autonomy since it prevents the central government from intervening in local jurisdiction on the specified areas of responsibilities. In the negative system, local government's jurisdiction is very broadly described so that it can cover almost any administrative need. Due to its vagueness, however, it also leaves room for intervention by the central government.

Korea has a mixture of positive and negative system. The LGA indicates, "Local government takes care of its administrative duties in its jurisdiction, and the duties are, for instance, as follows." It illustrates 6 areas and 57 duties in order to be a little bit more specific than the negative system. The 6 areas are: administration of its jurisdiction, including imposition of local tax, welfare of the residents, industrial and agricultural promotion, regional development and amenities, education and culture promotion, and regional emergency. It also illustrates around 40 duties of metropolitan cities that can be handled by cities of more than half a million in population.

There are two principles when distributing duties between local and central government. First, local government should be given priority in determining jurisdiction of a duty unless it is specified as that of the central government. This principle also holds true between local governments; priority of cities over metropolitan cities. This principle was first introduced in LGA in 1998, and has a symbolic meaning in the history of local autonomy. Second, when a duty is transferred to a local government, other related responsibilities should also be transferred for consistent and efficient administration.

There are two kinds of duties of local governments: its own duties and those authorized by

the state. The state may authorize a certain duty either to a local government or to a head of a local government. The former type of authorization applies to a duty with a local rather than national emphasis such as running a public health center or a disaster relief center. Necessary costs are shared between the state and local governments, and the control of the state is generally ex-post, instead, local councils are actively involved in the process.

The latter type is a duty with a national rather than local emphasis such as conservation of natural treasure or management of potential military resources. The necessary costs are generally borne by the state, and the central government's control is therefore very tight, whereas a local council does not have a say in the process.

Many ministries and agencies in the central government have local branches. Some examples are Ministry of Construction & Transportation, Ministry of Environment, Ministry of Fisheries and Maritime Affairs, and Korea Food & Drug Administration. There has been heated discussion on whether to transfer the power of those branches to local governments. The central government is reluctant to grant such empowerment.

The Kim, Dae-Jung Administration (1998~2003) selected devolution to local governments as one of a hundred reform agenda and enacted the law for administrative transfer to local governments in January 1999. To push his agenda, former president Kim established a special committee for local devolution chaired by the Prime Minister and consisting of academics, civil society, and central and local government. The current Roh Moo-Hyun government has strongly emphasized the local empowerment to best meet the people's grass-roots needs.

During the past 6 years, the special committee reviewed 5,194 duties of the state as candidates, and chose 1,305 to be transferred to local government. As of August, 2005, 918 local devolutions completed a legal amendment, and the remaining 397 laws are to be reviewed in the National Congress. The most heated discussion is on education and police service. They are currently provided by the state, and the government is trying to expand the administrative and financial role of local governments.

## 1.3. Financial Empowerment

### *Local Tax*

There are 17 local taxes in Korea. There are other revenue sources for local government, such as bonds and other charges and fees. The four taxes are for municipalities under metropolitan cities and the other 13 are for metropolitan cities. A municipality under a province, however, has 10 local taxes. The municipalities in a metropolitan city have more financial resources in general than a municipality in a province; and metropolitan cities have smaller territories than a province, which implies more administrative role for metropolitan cities than for a province. That's why a metropolitan city has more taxes than a province.

- 1) Acquisition tax: when one buys real estate, a car, golf club membership, ship etc.
- 2) Registration tax: when registering a change of property rights to a public ownership book
- 3) License tax: on those who get a license from the local government
- 4) Auto and horse racing tax: to the owner of the race to the total ticket sales
- 5) Inhabitants' tax: on all residents and corporations within a local government
- 6) Property tax: on possession of buildings, ships, airplanes etc.
- 7) Integrated land tax: on possession of land
- 8) Automobile tax
- 9) Fuel tax: on gasoline and other fuels for automobiles
- 10) Farmland income tax: on the profits from crop farming, the smallest amount
- 11) Cigarette consumption tax
- 12) Butcher's tax: on those who run a butcher shop
- 13) Common facility tax: on the beneficiaries of amenities such as sewage
- 14) City planning tax: on land or buildings within the zone set by law
- 15) Business tax: on the owner of business for environmental expenditure only
- 16) Regional development tax: on mining or harbor container business
- 17) Local education tax

The ratio of local taxes out of the total tax revenue is only 21% as of 2006. Also, most local taxes are levied on property and take up around 60% of the total revenue from local taxes. However, in other countries such as Japan and Germany who started local autonomy much earlier, taxes on income take up 50~60%.

### *Fiscal Transfer from the State*

There are two kinds of fiscal transfer from the state to local governments. First, a treasury subsidy is a transfer from the state to a local government to accomplish a specific project, so it

is an ear-marked transfer. The state generally requires a matching fund by a local government. The subsidy, therefore, tends to infringe on the autonomy of a local government. The total amount of the treasury subsidy was around 13 billion U.S. dollars for 533 projects in 2004.

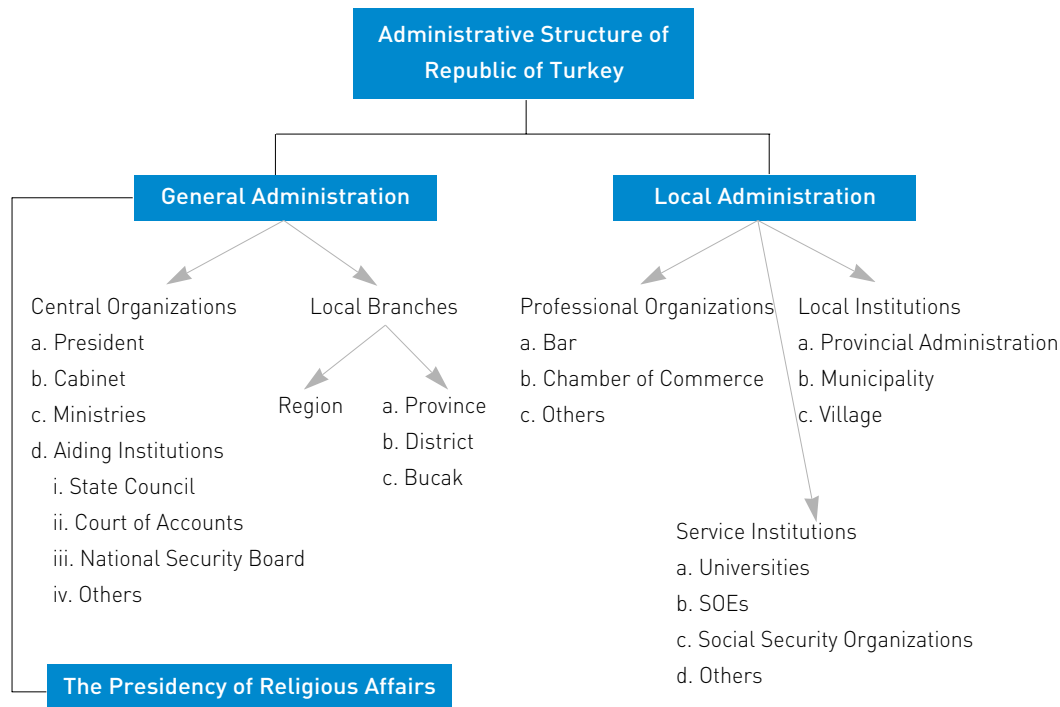
Korea recently adopted a special account for national balanced development. The account will be used for regional development and innovation. The central government formulates a budget plan for the special account based on each local government's need, fiscal condition and performance in past projects. In that the budget transfer will be made to specific projects, this account is similar to the subsidy explained above but the degree of expenditure empowerment is higher in the case of the account.

The second type of transfer is a local grant that is given to all local governments. The local grant is money without strings, and 19.24% of national tax is distributed to each local government based on its population and other considerations. Thirty seven percent of local governments' budget depends on those two types of transfers from the central government.

Financial independence of local governments varies a lot: The Metropolitan City of Seoul has around 93% independence ratio when the lowest level of one municipality shows only 7.8% as of 2006.

## 2. Turkey's Status Quo: Overview of Reform Efforts

Figure 5-6 ●● Administrative Structure of Turkey



A highly centralized, lowly efficient and closed administrative system has been subjected to intense public scrutiny and debate. The outcome of this debate, together with the galvanizing effect of potential E.U. accession and the importance placed by the E.U. on local self-governance, is that Turkey is in the process of fragmenting the state decision making processes down to the lowest feasible level. It is not a quiet revolution and the changes being undertaken and envisaged, if successful and accepted, will catapult Turkey into the forefront of modern European statehood. This would be a massive shift from the prevailing situation that has built up since the fall of the Ottoman empire, during which time state centralization was regarded as absolutely necessary in preserving the coherence of Turkey.

There are various legislative attempts aiming at reforming the local administrations with the major underlying motive of delegating more to the local level. The laws on Municipalities,

Metropolitan Municipalities, Provincial Administrations and Local Authority Associations have all been enacted. The Revenue Law and the Law on Villages are in progress. Unfortunately, the Public Administration Framework Law, intended to be the centralizing force of administration reform, has been vetoed by the President and is back with Parliament.

“Draft Law on Main Principles and Restructuring of Public Administration”, also known as the “Public Administration Framework Law”, determines the duties and functions of the central government and transfers all remaining tasks and services of local communal nature to the local governments. It improves strategy development, general coordination and guiding capacity of central administrations and emphasizes initiative taking and operational flexibility of local administrations. However, this law was vetoed by the President in 2004.

Provincial Administration Law, which was enacted in February 2005, determines the main areas of service, giving full responsibility for all services of local communal nature where no other administration is explicitly assigned. Strategic planning was chosen as the main tool of management in provincial administrations. Also, the Governor is no longer stated as head of the elected provincial assembly.

With the Municipality Law, which was enacted in July 2005, the minimum population requirement to establish a municipality increased to 5000, which had been 2000 up until then. The old Municipality Law did not include rules for abolishing municipalities. Due to this deficiency, municipalities whose populations dropped to fewer than 2000, especially because of migration, still existed. However, the new law set rules for abolishing such municipalities. This new law also increases the transparency of assembly decisions. Another innovation of the new law is setting up an internal audit mechanism in the municipalities that have populations over 10000. Moreover, strategic planning was chosen as the main tool of management in municipalities as well. With the Metropolitan Municipality Law, which was enacted in July 2004, the minimum population requirement was set at 750000.

The regulations about administrative responsibilities and structure of local administrations mentioned above are aimed at delegating more to the local level. However, along with these increased responsibilities, there is also an urgent need to re-arrange the financial situation of local administrations. Consequently, a draft law on “Revenues of Local Administrations and Intergovernmental Fiscal Transfers” is under discussion. This draft legislation classifies municipalities into 5 groups, and 3 sub-groups within each group with respect to level of development in order to differentiate among municipalities in terms of local tax rates. Some of the major changes are as follows:

- Some locally collected taxes (collected by the central government) are transferred to municipalities,

- Various dysfunctional taxes and fees are abolished,
- Tourist tax will be introduced,
- Exemptions from taxes and fees are reduced to a minimum,
- Revenue sharing rules in metropolitan municipalities among the metropolitan and district municipalities are set,
- Rules for deductions on municipality revenues are set, all other transfers from various ministries' budgets are consolidated into a single transfer to be made from the MoF budget for municipalities with fewer than 10,000 inhabitants,
- Revenue sources such as taxes, fees, etc. for provincial administrations are specified (for areas outside municipality borders),
- New criteria for revenue distribution in addition to population (such as surface area, performance, rural population, development index, ratio of local taxes to total, ratio of own revenues to total revenues, etc.) are introduced.

The current situation is still in a high state of flux, not surprising given the scale of the changes envisaged, and tensions and uncertainties abound. Politicians and administrative personnel will find it very difficult to accept the impact that the changes could have and are having on their positions and privileges.

## 3. Policy Recommendations for Turkey

### 3.1. Administrative Aspects

#### *Less control and more empowerment*

Less control by the central government and more empowerment from the center has been a trend in many countries, including Korea. Turkey is also making such efforts: (1) Transfer all local branches of ministries to local government, (2) Make it easier for municipalities to increase/decrease taxes and fees related to investments and services (3) Reduce municipal administrative control that delays services or increases costs.

Currently, core municipal services in Turkey include transportation, water and waste management, but their role is relatively limited. Turkey will have to consider increasing the level of municipal responsibility. However, the decision on when and what role to transfer to municipalities should be made with caution.

Since 1998, Korea has strongly pushed this agenda of local empowerment by forming a Special Committee for Local Empowerment that consists of central and local government and specialists in the private sector. The principle was to give all the administrative duties to the local government except those which should not be. There are, however, some lessons to learn from Korean experiences. When the Korean government transferred its environment compliance function to local governments, there were some problems because local governments were more interested in taxes from the manufacturer than better environments. It was not easy for citizens to realize the bad influence of loose environmental protection. Therefore, the central government took the role of environment compliance back partially and later returned it to the local government in 2002.

There are three reasons why a certain duty has to be performed by central government rather than local: specialty, national consistency and incentive. First, civil servants rotate in a local government, which makes it hard for them to be well trained. In the local branch of the central government, civil servants rotate to the other divisions within that ministry. Second, for consistent policies throughout all regions in Turkey a central government needs to maintain some functions. Third, if local government does not have an incentive to exercise a transferred duty, the central government should assume it.

The Turkish government needs to start transferring administrative duties that local government is ready to assume, but should not wait until they are fully ready. Learning by doing

is a very important method in the duty transfer. It should be noted that the objective is better and more efficient service to the people, and not the transfer itself.

One of the issues in local empowerment is the cost in carrying out the empowered responsibilities. When a central government transfers a certain duty, it may transfer duty only, but it may also transfer running costs or staff. There are four different types of transfer: duty only, duty + running costs, duty + staff, duty + costs + staff. There should be a case-by-case review for each duty. There is a need for personnel exchanges between central and local government to mitigate the resistance from central government staff who are transferred to the local government.

The empowerment does not have to be uniform across municipalities. Sometimes, it is better to start from the municipalities with higher fiscal independence. In Korea, wealthy municipalities, for they already have enough tax revenues, tend to lower the real estate tax rate, which results in a very regressive tax scheme.

In order to reduce control by the central government, it is very important to reduce local government's dependence on the state regarding interpretation of legal provisions. The local government in Korea asks too many official questions to the center in order to get away from possible responsibility. A clearer provision in the laws, therefore, will enhance the autonomy of local government.

### *Increase Performance Monitoring*

Less control and more empowerment should be coupled with increased performance monitoring. The Ministry of Interior of Turkey is establishing a performance monitoring system that would enable cross-municipal comparisons and assessments of best practices.

In Korea, MOGAHA (Korea's MoI) evaluates each province's performance, with publicity being a reward, which is a big incentive for the governors of the provinces because they are elected officials. In Turkey, however, publicity may not be a strong incentive, since a governor of a province is appointed rather than elected. Therefore, Turkey needs to come up with a new reward/penalty system.

As for consequences, promotion and reappointment is the most effective tool. Since personnel decisions on high ranking officials involve many factors, sometimes it is easy to forget the result of the evaluation. Korea, in 1998, when the government evaluated CEOs of state-owned enterprises regarding their reformative attitude, made a mistake by offering the worst three CEOs a reward, such as promotion to minister and vice-minister, rather than a penalty. There were other political factors for the President other than evaluation results that led

to this decision. However, if evaluation does not create consequences, it does not produce intended results.

Every year since 1998, Korea has analyzed the fiscal status of local governments. The Korean government often varies its financial transfer to local governments depending on the evaluations. It is called the Fiscal Analysis system for local government. Those with good evaluations receive an incentive, more fiscal transfer from the central government, and those with bad performance are to submit improvement plans. However, the fiscal transfer from the central government should not be a leverage in Turkey for sometime.

This paper also suggests a public monitoring system through transparent performance information. A local government needs to involve citizens in the planning, budgeting and also monitoring processes. The need for this participatory planning is more emphasized in local governments than in central government because the central government is already under scrutiny by the press.

This paper suggests a scenario workshop, which started in Denmark in 1991 in the areas of Ecology, Library, and Education. Korea has not tried this type of participatory planning yet. It is generally a 1~2 day-workshop that discusses a scenario and action plan. The purpose of this workshop is to formulate a development plan for local government with participation of citizens, civil servants, firms and specialists. Around 20 people gather to discuss the development plan that is best for a municipality. It is generally a closed session with invited participants, but the results of the workshop are open to the public. Participatory planning is a way to introduce citizens' power into the monitoring system.

The Korean government also introduced a touch of participatory budgeting and monitoring. Annually, they try a poll on the Internet homepage asking people's and specialists' opinions on budget priorities. Also, they have a Budget Misuse Report Center on the Internet homepage and established a special team to deal with those reports. This is a good example that citizens' participation strengthens a monitoring system.

## 3.2. Financial Aspects

### *Expand Financial Accountability*

Financial accountability, public procurement, accounting standards and budget classification needs to be implemented at the local as well as the central level. In Korea, a local fiscal information system is underway, which will enhance the financial accountability of the local government. The central government of Korea is currently developing the information system

and will disseminate it for free to local governments starting a pilot-study in 2006. It will be fully in place by 2008.

In terms of procurement system, the government e-procurement system in Korea (G2B) is worth noting. First launched in 2002, it is a single window for public procurement which digitalized the entire process from order to payment for all public organizations. All public entities, including local governments, should use this electronic G2B system, and it contributed a great deal to transparent procurement administration. During the year 2004~2005, the government advanced the G2B toward a more customer-oriented and ubiquitous system connected to PDA.

One of the ways to expand financial accountability is to tie fiscal transfer from the central government to service provided by the local. Incentives would have to be built into the transfer mechanisms. For instance, fiscal transfer could be made contingent upon a report card on local government service. This paper suggests that other transfer through ministries in Turkey should be linked to services, not national tax transfer nor provincial tax to metropolitan municipalities.

There are three mechanisms of transfer in Turkey: 6% of national tax (55%), 4.1% of provincial tax to metropolitan municipalities (30%) and other transfers through line ministries and agencies (15%). The 6% transfer should not be linked with services, for insufficient budget could be the reason for the bad service. Good service, however, can be linked with more flexibility in using the transfer, not the level of the transfer. Earmarking a transfer to a specific service weakens local government's flexibility in using resources the best way.

### *Fiscal Equalization and Local fiscal reform*

There are progressive and regressive aspects of the current Turkish fiscal transfer system to local governments. For the progressive aspect, 6% of national tax is redistributed equally, according to the size of the population, whereas 4.1% of provincial tax is to be allocated only to metro municipalities, which is regressive in nature.

In order to determine whether we need to strengthen the progressive side or regressive side, we need to determine the growth strategy first. If Turkey believes in a growth pole strategy, enhancing urban ratio is a reasonable policy goal, and the regressive aspect should be emphasized more. The growth pole strategy is to develop selected local municipalities so that they can be a growth engine of the neighboring geographical area. This is a reasonable strategy in a big country with limited capital to initiate economic development. In fact, this paper suggests the growth pole strategy, and therefore supports regressive fiscal transfer. In order for the growth pole strategy to be successful, however, there should not be too many growth poles. In Turkey, 81 provinces will insist that at least one growth pole should be designated in a

province. More than 30 growth poles should be too many. This paper suggests integrating provinces in the long run.

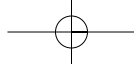
As for local fiscal reform, the following are currently suggested, but there should be caution in implementing them: 1) To consolidate local taxes by abolishing minor taxes with high administration costs and raise the real estate tax rate, 2) To introduce tourist tax, and 3) To be flexible in setting tax rates by municipalities.

First, consolidation of local taxes should be determined by the municipalities, and not by the state. Different municipalities may have different tax revenues. Raising any tax rate, including real estate tax, should consider its impact on the size of the informal sector. Second, tourist tax is a good idea; the price elasticity of demand will be low and will not increase the informal sector much. Third, the flexibility in setting the tax rates by the local government should be carefully introduced. When there is a wide gap between the fiscal capacities across municipalities, too much flexibility may weaken the possibility of intervention by the central government. Turkey may want to take a gradual approach by making tax rates determined by each municipality, but approved by the state until a local government is better prepared.

One aspect of local fiscal reform for local government is to reform the public corporations run by the local government. In Korea, there are 346 corporations owned by local governments, 97 local government-funded organizations, 34 public hospitals and 215 corporations run by local governments. Their efficiency is known to be far lower than the private sector and also state-owned enterprises. Approximately 40% of those entities are in deficit in Korea. The best way to overcome this deficit is to privatize those corporations. Another option is to commission the operation to the private sector where municipalities maintain ownership and collect contract fees. Since public corporations under the local government are very important service providers to citizens, reforming them cannot be postponed.

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A Way Forward for the Turkish Economy:  
Lessons from Korean Experiences



## Chapter 6

# Reforming the Fiscal Management System: Turkey and Korea



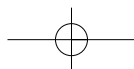
1. Introduction

2. The Korean Experience

3. Reforms in Turkey

4. Lessons Learned and Roads Ahead

References





## Reforming the Fiscal Management System: Turkey and Korea

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### 1. Introduction

The Korean government has maintained strong fiscal discipline since the early 1980s, keeping its budget more or less in balance and its debt at low levels. The fiscal balance showed large deficits after the economic crisis of 1997, but returned to surplus in 2000 thanks to the buoyant economy and resumed consolidation efforts. The surplus has continued since then.

At the same time, however, the Korean government is faced with various risk factors that can adversely affect its financial position. The aging population and the technological catch-up with the advanced economies imply a much slower economic growth in the decades ahead. While revenue growth slows down, the demand for public expenditure is increasing rapidly. The financial sector restructuring in the wake of economic crisis has left irretrievable debts of 69 trillion won (9 percent of 2004 GDP) in the public sector, and the burden is expected to fall mostly on taxpayers. All public pension schemes have structural problems due to the imbalance between contributions and benefits. Some of them (those for civil servants and military personnel) are already in serious trouble. Economic cooperation with North Korea will demand more and more government support in the future. Spending on social welfare programs has increased substantially after the crisis, and is set to increase further.

Government expenditure as a percentage of GDP has stabilized since 2001 at around 25 percent after rising rapidly in the 1990s, but it may resume its growth and result in worsening fiscal balances when these risk factors materialize. The Korean government embarked on an ambitious reform agenda to cope with these challenges and to modernize its system of financial management. Its efforts have been concentrated on (1) introducing a medium-term expenditure framework as embodied in a yearly National Fiscal Management Plan that covers 5 years on a rolling basis; (2) moving away from a bottom-up to a top-down approach in budgeting; (3) strengthening performance management; and (4) introducing “program budgeting,” i.e., reorganizing budget accounts around a program structure.

At about the same time, the Turkish government also began a fundamental reform of its fiscal management system. The fragility in public finance has long been blamed for most of the ills in the Turkish economy, from high inflation to poor growth performance, and it was considered one of the primary contributors to the recent outbreak of financial crisis. Fiscal reform, therefore, has a far-reaching implication that goes beyond balancing the budget or maximizing the efficiency of public spending; it is conceived as a critical pre-condition for restoring the Turkish economy to a stable, long-term growth path.

Fiscal reform in Turkey has been based on various laws enacted after the crisis. In particular, the Public Financial Management and Control Law of 2003 prescribes the introduction of a medium-term expenditure framework, strategic planning, performance budgeting, internal control and audit, and performance-based external audit. In 2005, the first medium-term economic program and the first medium-term fiscal plan were published for the period of 2006-2008. In 2006, all provincial administrations and municipalities will prepare their first strategic plans, while a phased-out approach is underway for central administrations, all of which will adopt strategic plans by 2010.

As is clear from the above discussion, fiscal reform in Turkey was motivated in most part by the urgent need to overcome the crisis, and addresses a wide range of issues including the internal control and performance-based audits backed by the broad support from the general public and the legislature. However, Turkey has a long way to go to modernize its fiscal management system and institute the degree of fiscal discipline that Korea has maintained since the 1980s. On the other hand, fiscal reform in Korea is somewhat limited in its scope compared to Turkey's as it was initiated by the central budget office in response to the specific challenges expected in the future. Comparing the reform agenda of Turkey and Korea, taking stock of the progress made to date, and drawing lessons would, therefore, be beneficial to both countries.

This paper aims to (1) provide an overview of the development of public finance in Korea since the 1970s and analyze its current status; (2) explain the institutional setup of the Korean fiscal management system and assess the recent reform efforts; (3) sketch the changes in the Turkish fiscal management system after the crisis; and (4) draw lessons for Turkey and Korea for a successful implementation of the reform agenda.

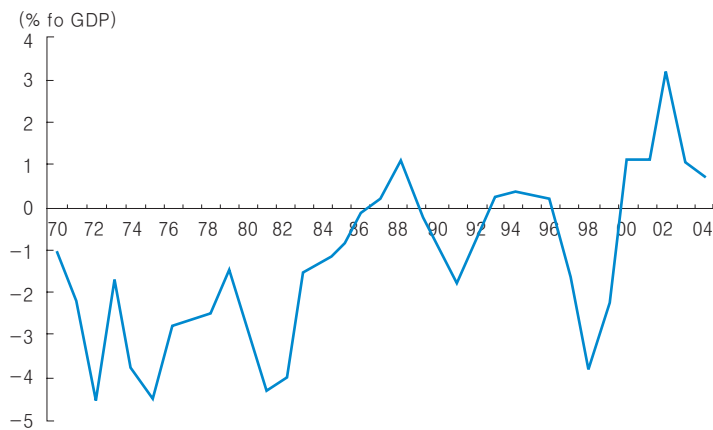
## 2. The Korean Experience

### 2.1. Korean Public Finance in the Last Three Decades

#### 2.1.1. Large Deficits in the 1970s

In the 1970s and into the early 1980s, the Korean government ran a persistent budget deficit (see Figure 1). The deficit of the consolidated central government averaged about 3 percent of GDP in this period. Income transfer to the agricultural sector, heavy investment in social infrastructure, and various subsidies to promote heavy and chemical industries required large amounts of public money. But rapid economic growth helped contain the spending at around 20 percent of GDP (see Figure 2).

Figure 6-1 ●● Budget Surplus/Deficit of the Central Government



Source: Ministry of Finance and Economy.

Figure 6-2 ● Central Government Spending



Source: Ministry of Finance and Economy.

### 2.1.2. Fiscal Tightening in the 1980s

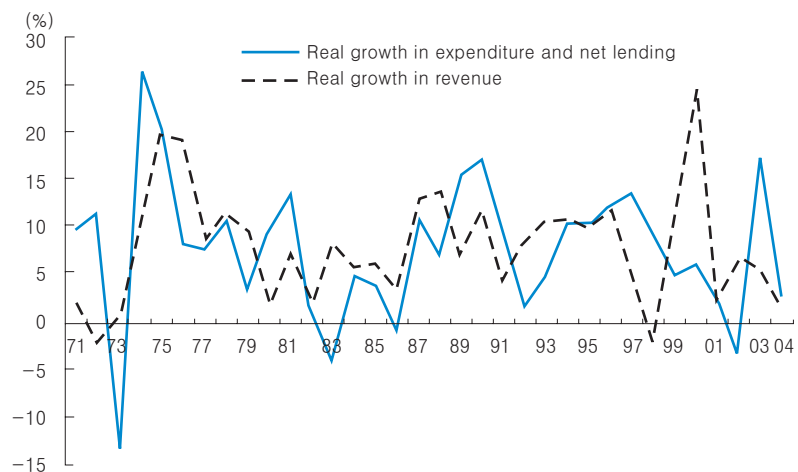
A major change in policy stance took place in the early 1980s. The second oil shock together with political instability left Korea with spiraling inflation and negative income growth in 1980. The new government that came into office in 1981 tightened monetary and fiscal policies rather drastically.<sup>1</sup>

On the monetary front, the annual growth rate of M2 was halved by the middle of the 1980s. On the fiscal front, consolidation took the form of reduced expenditure. The growth of real government spending was -3 percent in 1983, and remained at low levels until 1987 (see Figure

1 \_ The new government recognized the intrinsic problems of the government-led growth strategy, especially those coming from the promotion of capital-intensive industries. This strategy distorted the efficient allocation of resources, helped the formation of large business conglomerates (the so-called chaebol), aggravated income inequalities, and produced macroeconomic instability. Consequently, the new government adopted “Liberalization and Stabilization” as its slogan for economic policy. While the stabilization policy was carried out successfully as explained in the text, the liberalization policy did not induce sufficient structural reforms in the economy. Many people think that this sowed the seed for the economic crisis of 1997.

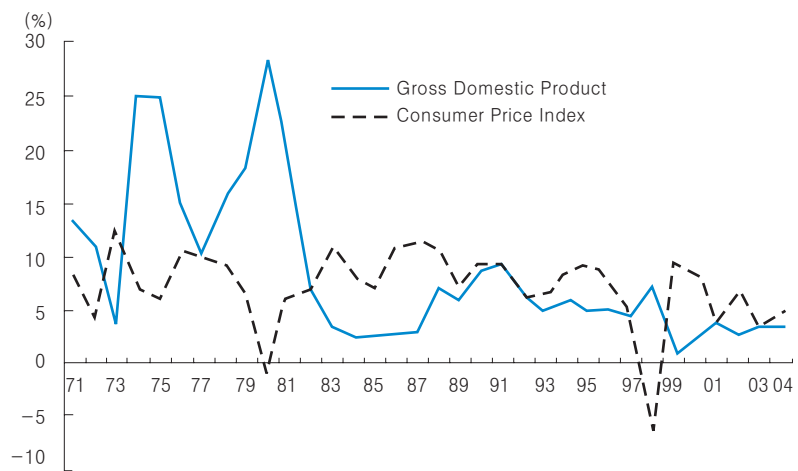
3). These changes coincided with a substantial reduction in inflation. Overall, the economy grew at a healthy pace up until the recent economic crisis (see Figure 4).

Figure 6-3 ●● Growth of Real Spending and Revenue of the Central Government



Note: Real values were obtained by deflating nominal values with GDP deflator.  
Source: Ministry of Finance and Economy.

Figure 6-4 ●● Output Growth and Inflation



Source: Bank of Korea.

One important principle in fiscal management was established in this period. It was the principle of “Expenditure within Revenue,” or the balanced budget principle. While not formalized in a law or a regulation, it acted as self-discipline imposed on the budget authorities against imprudent management of the budget.<sup>2</sup>

In fact, the strong economic growth and the moderate-to-high inflation produced higher-than-expected tax revenues in most years. This in turn made it relatively easy to keep the budget in balance. The National Pension Scheme (NPS) that was introduced in 1988 also contributed to the total revenue by one to three percent of GDP each year.<sup>3</sup>

The balanced budget principle kept the public debt to a minimal level. In 1996, the year before the crisis, the gross debt of the central government was less than 10 percent of GDP, and the net debt was negative; that is, the central government was a net creditor to the other sectors in the economy.<sup>4</sup> The local governments were generally in good shape as well.

Of course, there were costs as well as benefits associated with the balanced budget principle. Some argue that the counter-cyclical role of fiscal policy was constrained, and essential investment in social infrastructure was often postponed to contain the overall spending growth, but the Korean economy was able to achieve strong growth without much cyclical fluctuation in the decades following the adoption of the balanced budget principle.<sup>5</sup>

Most importantly, strict application of the principle enabled the Korean government to keep the size of government debt at a manageable level, and provided it with room to maneuver when the crisis hit the economy. Without too much worry about the rapid explosion of the budget deficit and public debt, the Korean government could plan massive fiscal support for troubled financial institutions. It also expanded the welfare programs for the poor and the unemployed substantially.

2 \_ One innovation during this period is worthy of note. The Budget Review Committee (BRC) was set up within the budget office in 1982 (Bahn, 2003). BRC is composed of senior management of the budget office. The recommendations of budget examiners regarding the ministerial budget requests are reviewed by the BRC and then final decisions are made in sessions closed to outsiders. When faced with lobbies from line ministries and other interested parties, budget examiners find it convenient to pass the burden of budget cuts to the BRC. The BRC has been very effective in containing the spending increase and establishing fiscal discipline.

3 \_ The long-term prospect of the NPS is quite bleak. To finance the system, the contribution rate that stands currently at 9 percent will have to increase substantially in the future.

4 \_ There are doubts, however, about the quality of government assets, which are mostly loans to private entities and local governments.

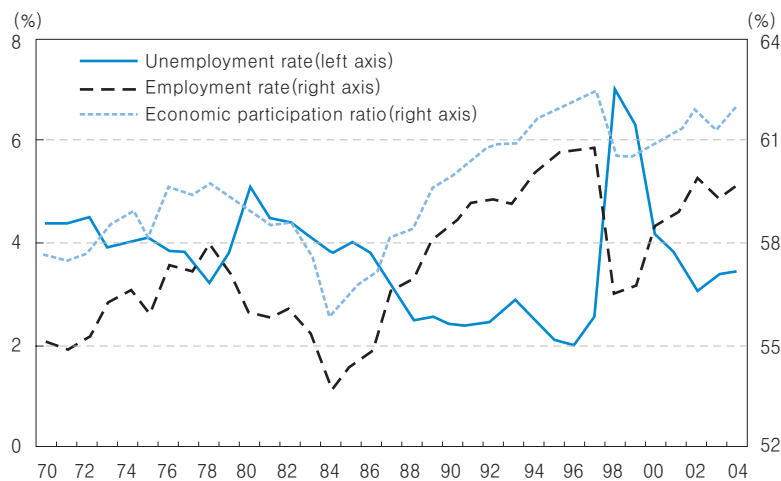
5 \_ Specifically, the average growth rate was 7.2 percent (with a standard deviation of 3.5 percent) during 1971-1982 and 7.0 percent (with a standard deviation of 3.9 percent) during 1983-2004. The growth performance does not appear fundamentally different in these two periods. In addition, following the estimation method suggested by Bayoumi and Eichengreen (1995), a formal test can be carried out to see whether the cyclical response of the fiscal policy was weakened in the latter period. I could find no evidence for such claims.

### 2.1.3. Economic Crisis and Ballooning Budget Deficit

The fiscal support for financial sector restructuring primarily took the form of loans to two public corporations: the Korea Deposit Insurance Corporation (KDIC) and the Korea Asset Management Corporation (KAMCO).<sup>6</sup> The loans were spent repaying the interest on the restructuring bonds issued by these corporations. The total outstanding stock of restructuring bonds stood at 102 trillion won (21 percent of 1998 GDP).

Social welfare expenditure also increased significantly after the crisis. The unemployment rate surged from less than 3 percent in 1997 to 7 percent in 1998, with an accompanying deterioration in income distribution and an increase in poverty (see Figures 5, 6, and 7). In response to these developments, public assistance to the poor almost doubled.<sup>7</sup> The unemployment insurance scheme, which had been introduced in 1995, rapidly enlarged its coverage and increased its benefit level.

Figure 6-5 ● Labor Market Indicators



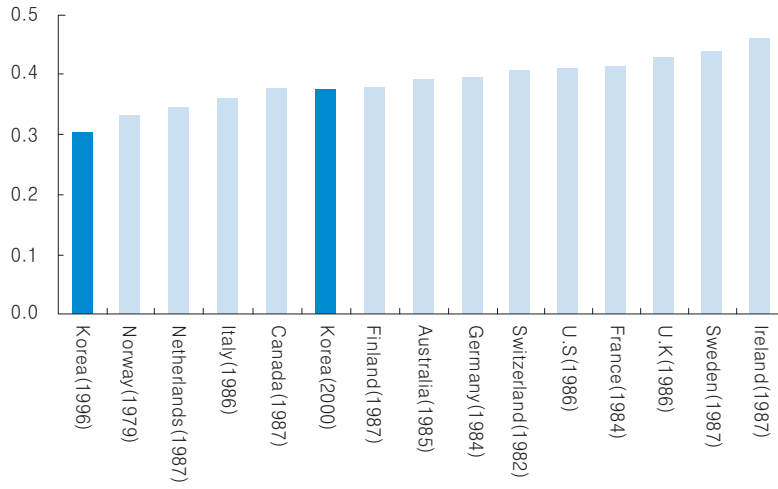
Note: The employment rate refers to the people aged 15 and over who are employed divided by the working age population.

Source: National Statistical Office.

6 \_ The KDIC was responsible for recapitalizing under-funded institutions and paying out the deposits of closed institutions. The KAMCO sold the assets purchased from troubled financial institutions in return for the KAMCO bonds.

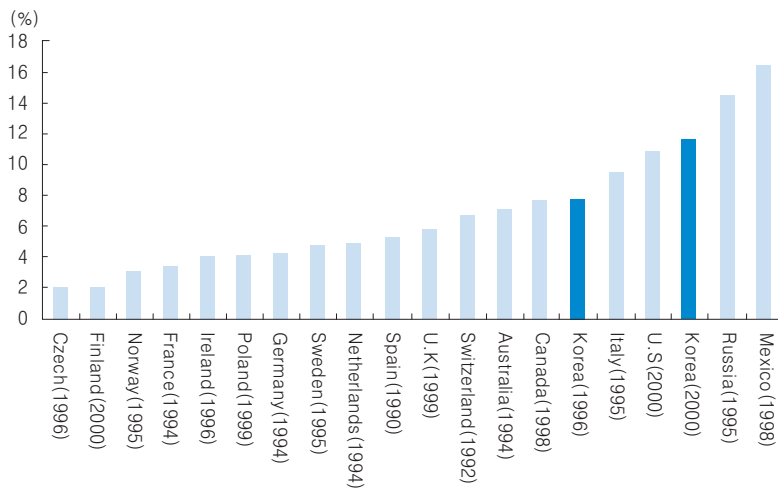
7 \_ These expenditures still take up only a small portion of the total budget compared to western countries, as the social welfare system in Korea is in its early stage of development. In the future, however, public pension benefits and other welfare expenditures are certain to drive up the social welfare expenditures to a level that is comparable to those in western countries.

Figure 6-6 ● Gini Coefficient



Source: Yoo (2003).

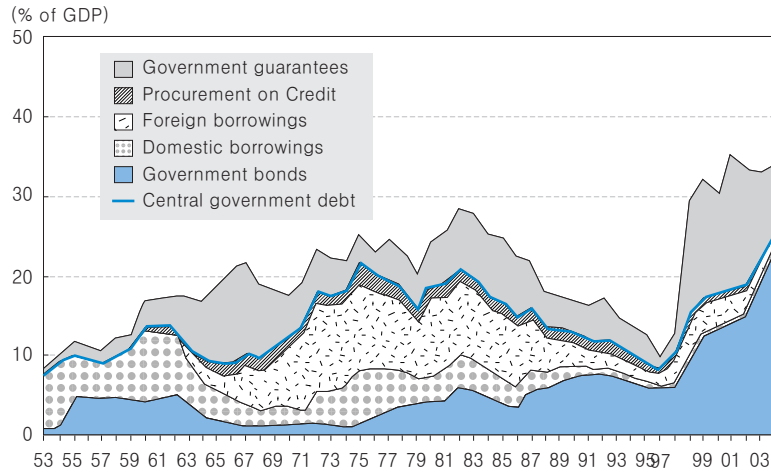
Figure 6-7 ● Relative Poverty



Note: The relative poverty refers to the households with incomes below 40 percent of the median household income divided by the total households.

Source: Yoo (2003).

Figure 6-8 ●● Debt / GDP Ratio



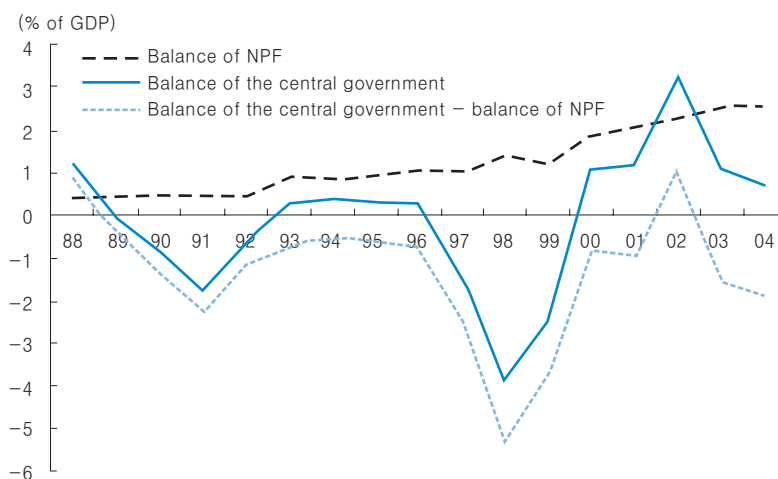
Source: 1953-90, Korea Development Institute (1991); 1991-2004, Ministry of Finance and Economy.

These developments left an unmistakable mark on government finance. The consolidated budget, which remained more or less in balance before the crisis, dipped into deficit in 1998 at 4 percent of GDP. The ratio of government debt to GDP rose from 8 percent in 1996 to 15 percent in 1998 (see Figure 8). When government debt-guarantees were included, the total public burden climbed to 30 percent of GDP. The bonds issued by KAMCO and KDIC constitute most of these government guarantees.

Beginning in 1999, the Korean government resumed its efforts to contain the expenditure growth (see Figures 1, 2, and 3). Aided by the dramatic rebound of the economy (see Figure 4) and the rapid growth in revenues, the budget recorded a surplus of 1.1 percent of GDP in 2000. It remained in surplus in following years.

On the other hand, the debt-to-GDP ratio kept rising despite surpluses since 2000. This anomaly is due to the fact that these surpluses came mostly from the National Pension Fund (NPF). The surplus in the NPF was 2.6 percent of GDP in 2004. Most of the surpluses are used to buy assets in the financial market. These assets will be liquidated later to pay pension benefits to eligible retirees. When we exclude NPF from the consolidated budget, the government has consistently run budget deficits since 1989, except in 2002 (see Figure 9).

Figure 6-9 ● Budget Balance Excluding the National Pension Fund



Source: Ministry of Finance and Economy.

## 2.2. Current State of Korean Public Finance

### 2.2.1. Financial Balance

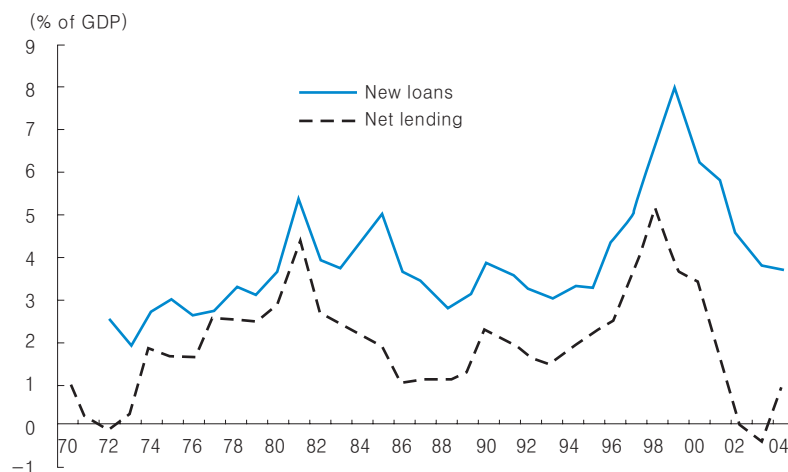
As shown in Figure 9, the consolidated central government budget balance is over-stated due to the surpluses in the NPF. To better assess the financial soundness of the government, we need to exclude the NPF from the consolidated balance. There are two more factors to consider in addition to the NPF in this regard. One is the net lending and the other is the repayment of restructuring bonds by the government.

The large amount of net lending has been a major factor behind large deficits in 1998 and 1999. In fact, government lending activity has been quite extensive since the early days of government-led economic growth (see Figure 10). The official statistics show that the default rate on government loans is close to 0 percent.<sup>8</sup> If this is true, loans do not reflect any

<sup>8</sup> \_ It should be noted that the actual default rate may be higher. After all, the government has frequently introduced rescheduling programs for agricultural loans.

deterioration of the government asset position, and we should disregard net lending when assessing the financial health of the government.<sup>9</sup>

Figure 6-10 ●● Central Government Loans



Source: Ministry of Finance and Economy.

One exception is the government loans made to the KDIC and KAMCO. In 2002, the government announced a plan to exempt the KDIC and KAMCO from repaying the loans to the government. This decision essentially converted the loans into direct spending in the years they were made. The total amount exempted was 22 trillion won. We include these loans in the consolidated budget balances in the following discussion.

In addition to the loan cancellation, the government is sharing with the KDIC and KAMCO the obligation of restructuring bonds. According to government estimates, the irretrievable loss incurred during financial sector restructuring would amount to 69 trillion won. The government announced that it would take up a total of 49 trillion won of restructuring bonds, repaying their interest and principal. In 2003, 13 trillion won was spent on transforming part of these bonds into government bonds. The figure for 2004-2006 is 12 trillion won each year. As these expenditures mirror the results of past restructuring activities, we exclude them from the

9 \_ To be precise, the subsidy cost of loans emerging from the disparity between market interest rates and concessional lending rates should be included in government expenditures. With no reliable estimates on the subsidy cost, however, I decided to simply ignore it.

consolidated balance in 2003-2006 and include them in 1997-2002.

Table 1 shows the results of these adjustments. The adjusted balance is close to the consolidated balance in 1998-2000, but much lower than in 2001-2005. For example, in 2004, the balance declines from 5.6 trillion (0.7 percent of GDP) to 1.1 trillion won (-0.2 percent of GDP) after the adjustment. However, they have been within 0.5 percent of GDP since 2001, and we can still say that the financial soundness of the government is not a very serious problem at this stage.

**Table 6-1** ● Consolidated Budget Balance and Its Adjustment

(Trillion won, %)

Description	1998	1999	2000	2001	2002	2003	2004	2005 <sup>1)</sup>
Consolidated balance (% of GDP)	-18.8 (-3.9)	-13.1 (-2.5)	6.5 (1.1)	7.3 (1.2)	22.7 (3.3)	7.6 (1.1)	5.6 (0.7)	5.6 (0.7)
NPF balance (% of GDP)	6.7 (1.4)	6.5 (1.2)	11.2 (1.9)	13.3 (2.1)	15.6 (2.3)	18.5 (2.6)	20.2 (2.6)	24.4 (2.9)
Net lending	24.4	19.8	19.8	10.1	0.4	-2.5	1.4	6.4
Loans to KDIC and KAMCO	1.3	4.0	5.6	6.0	6.9			
Issuance of restructuring bonds <sup>2)</sup>	15.8	9.8	4.6	16.0	1.9			
Assumption of restructuring bonds						13.0	12.0	12.0
Adjusted balance <sup>3)</sup> (% of GDP)	-18.2 (-3.8)	-13.6 (-2.6)	5.0 (0.9)	-18.0 (-2.9)	-1.3 (-0.2)	-0.4 (-0.1)	-1.1 (-0.2)	0.3 (0.0)

Note: 1) The figures for 2005 are based on budget.

2) Issuance of restructuring bonds is based on the assumption that out of 49 trillion won, 2.1 percent was issued in 1997, 32.2 in 1998, 19.9 in 1999, 9.4 in 2000, 32.6 in 2001, and 3.8 in 2002, which were the actual shares of total restructuring bonds issued in 1997-2002.

3) Adjusted balance = consolidated balance - NPF balance + net lending - loans to KDIC and KAMCO - issuance of restructuring bonds + assumption of restructuring bonds.

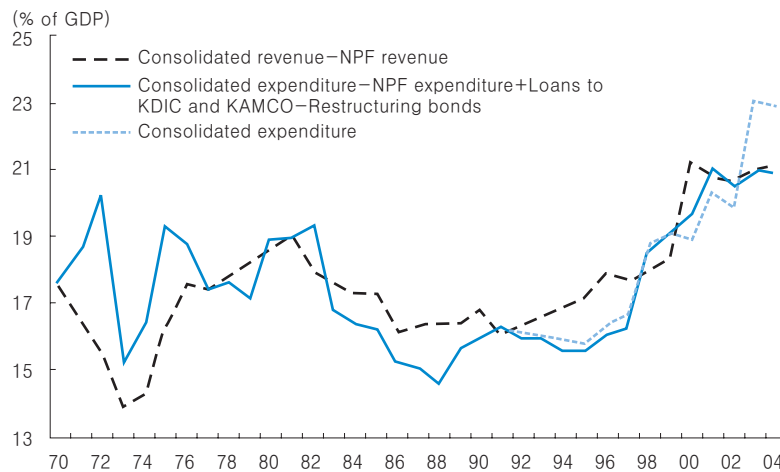
## 2.2.2. Government Liabilities

Another indicator for the soundness of public finance is government liabilities. The debt to GDP ratio amounted to 25 percent at the end of 2004 (see Figure 8). When government guarantees are included, it rises to 34 percent. The transformation of restructuring bonds is reducing the amount of guarantees at the expense of direct liabilities. But with the “adjusted balance” remaining close to zero, the total public burden including direct liabilities and guarantees is stabilizing at 33-34 percent of GDP. If an appropriate amount of control is exercised on the spending growth, the total burden will remain at the current level in the years ahead.

### 2.2.3. The Size of Government Expenditure

Of course, it is not certain at all whether we would be able to successfully contain spending growth in the future. Figure 11 shows the consolidated central government expenditure and the adjusted expenditure. Here the adjustment was made in the same way as in Table 1 (subtracting the NPF expenditure and the repayment of restructuring bonds and adding back the loans to the KDIC and KAMCO). The consolidated expenditure has been increasing rapidly since the mid-1990s. Unless conscious efforts are made to contain it, the spending growth is likely to produce persistent deficits and rising government liabilities in the future.

Figure 6-11 ●● Adjusted Revenue and Expenditure



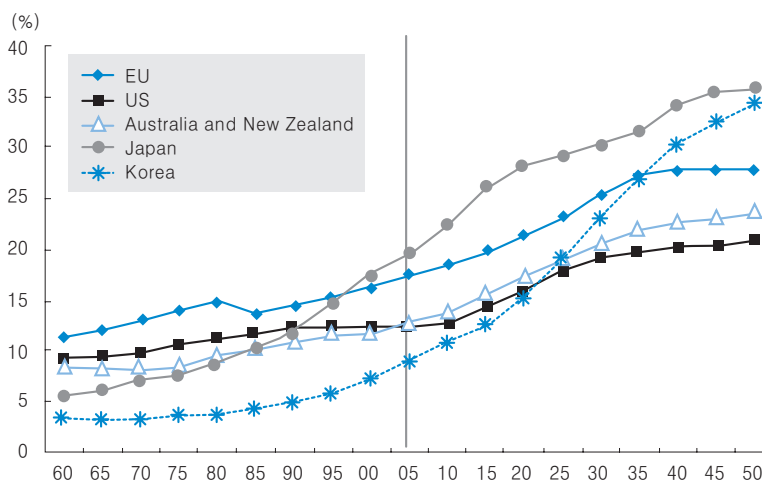
Source: Ministry of Finance and Economy.

Of particular importance are the public pension schemes such as the National Pension Scheme (NPS), the Government Employees' Pension Scheme (GPES), the Private School Teachers' Pension Scheme (PSTPS), and the Military Personnel Pension Scheme (MPPS). These pension schemes share one common feature; i.e., too generous benefits in relation to contributions. With a rapidly aging population (see Figure 12), this imbalance has produced and will continue to produce a devastating effect on their finance.<sup>10</sup>

10 \_ MPPS has been in deficit over 10 years and requires government support of about 1 trillion won each year. GPES entered into deficit in 2001, and the deficit is expected to grow exponentially in coming years. PSTPS has basically the same problem but will experience difficulties in later years. NPS, with its huge coverage, can become a major drain on government budget.

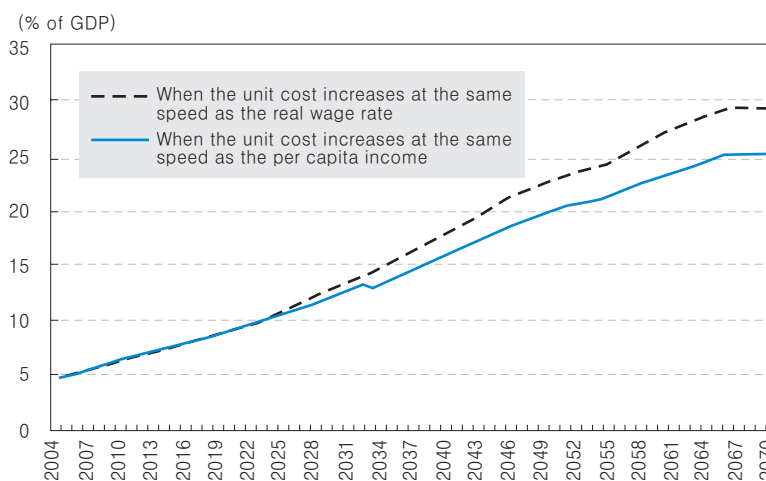
In addition to pensions, health spending will increase rapidly with the aging population. According to a projection by the Korea Institute of Public Finance, age-related spending will rise from 5 percent of GDP in 2004 to 25-30 percent in 2070 (see Figure 13).

Figure 6-12 ●● Population Aging



Source: United Nations.

Figure 6-13 ●● Projected Age-Related Spending



Source: Korea Institute of Public Finance (2005).

Increased spending on pensions and other age-related spending will drive up the total amount of government expenditure. Table 2 compares the general government spending across six countries including Korea. In 2000, the spending to GDP ratio was 23.0 percent in Korea and ranged between 30 and 50 percent in other countries. However, when income transfers are excluded, the ratio declines to 19.4 percent in Korea and 20-30 percent in other countries. In particular, the U.S has a lower ratio than Korea. With the increase in age-related expenditures in Korea, the gap between Korea and other countries will diminish in the future.<sup>11</sup>

Table 6-2 ●● General Government Expenditures

(% of GDP)

	U.S	Japan	Germany	France	U.K	Korea
Consumption	15.1	16.8	19.0	23.3	19.4	10.1
Net capital outlays	0.9	6.0	3.0	3.3	2.2	8.3
Income transfers	13.7	10.0	18.9	17.8	13.7	3.6
Subsidies	0.5	0.9	1.6	1.2	0.5	0.3
Interest payments	3.4	3.3	3.3	3.2	2.4	0.7
Total	31.2	37.0	45.7	48.8	38.2	23.0
(Excluding income transfers)	(17.5)	(27.0)	(26.8)	(31.0)	(24.5)	(19.4)

Note: The data for Japan and Korea refer to year 2000. Others refer to year 2001.

Source: OECD, OECD Economic Surveys: Korea, Volume 2003/5-March.

Containing the spending growth is critical in attaining fiscal sustainability. Rising government expenditures not only damage the long-term stability of public finance but also pose a direct threat to the efficient functioning of the economy. Containing the total size of government expenditure will gain greater importance in the future as the growth potential of the Korean economy declines. Han and others (2002) forecast the potential income to grow at a much slower rate in coming years (see Table 3). Its growth rate has declined from 7.7 percent in the 1970s to 5.6 percent in the 1990s, and will decline further to 5.1 percent in 2000-05 and to 4.2 percent in 2005-10, primarily due to the slower growth of the labor force. In fact, the total population is expected to shrink in absolute numbers beginning in around 2030.

11 \_ It is interesting to note in Table 2 the relatively small size of government consumption in Korea. It stands at 10.1 percent of GDP. This seems mainly due to the small size of public employment in Korea. On the other hand, government investment as a percentage of GDP is larger in Korea than in other countries except Japan.

Table 6-3 ●● Forecasts of National Income

(%)

	1963-70	1970-79	1979-90	1990-00	2000-05	2005-10
Growth in national income	8.94	7.67	7.29	5.61	5.14	4.17
Contributions from Inputs	4.35	4.23	4.80	3.00	2.85	2.06
Labor	3.67	3.06	2.90	1.60	1.28	0.89
Workers	3.44	2.90	2.39	1.28	1.21	0.82
Capital	0.68	1.17	1.90	1.40	1.57	1.17
Total factor productivity	4.59	3.44	2.49	2.61	2.29	2.11

Source: Han and others (2002).

Slower economic growth will imply a slower growth in tax revenue. Expanding government expenditures at the same rate as in previous years is likely to produce widening deficits, accelerate the decline in national saving, hamper fixed capital formation, and further reduce the growth potential.

#### 2.2.4. Functional Classification of Expenditures

Government expenditures can be classified in various ways. Table 4 shows the functional classification of the central government expenditure and net lending in Korea. Defense spending declined rapidly in the 1980s and 1990s and now corresponds to 11.4 percent of total spending. Education has traditionally taken up a large share (15-17 percent) of total spending, but an even larger share has been given to economic affairs (20-28 percent). Among the economic affairs, agriculture and transportation have been the major areas of spending. On the other hand, social protection has received relatively little attention in budgetary spending, though its share has been growing rapidly in recent years.

Table 6-4 ●● Central Government Expenditure and Net Lending

(%)

	% of GDP					% of total spending				
	1970	1980	1990	2000	2003	1970	1980	1990	2000	2003
General public services	3.9	0.8	0.7	1.1	1.4	23.1	4.0	4.2	5.2	6.7
Defense	3.8	6.1	3.6	2.5	2.5	22.7	30.6	20.0	11.4	11.4
Public order and safety	0.0	0.9	0.8	1.0	1.1	0.0	4.6	4.3	4.6	5.3
Education	2.8	2.9	3.0	3.3	3.3	16.7	14.6	17.0	15.3	15.0
Health	0.2	0.2	0.3	0.2	0.1	1.3	1.0	1.7	0.7	0.4
Social protection	0.8	1.1	1.4	3.3	2.9	4.9	5.7	8.1	15.3	13.5
Housing and Community Amenities	0.0	0.5	1.8	1.2	1.1	0.3	2.5	10.1	5.3	5.0
Recreation, culture, and religion	0.2	0.1	0.1	0.2	0.3	1.4	0.7	0.5	0.8	1.2
Economic affairs	4.6	5.1	3.6	5.5	6.2	27.4	26.0	20.4	25.2	28.7
Fuel and energy	0.6	0.4	0.1	0.1	0.4	3.8	2.1	0.6	0.7	1.8
Agriculture, forestry, fishing, and hunting	1.9	1.2	1.8	1.4	1.4	11.2	5.9	10.2	6.2	6.7
Mining, manufacturing, and construction	-0.5	1.5	0.4	0.6	1.0	-3.0	7.4	2.0	2.6	4.5
Transportation and Communication	1.3	1.3	1.1	2.2	2.0	7.9	6.7	6.1	9.9	9.3
Other economic affairs	1.3	0.8	0.2	1.3	1.4	7.5	3.9	1.4	5.8	6.5
Other expenditures	0.4	2.1	2.4	3.5	2.8	2.2	10.4	13.7	16.2	12.8
Total	17.0	19.8	17.8	21.9	21.7	100.0	100.0	100.0	100.0	100.0

aSource: Ministry of Finance and Economy. Note: Estimates of SPO

The concentration of spending on economic affairs may reflect the less-developed-country status of Korea. Perhaps we still need large investment in roads, ports, and railways. Perhaps we still need to provide large government loans to the agricultural, manufacturing, and construction sectors because the financial market is not yet fully developed. But there are strong doubts about these assumptions.

First, the rapid increase in spending on social infrastructure during the 1990s need not be sustained in the future. Many (but certainly not all) experts in this area agree that, with the ever-

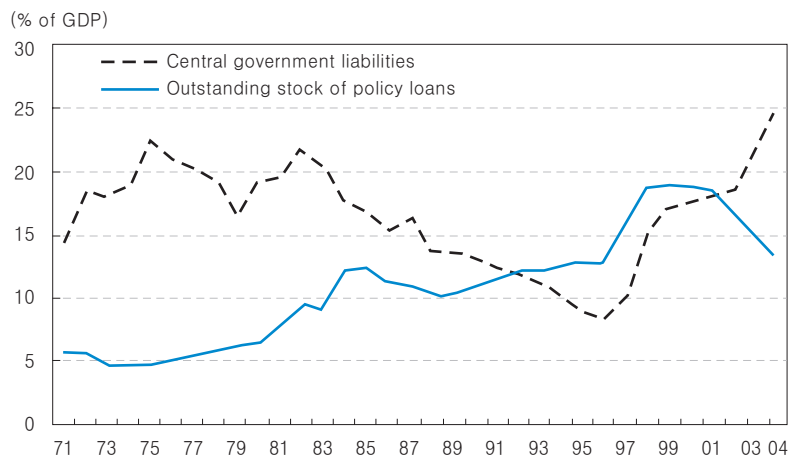
stringent budget constraint and the completion of major road-building programs, it is time to reorganize the overall investment strategy. In particular, we should pay more attention to the demand-management (e.g. through an increased use of user-charging) and the proper maintenance of existing stocks of infrastructure.

Second, the Korean financial market has undergone a rapid change since the 1980s and especially after the economic crisis. Banks are rapidly expanding their lending to households and small and medium-sized enterprises, and large corporations are turning ever more to capital (stock and bond) markets. The government appears to be playing a substitutive, rather than complementary, role to commercial banks in many cases. It is now generally believed that the government should reduce its role as a provider of financial resources for businesses. The reduced government role in this area will not only help restrain the growth of public spending but also promote the development of private financial markets and reduce the distortion in resource allocation.

On the other hand, the government should increase its effort in the provision of basic public service such as public security, fire-fighting, judicial services, promotion of competitive business practices, prudential regulation of financial institutions, statistical services, environmental protection, etc. These services are vital for long-term economic growth and social development. Unfortunately, their importance has been generally understated to this day in Korea. For example, competition policy is still at its early stage of development. Statistical services also have substantial room for improvement, as illustrated by the lack of reliable data on gross regional product even though the government has historically emphasized the importance of mitigating regional disparities.

At the same time, more efforts are needed to reduce the outstanding stock of government loans. Figure 14 shows that in 1997-1999, government loans grew by about the same amount as government liabilities. That is, the government issued bonds and other debt instruments and used the proceeds to extend loans to the private sector. The trend has reversed in recent years, but the outstanding stock of loans still stood at 13 percent of GDP at the end of 2004.

Figure 6-14 ● Government Assets and Liabilities



Sources: Ministry of Finance and Economy.

Government loans typically have maturity of 5 to 10 years while most government bonds have maturity of less than 5 years. The interest rates on loans are lower than those on government bonds. Such difference in interest rates on loans extended over long periods will impose financial burden on the government in later years.

## 2.3. Institutional Setup and Reform Efforts in Korea

### 2.3.1. The Structure of the Budget

#### 2.3.1.1. General Accounts, Special Accounts, and Funds

The budget of the central government as ratified in the National Assembly is comprised of one general account and various special accounts. There were a total of 23 special accounts in the fiscal year 2005 budget (see Table 5). Revenue sources for the general account include general-purpose (not ear-marked) taxes and non-tax revenues. On the other hand, many special accounts have their own special ear-marked taxes or quasi-taxes (i.e., fees, charges, and other mandatory contributions). Transfers from the general account also make up a large portion of resources for special accounts.

Table 6-5 ●● Special Accounts

Name	Name
Fiscal Financing	Environmental Reconstruction
National Property Management	National Medical Center Management
Agriculture and Fisheries Structural Adjustment	Land Management and Balanced Regional Development
Rural Development Tax Management	Postal Insurance Service
Transportation Facilities Registration	Automobile Traffic Management
Management of Funds Transferred to Local Governments	Patent Management
Prison Operation	Balanced National Development
Military Personnel Pension	Grain Management
Management of Funds Transferred to Local Educational Agencies	Agency
Energy and Resources	National Railroad
	Communication Service
	Government Procurement

On a consolidated basis, the central government budget includes, in addition to the general and special accounts, numerous funds. There were 57 funds in 2005 including the National Pension Fund, the Employment Insurance Fund, and the Foreign Exchange Stabilization Fund. These funds were established much like special accounts to achieve specific policy objectives, and many of them have their own revenue sources including quasi-taxes.<sup>12</sup>

The difference between the funds and the general and special accounts lies in the managerial flexibility allowed for the former. Ministries can freely change fund expenditures up to 30 percent of the planned amount without notice to the budget authorities and the National Assembly (see Table 6). The line items in the operational plans of funds are much less detailed than those in the general and special accounts. Their cash flows are managed independently by line ministries and do not pass through the single treasury account held in the Bank of Korea.

12 \_ There were 101 quasi-taxes for special accounts and funds at the end of 2001 and their total revenue was estimated to be around 1 percent of GDP (OECD, 2003).

**Table 6-6** ●● Characteristics of the General Account, Special Accounts, and Funds

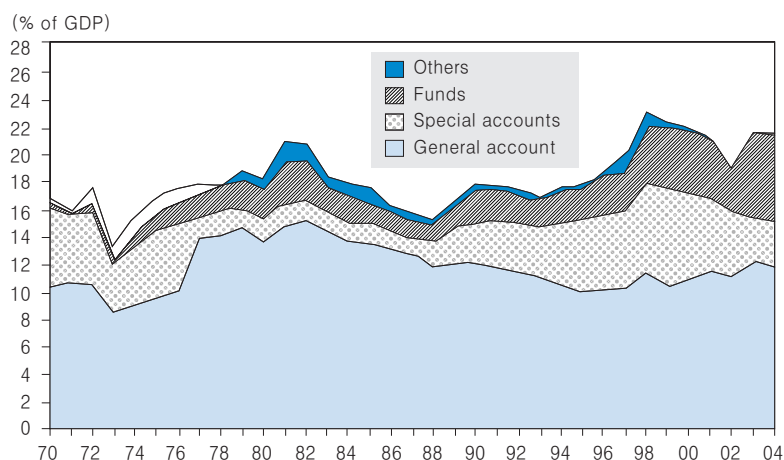
	General Account	Special Accounts	Funds
Objective	Supporting general fiscal activities.	Supporting specific programs.	Same as S/A.
Revenues	General-purpose taxes and non-tax revenues.	Ear-marked taxes, mandatory contributions, transfers from other accounts and funds, etc.	Mandatory contributions, transfers from other accounts and funds, etc.
Expenditures	Unrequited expenditures.	Unrequited expenditures and loans.	Unrequited expenditures and loans.
Linkages between revenues and expenditures	None.	Clear linkages.	Clear linkages.
Authorization and execution of expenditure plans	Voted on in the National Assembly. Controlled and monitored during execution as mandated by the Constitution.	Same as G/A.	Same as G/A but larger flexibility guaranteed in Implementation. <sup>1)</sup>

Note: 1) Ministries can change fund expenditures up to 30 percent of the planned amount without notice to the budget authorities and the National Assembly. Cash flows are managed independently by the ministries in charge and do not go through the single treasury account held in the Bank of Korea. Unlimited carry-overs of unused cash are allowed.

The general account, special accounts, and funds form the consolidated central government budget (see Figure 15). The share of general accounts in the total consolidated expenditure and net lending stood at 55 percent in 2004, and those for special accounts and funds at 16 percent and 29 percent, respectively.<sup>13</sup>

13 \_ The U.S. federal government also has a large number of trust funds, special funds, and public enterprise funds in addition to the general fund (GAO, 2001). In 1999, the spending of the funds other than the general fund corresponded to around 55 percent of total federal spending. But most of them (33 out of 55 percent) represented “long-term commitments” such as social security. In case of Korea, “long-term commitments” occupy only about 10 percent of total spending.

Figure 6-15 ●● Expenditure and Net Lending by Accounts and Funds



Source: Ministry of Finance and Economy.

### 2.3.1.2. Drawbacks

The highly complex structure of the budget has been criticized for many aspects.<sup>14</sup> First, it limits the ability of the budget authorities to centralize all national resources and then allocate them based on national priority. As mentioned above, special accounts and various funds have their own sources of revenue, which are not easily transferable to the general account or any other special accounts and funds in response to changing circumstances. This compartmentalization and fragmentation of resources reduces the allocative efficiency of the budget.

Second, fiscal transparency and program efficiency are also undermined by the complicated budget structure. Various accounts and funds are intricately interrelated through complicated flow of grants and loans. It is difficult to see how much funding is being allocated to various spending areas. The functional classification of spending is not reported for the consolidated budget, and it is reported only for the previous year's outturns with a considerable time-lag of more than a year. We can find many programs with similar policy objectives and tools but

14 \_ There is much similarity between the Korean and the Japanese budget system. See Bayoumi (1998) for the Japanese system.

under different accounts and funds. Consolidating similar programs would contribute to greater allocative and technical efficiency with increased transparency.

### 2.3.1.3. Government Efforts

The government is making efforts to simplify the budget structure and strengthen transparency and accountability. The most important change occurred with the revision of the Fund Management Act and the National Assembly Act in 2001. Previously, there had been two types of funds—"public funds" and "other funds." The operational plans of "public funds" had been prepared by responsible ministries and reported to the National Assembly but had not required the latter's approval. Those of "other funds" had not even been reported to the National Assembly. In this sense, public and other funds had been off-budget accounts.

In 2001, they were regrouped into "funds" and "financial funds." "Funds" include all of the previous "public funds" and some "other funds." "Funds" were moved from off-budget to on-budget: the operational plans of "funds" require the approval by the National Assembly and their financial reports are submitted to the latter, just like the general account and special accounts.<sup>15</sup> In 2004, further changes were made to move "financial funds" from off-budget to on-budget and subject them to the same degree of control by the National Assembly.

The government also introduced a review process in the Fund Management Act to abolish obsolete funds and consolidate those with similar objectives. The first such review was conducted in 2004 and subsequent reviews are scheduled every three years in the future.<sup>16</sup> In addition, a separate, *ad hoc* review was conducted on special accounts in 2004. The results of these two reviews were presented to the President in May 2005 in a combined report and received his approval. To implement the recommendations of the report, the government needs to revise various laws that provide legal basis for individual special accounts and funds. It remains to be seen how many of the recommendations will survive the opposition from diverse interest groups and succeed in the revision of relevant laws.

Past experience does not offer a very good prospect. The number of funds had been declining from 114 in 1994 to 53 in 2002 but since then has stayed at around 55 (see Table 7)

15 \_ This change in typology produced discontinuity in the time series of fiscal data. Before 2001, the consolidated spending and revenue data included "public funds" and excluded "other funds." After 2001, they include "funds" and exclude "financial funds." As a result, several important funds such as the Teachers' Pension Fund are now included in the consolidated financial statistics. However, no attempt has been made to revise previous data to eliminate discontinuity.

16 \_ These reviews are called "Retention Reviews." Apart from the Retention Review, the government has also been conducting annual "Management Reviews" since 1999. Management Reviews look at the operational efficiency of funds, including the adequacy of their asset management practices.

despite the government's effort to reduce it further. A few special accounts were to be closed down in past years (in 2003 in case of the Transportation and the Registration Special Accounts and in 2004 in case of the Rural Development Tax Management Special Account). However, the subsequent revisions of the relevant laws, mostly to accommodate the desire of interest groups, saved them and none have been closed down.<sup>17</sup>

Table 6-7 ●● Number of Funds<sup>1)</sup>

	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05
At the start of the year	114	106	99	76	75	76	75	62	53	58	59	
Established during the year	6	4	4	3	3	2	2	1	8	3	2	57
Closed during the year	-14	-11	-27	-4	-2	-3	-16	-8	-4	-2	-4	
At the end of the year	106	99	76	75	76	75	61	53	58	59	57	

Note: Includes public and other funds before 2002 and funds and financial funds since then.

Source: Ministry of Planning and Budget.

## 2.3.2. Major Players and the Fiscal Discipline

### 2.3.2.1. Major Players

Major players in the budget process include the Ministry of Planning and Budget (MPB), the Ministry of Finance and Economy (MOFE), and the Board of Audit and Inspection (BAI) (See Table 8). The MPB is responsible for preparing the draft budget with the help of the Tax and Customs Office in the MOFE, which provides revenue forecasts. When the budget is authorized by the National Assembly, the MPB prepares the quarterly budget implementation plan, usually within a month, and allocates funds to line ministries. The Treasury Bureau of the MOFE then prepares the monthly cash plan and releases cash to line ministries. The Treasury Bureau keeps track of cash flows into and from the treasury single account held in the Bank of Korea. It is also responsible for issuing government bonds and managing government assets and liabilities.

An important issue concerning the interplay among various players is that of fiscal discipline. The budget process in Korea has generally taken a highly centralized, strategic

17 \_ One favorable development is the series of new initiatives that are recently being introduced; the medium-term expenditure framework, top-down budgeting, performance management, and program budgeting. These initiatives are expected to reduce the line ministries' incentives to secure funding through special accounts and funds and to help MPB in improving the allocative and operational efficiency of spending. More will be discussed below on these initiatives.

dominance-based approach, in the terminology of von Hagen and Harden (1996). These authors distinguish between two approaches in budgeting. Under a *target-based approach*, the government collectively negotiates a set of binding, numerical targets for the budget. The budget process starts with negotiations among concerned parties over binding limits on the spending total or budget deficits. Once these limits have been agreed upon, they must be observed during the remainder of the budget process. On the other hand, under a *strategic dominance-based approach*, the budget process vests the budget authorities with special strategic powers. Often, the main budgeting decisions are made in bilateral negotiations between the budget authorities and spending ministries.

### 2.3.2.2. The 1970s and 1980s

In the 1970s and 1980s, the Economic Planning Board (EPB) played a central role in budgeting as well as in preparing and implementing economic development plans. EPB was the leading ministry within the government, as reflected in the title of the head of EPB as deputy prime minister. Negotiations over spending bids were conducted bilaterally between the deputy prime minister and spending ministers. Little reconciliation occurred in the cabinet regarding the draft budget prepared by the deputy prime minister.

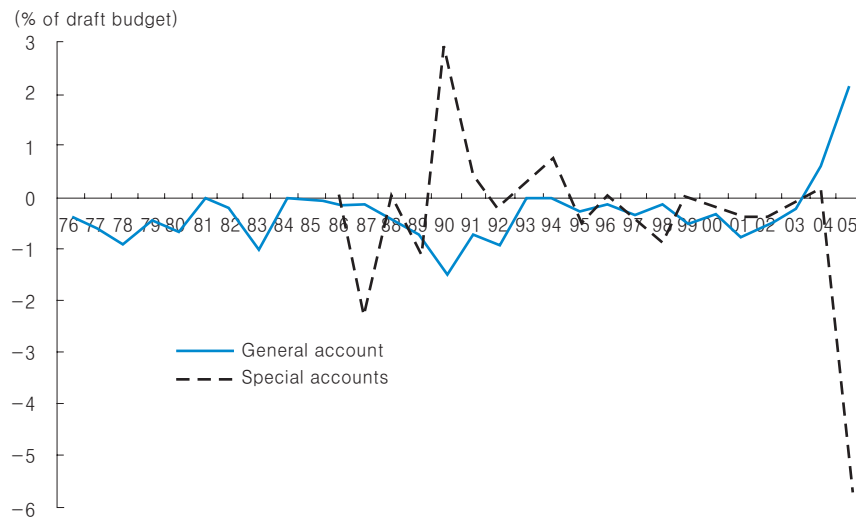
Table 6-8 ● Major Players in Korea's Budget Process

Players	Roles
Ministry of Planning and Budget (MPB)	<ul style="list-style-type: none"> <li>* Compiles budget bids and prepares the draft budget.</li> <li>* Allocates funds to spending ministries (apportionment).</li> <li>* Approves the transfers of funds between line items (virements).</li> </ul>
Treasury Bureau of the Ministry of Finance and Economy (MOFE)	<ul style="list-style-type: none"> <li>* Releases cash to spending ministries.</li> <li>* Manages the treasury single account held in the Bank of Korea.</li> <li>* Issues treasury bonds and manages assets and liabilities.</li> <li>* Collects ministerial financial reports, prepares the whole-of-government financial reports, and sends them to the BAI.</li> <li>* Produces the government financial statistics.</li> </ul>
Tax and Customs Office of MOFE	<ul style="list-style-type: none"> <li>* In charge of tax policy.</li> <li>* Prepares revenue forecasts.</li> <li>* Oversees the National Tax Service and the Customs Service.</li> </ul>
Ministry of Government Administration and Home Affairs (MOGAHA)	<ul style="list-style-type: none"> <li>* In charge of local government tax and spending policies.</li> <li>* Allocates the Local Shared Taxes (a formula-based block grant) to local governments.</li> <li>* Coordinates the central government subsidies to local governments.</li> <li>* Approves the borrowing by individual local governments.</li> </ul>

Board of Audit and Inspection (BAI)	<ul style="list-style-type: none"> <li>* The supreme audit institution in Korea, whose head is nominated by and reports to the president. The National Assembly can also request audits on specific issues to the BAI.</li> <li>* Checks the regularity of ministerial activities.</li> <li>* Prepares and tables the financial report to the National Assembly.</li> </ul>
National Assembly	<ul style="list-style-type: none"> <li>* Deliberates and votes on the budget.</li> <li>* Approves the transfers of funds between programs.</li> <li>* Reviews and approves audit reports.</li> </ul>
Spending ministries	<ul style="list-style-type: none"> <li>* Execute the budget and prepare financial reports.</li> </ul>

The authoritarian nature of previous governments also limited the role of the National Assembly in the deliberation of the draft budget. The National Assembly has traditionally been dominated by the party of the President. Insofar as the government had already consulted the ruling party before presenting the draft budget to the National Assembly, amendments typically entailed minor changes in the budget (see Figure 16). In addition, the Constitution prohibits the National Assembly from increasing the total spending or introducing new spending items unless agreed on by the government.

Figure 6-16 ●● Budget Amendments



Source: Ministry of Planning and Budget.

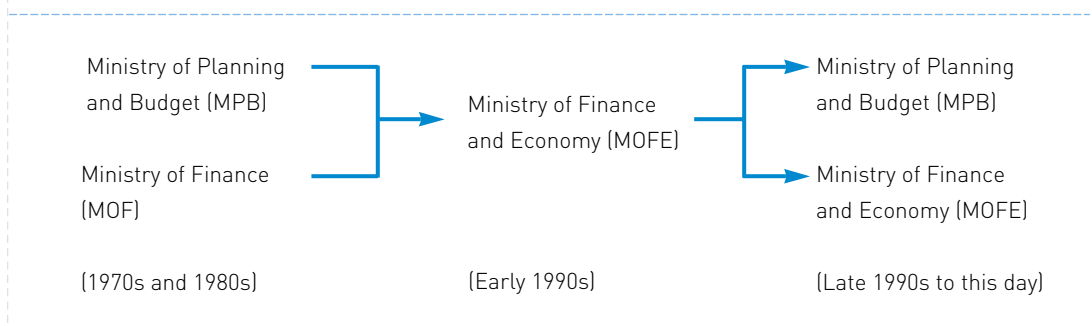
The EPB also exercised tight control of expenditures in the implementation stage. Ministries were required to spend within the limits set in the quarterly budget implementation plan. EPB could postpone or block part of the expenditures (those classified as “discretionary allocation items”) when deemed necessary. All limits on expenditures were imposed in cash terms. Transfers across appropriation accounts (“virements”) were prohibited unless authorized by the National Assembly or by EPB. In addition, supplementary budgets were normally introduced only once a year.

The Treasury Bureau of MOFE also had a tight grip on cash outflow. All cash disbursements were made strictly within the limits set in the monthly cash plans. Before the crisis of 1997, it was not uncommon for the Treasury Bureau to delay disbursements to line ministries when there was not enough cash left in the treasury account due to the seasonality of tax collection. This was in spite of the fact that they could issue short-term debt instruments within the limit set by the National Assembly to bridge the gap between tax collection and cash needs. In addition, the revenue forecasts prepared by the Tax and Customs Office were often very conservative with the actual tax collection overshooting the forecast by substantial margins.

### 2.3.2.3. The 1990s and after

Most of these characteristics carried over until recently. In the early 1990s, EPB and the Ministry of Finance were merged into the Ministry of Finance and Economy (MOFE), and the deputy prime minister-ship was handed over to the head of MOFE.<sup>18</sup> The latter exercised the same degree of centralizing power in budgeting as the head of EPB (see Figure 17).

Figure 6-17 ●● Organizational Change in the Budgeting Function



Economic Planning Board (EPB)

18 \_ This merger signaled the official closing of the “planning-based development era.” At the same time, the newly established Korea Fair Trade Commission took charge of competition policies in place of EPB, and the evaluation function of EPB was moved to the Prime Minister’s Office.

The recent reorganization in government resulted in a subtle change in the budget process. After the economic crisis, the budgeting function was separated from MOFE and moved to MPB.<sup>19</sup> Previously, EPB and then MOFE had the formal role in setting the overall agenda and coordinating policies across the government. After the reorganization, the coordination role together with the prime minister-ship was kept in MOFE, and MPB was devoid of such functions.<sup>20</sup> All these factors can act to reduce the centralizing power of MPB. In addition, the balance of power between the executive branch and the legislature is tipping toward the latter with the democratization of Korean politics.

#### 2.3.2.4. *Assessment*

There is not yet a visible sign that these changes have substantially weakened the centralizing power of MPB and the fiscal discipline. However, the risk is increasing, as illustrated, for example, in the increasing number of supplementary budgets introduced during the year after the crisis (see Figure 18). In most cases, the supplementary budgets were aimed at stimulating the economy.

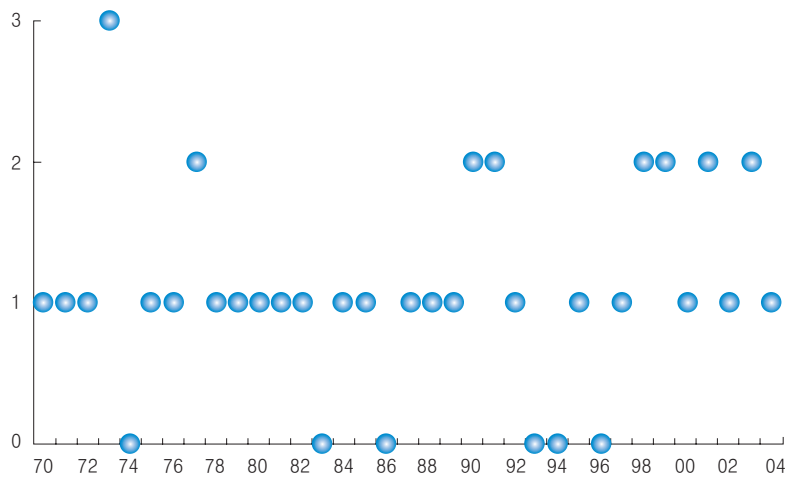
We also observe some changes in the cash management and revenue forecast practices in the post-crisis period. Pressured to stimulate the economy, and in particular to back up the front-loading<sup>21</sup> of annual spending that has been popular since 1999, MOFE is resorting more and more to short-term debt instruments to bridge the gap between tax collection and cash needs. The downward bias in revenue forecasts is also being reduced. In 2004, we actually had a large shortfall in tax collection, which was partly blamed on an overly optimistic assumption of the economic growth, which was in turn claimed by some to have been politically motivated.

19 \_ Before the separation, MOFE was a super-ministry in charge of general economic policy coordination, macroeconomic policies, budget preparation, tax policies, financial market policies, external economic relations, and treasury function. Many believed that the lack of check-and-balance as seen in the previous periods between EPB and MOF, together with the unmanageably large span of control of the Minister for Finance and Economy, veered economic policy-making off the right track, and contributed to the outbreak of financial crisis. The focus of criticism was laid on the bureau of financial market policies within MOFE, which was subsequently reduced in size and whose regulatory function was transferred to the newly created Financial Supervisory Commission. The Bank of Korea was granted instrumental independence from MOFE.

20 \_ Compared to EPB's responsibilities, MPB's exclude economic policy coordination, external economic relations, and competition policies.

21 \_ In front-loading exercises, MPB would allocate more funds than usual to the first half of the year, and urge line ministries to spend the allocated funds as early as possible. When necessary, that is when growth is slower than expected despite front-loading, MPB would consider introducing supplementary funds in the latter half of the year.

Figure 6-18 ● Number of Supplementary Budgets Introduced



Source: Ministry of Planning and Budget.

Part of these changes looks inevitable. The democratization of Korean politics and the devolution of budgetary power to line ministries are an unavoidable trend. The separation of the budgeting function from the policy coordination function was a political choice, made in part to respond to the criticism that the concentration of powers in one large “dinosaur” ministry (Ministry of Finance and Economy) contributed to the outbreak of the financial crisis. Utilizing short-term debt instruments to neutralize the impact of seasonality in tax collection is in itself a desirable practice.

It is also true that there is an increasing risk of overspending and weakened fiscal discipline. We would be better off with a new system of expenditure management that can cope with such a risk, for example, by gradually moving away from a strategic-dominance approach toward a target-based approach. The medium-term expenditure framework (MTEF) is one such option. An MTEF can be defined as the practice of preparing annual budgets with a medium-term perspective in a top-down way. More will be discussed below on the MTEF.

### 2.3.3. The Budget Process

#### 2.3.3.1. Before the Introduction of the MTEF

The budget process in the Korean central government has undergone a significant change in recent years. The government introduced the MTEF together with a top-down budget in 2004 for fiscal year 2005.<sup>22</sup> The budget process before the change is summarized in Table 9.

**Table 6-9** ●● Key Steps of the Budget Process before the Introduction of the MTEF\

Month	Action
January	* The fiscal year starts on January 1 <sup>st</sup> .
March	* The Ministry of Planning and Budget (MPB) sends the Guide to Budget Compilation to spending ministries.
May	* Ministries send budget bids to MPB by the end of May.
June-July	* MPB compiles the budget bids and prepares a preliminary budget proposal.
August-September	* MPB goes through bilateral negotiations with spending ministries between mid-August and mid-September. * MPB discusses the budget proposal with the ruling party.
October	* Authorized by the cabinet and the president, the draft budget is sent to the National Assembly by October 2 <sup>nd</sup> . * In mid-October, the Committee on Budget and Accounts begins deliberation on the draft budget. Ministers are typically requested to testify at committee meetings. Meetings are normally open to the public.
December	* The draft budget is modified and approved by the Committee on Budget and Accounts and then by the National Assembly by December 2 <sup>nd</sup> .

The recent reform was intended to address several defects found in the previous budgeting practice. First, prior to the introduction of the MTEF, budgeting was centered on the next single budget year, lacking a medium-term perspective. MPB and the National Assembly gave little consideration to the out-years beyond the budget year. Line ministries had little information on how much resources would be available to them in the future, and their medium- to long-term

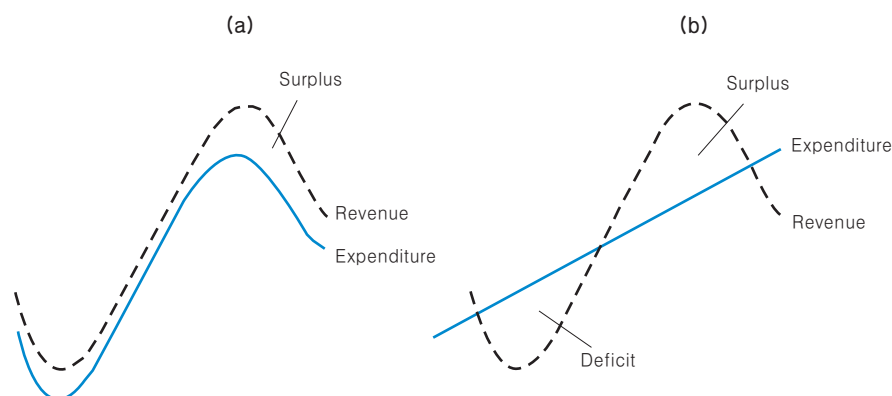
22 \_ Potter and Diamond (1999), Schiavo-Campo and Tommasi (1999), and World Bank (1998) provide a useful guide on the reform in this direction.

planning function was severely limited. Limited planning function in turn reduced the effectiveness and efficiency of overall public spending.

It was also difficult for MPB to identify and cope with the trend in increased spending. Without a long-term view on the appropriate level of tax burden, MPB would simply allow ever-increasing public spending to accommodate rising demands from various sectors. The focus on a single budget year also fostered gradualism in budgeting and hindered a strategic reprioritization of spending precisely when the strengthened control on the aggregate expenditure generated greater necessity for flexible reprioritization.

In addition, the counter-cyclical role of fiscal policy could be constrained when the attention was focused on a single year. The principle of “balanced budget in each year” had the potential to produce a pro-cyclical fluctuation in spending as illustrated in panel (a) of Figure 19. If, on the other hand, spending increases at a close-to-constant rate as in panel (b) and the balanced budget is pursued on average over the business cycle, the so-called “automatic stabilizer” can be strengthened.

Figure 6-19 ● Management of Spending over Business Cycles



Second, before the introduction of the top-down process, budgeting relied excessively on a bottom-up approach. At the initial stage of budget preparation, MPB made rough estimates of the total size and the sectoral allocation of the next year’s budget, but the estimates were not transmitted to line ministries and, therefore, could not guide line ministries in preparing their budget requests. When reviewing their budget requests, MPB focused on the microscopic spending control of individual programs. The sectoral allocation and the total size of the budget

were determined at the last stage of budget preparation by aggregating the expenditures on individual programs.

As a result, the control of inputs assumed a major significance in budget discussions and little attention was paid to outputs or outcomes. Absorbed in details, MPB had little time to review and analyze important policy issues, and the linkage between budgeting and policy-making was very weak. The budget negotiation between MPB and line ministries was a very time-consuming process for both parties. The accountability and autonomy of line ministries in preparing and managing their budget was also severely limited. Line ministries usually requested an unrealistically large amount of budget, and massive cuts were inevitable.

A third characteristic of the previous budgeting practice was the central stage accorded to the general account. MPB spent most of its efforts on reviewing and preparing the budget of the general account and paid less attention to special accounts and funds.

The previous approach had certain merits. The budget authorities had large discretion over the annual spending and used their power to contain the spending growth and adjust it to changing revenue conditions. To some degree, such short-term thinking was inevitable in Korea where the socio-economic environment changes quite rapidly and unexpectedly. In addition, by emphasizing the input control and the regularity of budget execution, the abuse or misuse of tax money could be minimized, but the growing size and complexity of the budget is making it necessary for MPB to deregulate the budgeting process, enhance autonomy and accountability of line ministries, and focus on the strategic management of public finance.

#### *2.3.3.2. After the Introduction of the MTEF*

With the introduction of the MTEF and top-down budgeting, all these are changing. Now the annual budgeting exercise starts with a discussion on fiscal policy over a five-year period including the current year, the budget year, and three out-years. Following this discussion, MPB transmits spending ceilings for sectors and programs to line ministries.<sup>23</sup> These ceilings encompass the general and special accounts and funds. Line ministries are asked to prepare their budget requests within these ceilings. When reviewing the ministerial budget requests, MPB places less emphasis on the microscopic control of line items and more on the strategic alignment of budget requests with overall policy directions.

23 \_ Ceilings are set for 14 spending areas such as social infrastructure, agriculture, education, and environment and then disaggregated into 56 programs. For example, social infrastructure has 7 programs, including roads, railways, subways, ports, airports, housing, and water resources. Separate ceilings are also set within each program for the general account and various special accounts and funds.

Key steps of the new budget process are explained in Table 10. The budget cycle starts in January, earlier than in previous years. The workload of budget examiners is accordingly spread out over a year rather than concentrated in July and August. This is deemed another merit of the new system.

**Table 6-10 ●● Key Steps of the Budget Process after the Introduction of the MTEF**

Month	Action
December	<ul style="list-style-type: none"> <li>* MPB sends to line ministries standard assumptions on macro-variables such as inflation, interest rates, exchange rates, etc.</li> <li>* Sectoral task forces are organized. They are composed of private sector and government officials from MPB and relevant ministries.</li> </ul>
January-April	<ul style="list-style-type: none"> <li>* Line ministries submit to MPB their estimates of spending needs over the next 5 years by the end of January.</li> <li>* Sectoral task forces discuss major policy issues and present their recommendations in a series of public hearings held in March and April.</li> <li>* By the end of April, MPB prepares a draft National Fiscal Management Plan (NFMP) through discussions with line ministries. The draft NFMP contains major policy directions and fiscal aggregates (total spending, deficits, debts, etc.) for the next 5 years and tentative spending ceilings on sectors and programs for the budget year.</li> </ul>
Cabinet meeting	<ul style="list-style-type: none"> <li>* At the end of April, a cabinet meeting, chaired by the president, is held in a secluded place to discuss and finalize the ceilings.</li> <li>* Following the meeting, the ceilings are transmitted to line ministries in the Guide to Budget Preparation.</li> </ul>
May-June	<ul style="list-style-type: none"> <li>* Line ministries prepare their budget requests and send them to MPB.</li> </ul>
July-August	<ul style="list-style-type: none"> <li>* MPB prepares the draft budget. Less emphasis is placed on the microscopic control of line items and more on the strategic alignment of budget requests with overall policy directions.</li> </ul>
August-December	<ul style="list-style-type: none"> <li>* Goes through the same process as before the introduction of MTEF.</li> </ul>

The new system is already producing tangible results. In fiscal year 2005, the budget requests by line ministries represented an increase of 11.7 percent over the previous year's budget. This was much smaller than the 30.8 percent increase in fiscal year 2004. Line ministries also voluntarily shuffled a larger portion of their spending across programs, cutting back 2.7 trillion won on existing ones and introducing new ones worth 3.0 trillion won. The corresponding figures for fiscal year 2004 were 1.6 and 1.5 trillion won, respectively.

### 2.3.3.3. *Room to Improve*

There is of course room to improve. The first three points explained below concern the behavioral changes that are needed in MPB and line ministries over the medium term. The next seven points concern the changes in the budgetary system and MTEF that are called for immediately.

First, performance management in line ministries should be strengthened. In the discussion on policy directions and resource allocation, performance information provides a valuable guide. There have been efforts in this direction, but none of them have yet succeeded in instilling performance orientation in line ministries. Details on the current reform efforts will be given in the next subsection.

Second, the capacity for planning and prioritizing in line ministries should be enhanced. For example, line ministries should be required to publish long-term strategic plans, annual business plans, and annual performance reports as in other countries. Also, the planning and budget divisions of individual line ministries should now play a greater role in the coordination of ministerial policies and budget requests, unlike in previous years when they would simply compile budget requests from program divisions and send them to MPB with little modification.

Third, the role of MPB should also be changed. As a central coordinator of government policies, MPB should strengthen its capacity for policy analysis and long-term forecasts. It should stress input control less and pay more attention to outputs and outcomes. It should act as a consultant for line ministries to enhance their program performance and strive to build mutual trust in a collective action game.

Fourth, the medium-term targets in the MTEF should be clarified. Presently, it is not clear which variable the government is targeting in the medium term; the budget balance, the total spending, or the debt-to-GDP ratio. An ideal strategy would be to target a balanced budget over the business cycle.<sup>24</sup> In this strategy, deficits are allowed in a period of lower-than-expected growth. They are subsequently offset by surpluses in a period of higher-than-expected growth, and the accumulation of debt is held down over the cycle. The debt-to-GDP ratio declines slowly as the GDP expands. Examples of this strategy can be found in the Growth and Stability Pact (GSP) of the European Economic and Monetary Union (EMU), the “golden rule” of the British government, and the two-percent structural surplus rule of the Swedish government.<sup>25</sup>

24 \_ Given the low level of debt-to-GDP ratio in Korea, it seems unnecessary to target surpluses over the cycles.

Fifth, it is necessary to set out the annual operational targets that can guarantee the achievement of the medium-term targets. There are two types of operational targets commonly employed, namely budget balance and total spending. A prime example of the former is the three-percent deficit rule set out in the Maastricht treaty of the EMU. In contrast, the Swedish government imposes an expenditure ceiling on each of the three years ahead. The ceilings for the first two years coincide with the last two of the previous year's three-year ceilings. The United Kingdom has adopted similar practices for expenditure control. The U.S. federal government experimented with both types of targets in the 1980s and 1990s (see Box).

### **Box | Experience of the U.S. Federal Government on Deficit Control**

The United States experimented with both types of annual operational targets explained in the text. In the 1980s, targets were set up for budget deficits. The Gramm-Rudman-Hollings Act of 1985 (GRH I) prescribed deficit ceilings in nominal dollars for the next five years. The strategy, however, did not work. The actual deficits exceeded the stipulated ceilings in all years covered by GRH I. In 1987, GRH II was enacted and the deficit ceilings were adjusted upward to accommodate this reality, but it did not take long before GRH II also proved to be a failure.

In 1990, a new strategy was adopted with the enactment of the Budget Enforcement Act (BEA). Instead of setting limits on deficits, the congress introduced separate rules for discretionary spending and mandatory spending. On discretionary spending, cash limits were imposed for the next five years. Except in special circumstances, these limits were not to be breached. For mandatory spending (interest payments, social security benefits, etc.), which depend on exogenous variables such as interest rates and the number of the elderly, the so-called “pay-as-you-go (PAYGO)” principle was introduced. In PAYGO, any increase in deficits resulting from policy changes should be offset by corresponding changes in revenues or mandatory spending.

The new strategy worked well. It was renewed in 1993 and 1997. Actual spending on discretionary programs turned out to be larger than stipulated in the law every year except in 1996 (see Table 11), but the excess was always less than 1 percent of the stipulated amounts, and was mostly due to exceptional events such as the Gulf war and natural disasters.

25 \_ The GSP commits the member countries to achieve and maintain a budget position of close to balance or in surplus over the cycle. The golden rule allows the British government to borrow only to invest and not to fund current spending over the cycle. The current Swedish government is targeting an average surplus of 2 percent of GDP over the cycle (Gustafsson, 2004).

Helped by the strong economy, the United States attained budget surplus in 1999 for the first time since mankind set foot on the moon. The unusually long boom period in the 1990s boosted revenues above and contained the mandatory spending below the levels expected at the beginning, but it would be unfair to say that all surpluses were due to the strong economy. The rules introduced by BEA appear to have been quite effective in controlling expenditures and thereby reducing budget deficits.

First of all, these rules were aimed at controlling what could actually be controlled. Discretionary spending is by definition amenable to annual controls by congress. Mandatory spending can also be controlled through the PAYGO rule by changing relevant laws. On the other hand, budget deficits are difficult to control because they are affected by the business cycles as well as by the government policy. When a target cannot be directly controlled by the authorities in charge, it is difficult to hold them responsible for the results, and we cannot be sure that they will make their best effort to achieve the target.

**Table 6-11** ● Expenditures and Revenues of the U. S. Federal Government

(billion dollars)

		1994	1995	1996	1997	1998
Total Spending	BEA estimates	1,523	1,578	1,645	1,745	1,843
	Actuals	1,462	1,516	1,561	1,601	1,653
Discretionary Spending	BEA limits	537	539	547	547	548
	Actuals	544	545	534	549	555
Mandatory Spending	BEA estimates	765	795	843	920	996
	Actuals	715	738	785	809	855
Revenues	Actuals	1,230	1,306	1,379	1,440	1,523
	BEA estimates	1,259	1,352	1,453	1,579	1,723
Deficits /Surpluses	BEA estimates	-270	-230	-266	-305	-320
	Actuals	-203	-164	-107	-22	70

Source: OECD (1999).

**Box**

Between these types of targets, total spending is a superior choice because (1) it is less influenced by the cyclical position of the economy and therefore easier to control; and (2) it assists in a counter-cyclical management of fiscal policy by leaving the balance to fluctuate flexibly over the cycle. Presently, the Korean government intends to keep the annual spending totals unchanged in successive NFMPs, and thus appears to have total spending as an annual

target, but this point needs to be clearly communicated to the public.<sup>26</sup>

Sixth, it is desirable to introduce various risk analyses in the National Fiscal Management Plan. Such analyses would address such issues as (1) the deviation of medium-term growth rates and other macroeconomic variables from the projected levels; (2) explicit and implicit contingent liabilities of the government coming from loan guarantees, public corporations, local governments, and others; and (3) population aging.

Seventh, a mechanism for “baseline” projections should be established. MPB currently provides line ministries with standard assumptions on key macro-variables such as wage and price inflation. Based on these assumptions, line ministries project their spending needs for the next five years, but they should go further and distinguish between spending on existing programs (“baselines”), costs of new policy initiatives, and “savings options.” MPB would check the validity of ministerial projections and aggregate them to arrive at the government-wide baselines, costs of new policy initiatives, and savings options. Only then can the annual budgeting be closely linked with the National Fiscal Management Plan.

Eighth, a reconciliation process should be put in place to analyze the difference between projected revenue, spending, balance, and debt levels and the outturns. This is a critical step to secure accountability and transparency of macro-fiscal management. In case of the U.S. federal government, the deviation is decomposed into economic, policy, and technical factors.

Ninth, the internal auditing within line ministries and government agencies should be strengthened. An increased autonomy in financial management should be accompanied by an increased awareness of the possibility of fraud, waste, and abuse. In this regard, we can refer to the case of the U.S. federal government where the independence of internal auditors is guaranteed with the inspector general system and consider introducing a similar system.<sup>27</sup>

26 \_ With fixed total spending, it may be difficult to cope with an unexpected surge of spending needs, for example in times of economic hardship. An escape clause may be needed that is not too lax to undermine fiscal discipline nor too stringent to accommodate reasonable demands for increased spending.

27 \_ Under the Inspector General Act of 1978, the president appoints inspectors general (IGs) for certain specified federal establishments, by and with the consent of the Senate, without regard to political affiliation and solely on each individual’s experience in specified areas. Under the Inspector General Amendments of 1988, the heads of designated federal entities appoint IGs, without the necessity of Senate confirmation. The IG Act identifies 26 federal establishments that are to have an IG appointed by the president with Senate confirmation and 30 designated federal entities that are to have an IG appointed by their agency heads. The IGs perform audits in accordance with generally accepted government auditing standards and report suspected violation of criminal law to the Attorney General. Each IG must prepare semiannual reports that summarize the IG’s activities. The head of each agency transmits these reports unaltered to Congress and subsequently makes them available to the public (GAO, 1998).

Tenth, “program budgeting” needs to be introduced. The Korean government is currently redesigning the structure of its budget accounts around functions, administrations, and programs. The effort is spearheaded by the Budget and Accounting Reinvention Office (BARO).<sup>28</sup> The resulting program structure will make it easier to allocate resources according to the national priorities and set ceilings on sectoral spending. “Programs” will also act as the basic units of performance management in the future.

## 2.3.4. Performance Management

### 2.3.4.1. Overview

As noted above, budgeting in Korea has traditionally been focused on the ex ante control of inputs. The authorities have little experience in performance management through such methods as performance monitoring and program evaluation. There is no established feedback mechanism that supplies performance information to those in charge of budget preparation and execution, which partly explains the continuation of some ineffective and inefficient programs.

Performance management becomes more important with the introduction of the MTEF and top-down budgeting. These changes will allow greater autonomy to line ministries and can lead to greater inefficiency unless complemented with a new mechanism to secure accountability on the part of line ministries.

Figure 20 describes the basic framework of performance management. Starting from the mission of an organization, we set up strategic goals, performance goals, and performance indicators. Actual performance is assessed through performance monitoring, program evaluation, or program review. This work is documented in strategic plans, annual performance plans, and annual performance reports. Table 12 explains the meaning and requirements of the mission, strategic goals, and performance goals. Table 13 compares the three tools for performance assessment—monitoring, evaluation, and review. Key differences between evaluation and monitoring are listed in Table 14.

28 \_ BARO is a special task force organized in 2004 to lead reforms in the area of program budgeting, financial reporting, government financial statistics, and the IT system. It is officially part of MPB but composed of secondees from various organizations including MPB, MOFE, MOGAHA, and BAI.

Figure 6-20 ●● Framework of Performance Management

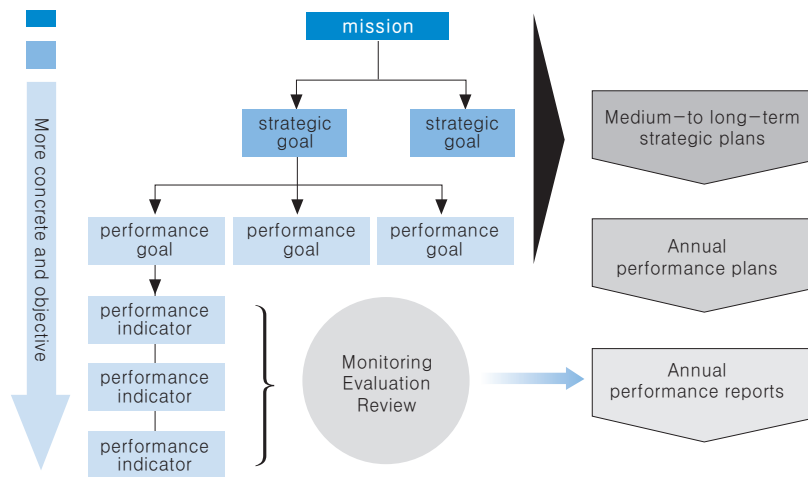


Table 6-12 ●● Meaning and Requirements

Term	Meaning and requirements
Mission	Means... * Major results sought by the program or the organization as a whole. * Starting point for identifying the specific outcomes to be measured and the specific performance indicators that are needed. Should... * Focus on the program effect on customers and the public.
Strategic Goals	Means... * Major policy goals that the organization pursues to complete its mission. Should... * Be value-free and avoid general or aspirational expressions. * Be stated clearly and succinctly. * Be minimal in number. * Be focused on the final results that the organization pursues.
Performance Goals	Means... * Concrete goals that the organization pursues to achieve it's strategic goals Should... * Be specific enough to ascertain, with the help of performance indicators, whether the performance objectives have been achieved.

**Table 6-13 ●● Tools of Performance Assessment**

Term	Main characteristics
Performance monitoring	<ul style="list-style-type: none"> <li>* Measures the program performance with a predetermined set of indicators.</li> <li>* Can produce information on outputs and outcomes in a frequent and timely manner at relatively low costs.</li> <li>* By itself, can rarely explain the causality between inputs and outputs or outcomes.</li> </ul>
Program evaluation	<ul style="list-style-type: none"> <li>* Addresses the question of why and how the program produced certain outputs and outcomes.</li> <li>* Employs analytical tools with varying degrees of sophistication.</li> <li>* Usually requires large amounts of money and time, and cannot be performed on all programs.</li> </ul>
Program review	<ul style="list-style-type: none"> <li>* Assesses the performance and other aspects of a given program with an explicit aim of helping budgetary decision-making.</li> <li>* Relies on information from various sources including monitoring and evaluation.</li> <li>* Is usually led by the central budget office (e.g., Ministry of Finance).</li> <li>* Requires a medium effort (in between monitoring and evaluation).</li> </ul>

**Table 6-14 ●● Key Differences between Evaluation and Monitoring**

Monitoring	Evaluation
<ul style="list-style-type: none"> <li>* periodic;</li> <li>* assumes appropriateness of program, activities, and indicators;</li> <li>* tracks progress against small number of indicators;</li> <li>* usually quantitative;</li> <li>* use data routinely gathered or readily available;</li> <li>* cannot indicate causality;</li> <li>* difficult to use for impact assessment;</li> <li>* usually internal.</li> </ul>	<ul style="list-style-type: none"> <li>* usually episodic;</li> <li>* can address a wide-range of potential questions about a policy, program, or project;</li> <li>* can identify what has happened as a result of an intervention and provide guidance for future directions;</li> <li>* can address “how” and “why” questions;</li> <li>* wide-range of quantitative and qualitative research methods possible;</li> <li>* can use data from different sources;</li> <li>* can identify unintended as well as planned impacts and effects;</li> <li>* can involve internal, external, or self evaluation.</li> </ul>

Source: Perrin (2000).

In recent years, diverse efforts have been made to strengthen performance management in government. Some of them are listed in Table 15. Below, detailed explanation will be given on the Performance Management of Budgetary Programs (PMBP), the Self-Assessment of Budgetary Programs (SABP), and the Evaluation of Budgetary Programs (EBP).

**Table 6-15** ●● Diverse Initiatives for Performance Management

Performance Management Initiatives	Organizations in Charge
Performance Management of Budgetary Programs (PMBP)	MPB
Self-Assessment of Budgetary Programs (SABP)	MPB
Evaluation of Budgetary Programs (EBP)	MPB
Government Operations Assessment System (GOAS)	Office of Government Policy Coordination (OGPC)
Management by Objectives (MBO)	MOGAHA
Performance Audit	BAI

#### 2.3.4.2. *Performance Management Budgetary Programs (PMBP)*

PMBP corresponds to performance monitoring in the above discussion. It is led by MPB, and its design follows the framework of the Government Performance and Results Act (GPRA) of the U.S. federal government. It is based on the pilot project on performance budgeting carried out in 1999-2002, which was not very successful in instilling performance orientation either in line ministries or in MPB.<sup>29</sup> PMBP requires line ministries to (1) set up performance goals and indicators, (2) prepare annual performance plans and reports, and (3) submit them to MPB at the start of the annual budget cycle.

29 \_ In 2001, 39 organizations participated in the pilot. A survey of the pilot (Jun and others, 2002) found that over half of the indicators proposed in the performance reports were based on outputs and only one-fifth were based on outcomes. The rest were input indicators. And about two-thirds of the indicators were non-quantitative ones. The survey also found that many indicators changed from one year to another, making it difficult to consistently trace program performance over time. It subsequently proposed that the government apply performance indicators only to major large-sized expenditure programs for which quantitative indicators are easy to construct.

Figure 6-21 ●● Structure of PMBP



A major drawback of PMBP lies in the fact that it covers only part of ministerial activities. Those activities not involving large sums of expenditure (such as pure policy-making) are excluded from performance monitoring. Also, activities for which the benefits of performance monitoring are expected to be small (such as wages and salaries, “basic program” expenditures, and general administrative expenses) are excluded as well. This has the potential to lead line ministries to disregard those activities that are critical in achieving their overall mission but involve small expenditures or only wages and salaries, and to lose sight of the linkage between the overall mission, strategies, and performance goals.

Unlike GPRA, PMBP does not require strategic planning on the part of line ministries. Performance indicators are therefore not derived from ministerial missions in a systematic fashion. This is understandable given the position of MPB within the government. MPB is only one of many ministries under the Prime Minister’s Office and cannot impose such a broad requirement as strategic planning on line ministries.

PMBP, like its pilot project, has not been very successful. There appears to exist only lukewarm support from the top management in MPB. Line ministries are also showing little enthusiasm for the PMS. Most importantly, performance reports are not open to the public, giving little incentive for line ministries to think seriously about the exercise.

The general failure of PMBP can be explained in several ways. First, it has been and will be very difficult to set up quantitative indicators for many government activities, especially when the activity has diverse (and sometimes conflicting) objectives, takes many years to attain the desired objectives, is only one of many factors affecting the outcome, or does not lend its performance to quantitative measurement by its own nature. Second, and more importantly, PMBP is not attracting sufficient attention from major stakeholders such as the budget examiners in MPB, managers in line ministries, parliamentarians, and the general public. Performance information provided by PMBP is not detailed enough for budget examiners in

MPB and parliamentarians involved in funding decisions on individual programs. Managers in line ministries do not find the information useful in managing their programs, and the general public cannot even access the information because the reports are not open to them. In short, it is hard to find real demand for PMBP.

Fortunately, efforts are being made to repair PMBP. According to MPB, from this year on, all activities (budgetary and non-budgetary) will be covered by PMBP, and reports will be open to the public. Real demands for performance information are being created through SABP and EBP as will be explained below, but there is still no requirement for strategic planning. So long as strategic plans provide an overarching framework for results-oriented management, including PMBP, SABP, and EBP, the Korean government (to be specific, MPB in coordination with the Prime Minister’s Office) should seriously consider introducing strategic planning in ministries.

In the United States, federal agencies should prepare strategic plans, performance plans, and performance reports under the GPRA. Table 16 lists these requirements, and Table 17 shows the assessment of agency strategic plans by the U.S. Government Accountability Office (GAO). Following these examples, prescribing more detailed requirements in Korea would help enrich the performance plans and reports prepared by line ministries. MPB or any other central agency<sup>30</sup> can also review them periodically, rate their quality, and propose best practices.

Table 6-16 ●● Documents Required in the GPRA

Documents	Requirements
Strategic plans	<ul style="list-style-type: none"> <li>* Should cover not less than 5 years, and should be updated at least every 3 years.</li> <li>* Must contain:                             <ul style="list-style-type: none"> <li>- A comprehensive mission statement for major functions and operations of the agency;</li> <li>- General and outcome-related goals;</li> <li>- A description of how the agency will achieve the goals and the operational process and resources required;</li> <li>- A description of how the goals relate to annual performance plan goals;</li> <li>- An identification of key factors external to, and beyond the control of, the agency that could significantly affect the achievement of goals; and</li> <li>- A description of program evaluations, with a schedule for future program evaluations.</li> </ul> </li> </ul>

30 \_ The National Assembly Budget Office and the Evaluation Research Institute of the Board of Audit and Inspection can play the role of GAO in this respect.

Performance reports	<p>* Should cover each program activity in the agency's budget.</p> <p>* Must:</p> <ul style="list-style-type: none"> <li>- Establish goals that define the level of performance to be achieved by a program activity;</li> <li>- Express goals in an objective, quantifiable, and measurable form unless an alternative form is approved by OMB;</li> <li>- Describe the operational processes and resources required to achieve goals;</li> <li>- Establish performance indicators to be used in measuring or assessing the relevant outputs, service levels, and outcomes of each program activity;</li> <li>- Provide a basis for comparing actual results with the established goals; and</li> <li>- Describe the means to be used to verify and validate measured values.</li> </ul>
Performance reports	<p>* Should include actual program performance results for the 3 preceding fiscal years.</p> <p>* Must;</p> <ul style="list-style-type: none"> <li>- Review how successfully performance goals were achieved;</li> <li>- Evaluate the performance for the current year relative to the performance goals achieved during the fiscal year(s) covered by the reports;</li> <li>- Where goals are not met, explain and describe (a) why the goals were not met, (b) plans and schedules for achieving the goals, and (c) if the goals are impractical or infeasible, why that is the case and what action is recommended;</li> <li>- Describe the use and assess the effectiveness in achieving performance goals of any waiver under 31 U.S.C section 9703; and</li> <li>- Include the summary findings of program evaluation completed during the fiscal year.</li> </ul>

Source: GAO (1998).

**Table 6-17** ●● Elements Included in Agency Strategic Plans

	Plan year	Mission statement	Long-term goals	Strategies	Relationship between long-term goals and annual goals	External factors	Evaluations
Department of Education	1997	X	X	X		X	X
	2002	X	X	X	X	X	
Department of Energy	1997	X	X	X			
	2003	X	X	X	X	X	
Department of Housing and Urban Development	1997		X				
	2001	X	X	X	X	X	

	Plan year	Mission statement	Long-term goals	Strategies	Relationship between long-term goals and annual goals	External factors	Evaluations
Small Business Administration	1997	X	X	X		X	
	2003	X	X	X	X	X	
Social Security Administration	1997	X	X	X	X	X	X
	2003	X	X	X	X	X	X
Department of Transportation	1997	X	X				X
	2003	X	X	X	X	X	

Source: GAO (1998).

### 2.3.4.3. Self-Assessment of Budgetary Programs (SABP)

SABP, a form of budget review, is also led by MPB. It is being designed after the Program Assessment Rating Tool (PART) of the U.S. federal government. It requires line ministries to assess their own programs with spending levels above a certain threshold in a cycle of 3 years. The assessment is based on 16 questions common to all types of programs and a few additional questions specific to different types of programs.<sup>31</sup> Table 18 lists the common questions asked.

Table 6-18 ●● Common Questions for the SABP

Section	Common Question
Program design	* Does the program have clear purposes and legal or other basis?
	* Can government intervention be justified?
	* Is government spending necessary to achieve the objectives?
	* Is the program duplicative of another program?
	* Has the program been subjected to an objective feasibility study?
	* Is the proposed program design most cost-effective?
	* Are performance goals and indicators in place?
	* Do performance goals and indicators fully reflect program objectives?
* Are the targets set at reasonable levels?	

31 \_ Types of programs are infrastructure investment, procurement of large-scale facilities and equipment, provision of direct services, capital injection, subsidies to private entities, grants to local governments, and R&D.

Program management	<ul style="list-style-type: none"> <li>* Is the implementation being monitored regularly?</li> <li>* Is the program being implemented as planned?</li> <li>* Are efforts being made to reduce costs or increase efficiency?</li> </ul>
Performance assessment and feedback	<ul style="list-style-type: none"> <li>* Has an objective and comprehensive program evaluation been conducted?</li> <li>* Did the program achieve the intended objectives?</li> <li>* Are customers and stakeholders satisfied with the program performance?</li> <li>* Is the agency utilizing the assessment results for program improvement and budget planning?</li> </ul>

Answers to the questions take the form of “yes (1)” or “no (0).” In the case of questions regarding the achievement of program objectives and customer satisfaction, 4-scale answers (1.00, 0.67, 0.33, 0.00) are given. A weight is assigned to each question and the overall assessment will be based on the weighted sum of the answers. Programs are then classified as “effective (85-100),” “moderately effective (70-84),” “adequate (50-69),” and “not effective (0-50).” MPB reviews the results of ministerial self-assessments and takes them into account when preparing annual draft budgets and the National Fiscal Management Plan.

In 2005, 555 programs were assessed (Table 19). Among them, 87 (15.7%) were classified as “not effective,” and their funding was cut by 10 percent with some modifications. Such practice of directly linking performance to budgeting has been held as taboo by many experts mainly because decision-making should be based not solely on a limited set of performance information but on broad considerations on, for example, the beneficiaries’ needs. But MPB felt that without a direct linkage, it would be very difficult to invoke serious interest in SABP from line ministries. Certainly, their strategy worked, and they plan to continue this exercise this year for next year’s budget.

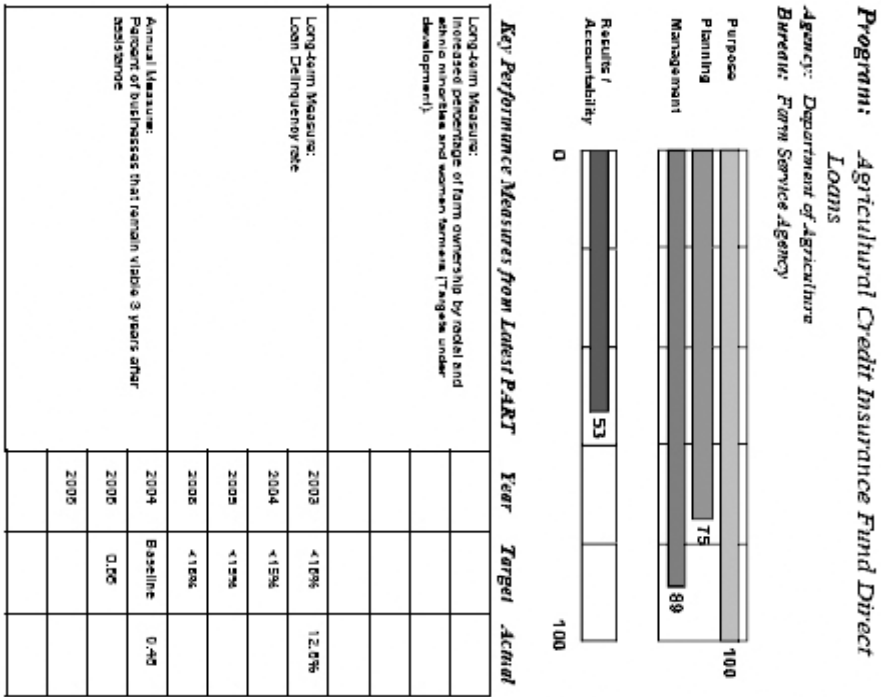
**Table 6-19** ●● Results of 2005 SABP

(Number and percentage of programs)

Total	Effective	Moderately effective	Adequate	Not effective
555 (100.0%)	28 (5.0%)	99 (17.9%)	341 (61.4%)	87 (15.7%)

Even though SABP succeeded in creating “real demand” for performance information within MPB and also in line ministries, improvements are needed in several aspects. Just like PART, SABP increased the workload of budget examiners substantially. It will increase further in

Figure 6-22 ●● An Example of PART Results



**Rating:** Moderately Effective  
**Program Type:** Credit

**Program Summary:**  
 The Farm Service Agency's (FSA) direct loans program provides loans to family farmers who could not otherwise obtain agricultural credit through other commercial institutions. The program is designed to provide a temporary source of credit until such time as the farmer is able to utilize the private sector for their financing needs.

FSA, through its nationwide network of service centers, is able to provide outreach to socially disadvantaged farmers and farmers in geographically isolated areas that have few lenders. Additionally, farmers may face a competitively limited market for their loans that can result in higher rates, unfavorable terms, and a shortage of loan funds. FSA direct loans facilitates the provision of credit which can help support low farm family incomes, assist minority and beginning farmers, or help farmers adopt new technology that will make their farming operations more economical. The PART assessment found:

- At the Federal level there are no other agencies that have the same specific goals and objectives as FSA direct loan program.
  - Borrower abuse of FSA loan reinsurance led to reforms in the mid-1990's that no longer allow borrowers with more than one write-down to qualify for other capital loans. Questions still remain regarding the ability of farmers, who continue to workout their loans, to meet their debt obligations over the long-term.
  - Long term goals include improved economic viability of farmers and ranchers, reduced loan losses, and targeted assistance to beginning and socially disadvantaged farmers. However, demand for direct loans is the major driver in the budget request, and it is not clear how this demand ties to accomplishing the annual and long-term performance goals.
- In response to these findings, the Administration will:
1. Define long-term outcome measures that focus on a key goal of the program - improving the economic viability of farmers and ranchers through strategic planning efforts and an in-depth program evaluation currently underway.
  2. Amend servicing options to reduce the administrative burden without impacting the effectiveness of the program.
  3. Implement FSA's new Farm Business Plan in the fall of 2004 which will improve the agency's ability to collect detailed performance information.

*Program Funding Level (in millions of dollars)*

Year	Actual	Estimate	Estimate
2004	844	955	937

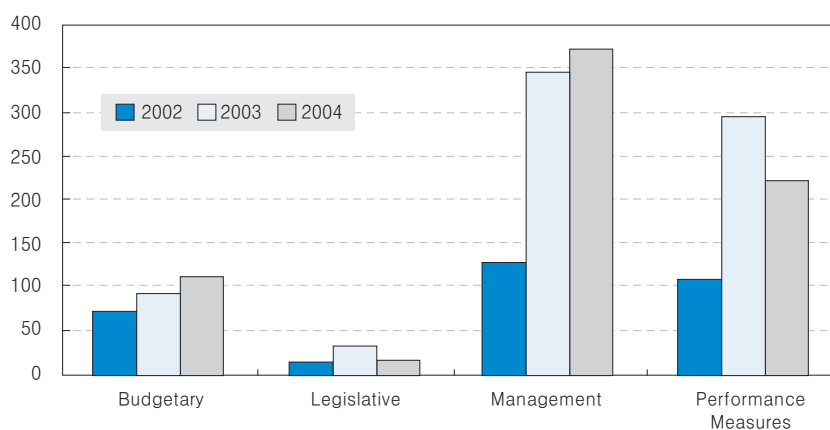
Source: U.S Office of Management and Budget

coming years as the assessed programs accumulate and the examiners need to re-assess the old cases when necessary. To alleviate this problem, an arrangement was made for this year with the small division in charge of coordinating SABP efforts within MPB making a preliminary assessment of the documents prepared by line ministries, and then passing their opinions to budget examiners who make the final assessment. This arrangement is not necessarily optimal given the limited capacity of that division and the possible lack of ownership in SABP results by budget examiners. Greater resources for SABP are being called for.

In addition, efforts are needed to go beyond scoring the programs. The U.S Office of Management and Budget (OMB) makes recommendations for line ministries to improve their program performance. Figure 21 is an example of PART results. In this case, OMB recommended the Department of Agriculture to (1) define long-term outcome measures, (2) amend servicing options, and (3) implement FSA’s New Farm Business Plan. OMB is supposed to follow up these recommendations in subsequent years and take necessary actions.

As can be seen in Figure 23, OMB’s recommendations are concentrated on managerial improvement. Performance measures also receive high attention from OMB. On the other hand, relatively fewer recommendations are made on funding decisions or legislative changes.

Figure 6-23 ●● Number of Recommendations



Source: U.S. Office of Management and Budget.

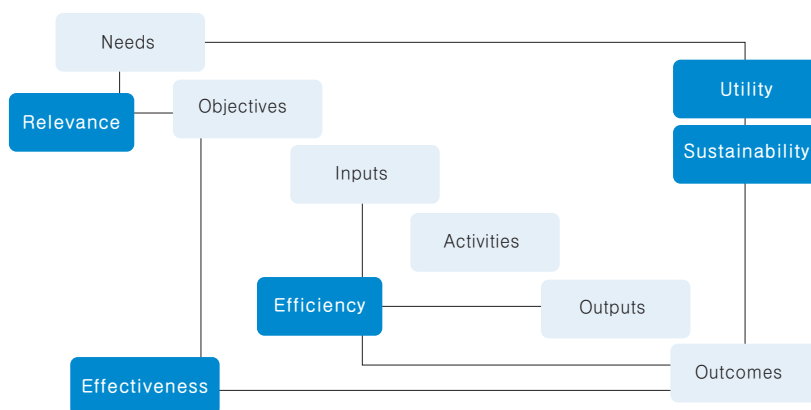
This year, MPB plans to start producing recommendations for line ministries. It remains to be seen how effective these recommendations will be in improving the program efficiency and effectiveness. In the United States, difficulties were encountered in communicating OMB’s intentions to line ministries, prioritizing many different recommendations, and securing adequate resources within OMB for the follow-up of recommendations. MPB should prepare themselves for similar difficulties.

### 2.3.4.4. Evaluation of Budgetary Programs

The last addition to the armory of performance management is the Evaluation of Budgetary Programs (EBP), which is an effort led by MPB to set up a systematic approach to program evaluation in line ministries.

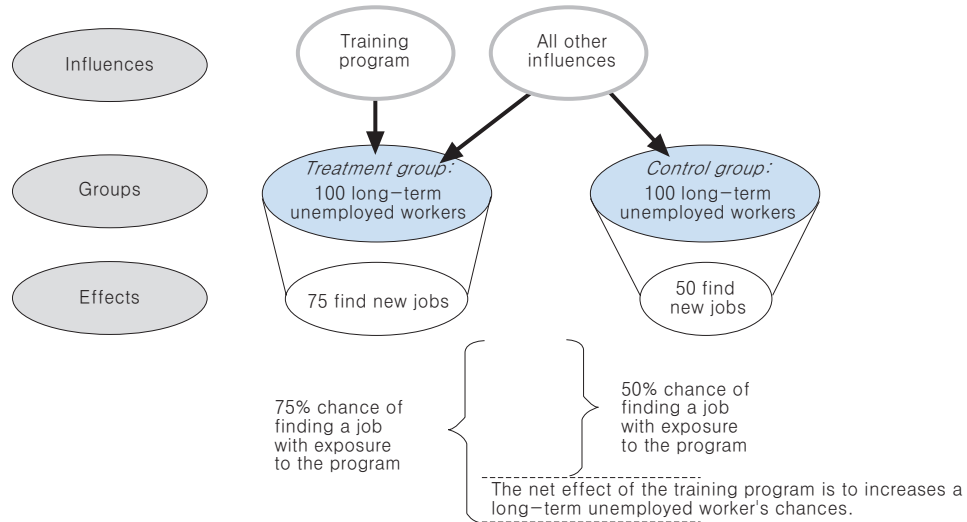
The central question in program evaluation is to address the issues of relevance, efficiency, effectiveness, utility, and sustainability as illustrated in Figure 24. Figure 25 gives an example of how we would identify the effectiveness of a training program for long-term unemployed workers.

Figure 6-24 ●● Issues in Program Evaluation



Source: European Commission (1997).

Figure 6-25 ●● Identifying the Effectiveness of a Training Program



Source: European Commission (1997).

Each year, MPB would commission evaluation studies on programs that it considers to need critical assessment. Korea Development Institute (KDI) organizes evaluation teams and oversees the studies. For this purpose, KDI has published a manual for program evaluation, which details the process and standards to be followed by evaluation teams.

Three programs were evaluated from late 2005 to early 2006 on a pilot basis. From 2006 on, around 10 programs will be evaluated each year. Pilot studies uncovered various difficulties in carrying out the evaluation. Most programs lacked clearly specified goals and necessary data to assess the achievement of goals. Evaluators found it difficult to understand the structure and context of individual programs and official documents were not much help in this regard. MPB and line ministries often had different expectations of evaluation, with the former focusing on funding decisions and the latter on program management, which cannot be easily reconciled with each other.

To overcome these difficulties, KDI's evaluation manual stresses the importance of, at the start of evaluation studies, asking line ministries to provide sufficient details of the program, identifying the program structure and context, re-defining the program objectives, describing the intervention logic of the program, setting up performance indicators and benchmarks for

program success, and deciding on the purpose and scope of the evaluation. These steps should be taken in a transparent way and in full cooperation with relevant stakeholders including the ministries in charge of the program and MPB.

Perhaps the most difficult part would be describing the intervention logic and setting up performance indicators. The manual recommends the use of logic models for this purpose. Figure 26 gives an example of a logic model in the case of a road-safety campaign. The manual also outlines the desirable features of performance indicators as in Table 20.

Figure 6-26 ●● Intervention Logic of a Road-Safety Campaign

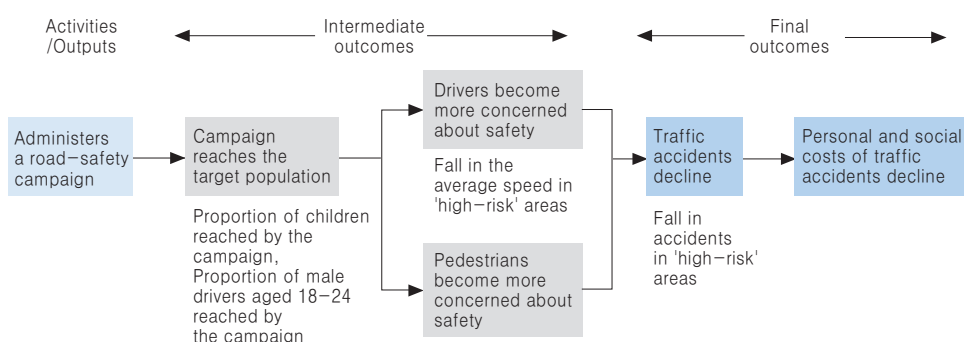


Table 6-20 ●● Criteria for Performance Indicators

**Performance indicators must be:**

- \* **Relevant** to what the organization is aiming to achieve;
- \* Able to **avoid perverse incentives**—not encourage unwanted or wasteful behavior;
- \* **Attributable**—the activity measured must be capable of being influenced by actions which can be attributed to the organization, and it should be clear where accountability lies;
- \* **Well-defined**—with a clear, unambiguous definition so that data will be collected consistently, and the measure is easy to understand and use;
- \* **Timely**, producing data frequently enough to track progress, and quickly enough for the data to still be useful;
- \* **Reliable**—accurate enough for its intended use, and responsive to change;
- \* **Comparable** with either past periods or similar programs elsewhere; and
- \* **Verifiable**, with clear documentation behind it, so that the processes which produce the measure can be validated.

Source: HM Treasury et. al. (2001).

EBP is expected to provide information on program performance that can be used for SABP. In fact, the first question in the last section in Table 18 asks whether an objective and comprehensive program evaluation has been conducted for a program. On the other hand, the information gathered through SABP can be used in the selection of candidate programs for EBP, especially in cases of low SABP-score programs. In this sense, PMBP and SABP are complementary to each other. A similar relationship exists between EBP and PMBP. EBP can propose new and refined performance indicators for PMBP as explained above. At the same time, EBP can utilize the performance data collected through PMBP in conducting evaluation.

EBP has many challenges to overcome in the coming years. The ultimate aim is to set up a standard and provide examples for program evaluation, and to instill evaluation culture in line ministries, which, we hope, will conduct evaluation voluntarily on their own programs as part of their daily business.

### 2.3.5. Government Financial Statistics

The limited scope of the government financial statistics has been pointed out as one of the major drawbacks of the Korean fiscal management system. As explained above, the consolidated central government covers the general and special accounts and funds, but it excludes some important fiscal activities of the government. For example, National Health Insurance is excluded from the consolidated government even though it is a social insurance program that covers over 90 percent of the population. Also excluded are various quasi-government organizations and research institutions (such as KDI), which are mainly financed and whose activities are closely supervised by the government.

Even within the central government, the revenue and expenditure statistics on one hand and the government asset and liability statistics on the other have different coverage. The latter excludes some funds that are included in the former, with possible under-reporting of the true size of government assets and liabilities. In addition, government assets are reported separately for credits (e.g., government loans), properties (e.g., securities and premises), cash holdings (e.g., deposits at the central bank), and supplies, making it impossible to get the overall picture of financial and non-financial assets.

Logical consistency is also compromised in the treatment of treasury bonds held by the National Pension Fund and other funds. These bond holdings are recorded simultaneously as government assets (as they are held by funds) and liabilities (as they are issued by the government). Ideally, such bond holdings should be netted out, and the asset and liability statistics should only reflect the net transactions between the government and the private sector.

The consolidated central government also shows large discrepancies with the National Accounts in its coverage. The latter includes National Health Insurance in the government sector but excludes some activities such as the credit programs of the National Housing Fund (NHF). As a result, the amount of government liabilities differs significantly between two statistical systems.

We have similar problems in the data for public financial and non-financial corporations. Together with the general government (the central and local governments and social security funds), public corporations constitute the public sector. However, in Korea, there does not exist a consistent definition of public corporations. For example, various financial funds such as the credit guarantee funds are not included in the public sector even though they have every aspect of public financial corporations. The government does not publish a comprehensive review on the financial status of individual public corporations, let alone consolidated financial statements.

This practice makes it difficult to assess the financial health of the public sector in general, and the implicit fiscal burden incurred through quasi-fiscal activities of financial funds in particular. Of particular concern are credit guarantee funds<sup>32</sup> that significantly expanded their activities after the recent economic crisis. At the end of 2003, the outstanding stock of guarantees amounted to 11 percent of GDP, far higher than in other countries where the public guarantees are usually less than 1 percent of GDP. Yet no reports exist that explain the future risks these funds may impose on government finance.

As a first step to address this problem, BARO is redefining the scope of the public sector. The starting point is the revised 2001 Government Finance Statistics Manual of IMF. BARO is also searching for ways to produce comprehensive, accurate, and timely information on government financial position by introducing accrual accounting and building a new IT system. The IT system is expected to centralize an array of financial information from all organizations within the government sector. When BARO's work is completed by 2007, big improvements will have been made in financial reporting and government financial statistics.

32 \_ These are the Infrastructure Credit Guarantee Fund, the Korea Technology Credit Guarantee Fund, the Credit Guarantee Fund for Agriculture, Forestry, and Fishery, the Korea Credit Guarantee Fund, and the Housing Finance Credit Guarantee Fund.

### 3. Reforms in Turkey

#### 3.1. Recent problems and need for reform

##### 3.1.1. Scope of the old budget

The old budget that we called the consolidated budget (general budget + annexed budget—treasury subsidies = consolidated budget), consisted of agencies with general and annexed budgets. The common characteristic of these agencies included in the budget within the overall framework defined by the Public Accounting Law no. 1050 (dated 1927) was that all of them had been formed with a view to provide public services. Agencies with annexed budget were different from agencies with a general budget because of the types of goods and services they generate.

The consolidated budget system indicated that some agencies carry out their operations outside the scope of the consolidated budget both in terms of generating and using funds. Some revolving funds, funds and foundations established by agencies with a consolidated budget, can be given as an example.

Table 6-21 ●● Public Expenditure Areas Not Covered by the Old Budget

Non-budgetary Direct Expenditures	Non-budgetary Indirect Expenditures
1. Funds	1. Government property and immovables
1.1 Partially budgeted funds	2. Quasi-official transactions
1.2 Non-budgetary funds	2.1 Functional losses resulting from state-owned enterprises
1.3 Special accounts	2.2 Bonds issued to the central bank for foreign currency translation differences
2. Revolving funds	2.3 Bonds resulting from consolidations
3. Local governments	3. Contingent liabilities
4. Public agencies with independent budgets	3.1 Guaranteed foreign debts
5. Foundations and associations	3.2 Transfer credits
6. Mutual assistance funds	3.3 Domestic guarantees
	3.4 Deposits insurance
	3.5 Build operate / build operate transfer projects
	3.6 Investment stock
	3.7 Other contingent liabilities

Non-budgetary Direct Expenditures	Non-budgetary Indirect Expenditures
	4. Tax expenditures 5. Taxes and similar levies imposed by different laws (revenues not attached to the budget and directly transferred to the agency) 6. Foreign project credit applications

Factors, which forced agencies to remain outside the scope of the budget or the institutional structure embracing the budget, may be classified under the following main categories:

- A steadily declining contribution made by the budgetary process to efficiency of services generated during preparation and implementation of the budget. Failure to shift to plan—program—budget system was its basic dynamic.
- Inability of spending agencies to have adequate control on their budgets in the process of preparation and implementation of budgets.
- Fund allocation and spending procedures were steadily getting more complex and lengthy.
- Failure to establish an adequate relationship between service—cost and performance of executives during the budget process.
- Agencies had lost their confidence in their budgets.
- There was a serious institutional resistance against efforts aimed at improving functioning of bureaucracy.
- Lack of the principle of reciprocity that should exist in the relationship between powers and responsibilities. Required accountability process did not exist in many issues in respect of which an authority had been granted.
- Outdated laws and regulations were far from meeting requirements.
- The need to allocate funds to a specific area for which they had been earmarked.
- The need to make an efficient plan in respect of multi-year services in the same context.
- Ease in spending due to lack of transparency and accountability.
- An accounting system that was not capable of generating data at the required level and did not have the required technical equipment and absence of fiscal reporting obligation.

### 3.1.2. Basic problems caused by a narrow budgetary scope

The old budget did not fully reflect the actual amount and structure of public spending due to a variety of reasons, including: exclusion of funds from the budget which distorted budgetary integrity and discipline, diversity and large number of revolving funds, functioning of agencies

that benefited from transfer facility outside budgetary control and information processes, effect on cost and revenues of superimposition of definition of public services that foundations and associations aimed to provide and definition of services provided by agencies included in the budget, compulsory transfer of public funds through assistance funds outside the scope of budget and their being subject to political and bureaucratic conflicts outside the budgeting process, inefficiency of the recording and control system related to the government's assets, failure to establish an adequate relationship between quasi-fiscal transactions and contingent liabilities and budget preparation and implementation processes, the government's inability to obtain a full set of information regarding its commitments and lack of information on tax expenditures. Moreover, absence of a fiscal reporting system further aggravated the adverse effect of this structure on budgetary results.

The narrow scope of the budget also brought about a fractured public decision-making process. This led to a serious coordination problem both in political and technical decision-making processes. The system, which was not configured to produce information and generated various points of resistance, instead, obstructed provision of services expected of it even if attempts were made to eliminate the coordination gap.

The budget did not contain the following information regarding activities it included:

- Effect of public activities on social welfare
- Measurable outputs of public activities
- Resources in kind used in these activities

The main consequences brought about by a narrow budgetary scope, failure to provide an adequate set of information and inefficiency of the control process can be summarized as follows:

- A well-forecast budget program could not be prepared
- Actual level of spending relating to areas of activity of sectors/agencies and their sub-distribution were not known
- Inadequate information could not systematically measure and assess expenditures
- The agencies, including the MoF had little confidence in it

### 3.1.3. Structure of the old budget

The program-budget system was prepared as a result of work initiated in 1968 and put into effect in 1973. The justification for the budget for the 1973 fiscal year stated that a gradual transition to the program budget system from the conventional budget system had started and

underlined the necessity to establish mechanisms that would create an infrastructure for the system as soon as practicable.

In practice, however, the attempt to shift to the program budget system had been unsuccessful due to a poor political determination, failure to establish mechanisms listed in the 1973 Budget Preparation Guide (e.g. conversion to functional coding system, a sound determination of service programs and related institutional changes), abolition of schedule (U), which was defined as one of the basic tools in the budget preparation system in 1975, frequent revisions in expenditure items (such as a shift from detail at single-digit level to hundreds level) that combined with the failure to take action regarding the coding system as specified in the 1973 guide.

### 3.1.4. Preparation of the budget

The budget preparation calendar started following the Prime Minister's budget notice being published in the Official Gazette in June. The budget notice drew an overall economic condition of the country and defined budgetary policies to be pursued under this economic environment. The MoF published budget preparation guides that laid down fundamental principles to be observed in budget proposals and standards established. The budget preparation guide prepared and published by the MoF described the general economic situation and targets and then listed fundamental principles and standards to be observed in preparation of the budget. It also defined guidelines for preparation of budget proposals within the framework of these principles and standards.

The budget preparation guide included information relating to the code system to be used in preparation of the budget and how the budget proposal was to be prepared as well as various standard tables. Agencies prepared their current and transfer budget proposals (excluding expropriations subject to approval) in accordance with these guidelines.

The MoF shall review current and transfer allocation proposals in order to verify that budget proposals of agencies have been drawn up in accordance with the budget notice, budget guide and the Prime Ministry's communiqué relating to investments while the SPO was approving proposals for allocation of funds to finance investments after holding talks with related agencies.

Guidelines for preparation of investment programs were published by the SPO as an attachment to the Prime Ministry's communiqué.

The budget draft was discussed by the Higher Planning Board together with General Economic Targets and Public Investments and then was submitted by the Council of Ministers to the parliament (Turkish Grand National Assembly - TGNA) as a government proposal (75 days prior to commencement of the fiscal/calendar year).

A rationale for the budget for the respective year was also submitted to the TGNA together with the budget bill. When the budget was submitted to the TGNA, the program for the related year was also deemed to be released. The budget bill was first discussed by the Planning and Budgeting Committee and then at a plenary session of the parliament for ratification. A budget bill and report presented to the TGNA was reviewed by the Planning and Budgeting Committee, which was made up of forty members including twenty five members minimum from the ruling party or parties, and approved within 55 days. It was then referred to a plenary session of the parliament. The budget bill was enacted and put into effect before January 1, set as the first day of the fiscal year.

The following fundamental problems were encountered during the budget preparation process:

- A budgeting system that displays the relationship between an agency's services and costs did not exist.
- Scope of the budget did not show public spending and revenues as a whole.
- Budget preparation work could not be carried out under a medium-term spending program in order to ensure economic and fiscal stability and to achieve sustainable development.
- Relationship between the plan and the budget could not be established adequately.
- Spending agencies did not perform a comprehensive evaluation that defines their targets and policies to be followed.
- Budget ceilings for agencies were not specified during budget negotiations held between spending agencies and central organizations.
- Reports that would enable drafters of the budget to see how funds allocated over the past couple of years had been spent and to verify that they had been used in an efficient and effective manner nor reports showing the amount of output that could be achieved by funds proposed to be allocated under the next year's budget were presented.

### 3.1.5. Budget implementation

Spending transactions were carried out as a result of actions taken by officials at various levels. Disbursing Officers were empowered to issue authorizations for expenditures and payments. Even though the minister was formally responsible for effecting payments from the ministry's budget this power was delegated to governors, general directorates or regional

directorates for administrative reasons. Accrual Officers of the agency were assessing expenditure requirements and were preparing documents required for payment while accountants handled payment requests after assessment and approval. The basic responsibility of accountants was to effect payments and to maintain accounting records.

Budget departments from ministries and central organizations of main spending units were performing a supervisory function relating to the release or allocation of funds. The Court of Accounts functioned as a log wherein all documents relating to the government's fiscal transactions were maintained and as a higher supervisory mechanism controlling fiscal transactions.

### 3.1.6. Fundamental problems encountered during the budget implementation process

Mechanisms, which were needed to increase efficiency of the decision-making process in budget implementation, were not defined adequately and these mechanisms did not function efficiently. Therefore, the process depended on knowledge and experience of the agency or individual making the decision. The most important weakness created by this shortcoming was that the budget implementation process did not function systematically.

Major problems observed in these mechanisms during implementation of the budget were as follows:

- The old accounting system was totally focused on the budget. Therefore, it was only permitted to trace budget implementation results, but did not generate information on actual outcome of the government's actions.
- Transactions performed for both political and administrative reasons and which had a direct effect on results of the government actions were not properly included in the accounting system and they could be concealed by using the latter.
- Due to the inability to trace multi-year commitments, required allocations could not be made for related years.
- A sufficient relationship could not be established between targets and macroeconomic policies set forth in the budget preparation process and detailed spending programs generated by agencies.
- In approving detailed spending programs, cash and borrowing projections were not taken into consideration sufficiently.
- The system functioned with a large number of accountant's offices and budget departments due to the absence of automation and information systems in the budget implementation process. Therefore, even an analysis showing to what extent such

departments were important and efficient could not be performed.

- Local units that were directly affected by results of public services neither participated in decision-making processes nor exerted control in budget implementation.
- In the budget implementation process, emerging new roles and actors (finance departments, regional revenue offices, tax departments, etc.) only brought about inefficiency and red tape.
- Since objectives in formation of the budget and the political will required to guide budget implementation and administrative responsibilities (such as utilization of reserve funds and Treasury guarantees) were not clearly defined in advance, arbitrariness occurred in application of budget allocations that, in turn, had an adverse effect on fiscal discipline.
- The accounting system was focused on the budget transactions created by administrative decisions or pursuant to fiscal regulations and was not attached to budget accounts.
- In the old system commitments could not be traced.

### 3.1.7. Accounting and reporting structure

After the latest revision made in 1990, the accounting system was located somewhere between the modified cash-based method and the modified accrual-based method because it contained some accrual factors and a set-off period procedure.

Although the Turkish government accounting system was recording transactions according to the cash method and was budget-centered, accounts were kept open for a certain period (set-off period) and accounting of transactions relating to the preceding year's budget was continued. In addition, some liabilities (custody accounts, liabilities not creating cash, etc.) and assets (interests in associated undertakings, loans, out-of-budget capital formations, etc.), which were not traced in a cash-based accounting system, were recorded in the Turkish government accounting system. Because of these characteristics, the old accounting system should be defined as a mixture of the modified cash-based method and the modified accrual-based method.

### 3.1.8. Basic problems encountered in the process of accounting and reporting of the budget

Fundamental problems faced in accounting and reporting of the old budget can be listed as follows:

- The government accounting system was focused on the budget. Thus, it recorded only transactions covered by the budget and did not trace public activities remaining outside

the budget's scope.

- The government accounting system had a narrow scope.
- The public sector did not have a unified accounting system.
- The government accounting system did not classify accounts.
- The government accounting system did not display a complete continuity, which was one of the fundamental principles of accounting.
- The government accounting system did not include adequate details.
- The government accounting system was not suitable for reporting and generating conclusions.
- Entry of budget applications and other fiscal transactions to a cash-based government accounting system (which was basically a system between the modified cash-based and the modified accrual-based methods) lead to loss of many data which were essential for fiscal reporting.
- Fiscal reports matching international standards could not be generated by this budget-centered accounting system, which did not embrace the government's fiscal structure as a whole.
- Local reports produced by the system were not qualified as fiscal reports.
- Central reports, generated by the government's accounting system, remained as consolidated schedules and tables.
- Many accounts used in the account plan no longer served any accounting purpose and transactions with different natures (of balance-sheet, final account or regulating account types) were being entered into the same accounts.
- The government's properties could not be covered by the old accounting system and thus could not be reported.

**Table 6-22** ●● Code Structure of the Old Budget

01-999: Department codes
01-99: Agency codes
101-999: Program codes
01-99: Sub-programs
1-3: Types of allocations
001-999: Activity codes
100-900: Expense item

### 3.1.9. Fundamental problems encountered in the old budget encoding system

- The classification system had disappeared. Superimpositions of institutional, functional and economic codes as well as sub-groups were common. Solutions developed in respect of needs that emerged in time had damaged the system.
- Required classification standards had not been maintained. This erosion was particularly visible in functional classification and expense item classification.
- The classification system could not be developed in tune with the country's fiscal, economic and administrative development and changes in fiscal legislation.
- The code structure was no longer able to provide reliable data.
- Functional and economic codes were superimposed within the code structure.
- Institutional encoding was quite insufficient.
- Functional encoding did not use common codes. The same codes denoted different service programs in different agencies.
- Use of codes had narrowed over time.
- Encoding and classification standards had not been maintained during creation of fiscal legislation.
- Service and cost analysis methods had steadily weakened.
- The technical infrastructure could not be developed in line with emerging needs. Particularly, technological progress remained far behind requirements.
- Central budget units were mainly preoccupied with routine work rather than centralization of work and authorities and analysis.
- The classification system could not be developed in line with the country's fiscal, economic and administrative progress and changes in fiscal legislation.
- Methods relating to service and cost analysis had steadily weakened.

### 3.1.10. Fiscal transparency

Discussions on the fiscal crisis which hit East Asia in 1997 centered on a problem encountered in the generation of information, which would provide a picture of developments occurring in the economy and the existing structure. In this context, lack of adequate transparency and openness of markets was shown as one of the reasons for the crisis. After the crisis, it became clear that conventional budgets have proved extremely ineffective in defining fiscal risks to which economies were exposed. It was also observed that official budget accounts of not only Asian economies, but also other economies portrayed an economic situation that was healthier than the actual one. This triggered global efforts, mainly undertaken by international organizations, to ensure fiscal transparency aimed at generation and publication of accurate data.

Ensuring fiscal transparency in order to make a better assessment of the national economy and to increase efficiency in the public sector became one of the major prerequisites. According to the Code of Good Practices for Fiscal Transparency and minimum standards established along with the code, major shortcomings observed in Turkey may be summarized as follows:

- The budget had a very narrow scope as a result of which only a very small portion of public resources were spent with the parliament's approval and then audited on behalf of the parliament.
- Extra-budgetary activities were not presented to the parliament together with the draft budget.
- The government's semi-fiscal activities were not disclosed.
- Budgets for the past and following two years were not presented to the parliament together with the draft budget for the current year.
- The central government's contingent liabilities, tax expenditures and its semi-fiscal activities arising from its relations with state-owned banks, state-owned enterprises and central banks were not published together with the budget blueprint.
- Governments did not present their opinions vis-à-vis fiscal sustainability and their endeavors in this field.
- Financial risks, which might result from contingent liabilities, deviations from assumptions and forecasts, etc. were not reported.
- Roles and responsibilities were intermingled, which prevented performance of an administrative responsibility assessment.
- Classification of transactions did not permit an evaluation of administrative responsibilities for collection and utilization of public funds.
- Different budget deficit definitions, which would permit making an economic analysis apart from the budget's general balance, were not used.
- No document showing accounting standards was drawn up. A totally cash-based accounting system lead to problems in assessment of the national economy.
- Some difficulties were encountered in interpretation of tax laws, which were frequently amended.
- The scope of final accounts was extremely limited, just like the consolidated budget. Public activities could not be evaluated as a whole. Different auditors performed independent auditing of public funds.

### 3.1.11. Effectiveness of the audit system and problems

- Adverse effects on audits, resulting from public fiscal management not conforming to principles and requirements of the modern management approach
- Insufficiency of audits to prevent corruption and to create an environment deterring

corruption

- Auditing profession had not developed sufficiently
- The concept of independence was not fully perceived by auditing units and auditors
- Existence of areas and activities exempted from auditing and restrictions on audits
- Failure to perform audits according to priorities based on a strategic plan
- Inadequate application of modern auditing procedures
- Absence of the concept of internal control and inadequate relationship between internal control and audits
- Auditing methods and techniques had not been fully established
- Absence of a continuous and systematic approach to improvement of professional skills of auditors and in-service training
- Information technology was not properly and systematically employed in auditing
- Lack of communication, coordination and cooperation between auditing organizations
- Audits were not transparent and verifiable

## 3.2. Reform efforts and current situation

### 3.2.1. Introduction of reforms to improve public spending efficiency

Fiscal stabilization since 2001 was mainly based on tax increases and only to a limited extent on spending reductions. Budget cuts were effective in the central government spending but, due to continuing pressures in other general government expenditure categories, especially in transfers to social security institutions, total primary spending could only be fixed as a share of GDP. To control spending in a sustainable and durable manner, while curing resource shortfalls in core public services, serious structural reforms were seen as obligatory.

A number of important reform initiatives were undertaken in conjunction with the 2001 stabilization program. To make public expenditures more transparent and directed towards clear policy objectives, a number of projects have been introduced in co-operation with the International Monetary Fund, the World Bank and in the framework of the convergence program with the European Union acquis. These measures are now at an early stage of implementation and require significant additional expertise in central economic agencies, in line ministries and sub-central layers of government.

### 3.2.2. Integrating the general government accounts

The Public Financial Management and Control Law was enacted in December 2003 and took effect starting with the preparation of the 2006 budget. For the first time in the history of public finances in Turkey, all fiscal operations of the government were consolidated in an integrated general government approach, from preparation to the closing stages of the budget.

### 3.2.3. The new budgeting system

The central budget will remain the main axis of public finances. All extra-budgetary funds have been integrated in the central budget. A medium-term economic program for the period 2006-2008 has been prepared by the State Planning Organization (SPO) and has been adopted by the Council of Ministers. This program covers macro policies, targets and main economic indicators in the context of development and strategic plans and general economic conditions. A medium term fiscal plan, consistent with the medium term economic program has also been prepared by the MoF. It includes total revenue and total expenditure projections, budgetary targets and proposed budget appropriation ceilings for public administrations. These documents set the framework for the discussions and negotiations with line ministries and spending agencies, before political reconciliation in the Cabinet and the Parliament.

A rolling medium term budget framework - for the two years following the budget year - accompanied the budget. The ratified budget will be implemented through a unified treasury system and the closing accounts will be presented shortly after the end of the budget exercise. A detailed audit report will be submitted to the Parliament before closing the accounts.

The accounts of the social security institutions, extra-budgetary funds and local governments will be prepared, implemented and closed according to their respective laws, but will be coordinated with the central budget. Integrated general government accounts will be published quarterly, together with an annual report shortly after the end of the budget exercise. The Court of Accounts will have authority to audit all general government accounts and bodies.

To align the accounts with Government Financial Statistics (GFS) standards, the budget codification system is being revamped. Each spending item is identified in institutional, administrative, economic and functional terms and budgets and budget reports are compiled according to these different classifications. The new codification system has been put into effect for all general government entities from 2006.

This new system modernizes the budgeting process according to international standards. However, it is not immune to the difficulties common to many countries in running public

finances on a general government basis while the social security institutions and local governments continue to operate outside the central budget. The new system improves fiscal coordination between general government entities by mandating municipalities to communicate their yearly budget plans by the month of June of the previous year, and by requiring the social security institutions to submit three-year rolling provisional accounts.

The central government's audit institutions are required to audit all general government finances with the same standards, and with adequate resources. The Public Financial Management and Control Law and the Public Administration Framework Laws stress the importance of (internal and external) audits. A new draft law on the Court of Accounts is prepared and expected to be submitted to the Parliament to clarify auditing issues.

### 3.2.4. Setting medium-term strategic objectives

The Public Financial Management and Control Law impose the introduction of functional budgeting in all areas of public spending. The government, parliament and public will be provided with a clear description of the policy objectives pursued by expenditures for both ex ante planning on budget priorities, and ex post discussions on achievements.

### 3.2.5. Multi-year functional budgeting

In addition to the traditional institutional, administrative and economic classifications, the central government budget will also be presented, starting with the 2007 budget, according to functional targets. Ministries and spending bodies will gradually (based on a transition calendar) report their budget proposals and budget reports according to functional objectives, by consolidating individual spending programs with specific targets. This functional allocation of resources will be presented in a multi-year framework and will better indicate the government's policy priorities.

The Public Financial Management and Control Law mandates the introduction of multi-year functional budgeting as an innovative practice for line ministries and other spending bodies and requests the leadership and co-operation of the SPO and of the MoF for its gradual implementation. Article 9 of the Law declares:

- “In order to elaborate on missions and visions for the future within the framework of development plans, programs and relevant legislation; to determine strategic goals and measurable objectives; to measure performances according to predetermined indicators, and to monitor and evaluate this overall process, public administrations shall prepare

strategic plans in a cooperative manner.

- In order to provide public services at the required level and quality, public administrations shall base their budgets and their program and project-based resource allocations on strategic plans, annual goals and objectives, and performance indicators.
- The SPO is authorized to determine the strategic planning calendar and the public administrations to be in charge of preparing strategic plans, and to set out the principles and procedures concerning the correspondence between strategic plans and national development plans and programs.
- Public administrations shall prepare their budgets on a performance basis and in accordance with the mission, vision, strategic goals and objectives included in the strategic plans. The MoF is authorized to define the procedures and principles on the compatibility of administration budgets with the performance indicators stated in strategic plans, and the activities to be carried out by these administrations or other issues of performance based budgeting.
- The performance indicators that shall be set by the MoF, the SPO and relevant public administrations shall be included in the budgets of these administrations. Performance audits shall be carried out in the framework of these indicators.”

### 3.2.6. Enhancing accountability

Turkey has a very centralized approach to the provision of public goods and services, with local governments effecting only 9.5 per cent of total primary public spending (3.5 per cent of GDP). As local governments have no taxing powers, these figures overstate the degree of decentralization. Moreover, revenue-sharing has been done according to straight demographic criteria, without taking into account local economic, social and physical conditions. Municipalities basically provide purely local services such as water distribution, waste management and land planning. Local administrations are also extremely fragmented, with 81 provincial administrations (prefectures) and 3,225 municipalities, with 62.5 per cent of municipalities having a population lower than 5,000 inhabitants. This combination of extreme centralization and fragmentation was found to be a major source of inefficiency and lack of accountability in all the major reviews of the public sector in the past decade. A framework law to launch a thorough decentralization process was passed by the Parliament in 2004. The “Draft Law on Main Principles and Restructuring of Public Administration”, also known as the “Public Administration Framework Law”, was aimed at determining the duties and functions of the central government, and transferring all remaining tasks and services of a local community nature to the local governments. It improves strategy development, general coordination and guiding capacity of central administrations and emphasizes initiative taking and operational flexibility of local administrations. However, this law was vetoed by the President in 2004.

Revenue-raising power of local governments still remains limited at this stage of reform. However, along with these increased responsibilities, there is also an urgent need to rearrange the financial situation of local administrations. Consequently, a draft law on “Revenues of Local Administrations and Intergovernmental Fiscal Transfers” is under discussion. This draft legislation classifies municipalities into 5 groups, and 3 sub-groups within each group with respect to level of development in order to differentiate among municipalities in terms of local tax rates. Some of the major changes are as follows:

- Some locally collected taxes (collected by the central government) are transferred to municipalities,
- Various dysfunctional taxes and fees are abolished,
- Tourist tax will be introduced,
- Exemptions from taxes and fees are reduced to a minimum,
- Revenue sharing rules in metropolitan municipalities among the metropolitan and district municipalities are set,
- Rules for deductions on municipality revenues are set, all other transfers from various ministries’ budgets are consolidated into a single transfer to be made from the MoF budget for municipalities with fewer than 10,000 inhabitants,
- Revenue sources such as taxes, fees, etc. for provincial administrations are specified (for areas outside municipality borders),
- New criteria for revenue distribution in addition to population (such as surface area, performance, rural population, development index, ratio of local taxes to total, ratio of own revenues to total revenues, etc.) are introduced.

The framework law represents a major undertaking to transform the public finance system and has the potential to enhance public sector efficiency and responsiveness. Together with the Public Financial Management and Control Law, it opens the way to new principles of public sector management. These are based on medium-term strategic plans for service delivery; explicit quantitative benchmarks for service quality; clearly identifiable and accountable governance structures in service organizations; delivery of services at the most decentralized efficient scale available; full transparency of fiscal costs; ex post performance audits; and, wherever feasible, a separation of service funding from service supply in order to reap the incentives and disciplines of market competition.

### 3.2.7. The changing role of external audits

In the traditional Turkish budget management system, the auditing of the public accounts by the Court of Accounts (CoA) is a legally well-powered and well-endowed function. It is dedicated to the verification of the conformity between the itemized budget law and actual

spending, line by line. CoA auditors built their competence and reputation on producing expenditure conformity reports based on audits effected in the provinces, where the spending by line ministries (handled by local budget officials appointed by the Ministry of Finance) is consolidated. Annual budget reports have been produced through a bottom-up aggregation of these reports.

In this system, line ministry spending is not analyzed with regard to the sectoral responsibilities of each ministry. A number of extra-budgetary funds with sectoral missions are also not subject to audits. The purpose of auditing is not to check the quality, efficiency and relevance of expenditures with regard to the public policy objectives pursued.

Although its law requested CoA to provide yearly reports to the Parliament on the adequacy of public spending “with the services and needs provided for by the budget”, these reports never gained prominence in the parliamentary process and have been sidestepped. As a result, these reports stopped being produced in 1983. No reports are produced on the stock of public assets and liabilities either, although this is also requested by law. Finally, audits are effected only on a cash basis, excluding consumption of physical capital and not allowing any monitoring in accrual terms.

The new public expenditure management system authorizes auditing with greatly expanding missions. First, the consolidation of extra-budgetary and quasi-fiscal spending in the budget widens the scope of audits towards general government activities. Second, the planned shift toward results-oriented budgeting will shift the focus of audits from “conformity of spending with appropriations” to “compliance of policies with objectives” and “performance audits”. Under this significant widening of the scope of audits, the degree of exposure of local governments to central government audits will need to be fully clarified. A draft law on CoA is now being prepared to describe and assign these new responsibilities and duties, and to spell out the new prerogatives of the CoA in the general government sector.

### 3.2.8. Strategic planning pilot studies and transition to wider implementation

The Turkish government opted for strategic management as one of the levers of public financial management and administrative reforms. In this regard, strategic planning and performance based budgeting are adopted as the main tools for reforming the public expenditure management and public administration at large. PFMC law makes this obligatory for all central public institutions, whereas the Metropolitan Municipality Law enacted in July 2004, the Provincial Administration Law enacted in February 2005, and the Municipality Law enacted in July 2005 all bring in strategic planning for local administrations.

On the one hand, along with performance budgeting, PFMC law was adopted as one of the main pillars of the new budgetary process, making it mandatory for most government agencies. The underlying impetus in installing strategic planning into the public financial management is to increase agencies' capacity in policy formulation. Another main objective for this piece of reform is to reinforce development plan-budget link, ensuring mutual feedback between central agencies and line ministries as well as other public bodies. Complemented by annual performance programs, within a medium-term programming and budgeting framework, strategic plans will be the basis for agencies' budget proposals. On the other hand, the government's preference for a more "strategic" management culminated in drafting a Public Administration Framework Law as well as Local Administration Laws; they stipulate that all Metropolitan Municipalities and Special Provincial Administrations as well as municipalities with a population of over 50,000 (about 285 municipalities) have strategic plans.

With such a central role, strategic planning needs to be introduced to public agencies carefully. Experience in other countries showed that one-time across-the-board implementation is likely to fail. Chances are that a phased approach will be more successful. Taking these into account, the High Planning Council decreed a decision (no. 2003/14) designating the following eight agencies for pilot implementation:

- Ministry of Agriculture and Rural Affairs
- General Directorate of Highways
- Bank of Provinces
- State Institute of Statistics
- General Directorate of Health for Borders and Coasts
- Hacettepe University
- Kayseri Greater City Municipality
- Denizli Special Provincial Administration

The objectives of pilot implementation were to determine successes and failures of strategic planning in agencies of various scale, organization and function; to derive lessons that can be applied in expansion of the program, to improve human and institutional capacity in pilots; and to assess the relevant needs of the agencies at large and to form the basis for performance-based budgeting.

Seven out of eight pilot studies were nearing completion as of March 2006, with only one of them completing and putting into practice a performance plan. Initial experience shows that implemented carefully and gradually, strategic planning can be a powerful tool in reforming public management while paying attention to serious capacity problems and risks. Based on this experience, SPO is currently about to announce an expansion calendar that will lay out the transition scheme for central administrations as well as elements and modalities of strategic

planning. According to this transition scheme, expansion of this practice to all central public institutions will extend until 2010. Starting from 2007 a number of administrations will be required to conclude their strategic plans and performance programs each year.

Apart from pilot implementations, SPO has been guiding public administrations in building capacity for strategic planning. In this regard, a strategic planning manual for public institutions was prepared in 2003.

### 3.2.9. Institutional restructuring for implementing the reform: strategy development units

In February 2006, strategy development units were established in all central government administrations (law dated December 22, 2005 amending the PFMC law). These new units will be responsible for coordinating activities aimed at strategy formulation and strategic plan preparation, will carry out financial services including budget preparation and implementation, will put into practice internal control, and will deal with data infrastructure and organizational improvement as well as research and development.

It is expected to take considerable time for these newly established units to build capacity and expertise in order to tackle all the stated duties at a desired level of service quality. Therefore, the success of reforming the expenditure management system essentially is very much dependant upon the implementation of other reform components such as personnel reform and establishment of a sound human resource management system for the public sector.

Consequently, an integrated reform strategy has to be pursued and it is crucial that the draft laws on public personnel and revenues of local administrations are enacted and put into practice in the near future for the integrity of the reform as a whole.

## 4. Lessons Learned and Roads Ahead

The development of public finance took different courses in Korea and Turkey. In Korea, fiscal consolidation in the early 1980s restored the budget balance to a sustainable path. The recent economic crisis imposed heavy burden on government finance, but deficit is not a serious concern for now and the debt-to-GDP ratio is stabilizing at around 30 percent. Nonetheless, the Korean government embarked on a series of reforms to modernize its expenditure management system. It introduced a medium-term expenditure framework and a top-down budgeting process. Performance management is being strengthened with three initiatives—Performance Management, Self-Assessment, and Evaluation of Budgetary Programs. Government financial reporting and statistics system is also being revamped. It is expected that these reforms will contribute to stronger fiscal discipline and greater allocative and operational efficiency of public spending in the face of challenges lying ahead.

Unlike Korea, Turkey has long had chronic deficits in the public sector, which were the root causes of high inflation and macroeconomic instability. The explicit deficits of the government as well as the hidden deficits in public corporations and state banks, due to their extensive quasi-fiscal activities, had the potential to devastate public finance. These hidden deficits came to the surface during the crisis of 2001. The debt-to-GDP ratio jumped from around 50 percent of GDP to over 100 percent in a matter of one year, and government interest expenditures rose to over 20 percent of GDP. After the crisis, the Turkish government began fundamental reforms of its expenditure management system, ranging from procurement, internal control, performance audit, medium-term economic and fiscal frameworks, and financial reporting to strategic planning and performance management. Fiscal discipline is being reinforced and deficits are declining rapidly.

It is interesting to note the strong similarity between Korea and Turkey in their array of reform agenda. In Korea, less emphasis is placed on procurement, internal control, and performance audit, and no action has been taken to introduce strategic planning. Still, the two countries began to reform their expenditure management system at about the same time with similar focuses despite different historical backgrounds and economic and social contexts.

In both Korea and Turkey, many improvements are still needed for the success of these reforms. In Korea, the complicated budget structure needs to be streamlined. It is necessary to strengthen fiscal discipline in a target-based approach with the help of the MTEF. The MTEF itself should be improved in many aspects as explained in the text. Strategic planning should be introduced, and ways need to be found to cope with the increased workload of budget examiners. In addition, various initiatives to strengthen performance management—including the three by MPB, GOAS by OGPC, MBO by MOGAHA, and performance audits by BAI—

should be integrated and embodied in departmental planning and reporting. The Korean government can also learn from the Turkish efforts, among others, to strengthen internal control.

In Turkey, greater emphasis is needed in linking performance and budgeting. Strategic planning and performance monitoring alone are seldom enough. An abstract structure of mission, strategies, and performance goals is a necessary condition for good performance management. However, they are often short of providing detailed information on individual programs (including the causality between inputs and outputs/outcomes). Accordingly, they lack an incentive mechanism that guarantees an active involvement by concerned parties—the central budget office, line ministries, legislature, and general public. Program evaluation and program review should be in place to complement strategic planning. They will provide additional information essential for important decision-making (including budgeting), and help invoke interest from concerned parties.

Budget examiners in the central budget office should assume primary responsibility for reviewing ministerial strategic plans and conducting program reviews. It is because when not influencing the budget process, all efforts can degenerate into wasteful paperwork. In this regard, a close cooperation between the State Planning Organization and the Ministry of Finance is needed.

In short, Korea and Turkey have achieved a lot during the last few years in reforming their expenditure management systems, and are continuously improving them. In this process, there appears ample opportunity to learn from each other. Sharing our experiences in the future will benefit both of us as it does today.

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