

Republic of Korea



WORKFORCE DEVELOPMENT

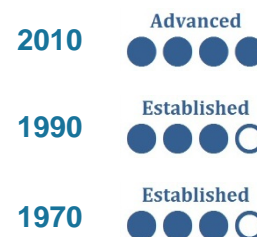
SABER Multiyear Country Report

2013

Status

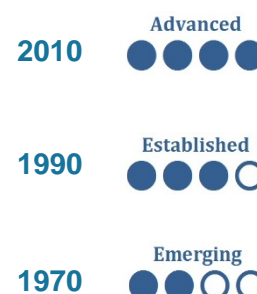
Strategic Framework

Strategic Framework was assessed at the established level for 1970 and 1990 and reached an advanced level by 2010. These results reflect active apex-level leadership on the part of the government that consistently maintained a close alignment between Korea's economic development priorities and workforce development (WfD) policy; the integration of robust surveys of skills demand and supply into the policymaking process; and the clear delineation of legal roles and responsibilities for government and non-government stakeholders involved in setting strategy for WfD.



System Oversight

System Oversight was assessed at the emerging level in 1970, progressed to an established level by 1990 and reached an advanced level in 2010. These results reflect strong oversight of the WfD system through the consistent enforcement of appropriate accreditations standards for all providers receiving public funding; a credible and comprehensive system of skills testing and certification; and an education system that creates multiple pathways in and out of vocational education at both the secondary and post-secondary levels. The system has steadily improved with respect to facilitating lifelong learning and using criteria for allocating WfD funds to both incentivize efficiency in resource use and ensure alignment of WfD with economic development priorities.



Service Delivery

Service Delivery was assessed at the emerging level in 1970 and 1990 and progressed to an established level in 2010. These results reflect the finding that Korea has taken numerous measures to foster links among individual training providers, research institutes and industry; to encourage diversity in training provision by supporting private providers and companies that train workers; and to make extensive use of data collection and analysis to both identify strengths and weaknesses in service delivery and, especially in the past two decades, incentivize provider performance.

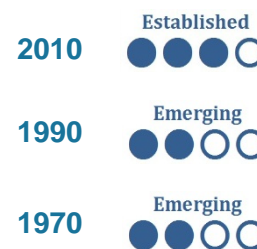


Table of Contents

Executive Summary	3
Introduction	5
Country Context	7
Overview of Benchmarking Results	14
Detailed Results Dimension 1	18
Policy Goal 1 Articulating a Strategic Direction for WfD	19
Policy Goal 2 Prioritizing a Demand-led Approach	23
Policy Goal 3 Strengthening Critical Coordination	26
Detailed Results Dimension 2	29
Policy Goal 4 Diversifying Pathways for Skills Acquisition	30
Policy Goal 5 Ensuring Efficiency and Equity in Funding	34
Policy Goal 6 Assuring Relevant and Reliable Standards	37
Detailed Results Dimension 3	40
Policy Goal 7 Fostering Relevance in Training Programs	41
Policy Goal 8 Incentivizing Excellence in Training Provision	45
Policy Goal 9 Enhancing Accountability for Results	47
Annex 1 Analytical Framework of SABER-WfD	50
Annex 2 Benchmarking Scores	51
Annex 3 Acronyms.....	52
Annex 4 Documents	53
Annex 5 Informants	56
Annex 6 Benchmarking Rubrics	57
Authorship and Acknowledgements	66

Executive Summary

Skills as a key element of rapid economic development in the Republic of Korea

The Korean economy has enjoyed sustained rapid growth since the 1960s. Over the past few decades the dominance of state-led economic planning has given way to greater reliance on market forces to drive economic growth and diversification. Workforce development has received close attention during this entire period, providing employers with the skills necessary to support Korea's transformation from being one of the poorest countries in the world in the 1960s to its status today as a developed country with an advanced, knowledge-based economy. The demand for skills has been consistently met through coordinated action within government and collaboration with industry, research institutions and other stakeholders. This report highlights the reforms taken between 1970 and 2010 that have made WfD a key part of Korea's economic growth strategy over the past four decades.

Methodology

The study benchmarked policies and institutions for workforce development (WfD) in Korea and identified measures that helped strengthen the system. It relied on a new diagnostic tool (SABER-WfD¹) and a wide range of primary and secondary evidence to make the assessment, focusing on the three Functional Dimensions of WfD policies and institutions identified in the SABER-WfD tool: strategic framework; system oversight; and service delivery. By documenting the status of these policies and institutions in 1970, 1990 and 2010 the study tracked the progressive development of the Korean WfD system over a 40 year period during which the economy grew rapidly. WfD institutions, policies and practices related to the first Dimension, already strong in 1970, became stronger in subsequent decades, while significant and steady gains were achieved in the other two Dimensions as well, especially after 1990.

Key reform elements at the strategy level

The Korean government recognized very early on the importance of WfD for economic development. By the 1960s, the country's President was convening weekly meetings with ministers to discuss WfD strategy, a practice that has continued to the present day. Over this period, leaders passed key reforms to institutionalize the roles of government and non-government leaders in setting and implementing WfD strategies. One example is the creation of the Vocational Training Review Committee in 1967 to facilitate stakeholders' implementation of reforms. From 1961 to 1995, Korea's powerful central planning agency, the Economic Planning Board, played a critical role in setting economic development strategy and coordinating the actions of government ministries and agencies, including actions related to WfD. From the 1970s, strategy making has benefited from the availability of robust information on labor market conditions generated by government research institutions such as the Korea Education Development Institute (created in 1972), the Korea Employment Information Service (created in 1979) and Korea Research Institute for Vocational Education and Training (created in 1997), institutions that were established to provide information and analysis to inform the development of economic and WfD initiatives. In recent years, the strategic focus of the system has benefited from the creation of the Human Resource Development Forum and Regional Human Resource Development Committees, which gave non-government leaders a regular, institutionalized role in reviewing WfD policy and discussing its implications.

Reforms to improve the oversight of the education and training system

Institutions and policies for oversight and governance of the WfD system developed steadily over time. Stringent standards for facilities and curriculum combined with robust employer participation in governing and funding the system have created effective incentives for high quality industry-relevant training provision by both public and private providers. The National Education Curriculum, first defined in 1963 and most recently revised in 2009, sets system-wide standards for curricula, facilities and equipment used in vocational education. Korea's Vocational Training Standards, first issued in 1976 by the Ministry of Labor, perform a similar function for continuing vocational training. Early reforms included the passage of the National Technical Qualifications Act in 1973 and the introduction of a training levy system in 1976. More recent reforms include steps to increase information about job opportunities in the form of the CareerNet and WorkNet websites; the introduction of the Academic Credit Bank in 1997 and the Individual Training Account system in 2008 to encourage lifelong learning; the transformation of the training levy

"The Korean government recognized very early on the importance of WfD for economic development. By the 1960s, the country's President was convening weekly meetings with ministers to discuss WfD strategy, a practice that has continued to the present day."

¹ The tool is part of the World Bank's initiative on Systems Assessment for Better Education Results (SABER). It includes several policy domains, among them WfD. More information on all SABER domains may be found at: <http://www.worldbank.org/education/saber>.

into a system of training grants financed by a payroll tax and its integration in 1995 into the Employment Insurance System; the development of National Competency Standards starting in 2002; and the use of performance-based allocation of funding to intensify the incentives for providers to offer job-relevant training services.

Reforms to improve management of training institutions and programs

The government actively oversees service delivery by both public and private providers. To ensure the relevance and quality of programs, it put heavy emphasis on fostering collaboration and linkages among technical vocational education and training (TVET) providers and employers. Such measures were institutionalized early in Korea's development push, for example, in the form of the Department of Cooperation between Schools and Industry, which was created in 1973 to increase opportunities for workplace training for students; and through the Vocational Training Research Institute, which was created in 1981 to advise training providers on how to tailor programs and curricula to regional labor market demand. Recent initiatives to strengthen the role of firms in creating and governing training provision include: the formation of the Consortium for HRD Ability Magnified Program (CHAMP) in 2001 to enhance vocational training opportunities for working adults; and the creation of Meister High Schools in 2010 to offer high school graduates an attractive career pathway through vocational education. In addition, systemic measures to strengthen service delivery have been put in place, including: new procedures for awarding grants from the government-funded Job Skills Development Program that are designed to increase competition among training providers; the use of the Job Posting and Bidding System to hire the heads of training institutions on a competitive basis and to attract candidates with industry experience; and increased attention to monitoring institutional outcomes and performance.

Reflections on lessons from the Republic of Korea

The Korean experience is an example of an effective government-led model for WfD. The highest levels of government leaders have consistently asserted WfD's importance as a means to provide an appropriately skilled workforce for advancing strategic economic development objectives. The government's large investments in gathering robust and accurate data on current and future economic conditions and their skills implications have been instrumental in aligning WfD to economic development goals. This has been achieved both through the creation of numerous dedicated governmental and quasi-governmental research institutions and think tanks as well as by maintaining strong formal and informal government links to industry. Also necessary is a collaborative approach to WfD. The government recognized industry, training providers and labor unions as essential partners in activities ranging from implementing strategic reforms, to system oversight, to collaborating in ensuring that providers deliver desired outcomes. In the face of rapid economic change and ambitious economic development targets, Korea has, for most of the past several decades, relied on a centralized approach to governing the TVET system. All training providers operating in the country must complete a rigorous accreditation process and depend to varying degrees on government subsidies to finance their operations. The government's insistence on detailed spending plans and adherence to a national curriculum have given it considerable influence over TVET providers. In response to increasing economic diversification and the need for more flexibility from the WfD system, the government's approach has evolved and it now relies increasingly on market competition and funding incentives for providers to achieve targets for WfD. In the coming years, Korea's WfD system faces new challenges, among them the need to foster flexibility and creativity among workers, to manage the persistence of strong social preference for academic rather than vocational education, and to expand participation in lifelong learning as the population ages.

"The government's large investments in gathering robust and accurate data on current and future economic conditions and their skills implications have been instrumental in aligning WfD to economic development goals."

Introduction

The Republic of Korea vaulted in less than three generations from being one of the poorest countries in the world to becoming a member of the Organisation for Economic Co-operation and Development (OECD). This economic transformation has attracted considerable admiration and inquiry. One of the key factors for Korea's success was the provision of skills to support industrialization and economic diversification. This report takes advantage of a new World Bank diagnostic tool to examine the development of the Korean system for workforce development (WfD) from 1970 to 2010. The findings are intended to document good practices, lapses and key breakthroughs and generate insights that can be used to enrich dialogue on WfD policy in the World Bank's partner countries.

A New Diagnostic Tool

The tool, known as SABER-WfD, is a product of the World Bank's initiative on Systems Approach for Better Education Results (SABER), which focuses on several policy domains, including WfD.² SABER-WfD aims to document and assess a country's policies and institutions in light of global good practice. The tool is based on an analytical framework³ that identifies three Functional Dimensions of WfD policies and institutions:

- (1) **Strategic Framework**, which refers to the praxis of advocacy, partnership, and coordination in relation to the objective of aligning WfD in critical areas to priorities for national development;
- (2) **System Oversight**, which refers to the arrangements governing funding, quality assurance and learning pathways that shape the

Figure 1: Functional Dimensions of WfD Policies



Source: Tan et al. 2013.

² For details on SABER see <http://www.worldbank.org/education/saber>

³ For an explanation of the SABER-WfD framework see Tan et al 2013.

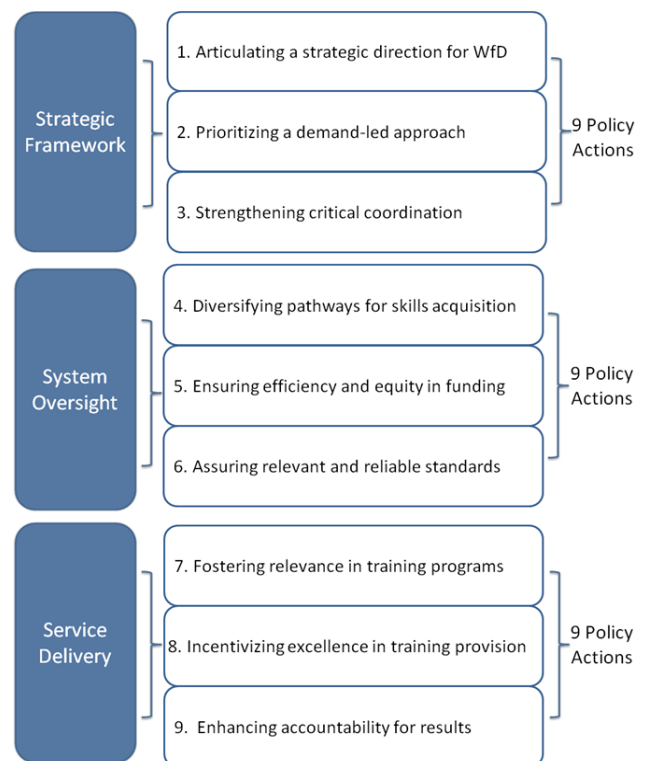
incentives and information signals affecting the choices of individuals, employers, training providers and other stakeholders; and

- (3) **Service Delivery**, which refers to the diversity, organization and management of training provision, both state and non-state, that deliver results on the ground by enabling individuals to acquire market- and job-relevant skills. (see Figure 1).

From the perspective of the line ministries, typically education and labor, strategy is about sensing, influencing, and responding to the external environment for WfD; oversight is about governing the activities of all stakeholders with a direct interest in WfD activities; and delivery is about managing the activities of those responsible for training provision.

These three Dimensions constitute a closed policy-making loop and, when taken together, allow for analysis of the functioning of a WfD system as a whole. Each Dimension is composed of Policy Goals (see Figure 2) spanning three broad areas: governance, finance and information. Each of the Policy Goals is in turn further defined by three tangible Policy Actions, making a total of nine Policy Goals and 27 Policy Actions.

Figure 2: Analytical Framework of SABER-WfD



Source: Tan et al. 2013. See Annex 1 for more details.

The SABER-WfD tool uses the foregoing analytical framework to create a structured data collection instrument (DCI) for gathering information on a country's policies and institutions for WfD. For each of the 27 Policy Actions, the DCI poses a set of questions relating to the corresponding aspect of the WfD system. Each question is answered by choosing from a list of closed options corresponding to stages of development. The choice is substantiated either by documentary evidence or by information supplied and corroborated by knowledgeable and credible informants (see Box 1). As in the other countries selected for this pilot phase, the collection of data using the SABER-WfD instrument was led by Principal Investigators (PIs).⁴

Data Processing and Scoring. For each of the 27 Policy Actions, the information gathered by the PIs is scored according to standard rubrics. These rubrics correspond to four stages of maturity in policy and institutional development for WfD: (1) latent, (2) emerging, (3) established and (4) advanced. A summary description of the rubrics appears in Figure 3 while the details are explained in Annex 6.

The scores on the Policy Actions form the basis for scoring the nine Policy Goals. The approach involves the application of simple weights to aggregate the scores on the Policy Actions that relate to each Policy Goal, typically 1/3 for information relating to policy concepts and design and 2/3s for information relating to policy implementation. In the interest of parsimony in data collection, the SABER-WfD study accepts reviews and evaluations of policies and related follow-up actions as evidence of implementation. Finally, to obtain the scores for the three Functional Dimensions considered in the SABER-WfD framework, the scores for the Policy Goals that relate to each dimension are aggregated with equal weights. This algorithm yields composite scores on a 1-4 scale for every level of

aggregation in the data; naturally, the composite scores are rarely whole numbers.

Note that in order to conform to standardized presentation of reports under the overall SABER initiative the dimension-level SABER-WfD categorical ratings shown on the cover of this report are based on the corresponding composite scores which have been converted to the relevant categories.⁵ In the rest of the report, the composite scores are presented in the form of a dial, as shown in Figure 3, in order to retain the detail they reflect.

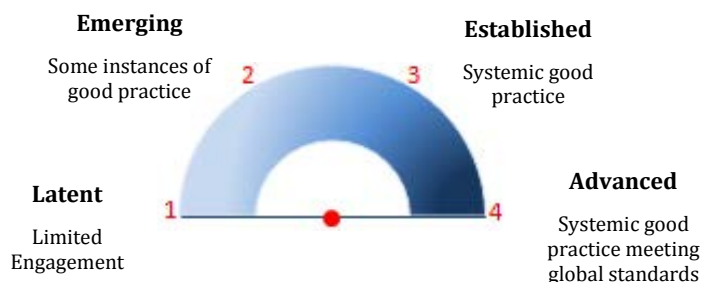
Box 1: A Note on Documentary Sources

This report is based on data collected through a desk study drawing on various documents for the years 1970 to 2010. The most important of these are:

- Statistical Yearbook of Education*
- Statistical Yearbook of Employment and Labor*
- 100 Years of History for Vocational Education and Training in Korea* by Lee Moo-Kuen
- The Changes and Tasks of Vocational Competencies Development in Korea* by Chung Taek-Soo
- Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training* edited by Choi Young Real et al.

Complete information on all sources appears in Annexes 4 and 5.

Figure 3: Rubric for Benchmarking WfD



Source: Tan et al. 2013.

⁴ For Korea, the PIs were Ko, Hye-Won and Park, Yoon-Hee, who are research fellows at the Korea Research Institute for Vocational Education and Training (KRIVET).

⁵ For a given composite score, X, the conversion to the categorical rating shown on the cover is based on the following rule: 1.00 ≤ X ≤ 1.75 converts to "Latent"; 1.75 < X ≤ 2.50, to "Emerging;" 2.50 < X ≤ 3.25, to "Established;" and 3.25 < X ≤ 4.00, to "Advanced."

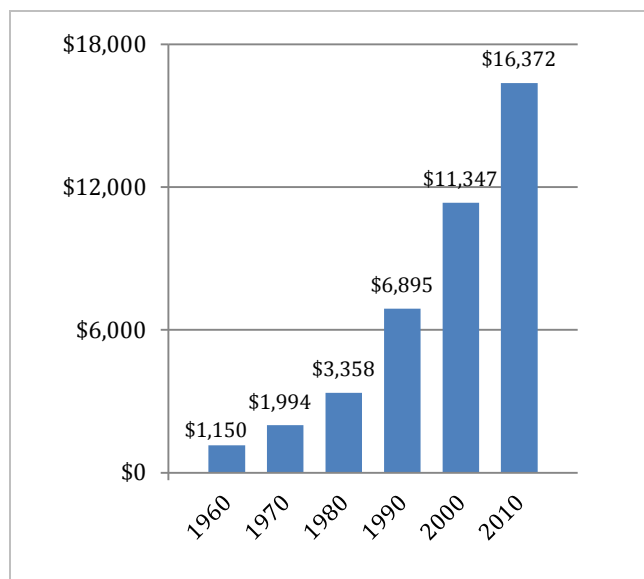
Country Context

The transformation of the Republic of Korea over the past five decades has often been described as an economic miracle. The country entered the 1960s as a low-income, labor-surplus economy with scarce resources; today, it enjoys one of the highest standards of living in the world and boasts globally competitive high-tech manufacturing and service industries. Effective strategies for WfD played a crucial role in this transformation. To set the stage for documenting these strategies we highlight below key aspects of the country's economic and social context and the institutional and financing arrangements for WfD.

Economic Trends

Growth. Korea's economy grew at an average rate of 6.6% p.a. from 1970 to 2010. During this period the economy contracted twice, in 1980, due to political upheaval and again in 1998, in the wake of the Asian financial crisis. The economy rebounded quickly in both instances, achieving growth rates of 6.2% in 1981 and 9.5% in 1999. Sustained high rates of growth over many decades have resulted in a fourteen-fold increase in Korea's real per capita GDP between 1960 and 2010 (see Figure 4).

Figure 4: Per Capita GDP, 1960 to 2010 (constant 2000 USD)

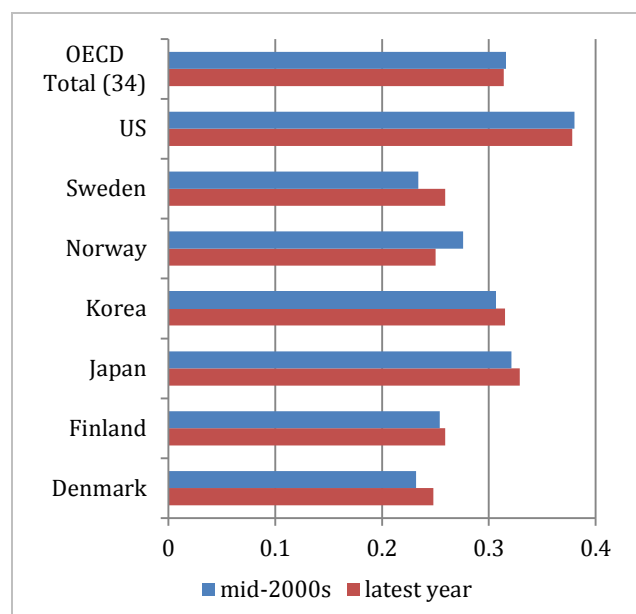


Source: World Development Indicators (database).

Income Distribution. Current income inequality in Korea is on par with that in Japan, considerably lower than in the United States but higher than in most European economies (see Figure 5). Historically, income inequality declined during the 1980s and 1990s. However, it rose sharply after the Asian financial crisis

and has subsequently continued its upward trend, wiping out progress made during the previous two decades. Poverty has also been on the rise⁶: the poverty rate in urban areas is estimated at 14.4% in 2009, up from 9% during the early 2000s.

Figure 5: Income Gini Coefficient for Korea and Comparators, mid-2000s and most recent year



Source: OECD Social Expenditure Statistics (database).

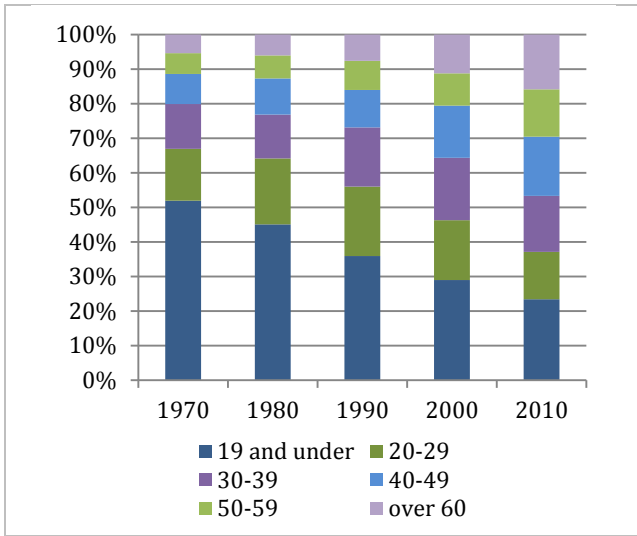
Note: The income Gini coefficient is a measure of the inequality of income distribution in an economy, where 0 corresponds to absolute equality and 1 indicates that all income goes to one person. Thus the higher the number, the more unequal the distribution of income.

Demographics and Employment

Demographics. Korea's population, currently estimated at 48.6 million people, is aging rapidly. The fertility rate has fallen sharply, from 5.0 births per woman in 1966, to 1.6 in 1990, to only 1.1 in 2005; the latter rate is significantly lower than the corresponding OECD average of 1.7 and well below the replacement rate of 2.1. Mirroring the steep decline in fertility, the median age of the population has risen, from about 18 years in 1966, to 27 years in 1990, to 35 years in 2005. Koreans below the age of 20 now comprise less than a quarter of the population, compared with more than half in 1970 (see Figure 6).

⁶ Poverty is here defined as the share of households whose inflation-adjusted income is less than half the median household income.

Figure 6: Composition of Population by Age, 1970 to 2010 (%)



Source: Statistics Korea, Population Census.

Employment. In 2010, an estimated 60.8% of Koreans over 15 years of age were in the labor force and 58.6% of them were employed. The unemployment rate was thus only 3.4%, a rate lower than the corresponding OECD average. Low unemployment has been a feature of the Korean economy for decades, with unemployment seldom topping 4% since 1980. However, youth unemployment has been a persistent problem: joblessness among those aged 15-24 has averaged 9.2% between 1980 and 2009 (see Table 1). Unemployment has been a larger problem among male youth than their female counterparts.

Demand for Skills

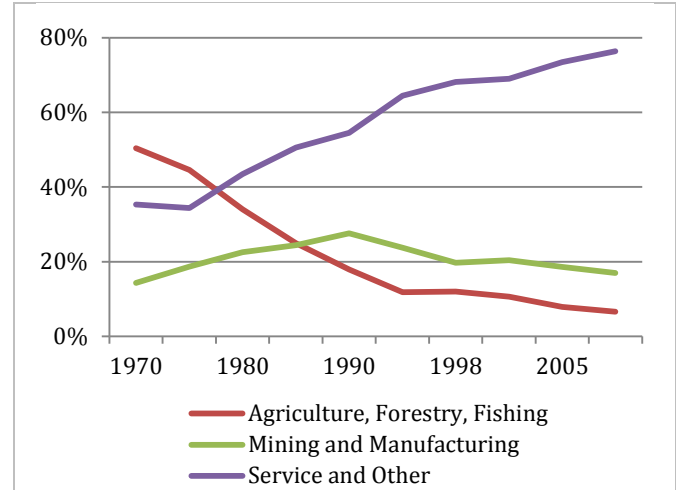
Sector Growth. The Korean economy has undergone considerable structural change, with implications for the demand for skills. The share of workers in service

Table 1: Youth and Total Unemployment, 1980 to 2010 (%)

Year	Unemployment rate	
	Youth (15-24)	Total
1980	11%	5%
1985	10%	4%
1990	7%	3%
1995	6%	2%
2000	11%	4%
2005	10%	4%
2010	10%	4%

Source: World Development Indicators (database).

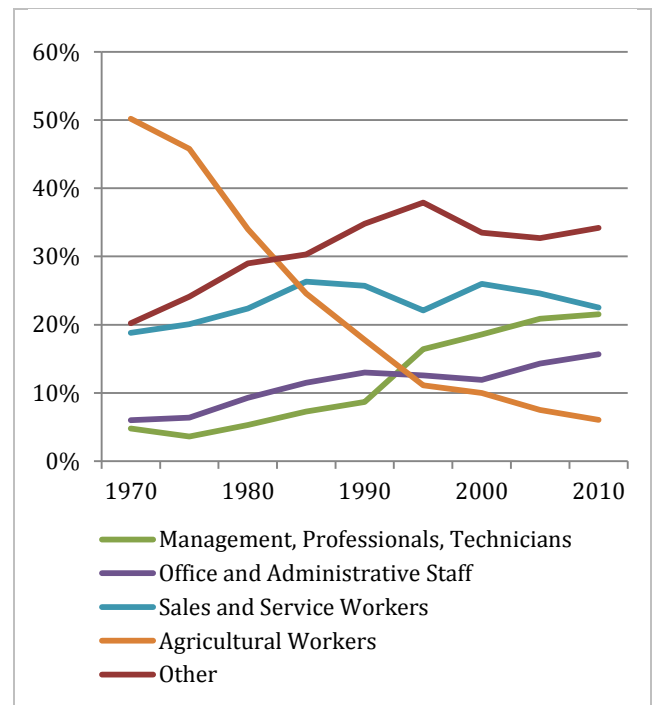
Figure 7: Composition of Workforce by Economic Sector, 1970 to 2010, (%)



Source: Statistic Korea, Survey of Business Activities.

sector jobs was 76.4% in 2010, up from 35.3% forty years earlier (see Figure 7). Employment in the primary sector dropped from 50.4% to 6.6% during the same period. With respect to the occupational structure of the workforce, the proportion of managers, professionals, and technicians more than quadrupled, from 4.8% in 1970 to 21.5% in 2010 (see Figure 8).

Figure 8: Composition of Workforce by Occupation, 1970 to 2010 (%)

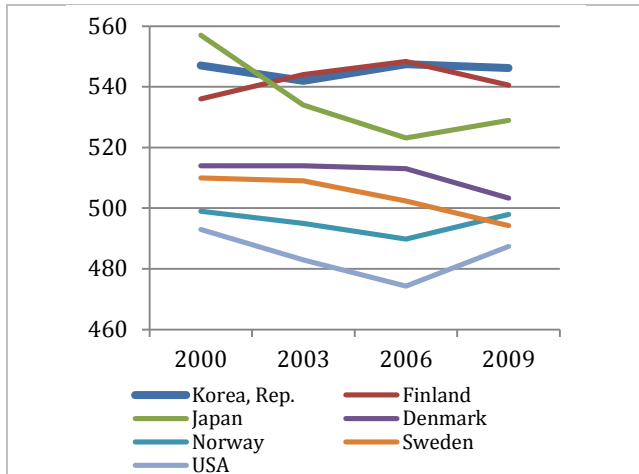


Source: Statistic Korea, Survey of Business Activities.

Supply of Skills

Skills Profile. In 1980, 51.3% of those in the labor force had not progressed beyond primary school. By 2010, this number had fallen to 10.9%, driven both by older generations leaving the labor force and by the almost universal progression to high school among Korean youths by 2000. The quality of the foundational skills acquired by those students entering high school is excellent. Korean eighth graders, for example, have consistently obtained among the highest scores on the OECD's Programme for International Student Assessment (PISA) for mathematics, reading and science (see Figure 9). The test was launched in 2000 in 29 countries and has been repeated thrice, with the latest round taking place in 34 countries in 2009.

Figure 9: Eighth Graders' Mean PISA Math Scores for Korea and Selected OECD Countries, 2000 to 2009

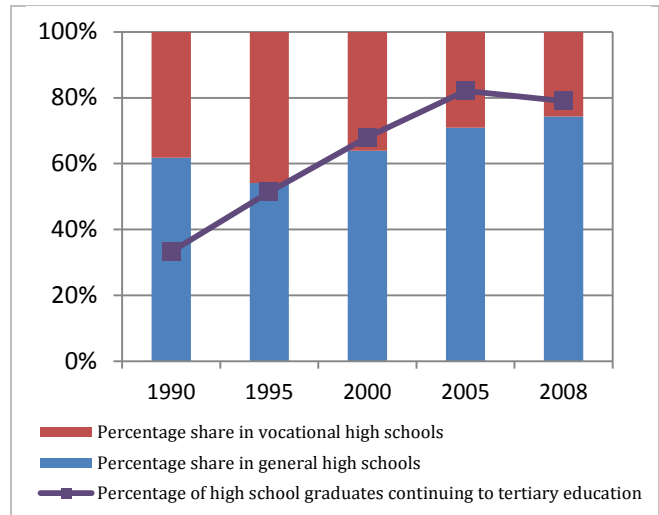


Source: OECD Educations Statistics (database).

Enrolment in vocational high schools grew in the early 1990s, thanks to the government policy to achieve a 50:50 balance between general and vocational tracks. It has fallen off in subsequent years, however, due to a confluence of factors including the decline of the school-aged population and the growing pursuit of academic tracks in preparation for higher education. In 2008 about 26% of high school students attended vocational schools (see Figure 10).

Today, a large majority of high schools graduates tend to go on to tertiary education rather than enter the labor market. By the 1990s social demand for higher education was high due to an increasing income gap between high school graduates and college graduates, improved living standards, and shrinking family sizes as a result family planning. Accordingly, the share of students progressing to tertiary education rose from

Figure 10: Educational Choices of Korean High School Students, 1990 to 2008



Source: Ministry of Education, Science and Technology and Korean Educational Development Institute, *Annual Education Statistics Report*.

33.2% in 1990 to 79.0% in 2008. As a result, the percentage of workers with a completed college education rose from 6.7% in 1980 to 38.9% in 2010.

This trend in progression to higher education is especially noteworthy among students in vocational high schools (see Table 2). The Presidential Commission for Education Reform (PCER) proposed

Table 2: Destination of Graduates of Vocational Institutions, 1970 to 2010 (%)

	Vocational High Schools		Junior Colleges	
	Further Education	Employment	Further Education	Employment
1970	10.1	67.1	23.5	37.4
1975	6.7	45.1	20.3	40.3
1980	11.4	51.1	-	-
1985	13.3	51.8	-	-
1990	8.3	76.6	-	-
1995	19.2	73.4	-	-
2000	42.0	51.4	-	-
2005	67.6	27.7	-	-
2010	71.1	19.2	3.6	55.6

Source: Ministry of Education, Science and Technology and Korean Educational Development Institute, *Annual Education Statistics Report*

Note: "Further Education" includes both junior colleges and universities for the vocational high schools column and universities for the junior colleges column. These numbers do not sum to 100% because students fulfilling military service requirements and who are unemployed are not represented here. No data are available for junior colleges from 1980 to 2005.

the Second Educational Reform Program in 1996, which included vocational education reform. The main objective of this vocational education reform was to establish a “Lifelong Vocational Education System” in order to realize a “Lifelong Learning Society.” The reform created options for vocational school graduates and incumbent workers to acquire further education beyond high school; it also eased regulatory barriers to establishing colleges. The impact of the reform was to increase the number of vocational high school graduates who continue on to post-secondary education: nearly three quarters of them did in 2010, up from just 10% in 1970. Correspondingly, the share of vocational high school graduates entering the labor force fell to just 19% in 2010.

With the introduction of a lifelong vocational education system, junior college education was also expanded. Junior colleges offer 2- to 3-year post-secondary programs in a variety of subjects including, but not limited to, vocational ones. Students who complete junior college attain an associate degree. Graduates of junior colleges tend to view their degree as a gateway into the labor market as opposed as a step towards university education. According to data for 2010, 55.6% of junior college graduates entered the labor market while only 3.6% enrolled in a 4-year university (see Table 2). The remainder were continuing their search for employment, still in the process of applying for further study or were completing military service requirements.

Mismatch between Demand and Supply

In the wake of the Asian economic crisis of 1997-8, young people found it harder than ever before to make a smooth transition into the labor market. In the past decade, unemployment among young people has consistently been more than twice the overall unemployment rate.

Despite high unemployment among young people, small- and medium-scale enterprises (SMEs) continue to complain of labor shortages. The problem is especially serious among SMEs in sectors with a traditional concentration of so-called “3D” (Difficult, Dangerous and Dirty) jobs, but it has spread to other industries such as construction, food service, cleaning, and healthcare. The expansion of higher education has aggravated the situation by drying up the supply of Koreans who are willing to take up “3D” jobs.

Korean employers have responded by recruiting foreign workers. The government introduced the Employment Permit System in 2004. As of May 2012,

480,000 foreign workers had found jobs under the system in 84,000 small firms.

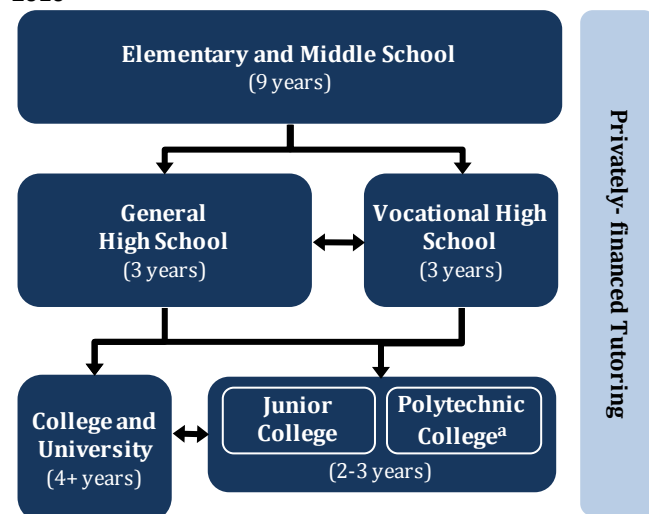
Training Provision

Skills training in Korea takes two main forms: (1) vocational education, delivered in secondary and tertiary institutions and administered by the Ministry of Education, Science and Technology (MEST); and (2) vocational training, administered by Ministry of Employment and Labor (MOEL), which targets workers outside of the education system and takes place primarily in training centers. Polytechnic colleges, under the MOEL also offer some training services.

Vocational Education. Korea’s education system has a 6-3-3-4 structure, corresponding to six years of primary education and three years each of lower- and upper-secondary education, followed by up to four years of post-secondary education (see Figure 11). Vocational education begins at the upper-secondary level, where it is primarily offered in dedicated vocational high schools; however, general high schools also run some vocational courses.

At the tertiary level, both junior colleges and polytechnic colleges offer vocational education programs, with junior vocational colleges enrolling the majority of students. As of 2010, Korea had 145 junior colleges across the country (see Table 3). Approximately 26% of students pursuing post-secondary education in Korea are enrolled in junior colleges. Of these students, 30.7% are enrolled in

Figure 11: Structure of the Korean Education System, 2010



Source: Authors’ construction.

^a Polytechnic Colleges are administered by the MOEL. All other schools are administered by the MEST.

Table 3: Number of Vocational Institutions and Enrollment, 1975 to 2010

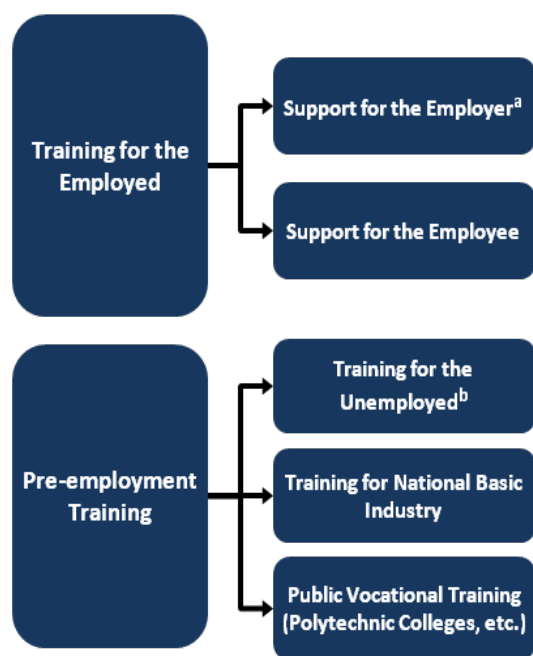
	Vocational High Schools		Junior Colleges	
	Schools	Students (1,000)	Schools	Students (1,000)
1975	479	475	101	63
1980	605	764	128	165
1985	635	886	120	242
1990	587	811	117	324
1995	762	911	145	570
2000	764	747	158	600
2005	713	503	158	530
2010	692	466	145	464

Source: Ministry of Education, Science and Technology and Korean Educational Development Institute, *Annual Education Statistics Report*.

engineering programs, 25.0% in social studies, 16.8% in arts and sports, and 27.5% in other programs such as healthcare and education.

Vocational Training. Vocational training in Korea is provided by training centers under the direction of the MOEL. Vocational training funded by the MOEL is

Figure 12: Korea's Vocational Training System, 2010



Source: Authors' construction.

^a Includes special programs for SMEs

^b Includes targeted training for farmers and fishermen

divided into training for the employed and pre-employment training (see Figure 12). The focus of vocational training has shifted in recent years from basic training for new employees to supporting skills upgrading and lifelong learning for incumbent workers.

Key Government Bodies. The two key Ministries responsible for WfD (Education and Labor) have undergone considerable transformation in structure and function during the course of Korea's economic development. Table 4 provides an overview of these changes.

A unique feature of the development of Korea's WfD system is the key role played by a central planning agency called the Economic Planning Board (EPB). Created in 1961 and headed by the Deputy Prime Minister, the EPB served as a hub for creating and coordinating the implementation of national development plans and played an important role in allocating resources, directing the flow of credit and assuring the alignment of WfD policies to economic

Table 4: Ministries Responsible for Vocational Education and Vocational Training, 1948 to 2010

Year	Name of Ministry or Office	Scope of Responsibility
Vocational Education		
1948	Ministry of Culture and Education (MOCE)	<ul style="list-style-type: none"> Culture General education Vocational education
1990	Ministry of Education (MOE)	<ul style="list-style-type: none"> General education Vocational education
2001	Ministry of Education and Human Resource Development (MOE&HRD)	<ul style="list-style-type: none"> General education Vocational education Establishing, overseeing, and coordinating human resource development policies on a national level
2008	Ministry of Education, Science and Technology (MEST)	<ul style="list-style-type: none"> General education Vocational education Science & technology
Vocational Training		
1948	The Labor Bureau ^a	<ul style="list-style-type: none"> Labor affairs
1963	The Labor Office ^a	<ul style="list-style-type: none"> Labor affairs
1981	Ministry of Labor (MOL)	<ul style="list-style-type: none"> Industrial relations Industrial safety & health Vocational training
2010	Ministry of Employment and Labor (MOEL)	<ul style="list-style-type: none"> Employment (including vocational training) Industrial relations Industrial safety & health

Source: Authors' construction.

^a Office within the Ministry of Health and Social Affairs

development strategy. As part of the process of elaborating successive Five-year Economic Development Plans, the EPB instituted a manpower planning system at the national level and undertook major updates of this system every five years. While the Ministry of Education and the Ministry of Labor were responsible for setting policies for the vocational education and training system, the EPB exercised oversight over these policies and, at times, adjusted them to promote coherence with other aspects of economic policy. In the late 1980s, the EPB's direct role in coordinating the efforts of the line ministries began waning. In 1994, it was merged with the Ministry of Finance to form the Ministry of Strategy and Finance. By this time, the task of coordinating the actions of multiple government ministries, which the EPB had performed so well in the past, appears to have been institutionalized, obviating the need for an agency dedicated to this task.

Financing Skills Development

As indicated earlier, two ministries in Korea are responsible for WfD: the Ministry of Education for vocational education and the Ministry of Labor for vocational training.

Vocational Education

Korea spent 7.6% of GDP on educational institutions in 2008. The budget for the vocational education is supported by tax revenue. MEST's education budget provides funding for primary and secondary school education and national universities; some support for private universities and for administrative and research organizations is also provided. Due to the unavailability of data, it difficult to determine exactly what proportion of the government's educational expenditure goes to vocational education.

Vocational Training

Vocational Training Act of 1967. This Act stipulated that in-company training programs that met certain standards and conditions pertaining to instructors, facilities and curriculum would be eligible to receive government support. To foster a culture of training and productivity improvement among enterprises, the government initially focused on 16 large enterprises by giving them training subsidies, with the hope that large enterprises would increase training to incumbent workers and hire fewer skilled workers directly from SMEs and that SMEs, in turn, would increase the amount of training provided to workers.

Vocational Training Framework Act of 1976. In 1974, the government issued a decree which imposed in-plant training obligations on large enterprises in six key industries. This sharp shift in policy, from a system of training subsidies to one that required large enterprises to train workers, was motivated by the government's strong desire to improve productivity in the export-oriented industries, as well as concerns about the long-run fiscal sustainability of the training subsidy system. The decree met with vehement opposition from the industrialists affected, however. The 1976 Vocational Training Framework Act was a compromise agreement. It introduced a training levy system which required all companies employing more than 300 workers in selected strategic industries to provide in-plant training to new workers. Any company that did not comply was required to pay into the Vocational Training Promotion Fund an amount equivalent to the cost of providing such training. This obligation was expanded to companies with 150 or more employees in 1992.

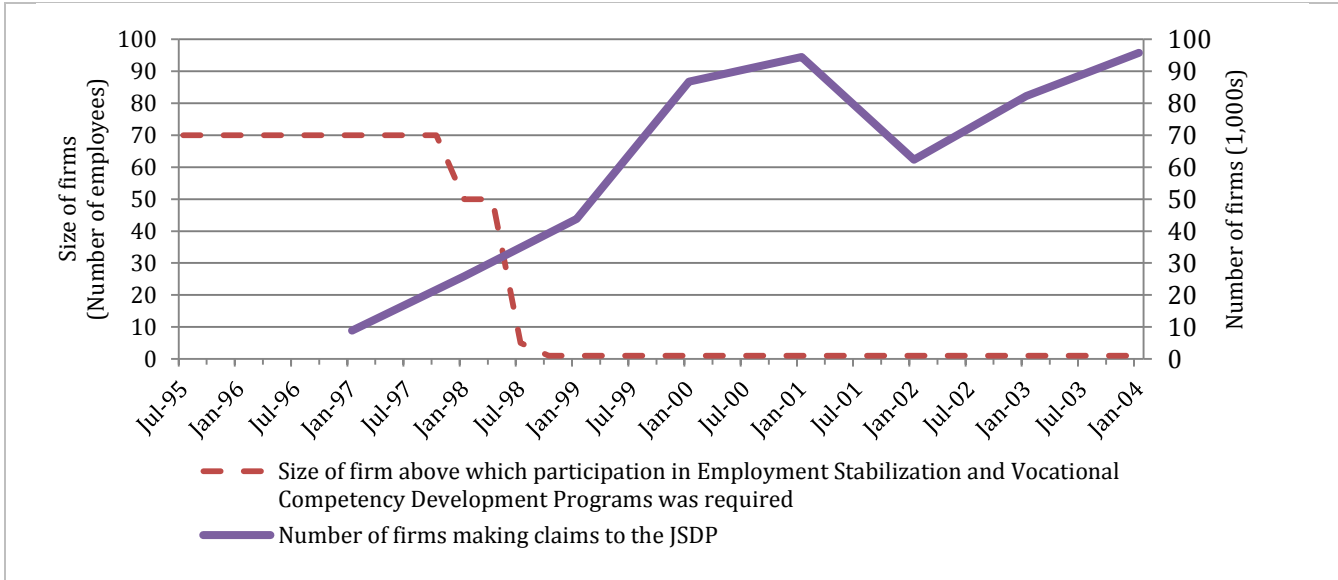
From 1976 to 1995, the financial resources for the vocational training system came both from the Vocational Training Promotion Fund and from the central government's annual budget allocations. In 1994, the year before the Fund was integrated into the Employment Insurance System (EIS), it provided 112.2 billion Korean won (54.9%) of the total 204.3 billion Korean won (301.17 million in constant 2005 USD) invested in vocational training that year.

Employment Insurance System (1995-present). In 1995, the levy system was replaced with a system of grants for on-the-job training for most companies with fewer than 1,000 and greater than 70 full-time employees. These firms were instead required to pay a payroll tax, which was used to finance the Job Skill Development Program (JSDP) under the EIS. Under the JSDP, the government used proceeds from the payroll tax to provide subsidies to support firms' training programs as well as to provide reemployment training to unemployed workers and to provide subsidies to individuals pursuing continuing education. The JSDP was well-received by employers, many of whom complained that the types of training mandated under the levy system were too restrictive. Accordingly, applications for reimbursement for training-related expenses rose in the early years of the program (see Figure 13). Mandatory participation in the JSDP program was scheduled to be expanded to all employers by 2002, however this expansion was moved up to 1998 in response to the rapid rise in unemployment and concomitant strain on social safety nets caused by the Asian financial crisis.

In 2009 roughly 80% of public funds for skills development were channeled through the EIS, with the JSDP being the primary mechanism. Budgetary contributions make up the other 20% and are usually earmarked for training for unemployed labor market

entrants, vulnerable groups (e.g., North Korean defectors, sole proprietors, and people undergoing rehabilitation) and for training in skills needed by key industries.

Figure 13: Threshold for Participation in and Claims Made to the JSDP, 1995 to 2004



Source: Authors' construction; Keum et al. (2006).

Note: The dip in the number of firms making claims to the JSDP in 2002 is due primarily to the use of a different method for classifying firms in that year. Funding for firms through the JSDP remained fairly constant from 2000 onward.

Overview of Benchmarking Results

The SABER-WfD benchmarking results reveal that Korea's WfD system steadily progressed between 1970 and 2010 under sustained leadership by and support from the government.

Overview of Results

Figure 14 shows the results for Korea for the three Dimensions in the SABER-WfD framework.⁷ Korea's Strategic Framework for WfD scored at an established level in 1970 and jumped to a highly advanced level in 2010. System Oversight progressed more steadily, but from a lower initial level of development. This aspect of the system was emerging in 1970 and reached an advanced level of system development by 2010. Service Delivery has lagged behind the other two Dimensions, with the system moving from emerging to established. Progress in this aspect of the system, as in the others, was more modest before 1990 but accelerated considerably in the most recent study period.

Figure 14: Benchmarking Results – Dimension Level

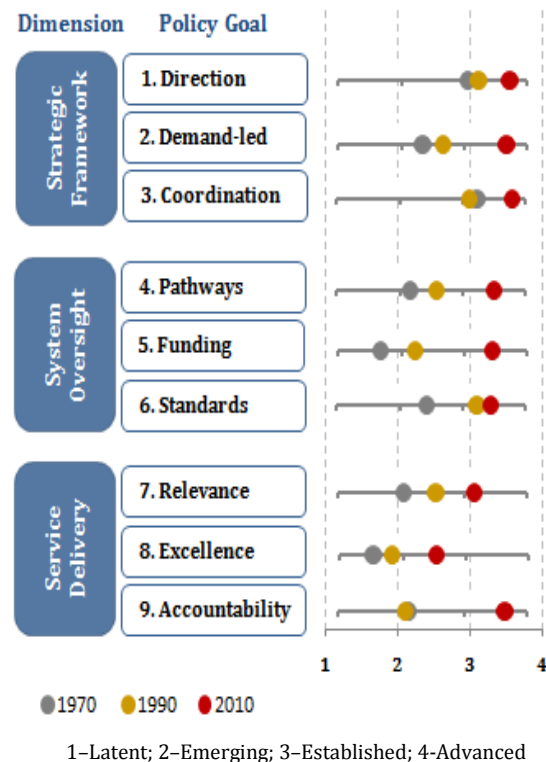


Note: The above composite scores are the same as the categorical ratings shown on the cover of this report. They have been converted using the rules indicated in footnote 4 on page 6.

As discussed in the introduction, each Functional Dimension is composed of Policy Goals spanning three broad areas of governance, finance and information. Each of the Policy Goals is in turn further defined by three concrete Policy Actions, making a total of nine Policy Goals and 27 Policy Actions. Figure 15 shows the benchmarking results for each of the Policy Goals. The scores for the Policy Goals are averages of the underlying Policy Action scores. The approach involves the application of simple weights to aggregate the scores at the Policy Actions level, typically 1/3 for information relating to policy concepts and design and 2/3s for information relating to policy implementation. The results for each Policy Action are presented and discussed in the Detailed Results section of this report.

⁷ See Annex 2 for the full results.

Figure 15: Benchmarking Results – Policy Goal Level



Landmarks in the Journey of Reform

Strategic Framework. The SABER-WfD benchmarking exercise indicates that Korea has a very advanced system with respect to this Dimension. Strategic WfD issues enjoy the sustained attention from apex-level leaders in government, industry, training providers and research institutions. These stakeholders coordinate their actions, both formally in several government-convened fora and also through extensive informal exchange. Employer input and extensive data collection are used to continually reorient the system to align it with emerging skills demand.

Apex-level commitment to creating appropriate WfD strategy, as well as extensive evaluation of skills demand and supply and the practice of convening stakeholders to jointly discuss strategy have been areas of sustained good practice since before 1970. In subsequent periods, Korea's sustained support for WfD has grown in sophistication and scope. These practices represent a strong and abiding acknowledgment of the importance of WfD to Korea's economic development agenda by the highest levels of government.

Korea's success story in this Dimension is one of gradual progress based on consistent and sustained effort rather than any specific landmark reform.⁸ Over the period under study the formality and importance of non-government stakeholders' contributions in apex-level dialogue has increased. In particular, the formalization of the roles of employers has contributed to encouraging productive employer input, making the process of setting strategic priorities increasingly demand-driven. The information that fed into the process of setting strategy also increased in scope and depth. By 1990 the number and quality of both regular and special-purpose assessments was increasing, and both in-house reviews and independent external evaluation of policies had become a routine part of the strategic planning process.

System Oversight The SABER-WfD benchmarking exercise indicates that on system oversight Korea achieved an advanced level of system development in 2010. Highly sophisticated systems of standards for accreditation and testing set high benchmarks for system performance and helped promote its credibility among employers. By 2010 employers had become active participants in system governance and oversight. The system benefitted from high levels of employer participation in setting funding priorities, designing and revising programs and curricula and in providing material inputs and internship opportunities. The national Employment Insurance System provided a dedicated fund from which employers could draw to support training of employees. Supported by the activities of research institutes and think tanks, the government actively reviewed and revised oversight and governance structures to promote systemic efficiency and effectiveness.

Public and private providers are managed in almost identical ways within the Korean system. Both receive considerable public funding, whose provision is contingent on adherence to robust standards regarding curriculum, facilities and staff recruitment and management. This creates a system where accreditation standards are supported by hard penalties for non-compliance, since it is neither legal nor financially practical for institutions to operate without accreditation. The consistent enforcement of standards in line with economic development priorities

⁸ During the early years of Korea's development the Economic Planning Board, a unique and effective central planning body, played an important role in ensuring the coherence between WfD strategy and broader economic development strategy. See page 11 for more details about this institution.

has been a motive force behind the evolution of Korea's WfD system into one of the best in the world today. A groundbreaking initiative to establish a vocational training system in Korea started with the promulgation of the Vocational Training Act in 1967. It laid out the fundamental elements of the system, including public and enterprise training programs and skills testing. Landmark reforms in the form of the National Technical Qualifications Act in 1973 and the introduction of a levy system in 1976 helped drive the system's rapid development. The former piece of legislation began a process of creation of comprehensive national skills standards assessed through standardized testing protocols. From this strong foundation, both the skills qualification framework and testing procedures continued to evolve in line with national economic strategy and international best practices. The introduction of a levy system not only encouraged firms to train employees but also was a crucial component of a successful multipronged government effort to increase partnerships between employers and trainers. The levy system was simplified as a payroll tax and rolled into the Employment Insurance System in 1995, thereby creating a dedicated fund from which the government offered grants for training to firms (which may be provided by public and private training institutions) and to unemployed individuals. Additional important reforms included increasing government support for lifelong learning through clearer and more numerous pathways for individuals to enter and leave the technical and vocational education (TVET) system and changes in the processes by which budgets for WfD were set and reviewed that increased both stakeholder input and the focus on achieving efficiency in resource allocation.

Service Delivery. The SABER-WfD benchmarking exercise indicates that this Dimension was at an established level by 2010. Formal links between vocational education providers and industry, mandated by legislation, had become robust and widespread. Industry exercised an advisory role at the national level in curriculum design and setting funding priorities. Many employers have also established formal relationships with providers in the form of internship and work-based learning programs, training for instructors, donations of used equipment and membership on governing boards. The government and TVET providers both consulted extensively with quasi-governmental think tanks and consultancies in the areas of curriculum design, pedagogical methods and alignment of program offerings to skills demand. Providers were required to submit data on institutional performance and were subject to penalties for non-compliance. While providers were not required to

meet specific targets, these data were important inputs into both allocating resources to achieve systemic efficiency and generating and disseminating knowledge on effective practices and innovations in service delivery.

Korea has consistently exemplified good practice in collecting and maintaining data on service delivery. It has invested considerable resources in cultivating the institutions and practices necessary to support these activities. Those responsible for overseeing and managing Korea's system for service delivery benefited from a wealth of both macroeconomic and institution-level data and have effectively leveraged this to manage service delivery and incentivize performance. Specific performance incentives were not widely used in Korea, especially before 2010. Instead, the government drew on its extensive analysis of skills demand and supply to manage overall system inputs and outcomes and provided guidance to providers in the form of directives backed up with the resources to fulfill them.

The biggest changes in service delivery were made in the following two areas: more and deeper linkages among training providers, industry, and researchers at the institution level; and an increase in formality, regularity, and scope of assessments of provider and system performance. The first advance resulted in significant collaboration in the areas of internships, in-kind contributions and the introduction and revision of training programs. The second advance represented an increase in government regulatory capacity as it began to use data that had been collected for the entire period in novel ways. Governance through system-level standards and directives began to be supplemented by more granular, rigorous monitoring and evaluation coupled with an increasing focus on providing institutions and staff with performance-based incentives.

Reflections on Lessons from Korea

An abundant, appropriately-skilled workforce has been a major factor in the rapid development of the Korean economy. The availability of the right workers to support industrialization and economic diversification is the product of the sustained success of Korea's WfD efforts. There are several key factors behind this success.

First, the link between WfD and Korea's economic agenda has received consistent, institutionalized emphasis and attention from the very top levels of government. Indeed, WfD has been integrated into Korea's economic development strategy since the

elaboration of the first Five Year Economic Development Plan in 1962. Korea's experience shows the benefits that accrue to consistent, well-informed and well-coordinated apex-level advocacy for WfD.

Second, Korea's WfD system has adapted to respond to each stage of economic development, enabling it to satisfy the skills demands of the labor market while also improving the quality of the skills of the workforce. As the economy developed, the government shifted its focus from basic training in skills needed by the manufacturing sector to providing both basic and advanced training in a much broader range of skills. Also, as the economy developed, the emphasis of WfD shifted from the training of new recruits to in-service training and upgrading of existing skills. The structure of the WfD system, which was driven by government-subsidized private training in the initial stage (1960s through 1976) and government-led public training in the next stage, is again transitioning to a private-led paradigm marked by voluntary firm participation and government support. Systems for funding WfD have also changed to suit each stage of economic growth, with the government-led system of obligatory in-house training supported by a levy being reorganized into the private sector-led Employment Insurance System in 1995.

Third, the government made funding for vocational education and training providers conditional on meeting system-wide standards for programs, facilities, and instructors. This top-down approach has allowed the government to adjust the system to meet evolving economic development needs and emerging economy-wide skills constraints. The homogeneity that this system of national standards created also simplified monitoring of institutional performance and created a simple, open system for student transfers.

Fourth, early identification of the skills demands of industry and addressing these demands through appropriate policy is essential for a successful workforce development system. During the early stage of industrialization which focused on heavy and chemical industries, Korea instituted manpower planning, whereby the government estimated the required number of skilled workers needed by priority industries and took steps to calibrate the training system accordingly. This approach has evolved over time. The government no longer carries out detailed manpower planning but now annually conducts the Workforce and Training Demand Survey to measure skills mismatches at the regional level. Results from such surveys are used to provide information to job seekers about where their skills may be in demand and

what additional skills it may be useful to acquire. However, no system-wide requirements for the use of information available through employment information services to improve programs and curricula have been established, leading some to argue that the link between training and employment service is still too weak.

Fifth, the WfD system is an effective means to bring those working in the informal sector, who are not protected by social safety nets, and other vulnerable groups into the formal sector. The large-scale training for the unemployed in response to the Asian financial crisis helped contribute to a rapid reduction in the unemployment rate after the crisis. A large portion of the training for the unemployed in the wake of the crisis was focused on the information and communication technology (ICT) industries, which has helped facilitate Korea's success in this sector. Public training for the industries identified as being of strategic importance for future economic growth is risky, but when it is carefully planned and monitored, it can help both employed and unemployed workers, especially vulnerable workers.

Challenges for the Future

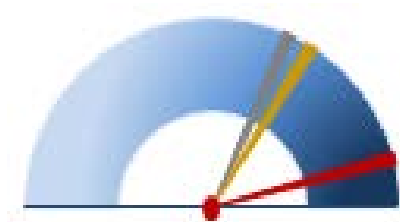
Despite the many lessons to be learned from the Korean case, Korea currently faces challenges in WfD. The rate of Korean high school students' progression to higher education is among the highest in the world. Many have pointed to the high social value placed on education by Korean society, dubbed "education fever," as a major force behind this phenomenon. Korea's spectacular progress in modernization and economic growth since the 1960s is largely attributable to the willingness of individuals to invest a large amount of resources in education. However, in light of many families' strong preference for academic higher education, vocational education has now become a second-choice option. This stands in contrast to the

1970s and early 1980s, when vocational education enjoyed parity in stature with academic tracks due to the high demand for and high social value placed on technical skills. In response to this falling off, the Korean government has recently taken measures to increase the employment rate among vocational high school graduates in an effort to increase the desirability of vocational education. These measures are beginning to drastically change secondary vocational education. For instance, the government has launched a "Work First - College Later" policy to encourage high school graduates to enter the labor market and work for several years before going to college. A new type of specialized vocational high school, the so called "Meister High School," was also introduced in 2010 to help improve the stature of vocational education and address emerging strategic skills gaps.

To sustain economic development, it is essential to nurture, allocate and utilize human resources in a way that sustainably creates employment and supports high value-added activities. This involves training highly-skilled technicians and experts who can work across a diversity of globally-competitive industries. Making opportunities for continued learning available for these individuals throughout their career to allow them to upgrade and acquire necessary skills is important. WfD policies for the future should, therefore, be designed in a way that provides systemic flexibility to quickly respond to potential shortages of skills supply. The challenges of doing so may be one factor contributing to decreasing cost efficiency of the Korean system. These demands require creative responses that may involve, among other things, more intensively tapping women and older people as sources of talent to address challenges related to rapid aging of the Korean population and increasing provisions for bridging learning and work to support a more robust lifelong learning system.

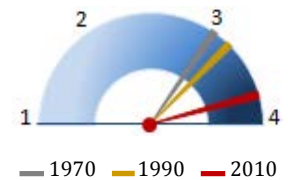
Detailed Results

Dimension 1 | Strategic Framework⁹



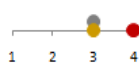
Policy Goal 1	Articulating a Strategic Direction for WfD
Policy Goal 2	Prioritizing a Demand-led Approach
Policy Goal 3	Strengthening Critical Coordination

⁹ The composite scores shown in the dial are the same as the categorical ratings shown on the cover of this report. They have been converted using the rules indicated in footnote 4 on page 6. The categorical ratings conform to the standard presentation of results in the SABER initiative, while the presentation in the dials reveals more detail.



The SABER-WfD benchmarking exercise indicates that on Policy Goal 1 Korea progressed from **established** levels in 1970 and 1990 to an **advanced** level in 2010. These summary results reflect the scores of the three underlying Policy Actions: the degree to which the country prioritized WfD; the extent to which its priorities were based on assessments of future economic prospects; and how well its policies systematically took such analyses into account.

Advocate for WfD as priority for economic development



This action scored at an **established** level in 1970 and 1990, and reached an **advanced** level in 2010.

Overview 1970 - 2010: By 1970 the Korean government had already identified WfD as a key to the success of its comprehensive Five Year Economic Development Plans, the first of which was approved in 1962. In subsequent periods, Korea's sustained support for WfD has grown in sophistication and scope. Successive national-level strategic plans have guided the reorganization of the WfD system to keep pace with the changing structure of the economy (see Table 5 on the following page).¹⁰ By 2010, the support for WfD in national economic development strategies was augmented by the creation of institutionalized fora for widespread industry voice as well as several research bodies that hold evaluation and improvement of the WfD system as a primary mission.

1970: The system benefitted from sustained advocacy by political leaders as well as high-level industry support. The legal foundation for this collaboration was established in the mid-1960s with the passage of two key pieces of legislation: the Industrial Education Promotion Act (1963) and the Vocational Training Act (1967).

The First (1962-66) and Second (1967-71) Five Year Economic Development Plans recognized the necessity of training skilled workers to support Korea's push to establish export-oriented light industry and made provisions for the necessary budgetary allocations. The

¹⁰ During the early years of Korea's development the Economic Planning Board, a unique and effective central planning body, played an important role in ensuring the coherence between WfD strategy and broader economic development strategy. See page 11 for more details about this institution.

First (1962-66) and Second (1967-71) Five Year Plans for the Promotion of Science and Technology, written to guide the actions called for in the Economic Development Plans, set expanding training in skills for key industries as a priority. Accordingly, the number of technical schools was increased while the number of agricultural and fisheries high schools was reduced. The curriculum taught in technical high schools was also revised to better address emerging skills gaps.

1990: The system continued to benefit from the strong foundations laid in previous years. Sustained leadership from government, industry and labor continued through an institutional framework very similar to that in place in 1970. Protocols for making policy decisions and channels for industry input remained in place despite several changes in political leadership. Korea needed more advanced skills as it developed, so national plans placed more focus on teaching science and engineering in higher education. These plans also emphasized the need for continual revision of vocational education curricula to keep pace with evolving skills demand.

2010: The increased high-level formal input from non-government stakeholders as well as the inception of several research institutes that conducted regular assessments brought the system to an advanced level of development.

The legal framework for WfD put in place in the 1960s was updated with the passage of the Workers Vocational Skills Development Act (2004) and the Promotion of Industrial Education and Industry-Academic Cooperation Act (2009). Under this framework, National Human Resource Development meetings were held every two months. These meetings were chaired by the President and attended by industry federations, trade unions and fourteen ministries. This broad set of stakeholders also collaboratively developed the First (2001-05) and Second (2006-10) General Plans for National Human Resources Development, which pursued 200 separate policy issues including training and developing human resources with international competencies, improving national lifelong learning competencies, promoting social integration and educational and cultural welfare, and expanding human resource development (HRD) infrastructure.

Formal assessments, sponsored by various ministries, were regularly conducted by government-affiliated

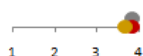
Table 5: Evolution of WfD in response to the Five Year Economic Development Plans, 1962 to 1997

Five Year Economic Development Plan Period	Key Reform Priorities	Legislation and Reform Measures	
		Vocational Training	Vocational Education
FIRST (1962-1966)	<ul style="list-style-type: none"> Building the foundation for industrialization Export-led growth driven by light industries 	<ul style="list-style-type: none"> Basic training for low-skilled workers 	<ul style="list-style-type: none"> Industrial Education Promotion Act
SECOND (1967-1971)	<ul style="list-style-type: none"> As above 	<ul style="list-style-type: none"> Vocational Training Act Five Year Science and Technology Promotion Plan 	<ul style="list-style-type: none"> Five Year Science and Technology Promotion Plan
THIRD (1972-1976)	<ul style="list-style-type: none"> Deepening industrialization Export-oriented growth driven by heavy and chemical industries Macroeconomic stability 	<ul style="list-style-type: none"> Special Measures for Vocational Training Act Act on the Establishment of Vocational Training Promotion Fund National Technical Qualifications Act 	<ul style="list-style-type: none"> Amendment of Industrial Education Promotion Act Specialization of technical high schools Establishment of Air & Correspondence High Schools Introduction of vocational programs in general high school curriculum
FOURTH (1977-1981)	<ul style="list-style-type: none"> Promotion of technology-intensive industries Balanced, export-oriented growth 	<ul style="list-style-type: none"> Initiation of the requirement of in-service training for employed workers and measures to promote employment stability 	<ul style="list-style-type: none"> School-industry partnerships Admission quota raised for engineering departments in junior colleges
FIFTH (1982-1986)	<ul style="list-style-type: none"> Macroeconomic stability Fostering knowledge and information industries Balanced, export-oriented growth 	<ul style="list-style-type: none"> Plans for strengthening Vocational Training 	<ul style="list-style-type: none"> Improving vocational high school performance Long-term investment in science and tech. Reform of higher education institutions Creation of rules governing the foundation and management of open universities
SIXTH (1987-1991)	<ul style="list-style-type: none"> Deepening industrialization Fostering competition Increasing economic openness Balanced growth 	<ul style="list-style-type: none"> Basic Plan for Promoting Vocational Training Expansion of the scope of industries obligated to conduct training of employees 	<ul style="list-style-type: none"> Reform of high school TVET system Introduction of 2+1 system in engineering high schools
SEVENTH (1993-1997)	<ul style="list-style-type: none"> Transition to low-cost, high-efficiency economy Establishment of a free and fair economic order 	<ul style="list-style-type: none"> Employment Insurance Act Vocational Training Promotion Act 	<ul style="list-style-type: none"> Employee training contracted to junior colleges

Source: Authors' construction.

institutes such as the Korea Research Institute for Vocational Education and Training (KRIVET) and the Korea Education Development Institute (KEDI).

▣ Evaluate economic prospects and implications for skills



This action scored **advanced** in 1970, 1990 and 2010.

Overview 1970 – 2010: Economic analysis informed Korea's First Five Year Development Plan in 1962 and has remained the leading edge of setting strategic WfD priorities up to the present day. The Korean government's research capacity and strong connection to both think tanks and employers have allowed setting strategic priorities to be a data-driven process. These priorities have been vigorously pursued through the

implementation of reform aimed at maintaining a skills pipeline that accommodates evolving demand.

1970: The system has featured institutionalized assessment of economic prospects since Korea's first concerted push to spark economic growth in the early 1960s. Detailed manpower forecasts were conducted to inform the first two Five Year Economic Development Plans. These forecasts were used to predict the magnitude of labor surplus or shortage for industries across the economy. The government used these forecasts as an input to the process of developing the National Education Curriculum for Vocational High Schools (1963) and the Vocational Training Standards for vocational training institutions (1967).

Both the Ministry of Labor (MOL)¹¹ and the EPB conducted regular labor force surveys to support their planning and policy work. The MOL also conducted annual employer surveys to keep abreast of emerging skills gaps. Employers provided less formal input through regular meetings with WfD authorities.

During the 1970s, the government put in place policies meant to effect a fundamental shift in economic structure towards the heavy and chemical industries. In 1973, the government chose six strategic industries including steel, nonferrous metals, machinery, shipbuilding, electronics and chemicals. In order to develop the selected industries, the government provided financial and economic incentives to companies who followed the government policy. As large-scale investment continued, the manufacturing industries grew rapidly. This rapid structural change further raised the demand for skilled workers and technicians.

The government responded by strengthening technical and vocational education at the secondary level. In addition, the government expanded public vocational training centers and imposed training obligations on large enterprises in the strategic industries. It replaced this arrangement with a training levy system in 1976 that required firms in the selected industries with 300 or more workers to either train their employees or pay a levy into the Vocational Training Promotion Fund.

At the same time, the government introduced a scheme of “Specialization of Technical High Schools” to quickly train the skilled workers needed in the priority industries. The government provided special administrative and financial supports to the schools. Under the scheme, there were 19 specialized technical high schools, with a total enrollment of 13,920 in 1979.

1990: The system continued to provide leaders with robust data and remained at an advanced level of development. Korea’s economic development strategy in the 1970s and 1980s focused on cultivating heavy and chemical industries. The MOL and the EPB both made monitoring the supply and demand of engineers and technicians needed for these industries a priority.

¹¹ During the 1970s the body in charge of skills training was the Labor Office within the Ministry of Health and Social Affairs. However, since the bodies performing the functions of the Ministries of Labor and Education both underwent several reorganizations and were renamed several times between 1970 and 2010, in the rest of the report the generic Ministry of Labor (MOL) and Ministry of Education (MOE) are used for simplicity’s sake. Table 4 on page 12 provides details on the dates and substance of all changes to the name and function of the MOL and MOE.

Table 6: Linking Vocational Education to Economic Strategy, 1960 to 2010

Period	Economic strategy	Workers in high demand	Level and type of training	Key focus of policy response
1960s to mid-1970s	Labor-intensive Industries	Low-skilled	High school and on-the-job vocational training	Expand
Mid-1970s to mid-1990s	Capital-intensive Industries	Technicians	Junior college	Expand
Mid-1990s to 2010	Knowledge-based Industries	Engineers and scientists	University	Strengthen university-industry-research linkages

Source: authors’ construction.

Primary responsibility for long-term economic forecasting transferred to the Korea Development Institute (KDI), a government-affiliated economic think tank established in 1971 that worked closely with the MOL and the EPB. The economy-wide analyses conducted by KDI were used to develop an appropriate WfD strategy and complemented the manpower forecasts that were still being conducted in preparation for writing the Five Year Economic Development Plans (see Table 6).

These analyses prompted a slew of significant reforms including an increase in the number of public vocational training institutions, the introduction of the Vocational Training Promotion Fund to increase in-company training, and the establishment of the Vocational Training Management Agency to supervise all public training institutions and skills testing and to provide support for firms’ training activities.

2010: Despite considerable institutional shuffling, the system remained keenly attuned to employers’ skills requirements and retained its capacity for self-evaluation and improvement. Several organizations invested considerable effort in measuring skills demand and supply, with KRIVET, the Korea Employment Information Service (KEIS), and the MOL all conducting regular employer and industry surveys, and Statistics Korea conducting monthly labor force surveys. These surveys were critical to both the conception and monitoring of high-level strategic plans such as the Framework Plan for Lifelong Vocational Skills Development (2007) and the First (2001) and Second (2006) General Plans for National Human Resource Development.

▣ Develop policies to align skills demand and supply



*This action moved from an **emerging** level in 1970 an **established** level in 1990 and 2010.*

Overview 1970 – 2010: In 1970, policy design was mainly informed by limited in-house assessments of skills shortages, while the practice of reviewing policies for impact was still emerging. By 1990 and 2010, the number and quality of both regular and special-purpose assessments had increased, and both in-house reviews and independent external evaluation of policies had become a routine part of the strategic planning process. The increasing breadth, depth and sophistication of this feedback loop are the main impetus behind the system’s steady development.

1970: The system for linking policy to rigorous assessments of economic prospects was still emerging in 1970. While the government developed policies based mainly on in-house reviews that were not always particularly rigorous, it was nonetheless able to implement policies that helped alleviate critical skills bottlenecks.

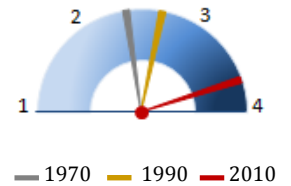
Surveys conducted by the EPB and the MOL revealed the limited availability of high quality training and instructors. In response, the government increased the number of vocational schools, expanded vocational education curricula and rapidly increased the availability of short-term, employer-based and evening courses. It also established the Central Vocational Training Institute in 1968 under the MOL to train instructors, administer qualifications testing and publish training material to help standardize the provision of TVET.

1990: The scope, maturity and importance of skills assessments to policymaking and their impact on policy decisions grew in scope and maturity in the twenty years to 1990, yielding a system at an established level

of development. Government ministries, KDI, KEDI and the Korea Vocational Training Management Agency-affiliated research institute all conducted regular and *ad hoc* assessments to understand the nature of the skills imbalances and prepare for the introduction or revision of major policies. In-house reviews were conducted by ministries and government-affiliated think tanks on an annual basis when developing the vocational education and training plan for the following year.

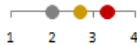
2010: The system built on its good practices and remained at an established level of development. Ministries and research institutes such as KRIVET and KEIS continued conducting regular assessments to understand the nature of the skills imbalances in all sectors. One finding was that unemployment and underemployment among youth and certain vulnerable populations was a persistent issue. The increasing importance of high-tech, green and knowledge-based industries also had created increased demand for new technical skills as well as soft skills, creative thinking and English-language skills. Establishing a reliable pipeline for appropriately-skilled workers was also impeded by the fact that as Korea grew wealthier, TVET suffered from the widespread public perception that it was a second-tier track.

In response, the government instituted a series of meaningful reforms across a range of policy domains including the establishment of Meister High Schools (see Box 5 on page 36) to help improve the stature of vocational education and address emerging strategic skills gaps. At the post-secondary level reforms focused on improving the quality of junior colleges through specialization, increasing opportunities for work-based learning, and instituting a performance-based government funding scheme based on a rigorous formula that rewards institutions for successfully placing graduates in jobs, the efficient use of fees and other funds and the quality of faculty and students.



Policy Goal 2 examines employers' engagement at the strategic level, government incentive programs for skills upgrading, and efforts to address future skills challenges. Results of the SABER-WfD benchmarking exercise indicate that Korea progressed from an **emerging** level in 1970 to an **established** level in 1990 and reached an **advanced** level in 2010.

□ Promote a demand-driven approach



This action scored at an **emerging** level in 1970 and improved to an **established** level in 1990 and 2010.

Overview 1970 – 2010: Although formal structures for engaging industry representatives on workforce development were in place by 1970, these stakeholders played a limited role in establishing and implementing WfD priorities. In subsequent periods, they became more actively involved, albeit still in an advisory capacity. The voice of industry has been further amplified in the most recent period through a sharp rise in the number, quality and continuity of systematic assessments of skills demand.

1970: The system allowed for limited and occasional advisory input from business and industry. The Vocational Training Act of 1967 created the Vocational Training Review Committee and empowered it to assess and review vocational training programs and skills certification. The Committee consisted of workers, employers, public servants, and vocational training experts and reviewed major issues and policies pertaining to WfD, providing advisory inputs in setting and implementing WfD priorities. Meetings, however, did not take place very often. In addition to these formal channels, the government solicited industry input through informal meetings.

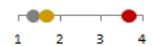
1990: While few major changes to the system were made during the 1970s and 1980s, the amount and frequency of industry input increased, raising the level of system development. The Vocational Training Review Committee was largely unaffected by the major Framework Act on Vocational Training, enacted in 1976. The Committee continued to review major issues and policies pertaining to WfD, but provided advisory inputs in the setting and implementation of WfD priorities with more regularity and vigor than in the previous period.

2010: The advisory role played by business and industry deepened in the decade leading up to 2010 while the number of stakeholders conducting routine assessments to gauge skills demand proliferated, yielding an established system attuned to changes in skills demand.

The government asked industry to review and recommend adjustments to the Framework Plan for Lifelong Vocational Skills Development before it was ratified in 2007. The high-level HRD Forum, sponsored by the MOL, and Future Human Resources Forum, sponsored by the MOE, both counted industry representatives among the ranks of invited stakeholders. These bodies regularly met to discuss, review and propose policies related to HRD, research and development and industry partnership with universities and training providers. In the early 2000s, the government introduced Sectoral HRD Councils (SHRDCs) to increase the cooperation between education and training providers and industry within key sectors, using, using the UK's Sector Skills Councils as a model. In collaboration with SHRDCs, the government developed vocational school curriculum, training standards and qualification standards.

Routine studies to gauge employers' demand for skills were conducted by government agencies, industry associations, labor unions, think tanks, and even some large firms themselves (e.g., the Samsung Economic Research Institute).

□ Strengthen firms' demand for skills to improve productivity



This action scored at a **latent** level in 1970 and 1990 and reached an **advanced** level in 2010.

Overview 1970 – 2010: In 1970, there were few incentives and services to support skills development for technology upgrading by firms. The inception of a levy system in 1976 provided increased resources for training while making employers more active stakeholders. This positive first step was followed in the most recent period by a significant increase in the scope of incentive programs, in the services available to firms to help address critical skills constraints and, most notably, in the robustness of procedures for reviewing government support for addressing skills constraints.

1970: The system featured limited financial incentives in support of skills development for technology upgrading. For example, in 1962 the government issued the Decree on Training the Unskilled Workforce, which allowed firms in selected industries to pay newly-hired unskilled workers less than the normal rate if the firm committed to train the workers. In addition, the Vocational Training Act stipulated that in-company training programs that met certain standards and conditions pertaining to instructors, facilities and the curriculum would be eligible to receive government support. While these in-company training programs accounted for a major portion of total training, in 1970 the total number of individuals trained was relatively low (see Table 7).

Table 7: Number of Vocational Trainees by Five Year Economic and Social Development Plan, 1967 to 1992

Plan	Year	Total Persons (1,000s)	Share of Total Trainees (%)		
			Public Training Provider	In-plant Training Provider	Authorized Private Provider
2nd	1967	99	36.7	48.8	14.5
3rd	1972	313	26.0	56.7	17.3
4th	1977	496	24.2	68.1	7.7
5th	1982	273	44.3	42.0	13.7
6th	1987	313	36.3	37.0	26.5
7th	1992	1,007	15.0	70.3	14.7
1967-1992		2,501	30.4	53.8	15.7

Source: MOEL, *Statistics of Vocational Training*.

1990: The diversity of government support increased slightly, but the system made only limited progress and was hampered by the absence of protocols for reviewing and revising government support. While little progress in terms of system development was noted for this period, steps taken before 1990 laid the groundwork for the system's rapid improvement after 1990. For instance, the Vocational Training Management Agency, a government entity, was established to provide consulting services to firms regarding employee training programs. The government also introduced a levy system in 1976. Under this system, companies with more 300 employees were required to either provide in-company training or contribute to the Vocational Training Promotion Fund. The amount that SMEs were required to contribute was kept significantly lower than the levy on larger firms to provide them with extra support.

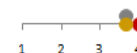
2010: The rapid diversification of government support along with the initiation of a robust system for annual reviews of incentives pulled the system from the latent level to the advanced level in less than twenty years. The scope of support financed through the Vocational Training Promotion Fund increased markedly with the Fund's integration into the EIS in 1995. Financial support for training was extended to employed individuals through programs that reimburse employees for training (employees were provided with Individual Skills Development Cards as verification of employee status) and through the provision of student loans. Proposal-based training grants over and beyond what could be claimed through the insurance system were also made available to SMEs that formed consortia for providing training to workers. The Vocational Training Management Agency was reorganized as HRD Services of Korea and extended its services beyond consulting to providing funding for training centers (see Box 2). Annual reviews of the incentive programs were conducted by government-affiliated think tanks such as KRIVET. Many of the key recommendations generated by these reviews were implemented.

Box 2: HRD Services of Korea

HRD Services of Korea is an autonomous organization affiliated with the Ministry of Employment and Labor that provides the following services in support of WfD:

- Consulting services and support for SMEs that wish to train;
- Support for establishment and management of Polytechnics;
- Evaluation of vocational training facilities;
- Training for TVET instructors and HRD professionals;
- Administration of the National Qualifications Testing System;
- Conducting research in support of the National Technical Qualification Testing System and management of associated information system.

Address critical challenges in the future supply of skills



*This action scored at an **advanced** level in 1970, 1990 and 2010.*

Overview 1970 – 2010: Routine evaluations to assess the future supply of skills were institutionalized as part of Korea's five year planning cycle. This advanced system has proven agile and resilient for the entire period under study and has helped set the benchmark for good practice. It has been able to grow in line with the increasing dynamism, complexity and openness of the Korean economy, and has consistently been

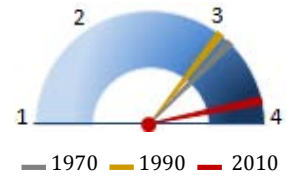
effective at anticipating and prompting action to address emerging skills mismatches.

1970: By 1970 the Korean government was both conducting national assessments of future skills supply across several industries and promptly implementing policies based on the results, giving the system an advanced score. The Vocational Training Division of the MOL conducted annual surveys to collect and analyze basic data for the Second Five Year Plan for the Promotion of Science and Technology by technology level and industry. Together with the Technology Development Bureau within the EPB, these two bodies focused on evaluating the supply and demand of engineers and vocational technicians needed for the labor-intensive light industry. In addition, the Survey of Employed Technical Manpower conducted by the EPB (beginning in 1961) examined the current workforce in order to evaluate economic prospects and skills implications for all sectors. Goals for reform were made explicit by President Park and monitored by the MOL and EPB. Under this strong leadership, most recommendations were implemented, often within twelve months.

1990: The continued the good practices of the previous period helped facilitate the Korean economy's movement into strategic growth industries. The MOL, together with the EPB, focused on evaluating the supply and demand for engineers and vocational technicians

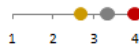
needed for heavy and chemical industries. KDI, in cooperation with MOL and EPB analyzed the long-term economic prospects for the Korean economy. These economy-wide analyses were used to develop appropriate vocational training strategies. Assessments of the future skills supply were conducted to develop the Vocational Training Development Plan in 1990. Implementation of important recommendations remained swift, in part because adequate funding was usually made available and the goals and responsibilities for implementation were made explicit.

2010: The scope of assessments expanded to take into account both regional variations in skills demand within Korea as well as international trends. KRIVET and KEIS conducted annual assessments as well as longer-term ten-year assessments for all five regions and the nation as a whole. In addition, the government made assessments of international skills demand and its implications for the Korean economy in preparation for signing several free trade agreements. All these efforts have contributed to the introduction of major WfD initiatives, such as the designation of flagship Meister High Schools to produce the highly-skilled technicians needed by strategic industries and the President's "Low Carbon, Green Growth" strategy and the concomitant "greening" of Korea's training system. Goals for implementing these and other reforms are made explicit and progress is monitored by the relevant government bodies.



Policy Goal 3 examines the quality of coordination mechanisms among WfD leaders, how formally roles and responsibilities are defined, and the existence and quality of regular interaction among stakeholders charged with implementing WfD strategies. Results of the SABER-WfD benchmarking exercise indicate that with respect to Policy Goal 3 Korea progressed from an **established** level in 1970 and 1990 to an **advanced** level in 2010. These summary results reflect the scores for the three underlying Policy Actions.

Ensure coherence of key strategic WfD priorities



This action scored at an **advanced** level in 1970, an **established** level in 1990, and an **advanced** level in 2010.

Overview 1970 – 2010: Apex-level coordination of key strategic WfD priorities has been a strong point in the Korean system since before 1970. The system has benefited from leadership by no less authority than the country’s President throughout the period analyzed. It also benefitted from the existence of both formal and informal channels for regularly convening leaders of government and industry to discuss and agree on strategic WfD goals and approaches. The sustained attention to WfD challenges has helped Korea to forge a WfD system that has kept pace with the country’s rapid economic development and that has consistently achieved positive outcomes.

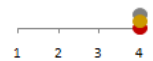
1970: The system featured several mechanisms that effectively facilitated coordination among key leaders in defining strategic WfD priorities. Within the government, the President met on a weekly basis with ministers whose portfolio included WfD. These apex-level meetings were instrumental in coordinating WfD strategy and laying the groundwork for coherent strategy implementation. Achieving this coherence was the function of the Human Resource Development Committee, which served as an institutionalized forum for the relevant ministers to coordinate the actions taken by their respective ministries to implement WfD policies.

1990: The formal and informal mechanisms for coordination remained largely unchanged from 1970.

They continued to deliver coordinated action in support for WfD priorities. However, a reduction in the quality of collaboration across government ministries facilitated by Human Resources Development Committee caused benchmarking rating to fall slightly, moving the system from an advanced to an established level. This did not drastically impede the rapid growth in system scope and complexity, however.

2010: By 2010, formal mechanisms facilitating apex-level coordination and implementation of strategy had been reorganized and revitalized. Formal weekly meetings between the President and relevant ministers continued. In addition, in 2010, the President convened the National Employment Strategy Council to bring together members of nine ministries and five industry federations to address high youth unemployment, skills mismatch and the scarcity of sought-after jobs. This council reviewed existing strategic initiatives such as Meister High Schools and allocation for WfD in the national budget and proposed changes. The work of the council, as well as work done in the more regular presidential meetings, resulted in important strategic decisions. One example was the reorganizing the MOL to better focus its resources on matching skills supply to demand and improving the labor market outcomes of technical training program graduates. The government’s formulation of Korea’s “Low Carbon, Green Growth” economic development strategy and concomitant investment in green skills also benefitted from the attention of both groups.

Institutionalize the structure of WfD roles and responsibilities



This action scored at an **advanced** level in 1970 and 1990, 2010.

Overview 1970 – 2010: The Korean system has been among the best in the world with respect to this Policy Action from 1970 to the present. Each period under study has featured the passage of major legislation that has retained precise designation of roles and responsibilities for a wide group of stakeholders while allowing the system to shift priorities and functions in line with changes in the structure of the Korean and global economies.

Table 8: Major Legislation Defining Responsibility for WfD

Act	Stakeholder	Responsibility
Vocational Training Act (1967)	National Government	<ul style="list-style-type: none"> • Making plans for vocational training and skills testing • Convening the Vocational Training Review Committee
	Industry Groups	<ul style="list-style-type: none"> • Participating in the Vocational Training Review Committee
	Labor Unions	<ul style="list-style-type: none"> • Participating in the Vocational Training Review Committee
	Employers	<ul style="list-style-type: none"> • Conducting vocational skills development training for employees
Framework Act on Vocational Training (1976)	National Government	<ul style="list-style-type: none"> • Making plans for vocational training and skills testing • Convening the Vocational Training Review Committee
	Industry Groups	<ul style="list-style-type: none"> • Participating in the Vocational Training Review Committee
	Labor Unions	<ul style="list-style-type: none"> • Participating in the Vocational Training Review Committee
	Employers	<ul style="list-style-type: none"> • Conducting vocational skills development training for employees
Workers Vocational Skills Development Act (2003)	National and Local Governments	<ul style="list-style-type: none"> • Formulating policies to promote and support vocational skills development activities • Convening the Employment Policy committee on Vocational Skills Development
	Training Providers	<ul style="list-style-type: none"> • Endeavoring to have trainees receive vocational skills development training suitable for their aptitudes and abilities, by providing counseling concerning vocational skills development training, offering employment guidance, and establishing selection criteria
	Employers	<ul style="list-style-type: none"> • Conducting vocational skills development training for employees
	Workers (trainees)	<ul style="list-style-type: none"> • Acquiring vocational skills according to their aptitude and abilities and cooperating in vocational skills development activities
	Industry Groups	<ul style="list-style-type: none"> • Participating in the Employment Policy committee on Vocational Skills Development
	Labor Unions	<ul style="list-style-type: none"> • Participating in the Employment Policy committee on Vocational Skills Development

Source: Authors' construction.

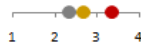
1970: The Vocational Training Act of 1967 and the Industrial Education Promotion Act of 1968 assigned clear roles and responsibilities to the MOL and MOE, training providers and employers (see Table 8). Under these acts the WfD authorities were empowered to coordinate WfD stakeholders' inputs for WfD plans, formulate and recommend strategy and policies for WfD, compile and disseminate WfD information and knowledge, formulate budgets, and request funding from government authorities. A combination of government expenditure and international aid provided the MOL and MOE with adequate resources to perform these functions.

1990: The system was reorganized but remained advanced. The Framework Act on Vocational Training (1976) and the Industrial Education Promotion Act (1990) retained clearly defined roles for the MOL and MOE, training providers and employers. In addition to

the funds from the government treasury, significant resources flowed to the MOL from the dedicated Vocational Training Promotion Fund, established in 1974.

2010: Another round of new legislation retained the crisp definition of roles and responsibilities laid out in the Framework Act on Vocational Training and the Industrial Education Promotion Act while providing similar clarity to a larger set of stakeholders. The Workers Vocational Skills Development Act, passed in 2003, and the Promotion of Industrial Education and Industry-Academic Cooperation Act, passed in 2009, included provisions for the MOL and MOE, training providers, employers and industry groups. As in past periods, the annual reports published by the MOL and MOE provided the transparency necessary for other stakeholders to effectively engage with the ministries.

Facilitate communication and interaction among all WfD stakeholders



This action scored at an **emerging** level in 1970, moving to an **established** level in 1990 and to an **advanced** level in 2010.

Overview 1970 – 2010: Translating the strategic priorities set by apex-level leaders into positive results on the ground requires coordinated action from stakeholders charged with implementing WfD policies. The establishment of the Employment Policy Review Committee in 2007, which was created to consolidate the duties of several disparate committees under the MOL including the Vocational Training Review Committee, reflects a larger process of steady growth in the formality, sophistication and sectoral reach of the mechanisms for coordination in Korea between 1970 and 2010. As a result of this process, by 2010, the system included several more stakeholder representatives in both strategy evaluation and implementation than in previous periods (see Table 9).

1970: The Korean system featured formal structures that fostered limited organizational linkages and information sharing among stakeholders. The Vocational Training Review Committee, chaired by the Vice Minister of Health and Social Affairs and composed of representatives from labor and industry organizations, public servants and vocational training experts, served an important role in fostering broad stakeholder cooperation as well as a mechanism for translating strategic priorities set at the apex-level into coordinated action.

1990: The Vocational Training Review Committee had grown in efficacy and reach, a result that can be attributed in part to its redefinition through the Framework Act on Vocational Training. By 1990 employers from most sectors enjoyed representation. In addition to the Committee, information sharing also occurred through informal seminars conducted by government-affiliated agencies such as the Korea Vocational Training Management Agency.

Table 9: Evolution of Mechanisms for Coordination of Priorities and Implementation, 1970 to 2010

Year	Formal Bodies that Define Strategic Priorities	Formal Bodies that Coordinate Strategy Implementation
1970	<ul style="list-style-type: none"> President’s weekly meetings Human Resources Development Committee 	<ul style="list-style-type: none"> Vocational Training Review Committee
1990	<ul style="list-style-type: none"> President’s weekly meetings Human Resources Development Committee 	<ul style="list-style-type: none"> Vocational Training Review Committee
2010	<ul style="list-style-type: none"> President’s weekly meetings National Employment Strategy Council (once in 2010 only) 	<ul style="list-style-type: none"> Employment Policy Review Committee Human Resource Development Forum Regional Human Resources Development Committee

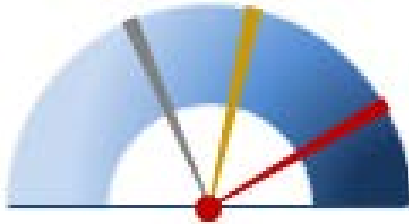
Source: Authors’ construction.

2010: The establishment of the Human Resources Development Forum and Regional Human Resource Development (RHRD) Committees kept the system on its positive trajectory. Both the HRD Forum and the RHRD Committees serve to involve leaders from important WfD stakeholders in reviewing HRD policies and discussing their implications. While these arrangements were meant to promote ownership and improve coordination of policy implementation, in practice these efforts fell short of achieving consensus on priorities. The efforts of these committees were complemented by coordination on a more strategic level facilitated by the Future Human Resources Forum. This body convened representatives from the government as well as technical experts, journalists and a broad spectrum of stakeholders in bimonthly meetings to discuss policies for innovation.

Information access and exchange between WfD stakeholders became significantly easier with the introduction of NHRD-Net in 2002. This website serves as a clearing house for information on workforce development in Korea including research reports and policies and strategies proposed by the ministries and.

Detailed Results

Dimension 2 | System Oversight¹²



Policy Goal 4

Diversifying Pathways for Skills Acquisition

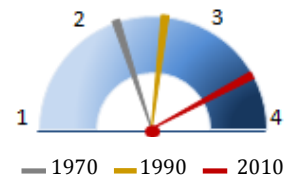
Policy Goal 5

Ensuring Efficiency and Equity in Funding

Policy Goal 6

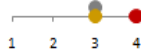
Assuring Relevant and Reliable Standards

¹² The composite scores shown in the dial are the same as the categorical ratings shown on the cover of this report. They have been converted using the rules indicated in footnote 4 on page 6. The categorical ratings conform to the standard presentation of results in the SABER initiative, while the presentation in the dials reveals more detail.



Policy Goal 4 examines the diversity of programs and ease of movement among them, whether or not the system facilitates skills upgrading by providing information on emerging trends and recognition of prior learning, and how well the system is able to adapt to changing skills demand. Results of the SABER-WfD benchmarking exercise indicate that Korea progressed from an **emerging** level in 1970 to an **established** level in 1990, and reached an **advanced** level in 2010.

▣ Foster articulation across levels and programs



*This action scored at an **established** level in 1970 and 1990, and reached an **advanced** level in 2010.*

Overview 1970 – 2010: This aspect of the system was already at an established level of development in 1970. The system featured standardized procedures for transferring between vocational and general education programs at both the secondary and post-secondary levels, creating multiple pathways and relatively few barriers for students to enter and leave vocational education during the course of their studies. The introduction of a system of financial incentives and technical assistance to promote articulation among vocational high schools and polytechnics in the period leading up to 2010 pulled the system from an established to an advanced level of development.

1970: The system's standardized procedures for transfers between vocational and general programs and from the secondary to post-secondary level reflect an established level of system development. High school students were able to transfer between academic and vocational high schools as long as space was available, and oftentimes were granted credit for coursework at their previous institution. There was transfer in both directions in 1970 since vocational education did not suffer from the perception of being a second-tier option at this time. In addition to the option of transferring to a vocational high school, academic high school students interested in pursuing a vocational course of study could opt to take classes at public or private vocational education institutions in their final year and use the credit to fulfill graduation requirements at their present high school.

At the post-secondary level, students were allowed to transfer between academic and vocation institutions through a standardized application system that involved transfer exams, submission of academic transcripts and interviews. Formal arrangements that

allowed graduates of 2-year junior colleges to apply their credits toward a degree from 4-year colleges and universities made junior colleges a stepping stone to academic tertiary education.

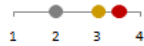
1990: The system continued to provide multiple pathways for transfer between vocational and general education and remained at an established level of development. During the 1970s and 1980s, employers' demand for technical skills was increasing. To meet this demand the government's 1974 revision to the National Education Curriculum aimed to promote vocational education by increasing the availability of vocational tracks to students in academic high schools. Some academic high schools started offering vocationally-oriented courses while arrangements allowing students to take courses at dedicated vocational schools during their final year of study proliferated. However, by the 1980s interest in vocational education was waning and these programs were met with limited enthusiasm from students.

Enrollment in colleges and universities was also rising sharply. Efforts were made to encourage vocational high school students to pursue higher education to increase the supply of high-level technical skills required by Korea's increasingly technologically-sophisticated economy. Many vocational high schools started offering college preparatory tracks to gifted students. This initiative was supported by a system of quotas, instituted in 1978, that mandated that at least 10% of four-year colleges' and universities' incoming classes had to be drawn from vocational high schools, while a further 30% were to be taken from the junior college system. This program achieved only limited success, however, and was abandoned five years later.

2010: A system of effective incentives was in place to support robust articulation between secondary and post-secondary vocational education, the so-called 2+2 System, whereby curricula for the final two years of vocational high school and for junior college were harmonized for selected vocations. Under this system, the MOE put in place grants and technical assistance to bring together instructors from vocational high schools, junior college professors, and industry representatives to coordinate vocational high school and junior college curricula, with the goal that by minimizing curriculum overlap and creating a common set of teacher materials, students could progress more seamlessly from high school to junior college. An effort with a similar goal, the Measures for Establishing the New Education System, promulgated by the MOE in 1996,

encouraged junior colleges to provide courses for vocational high school students during their winter and summer breaks. Students who completed these courses were granted credit upon enrollment in a participating junior college.

Promote life-long learning



This action scored at an **emerging** level in 1970 and improved to an **established** level in 1990 and attained an **advanced** level 2010.

Overview 1970 – 2010: The system charted a positive trajectory from 1970, where arrangements to support recognition of prior learning did not exist and individuals had to draw primarily on personal networks and *ad hoc* resources to evaluate their skills and find jobs, to 2010, which saw the introduction of national, online one-stop-shops for career guidance by both the MOL and MOE. Support for publicly-funded training programs for disadvantaged populations grew in formality and magnitude, increasing the scope and accessibility of these programs.

1970: Individuals trying to upgrade or acquire new skills faced considerable barriers. The government had not established a formal system for recognizing previous training or academic achievement, and non-government organizations such as industry associations or training providers that could have filled

this void did not exist. Resources available to individuals to assess skills gaps and identify training and job opportunities, whether public or private, were sparse, meaning that individuals often relied on personal contacts and training providers for these services. The government did offer training and job placement services to vulnerable populations such as school-leavers and soon-to-be discharged soldiers, which it supported on an *ad hoc* basis through the provision of funding, instructors, and training materials.

1990: Increased and systematic government support for lifelong learning brought the system to an established level of development. The MOL opened regional offices in 1981 that provided information to job seekers and helped match individuals to appropriate opportunities. These centers benefitted from the work of the National Employment Information Agency, whose core mandate was to provide information and analysis on the labor market to the regional offices, employers and individuals. By 1990, school-based career guidance was in place to provide students with information regarding potential jobs and help match graduates with appropriate opportunities. The extent of these services was limited, however, and was usually provided by instructors rather than specialized career counselors.

Box 3: The Academic Credit Bank System

Intended Beneficiaries

- High school graduates who did not progress to post-secondary education
- Former college or university students who discontinued their studies
- College or university graduates who wish to commence studies in a different field
- Those wishing to earn formal credits for self-study and workplace training and experience
- Those who have studied at private institutes or junior colleges and wish to transfer into the university system

Methods for Credit Accumulation

- Completion of Standardized Curriculum
- Acquire National Certificate or officially-recognized private certificates
- Pass Bachelor's Degree Exam for Self-Education or courses for exam exemption
- Complete a course of study at a credit-recognized school
- Complete training to acquire skills of important intangible cultural properties

Process for Acquiring a Degree



Source: Authors' construction.

Government support for individuals to access training and upgrade skills throughout their working life had also increased. By 1990 the MOL had created the Vocational Training Management Agency. This organization operated public training centers, trained instructors and provided consulting services to private training providers. The MOL continued its targeted training programs for members of disadvantaged populations. These efforts were supplemented by the passage of the major Establishment Decree on Open High Schools in 1973, which created open high schools to provide those who had not completed high school the opportunity to earn a diploma.

2010: In the two decades between 1990 and 2010 Korea created a robust, comprehensive and innovative system for lifelong learning that allows individuals to easily leverage prior learning for the acquisition of new skills, qualifications and jobs. The Career Information Center, established within KRIVET in 1999, provided career guidance services to students, teachers, and parents. The center initially focused on the provision of direct career services including face-to-face, telephone, and group services. In more recent years, however, the introduction of CareerNet, a web-based career information service has made the Center's services more widely available. KEIS, under the MOL, operates a similar online platform for dissemination of employment information and resources called WorkNet. The MOL's Job Centers provide in-person placement services and employment counseling similar to those provided by KRIVET's Career Information Center.

Korea's innovative Academic Credit Bank System, established in 1997 (see Box 3), greatly improved individuals' opportunities to have prior learning recognized, a relative weakness of the Korean system in previous periods. This system links non-formal learning with the formal education system by granting

credit for individuals' non-formal learning and work experience. These credits can then be applied toward earning an Associates or Bachelors degree. Another innovative program was the Individual Training Account (ITA) system, which was established in 2008 and facilitates continuing learning on the part of disadvantaged populations by both providing subsidies and documenting and consolidating learning done through the program.

Korea's system of public programs for disadvantaged and vulnerable populations also grew considerably. For example, the MOL devoted its efforts to vulnerable groups of people. The public-funded programs included "Social Enterprises" (2010), Phases 1 and 2 of "The My Work for Tomorrow Project for Youth" (2010 and 2011, respectively), "Measure to Support the Self-Reliance of the Beneficiaries of the Basic Livelihood Security System" (2010), "Wage Protection Measures for Construction Workers" (2011), "Comprehensive Measures for Non-Regular Workers" (2011), the introduction of ITA system (2008), and the implementation of "Successful Employment Package" (2009).

▣ Set policies and procedures to renew programs



*This action scored at a **latent** level in 1970, progressed to an **emerging** level in 1990, and reached an **established** level in 2010.*

Overview 1970 – 2010: The introduction, adjustment and closure of vocational education and training programs have been centralized, tightly-managed processes for the entire period under study. Neither vocational schools nor training providers enjoy much flexibility in setting or altering their program offerings. Courses and content are instead dictated by national-

Box 4: Individual Training Account

Under the Individual Training Account (ITA) system, an unemployed person is offered a certain amount of funding with which he or she is free to choose vocational training courses and providers from which to obtain services. Participants have their individual training histories recorded for integrated management.

The subsidy of KRW 2 million (USD 1,800) is valid for one year from the date of opening the account as long as 20-40% of the training costs are paid by the beneficiary. Disadvantaged individuals are exempt from the requirement to use personal funds and may be subsidized in excess of KRW 2 million.

In 2010, KRW 213 billion (USD 190 million) of the total budget of KRW 226 billion (USD 200 million) was disbursed, while 246,591 people – a number much higher than the projected 117,000 – benefited from the program. Starting from September 2011, the program was expanded to extend eligibility to non-regular workers (up to KRW 2 million per person) so that they may receive systematic training to change jobs.

At-risk groups such as self-employed people, North Korean defectors, and foreigners married to Korean citizens were allowed to take specialized vocational training with an exemption from the training costs under the ITA.

Source: MOEL, 2011.

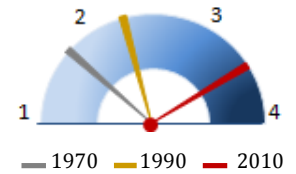
level curricula and standards, promulgated by the relevant ministry. The increase in the score reflects improvement in the openness and inclusiveness of ministries' processes of review and planning.

1970: The Korean government introduced, adjusted, and closed programs according to its own agenda and at its own initiative. All vocational high schools were required to teach according to the National Education Curriculum, which was revised by an institutionalized process with input from the government, industry experts and researchers every eight years, on average. Vocational high schools were, in some instances, able to implement supplementary courses to respond to local industrial needs. Applications for such additions to curriculum were vetted by the regional education authority.

The arrangement was similar for training programs under the MOL, which published the Vocational Training Standards. These detailed standards dictated program offerings in accordance with national WfD priorities. Training providers had to meet strict requirements in terms of content and were not allowed to introduce new programs.

1990: The system developed little in the two decades leading up to 1990. For vocational training, authority over the introduction of programs was given to the Vocational Training Review Committee within the MOL. However, programs were introduced in the same manner as in 1970, with a similar amount of inflexibility.

2010: While schools and training providers gained little autonomy over decisions regarding program introduction and closing, the process by which authorities made these decisions became more inclusive, especially for those training programs under the MOL where authority for making decisions about opening and closing training programs was shifted to the newly-created Council of Employment Policy. This council was chaired by the Minister of Employment and Labor and included approximately 30 employer representatives. The Council adjusted programs every five years when a new Plan of Vocational Training Competencies Development was adopted. In addition to industry input, the Council drew heavily upon research conducted by research institutes such as KRIVET and Korea University of Technology and Education (KUT), as well as by individual researchers, in making decisions about the introduction of programs.



Policy Goal 5 focuses on the government's role in funding WfD, ensuring efficient and effective use of the available funds, and in fostering partnerships that can multiply the resources available for TVET. Results of the SABER-WFD benchmarking exercise indicate that Korea progressed from an **emerging** level in 1970 and 1990 to an **established** level in 2010.

Articulate funding strategy



This action scored at an **emerging** level in 1970 and 1990 and improved to an **advanced** level in 2010.

Overview 1970 – 2010: For the entire period under study, the government set funding priorities in consultation with industry and provided systematic funding for training institutions supported by detailed spending plans. Before 2010, however, these practices were rarely, if ever, reviewed. The introduction of annual reviews of funding strategy as part of the budgeting process drove the system from emerging to advanced.

1970: Priorities for funding for both vocational education and training, set by the MOE and the MOL, respectively, were drawn up in reference to long-term strategic plans laid out by WfD leaders and involved industry input. The government committed to funding all operational expenses for public vocational training centers as well as both secondary and post-secondary public technical schools. These institutions submitted budget plans to the government, which the government then approved. However, procedures for systematically reviewing and updating strategic funding priorities had not been established, leaving this process to be driven more by broad goals than a focus on achieving efficiency in delivery.

1990: Procedures for funding vocational education and training institutions remained largely unchanged. However, the strategic focus of the government, and therefore funding priorities, had shifted. Special attention was paid to providing the skills required by the heavy and chemical industries. Short-term vocational training was also increasingly focused on supporting disadvantaged populations, especially unskilled workers and new labor market entrants who had not completed secondary education. The system performed well in spite of the lack of regular evaluations of priorities, something which held back the overall level of system development

During the early part this period, aid and concessional lending, especially for the construction and expansion of training facilities, played an important role in supplementing the government's budget for WfD. In the early 1970s demand for training was increasing faster than the government was able to construct and equip training facilities. In response, the MOL decided to take out loans to finance such construction. With the support of the EPB and Ministry of Finance, the MOL took out long-term loans from the Asian Development Bank (ADB). These loans were disbursed over a three year period from October 1973 and were used to build five vocational training centers. Another fifteen training centers were subsequently built using loans from the International Bank for Reconstruction and Development (IBRD).

2010: The introduction of annual reviews of system-wide resource allocation and performance-based funding for both education and training institutions brought the system to an advanced level of development. In education, both high schools and junior colleges were evaluated according to metrics that took into account administrative processes, institutional performance and innovation in programs and practices. The government increased support to those institutions that performed well.

Responsibility for funding vocational education was devolved to regional authorities under the 2004 Government Subsidies Improvement Plan. This resulted in a diversification of the sources of public funding, with other ministries beginning to support relevant parts of the vocational education system. It also resulted in a sharp reduction in funds made available to schools by the MOE, something that was not completely offset by the contributions of other ministries.

The MOL also increasingly tied funding of training programs to performance. It also introduced a facility for supporting innovation in training curricula where training providers that developed new curricula pertaining to strategic emerging technologies and industries could submit proposals to MOL, the best of which were selected for special government support. In addition, it continued to provide broad-based support for disadvantaged populations (see Table 10).

Allocate funds to achieve efficient results



This action scored at a **latent** level in 1970 and 1990 and improved to an **advanced** level in 2010.

Overview 1970 – 2010: The Korean system has been very good at advocating for alignment between strategic WfD priorities and funding allocation for the entire period under study. However, a culture of focusing on efficiency in achieving WfD objectives and revising allocation decisions in light of reviews developed much more slowly. By 1990, internal reviews of the WfD funding allocations had begun, but it was not until the most recent period that annual reviews of funding allocations and the criteria on which they were based took root.

Table 10: Training Funded by the MOEL, 2010

Target Group	Types of Support
Incumbent Workers	<ul style="list-style-type: none"> • Skills development training • Training on paid leave • Subsidy for employees' enrollment in training courses • Loan for skills development
Employees of SMEs	<ul style="list-style-type: none"> • Consortium for vocational training at SME • Subsidy for organized study at SMEs • Subsidy for better performance in core works at SMEs
Unemployed Workers	<ul style="list-style-type: none"> • Vocational training for the unemployed with work experience • Vocational training for the unemployed without work experience
Disadvantaged Farmers and Fishermen; Low-income Individuals	<ul style="list-style-type: none"> • Vocational training for the local unemployed
Unemployed Individuals, Youths who do not Progress to Tertiary Education	<ul style="list-style-type: none"> • Training to foster technicians • Training for national basic industry
Vulnerable Populations (e.g. North Korean Defectors; Low-income Self-employed)	<ul style="list-style-type: none"> • Vocational training for rehabilitation • Vocational training for North Korean defectors • Vocational training for disadvantaged self-employed

Source: Authors' construction.

1970: Priorities identified in longer-term strategies laid out by the Five Year Plan for the Promotion of Technology and Science and the Five Year Economic Development Plan guided the allocation of resources for vocational education. Similarly, annual surveys conducted by the Vocational Training Division of the MOL and the Survey of Employed Technical Manpower conducted by the EPB served as the basis for developing funding plans for vocational training. However, little concern was given to allocating funds to achieve efficiency in resource use. The system also lacked mechanisms to provide timely and reliable feedback on how funding decisions were linked to outcomes.

1990: A continued lack of procedures for determining how public funding for WfD was linked to outcomes, either on the system or program level, kept the system at a latent level of development. However, by 1990 the MOE had begun conducting internal annual reviews of the WfD funding allocations in preparation for setting the following year's budget. These first steps helped lay the groundwork for the rapid increase in system development after 1990.

2010: System development improved markedly with the introduction of robust mechanisms for using the results of evaluations and reviews to inform decisions about future allocation of public resources for WfD. Both the MOL and MOE began using formal reviews of program funding to inform decisions about resource allocation. This focus on achieving results with efficiency was especially explicit in the MOL's approach to funding training. For both ministries, the reviews used to inform funding decisions were published online.

The findings of reviews and evaluations were taken seriously, and appropriate recommendations were implemented swiftly, often within one or two years. For example, a review conducted by the MOE in the mid-2000s recommended that the criteria used to evaluate the performance of junior colleges be made more stringent. As a result the criteria according which funding was disbursed were widened significantly to consider labor market outcomes of graduates, the rate of return to industry partnerships, and the profiles of both faculty and students, among other items.

Foster partnerships



This action scored at a **latent** level in 1970 and moved to an **established** level in 1990 and 2010.

Overview 1970 – 2010: In 1970, no framework existed for industry to provide inputs in the WfD system or access public resources for training.

Arrangements to promote and facilitate partnerships were established shortly after 1970, pushing the system from latent to established in less than two decades. One major advance was the introduction of a levy system, which created a dedicated fund from which the government provided financial resources for training to firms, public and private training institutions, and individuals. By 2010, both the technical education and training systems benefitted from the existence of institutionalized frameworks for encouraging and organizing financial support and field-based training.

1970: While stakeholders provided advice on funding strategy and allocation, no formal framework for partnership in funding vocational education and training was in place.

1990: Revisions to the Industrial Education Promotion Act in 1973 mandated that vocational high school students complete field practice as part of their graduation requirement. The same year, the MOE established the Department of Cooperation between Schools and Industries to collaborate with firms to expand the supply of such field-based training opportunities. One example of early success was the partnership established between the Korean Electric Power Company and the Sudo Electric Technical High School. In addition to sending students for on-site training, the school also received financial support and equipment for training students on campus. The company, in turn, was able to screen potential employees, often offering the most promising students jobs after graduation.

A levy system to encourage firms to provide training to incumbent workers was established in 1976. This fund provided incentives to firms to train workers while creating a pool of dedicated resources that the government could deploy to support vocational training. Companies with more than 300 employees (this number was reduced to 200 in 1989 and 150 in 1992) were required to provide in-company training or pay into the Vocational Training Promotion Fund. The government used this fund to expand training opportunities by contributing financial resources to firms that train employees, public and private training institutions, and individuals.

2010: The system of partnerships in vocational education developed into an institutionalized network open to all firms interested in providing training inputs with the introduction of MOE's One Firm, One School policy. Under this framework, schools and firms submitted applications to the MOE, which then matched schools and firms based on the resources and

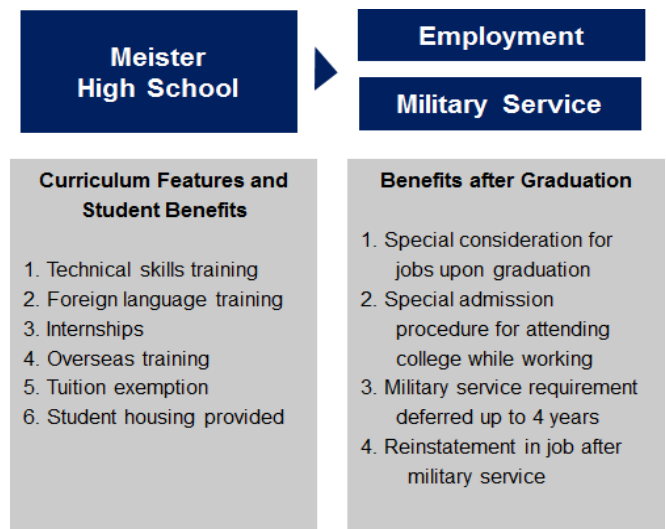
training opportunities that each school sought. This scheme enjoyed the participation of many of Korea's flagship conglomerates, such as Samsung and LG in the electronics sector. Korea's innovative Meister High Schools also deepened partnerships between individual firms and schools. These schools, which each aim to provide skilled technicians to a particular industry, teach curriculum and use testing standards that were designed with industry input. Industry also provides extensive internship and training opportunities to students and often hire graduates (see Box 5).

Box 5: Meister High Schools

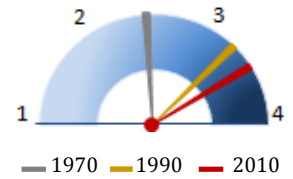
In 2010, the Korean government under the leadership of President Lee Myung Bak launched a new initiative to establish 21 special vocational high schools that would more effectively meet evolving industry needs. With traditional vocational schools still preparing students for relatively simple, lower skilled jobs and the face of a strong preference for academic education, Korea faced both a critical shortage of students with advanced technical skills and persistent youth unemployment. Meister High Schools aim to address this skills mismatch by cultivating highly skilled technical workers who are ready to obtain employment directly upon graduation.

Strong partnerships with employers ensure that industry input permeates all aspects of Meister High Schools. Industry experts participate in curriculum revision and serve as principals and instructors of several Meister High Schools. Other features include the provision of in-house training programs for students and instructors, as well as equipment donations. This new initiative is already showing signs of success: Partnerships have been forged with a total of 1,330 partner companies as of July 2011 and of the 3,600 current Meister High School juniors in 2012, over 50% have already accepted offers from industry partners for employment following their graduation.

Meister High Schools: Features and Student Benefits

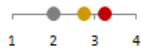


Source: Kim, Yung-chul, and Young-gon Kim. 2012.; Park, Dong-Yeol. 2011.



Policy Goal 6 is concerned with the quality of accreditation standards for training providers, the strength of the skills testing and certification regime, and the quality of procedures for assuring the credibility of accreditation and skills certification. The SABER-WfD benchmarking exercise indicates that with respect to Policy Goal 6 Korea progressed from an **emerging** level in 1970 to an **established** level in 1990 to an **advanced** level in 2010.

Specify accreditation standards



This action scored at an **emerging** level in 1970, reached an **established** level in 1990 and an **advanced** level in 2010.

Overview 1970 – 2010: Ensuring that providers met minimum standards of quality was an important policy of the Korean government. Thus, from the earliest year of the period under study, funding for all vocational schools and training institutions was made conditional on accreditation. The improvement in score between 1970 and 2010 reflects a strengthening commitment by the government to keep standards relevant to the economic environment and, accordingly, the increasing frequency of reviews.

1970: The National Education Curriculum, issued in 1963 by the MOE, specified standards for content, facilities and equipment for vocational high schools. All vocational high schools, whether public or private, were required to teach according to this curriculum and meet its concomitant standards in order to remain in operation. While the curriculum was reviewed by the ministry on a scheduled basis, reviews were very infrequent.

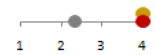
The MOL issued, reviewed, and adjusted the standards for vocational training in consultation with representatives of teachers groups, industry and academia. The Vocational Training Standards were reviewed and adjusted on an *ad hoc* basis, often in response to criticism from employers and training providers. These standards applied to all public training providers and all non-state providers receiving public funding.

1990: The structure of the system changed little, though by this time standards for both educational institutions and training providers had been revised several times to keep them relevant to Korea's rapidly changing economic environment. The National

Education Curriculum was revised for the fifth time in the late 1980s by the MOE in consultation with stakeholders including professors and instructors in the institutions as well as representatives of employers and labor. The number of standards for vocational training had proliferated, growing from 139 items in 1969 to 360 items pertaining to curricula, duration of training, facilities and equipment by 1990.

2010: After the seventh revision of the National Education Curriculum in 1997, the government adopted an *ad hoc* schedule of revision and adjustment to National Education Curriculum. This decision was taken to allow more flexibility in light of Korea's rapidly developing economy. There was a period of gestation while the government deliberated how this was to be accomplished. Following this shift, the Curriculum began to be reviewed both internally and by independent parties. The first revision of the Curriculum under this new regime was released in 2007.

Strengthen skills testing and certification



This action scored at an **emerging** level in 1970 and reached an **advanced** level in 1990 and 2010.

Overview 1970 – 2010: Korea had instituted practical skills testing in several occupations before 1970, but it was not until the passage of the National Technical Qualifications Act in 1973 that a comprehensive system was put in place. By 1990, it had developed into a world class practical skills testing system reflecting global best practices with respect to content, testing procedures, use of ICT and protocols for revising standards to match changes in economic structure.

1970: Practical skills testing for 15 occupations for which standards could be easily adapted from foreign systems was established by the Vocational Training Act of 1967 and implemented the following year. The government provided training materials aligned to standardized competencies for these 15 occupations. It also began work on a more comprehensive system for testing, which it introduced in 1973.

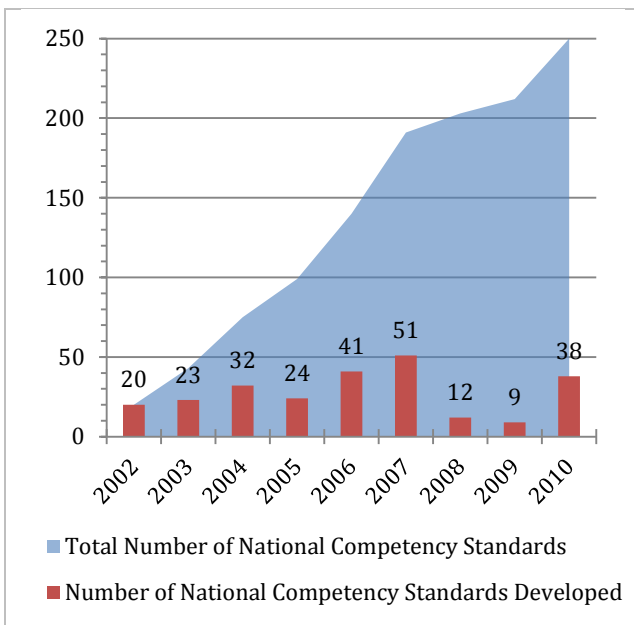
1990: The passage of the National Technical Qualifications Act laid the foundation for the development of a national testing system with standardized testing criteria focusing on both theory and practice for most occupations. By 1990, a total of 717 qualifications focusing on the engineer and

craftsmen division (682 qualifications) and service and administrative division (35 qualifications) existed. The MOL prioritized skills testing and certification for occupations in the key sectors, regularly updating or eliminating outdated qualifications to keep testing in line with the skills demanded by industry.

Testing was administered and qualifications were awarded by an independent third party, the Vocational Training Management Agency. The government provided training materials aligned to standardized competencies to public training institutions and, by 1990, had adopted computerized scoring.

2010: The system remained comprehensive and effective, retaining its advanced score. As of 2010, a total of 512 qualifications focusing on the technical and functional division (481 qualifications) and administrative division (31 qualifications) existed. In addition, the National Competency Standards (NCS) system, whose development began in 2002, sought to define and standardize the knowledge, skills and attitudes necessary to achieve different levels of competence for various occupations. Between 2002 and 2010, 250 occupational standards were developed (see Figure 16). These served as the basis for testing procedures. The MOL prioritized skills testing and certification for occupations in the key and emerging sectors, namely those of electronics, ICT, and environmental engineering. The Vocational Training Management Authority, renamed HRD Services of Korea in 2006, took over responsibility for overseeing

Figure 16: National Competency Standards Developed by Year, 2002 to 2010

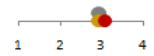


Source: Kim, Sang-Jin. 2010.

testing and certification. By 2010, the testing system made extensive use of ICT. A centralized, online test bank was maintained by HRD Services of Korea. In addition, Q-Net, a comprehensive online database of skills qualifications and certifications, was launched in 2001. This database consolidated information on the types and levels of certification, statistics on aggregated test taker performance and was used to notify candidates of their results.

These procedures for skills certification have made a substantial contribution to workforce development in Korea. However, ensuring the relevance of certificates to a dynamic labor market is a challenge. In this vein, it is worth noting that even in this advanced system, certifications in some fields are not consistently used as a criterion for hiring or promotion at companies.

▣ Assure credibility of accreditation and of skills certification



*This action scored at **established** levels in 1970, 1990, and 2010.*

Overview 1970 – 2010: Procedures for ensuring the quality and credibility of accreditation and skills testing have been areas of consistent performance in the Korea WfD system. The requirement that all vocational high schools and vocational training providers seeking to receive public funding obtain accreditation has existed since before 1970. The government has also taken an active role in managing skills testing centers to ensure consistent and credible testing procedures for the entire period.

1970: Korea's established system already featured sound mechanisms for assuring the quality and credibility of accreditation and testing. Vocational education and training providers that received public funding were required to obtain accreditation. For vocational high schools, the requirements for accreditation were laid out in the 1963 National Education Curriculum. Similarly, all training providers who sought public funding were required to follow the Vocational Training Standards, set by the MOL with input from industry representatives and experts in vocational training. In-company training institutions seeking public funding were also required to obtain authorization. Companies seeking to establish on-the-job training (OJT) programs were required to submit the information pertaining to budget, curricula, training methods, instructors and equipment, and duration and purpose of training, which were reviewed by the MOL.

Standards for practical skills testing were established by the MOL with input from stakeholders including

employers, experts and teachers. Skills testing was the responsibility of the MOL. All testing centers were either supervised or directly managed by the MOL and were required to meet standards pertaining to facilities, equipment, protocols for testing.

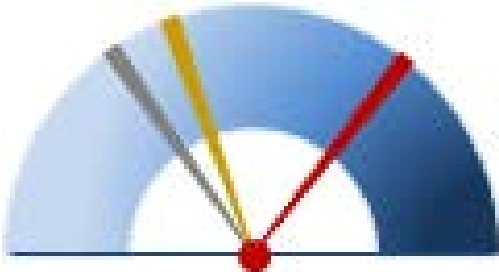
1990: The structure of the system remained relatively unchanged in 1990. All institutions seeking public funds were still required to comply with stringent and comprehensive accreditations standards. Responsibility for supervising and managing testing centers had been passed to the Vocational Training Management Agency, which continued to play a role similar to that of the MOL in 1970.

2010: The procedures for and terms of accreditation of WfD institutions remained unchanged, while the government undertook a major initiative to update and

improve testing standards. In the early 2000s, both KRIVET and Korea Vocational Training Management Agency (which became HRD Services of Korea in 2006) began developing new standards for skill certification in parallel. KRIVET's Korea Skills Standards (KSS) were eventually merged with HRD Services of Korea's National Occupational Standards (NOS) system to form the NCS, and their development was continued by HRD Korea. The process of developing the National Competency Standards (NCS) involved in-depth analysis of the occupational structure of the economy, Korea's system for industrial classifications, the designation of levels of certification and training content. This process resulted in a substantial reorganization of the qualification system for skills.

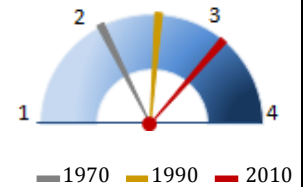
Detailed Results

Dimension 3 | Service Delivery¹³



Policy Goal 7	Fostering Relevance in Training Programs
Policy Goal 8	Incentivizing Excellence in Training Provision
Policy Goal 9	Enhancing Accountability for Results

¹³ The composite scores shown in the dial are the same as the categorical ratings shown on the cover of this report. They have been converted using the rules indicated in footnote 4 on page 6. The categorical ratings conform to the standard presentation of results in the SABER initiative, while the presentation in the dials reveals more detail.



Policy Goal 7 is concerned with the strengthening of training providers' linkages with industry and research institutions, the integration of industry inputs into the design of training programs, and provisions for enhancing the competence of administrators and instructors in training institutions. Results of the SABER-WfD benchmarking exercise indicate that Korea progressed from an **emerging** level in 1970 to an **established** level in 1990 and 2010.

▣ Link training, industry, and research institutions



*This action scored at an **emerging** level in 1970, an **established** level in 1990 and reached an **advanced** level in 2010.*

Overview 1970 – 2010: Korea enjoyed steady progress over the forty years under study. While legislation to facilitate formal links between TVET providers and industry was put in place well before 1970, links were slow to form in practice. Progress occurred first in linkages between vocational schools and industry. Linkages between vocational training providers and industry, and links with research institutions were slower to form. Connections became more robust, widespread and institutionalized as time progressed, yielding by 2010 an advanced network that encompassed curriculum design, internship and work-based learning programs, training for instructors and donation of old industry equipment.

1970: The Industrial Education Promotion Act of 1963 created a legal framework for formal links between vocational schools and industry, but in 1970 participation remained limited, reflecting a system that was still emerging. This act, which grew out of an interest in government to promote both work-based training for students and industry-educational institution collaboration, applied to both high schools and junior colleges. To guide collaboration, the MOE established and distributed guidelines on finding appropriate partners to each vocational high school every year. While there were some notable partnerships among vocational training institutions under the MOL and industry, the MOL provided no formal support and guidance, and as a result links were informal and much less common. Links with research institutions did not exist, either formally or informally, for institutions under either ministry.

1990: An enhanced Industrial Education Promotion Act supported by several institutionalized bodies to promote and guide collaboration helped create an established system. In 1973, participation in work-based training became a requirement for vocational high school students. The establishment of the Department of Cooperation Between Schools and Industries in the MOE helped schools fulfill this new obligation by encouraging companies to host students. Links between junior colleges and industry, while not subject to the same legal mandate, also proliferated during the 1970s and 1980s. For junior colleges, these linkages were especially important for developing curriculum. Both high schools and junior colleges benefitted from donations of old industry equipment and manufacturer training on the use of new equipment. Similarly, both vocational high schools and junior colleges enjoyed a deepening informal relationship with KEDI. This relationship was symbiotic: schools and colleges benefitted from the application of KEDI research on curriculum design and pedagogy while KEDI researchers gained access to institutional data.

In terms of vocational training, institutions benefitted from a formal relationship with the Vocational Training Research Institute. This relationship, mediated through the institute's host, the MOL, resulted in significant shifts in curriculum and an increase in the variety of occupational training offered. Tracks available to students varied at the regional level, with the Vocational Training Research Institute recommending programs to fit local industrial needs. The institute also set guidelines for programs at the national level in response to national economic opportunities. For example, in preparation for the 1986 Asian Games and 1988 Olympic games in Seoul, the institute recommended the national expansion of programs for traditional artwork and crafts.

By contrast, collaboration with industry remained less formal and less influential for institutions under the MOL, though managers of training institutions did occasionally consult with industry to determine training needs. One notable exception was skills development of instructors, where there was considerable collaboration between vocational training institutions and industry, and the government actively encouraged regular work-based training.

2010: The introduction of several cutting-edge forms of collaboration in vocational secondary education, along

with a deepening of collaboration across the board, brought the system to an advanced level of development. In 1994, Korea introduced a 2+1 system in some vocational high schools, which provided students with an opportunity to spend their final year participating in on-the-job training at a relevant industry site. This was followed by legislation in 2003 that allowed firms to customize schools curricula to suit their skills needs in exchange for a formal commitment to a hire a certain number of graduates, and that set the stage for the creation of the first Meister High School in 2010 (see Box 5 on page 36).

Formal cooperation between junior colleges and industry has resulted in significant collaboration in terms of industry internships and training for students, industry training for instructors, donation of old industry equipment to training providers, and collaboration on industry-commissioned projects.

Collaboration between vocational training institutions and industry became more regular and more formal, with industry serving as an active partner in setting contents and programs based on their own skills needs. As in 1990, industry continued to provide training opportunities to instructors as well as equipment.

One innovative advance in the area of continuing vocational training in this period was Korea's consortium model for encouraging employee training in SMEs, known as the HRD Ability Magnified Program. Under (CHAMP), this program, a large company, public training provider, employers' organization, university, or some combination therein could establish a training consortium to train workers at relevant SMEs. The SME would gain access to its partner's facilities or equipment for training purposes and the consortium would receive a subsidy equivalent to the costs of the use of training facilities or equipment, remunerations for training personnel and other operating costs. This program has been continuously expanded since its introduction in 2003. In 2010, it had a budget of KRW 73.7 billion (USD 65 million), allowing 106,000 SMEs to provide training to 231,000 workers. The Korean Bridge Model, pioneered by Samsung and KUT, is a notable example of such a consortium program (see Box 6).

During the period between 1990 and 2010 both the HRD Research Center within KUT and KRIVET acted as active research partners of vocational training institutions. KRIVET also partnered with vocational education institutions, using its research to suggest changes to courses, curriculum and pedagogy.

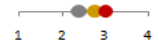
Box 6: The Korea University of Technology and Education Bridge Model

The Korea University of Technology and Education (KUT) Bridge Model comprises a 3-way academia-industry partnership involving a major enterprise (ME), its partner SMEs, and KUT. This innovative model is exemplified through KUT's Employee Vocational Education Program, which offers short-term courses to employees of participating firms. With MEs constantly pushing the technological and innovation frontiers, the university acts as a bridge to reduce technology gaps between MEs and SMEs, and increase SME participation in training. This arrangement also improves while improving the relevance of KUT's programs.

The first "bridge" was established with Samsung Electronics, its subcontractors, and KUT in 2006. Samsung and KUT collaborated to build the Advanced Technology Education Center and jointly conducted demand surveys to develop relevant program curricula. Samsung contributes technical knowledge, equipment, and industry experts to co-teach courses. Samsung's subcontractors contribute employees to be trained in Samsung's latest technology, and KUT provides training facilities and operates the center. All parties also benefit from the partnership: Samsung's subcontractors are better able meet its standards, the SMEs enjoy strengthened ties with Samsung, and KUT gains opportunities to co-teach courses with Samsung's experts. The Bridge Model's success has led to its expanded application across 11 universities and participation by 45 MEs and 2,268 SMEs.

Source: Lee, Wooyoung, Jinsoo Seol and Jinwoo Kim. 2011.

Design training with industry inputs



This action scored at an **emerging** level in 1970 and reached an **established** level in 1990 and 2010.

Overview 1970 – 2010: Industry has always been well represented in setting national strategies, but its influence has not always permeated much below this level. Before the last decade, industry input into the process of prioritizing and designing training programs was most often informal and advisory in nature. The decision to give industry representatives an active role in setting curriculum and student assessment standards for Meister High Schools was a considerable advancement in a trend of increasingly close collaboration between schools and industry that had developed during the most recent period under study.

1970: The system was emerging, reflecting the fact that industry played an advisory role in identifying, prioritizing, and designing publicly-funded programs in vocational high schools and junior colleges through the formal process of developing the National Education Curriculum. Experts from industry also had an advisory role in the design of program curricula through informal interaction with school management. The

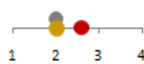
arrangements were similar for vocational training. Participation in the Vocational Training Review Committee within the MOL provided industry representatives an advisory role in the process of developing the National Vocational Training Plan and prioritizing publicly-funded training programs. Moreover, industry practitioners had an advisory role in the specification of training equipment and materials for publicly-funded programs.

1990: Industry retained an advisory role with respect to the governance of TVET institutions. However, the extent of industry participation, and the number of institutions that benefitted from industry input increased slightly, tipping the system from an emerging to an established level of system development.

2010: The introduction of Meister High Schools gave industry a decision-making role in prioritizing programs and determining curriculum. Designed specifically to provide a curriculum customized to a certain industry's needs, industry enjoyed decision-making power over these institutions' development and operation. Meister High Schools have a Curriculum Committee on which seats are reserved for industry representatives. In addition, experts from the relevant industry or industries are given reserved spots on the schools' Skills Qualification Committees, and thus play a pivotal role in ensuring that graduation requirements align with industry needs. Industry retained an active, albeit advisory role in setting priorities and curriculum for other vocational high schools as well. While also still advisory in nature, industry's influence over junior college curriculum increased, with representatives consistently given places at the table when new programs or departments were being introduced or the curriculum of existing programs was being reviewed.

Industry input into vocational training programs stayed much the same as in previous periods.

Improve competence of administrators and instructors



*This action scored at an **emerging** level in 1970 and 1990, and progress to an **established** level in 2010.*

Overview 1970 – 2010: Procedures for recruitment and incentivizing excellence among teachers and heads of training providers was fettered by a rigid, seniority-based system of promotion between 1970 and 1990. The limited introduction of several innovative measures for recruitment and retention improved the level of system development in the most recent period.

1970: Recruitment and retention of heads and instructors was handled in much the same way for both

vocational education under the MOE and vocational training under the MOL. As government employees, they were appointed by the ministry and enjoyed permanent contracts. The MOE exercised a rotation scheme, where heads and instructors were required to move to a different institution every three to five years. Since positions were awarded through a competitive process that took into the account individuals' qualifications, performance in supplementary training courses and professional track record, this arrangement allowed staffing to be tied to performance. However, the system in 1970 was still quite rigid and seniority-based. Staff rotation was less regular among institutions overseen by the MOL, with heads given time-limited posts of varying duration and no rotation scheme in place for instructors.

Heads and instructors in both ministries were relatively well-educated when compared to the general population. This was in part due to a system of licensing to ensure minimum levels of qualification among staff. According to the Public Education Officials Act of 1953, principals of all vocational high schools were required to hold a principal license, which required at least a Bachelors degree from a four-year college, minimum years of teaching experience and passing an in-service training exam. Instructors were also required to hold a degree or to have completed a significant amount of coursework toward such a degree from a four-year teaching college, or have earned a degree from one of 166 academic departments within 26 universities designated by the MOE. This requirement held for instructors in junior colleges as well, but these instructors were also subject to a requirement of having had two years of research experience. Instructors in vocational training providers were required to have a license, which was obtained by completing a course and passing an examination, though the requirement to take the exam was waived for skilled individuals in sought-after trades.

1990: Practices for the recruitment and retention of staff remained largely as they were in 1970. There had been few instances of review of these standards in the interim period, and the system remained at an emerging level of development.

As in 1970, staff already in the system had ample access to professional development opportunities. Instructors in vocational high schools participated in practice-oriented in-service training for several weeks during summer and winter breaks, and were required to participate in week-long to month-long professional development seminars on an annual basis. Similarly, the Korea Council for College Education (established in

1979) organized in-service training programs of varying durations for instructors of junior colleges.

Instructors and heads of training providers under the MOL also needed to fulfill annual training requirements. In addition, the Vocational Training Management Agency organized site visits and opportunities to earn new qualifications for instructors. They could also opt to take one- to two-year sabbaticals for extended stays in advanced industrial countries such as West Germany, Japan and Italy. These visits not only allowed instructors to gain proficiency with advanced technology, but also facilitated the diffusion of such technology in Korea.

2010: Two major policy reforms in the governance of vocational high schools, both introduced in 2010, pushed the system to an established level of development. In 2010, the MOE opened a new system for the recruitment of heads of vocational high schools that operated in parallel to the traditional procedures. Under this new Job Posting and Bidding System, positions were advertised openly and all instructors with a minimum of twenty years of teaching experience, vice-principals with a combined fifteen years of teaching and administrative experience, and individuals working in industry with at least three years of relevant experience could apply. Those with industry experience were deemed to be particularly desirable candidates due to the fact that their previous experience allowed them to use their network to find employment opportunities for graduates and solicit industry feedback and advice. Salaries for such individuals were allowed to deviate from the established government pay scale to be competitive with market rates in the relevant industry. Individuals

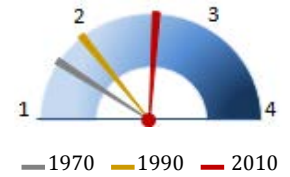
hired under this system were initially given a four-year contract, with the option for renewal based on performance. Individuals were evaluated through formal reviews that took into account the opinions of teachers, superintendents and parents. These measures were supplemented by a system of performance-based bonuses that rewarded successful principals.

The Teacher Competency Development system introduced a similar level of rigor into the evaluation of vocational high school instructors' performance. Under this system, instructors underwent annual reviews that incorporated input from colleagues, students and parents.

Professional development programs for instructors in both vocational education and training institutions, and incentives to participate in them, became more robust. These programs aimed to increase the technical competency of instructors, in particular with regard to new and emerging technologies. Unlike previous periods, routine evaluations that included participant feedback on program content, facilities, and implementation were conducted.

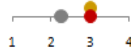
Instructors in public training institutions under the MOL had to be licensed according to procedures laid out in the Framework Act on Vocational Training. To acquire a vocational training teacher license, which was required to become an instructor, candidates must hold a technical qualification, complete a vocational teacher training license courses and pass the vocational training teacher examination. The HRD Institute within KUT provided in-service training programs for instructors to acquire new skills and qualifications.

Policy Goal 8 | Incentivizing Excellence in Training Provision



Policy Goal 8 examines the diversity of training provision and the incentives to encourage private providers to meet WfD standards and to motivate public institutions to respond to the evolving demand for skills. The SABER-WfD benchmarking exercise indicates that Korea progressed from a **latent** level in 1970, to an **emerging** level in 1990 and 2010.

□ Promote diversity in training provision



This action scored at an **emerging** level in 1970 and reached an **established** level in 1990 and 2010.

Overview 1970 – 2010: Non-state education and training providers, once established, are supported and run in the same manner as public providers. This extensive support has created ample incentive for private providers to enter the market. In 1970, only non-profit institutions were allowed to operate. A relaxation of these restrictions in 1973 created a larger, more diverse field of providers and helped the system reach an established level of development.

1970: The emerging system featured limited non-state provider participation. However, by 1970 Korea had put in place a legal framework that facilitated the entry of non-state providers. Not-for-profit, non-state institutions seeking to offer pre-employment vocational education could do so by obtaining legal status as an education foundation and applying for a license to open a school. These schools, while owned by a private entity and financed in part by private contributions, also received substantial government funding. They were subject to the same government supervision and oversight, were authorized to issue the same diplomas, were eligible for the same tax incentives and government grants, and were allowed to collect student fees in the same way.

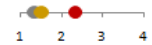
The arrangement for non-state training providers was similar. Non-profit organizations were allowed to offer training programs with permission from the MOL. Permission was obtained by showing evidence of meeting the established Vocational Training Standards that were used to govern public institutions. Firms wishing to establish their own in-house training facilities received permission to operate through the same procedures.

1990: The MOL's 1973 decision to allow for-profit institutions to offer TVET broadened the field of non-

state providers and helped bring the system to an established level of development. Permission to operate was awarded according to the same procedures in place in 1970 for both vocational education and vocational training institutions.

2010: As the most pressing challenges in WfD shifted from providing initial education to continuing and on-the-job training, the MOL promulgated the Worker's Skills Development Act in 2004. With the introduction of the JSDP, authorized by this act, training programs were diversified from their previous focus on manufacturing to cover all industries and occupational areas. In addition, private training providers were allowed to compete with public providers for funding through the JSDP, increasing the amount of funding available to encourage the entry of private providers and the competitive pressure faced by public and private providers alike.

□ Incentivize private providers to meet WfD standards



This action scored at a **latent** level in 1970 and 1990 and improved to an **emerging** level in 2010.

Overview 1970 – 2010: The Korean system is governed by standards that apply to all institutions, regardless of whether they are public or private. In the midst of rapid, state-led industrialization, Korea made a strategic decision to govern the system through system-wide standards for entry as opposed to packages of incentives targeted at institutions. This coincided with Korea's focus on WfD as a tool to support economic development and may have reflected a recognition that a system of autonomous institutions guided by incentives could be unwieldy in an environment characterized by dynamic change and limited managerial and oversight capacity. This arrangement kept scores for this Policy Action low for 1970 and 1990. In the most recent period, changes in economic structure, increasing bureaucratic capability and the availability of ICT solutions have made a system of incentives and censure more desirable and easier to implement.

1970: No specific system of incentives existed. The requirement that providers meet national standards to operate, while helping to promote minimum standards of performance, was too general to provide specific incentives for excellence. The government neither

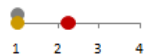
evaluated how these standards influenced provider performance nor consistently audited providers.

1990: The government paid limited attention to this Policy Action and the system retained an organization similar to 1970. While vocational education institutions were required to submit reports either once or twice annually that were reviewed by regional education authorities, these were not used to set targets or rigorously evaluate performance.

2010: The system improved as a result of more pointed performance incentives and, in the case of vocational training institutions under the MOL, regular performance reviews. The MOE began publicly recognizing vocational high schools and junior colleges for exemplary overall performance and for the introduction of innovative or successful extracurricular programs. This bolstered and formalized the esteem garnered by successful institutions, something which served as a more informal motivation for success in previous periods.

Successful and innovative training providers under the MOL were also given awards. In addition to this measure, the MOL began implementing periodic audits and revoking the licenses of institutions found to be deficient. The MOL benefitted from scrutiny of its training standards by KRIVET, which began an initiative to review the efficacy of performance incentives for vocational training providers in 2007.

▣ Motivate public institutions to respond to demand for skills



*This action scored at a **latent** level in 1970 and 1990 and reached an **emerging** level in 2010.*

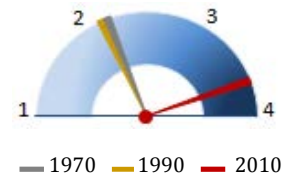
Overview 1970 – 2010: Korea opted to follow a path of state-led industrialization and did not make a sustained effort to increase individual institutions' sensitivity to industry's skills needs until 2010. During early stages of this development there was fear that responding to current skills demand could impede the pursuit of dynamic comparative advantage, and thus the government took a very active role in setting curriculum and managing providers in accordance to its Five-Year Development Plans. The government stepped back a bit after 1990, giving individual institutions more autonomy to respond to industry demand. Consequently, it began measuring institutional performance by setting targets for outcome indicators such as labor market outcomes of

graduates and employer satisfaction. This transition is reflected in the increase in score for 2010. However, the emerging score indicates that Korea continues to use alternative channels to ensure good practice.

1970: While the government was concerned with the WfD system as whole providing enough skilled workers to support economic development, mechanisms to promote sensitivity to industry demand for skills or to incentivize performance among individual institutions did not exist. Both the MOL and MOE were interested in the number of trainees so as to be able to match the number of employees needed for specific occupations, but no explicit targets were given to institutions. Nonetheless, the WfD authorities had a sense of which schools and training centers were performing well, and considerable esteem was accorded to exemplary institutions. This system of esteem and informal recognition of excellence provided strong, if not rigorous, incentives to meet and exceed minimum standards for quality.

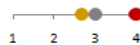
1990: The Korean approach to monitoring and incentivizing performance changed little. Steps to promote demand-driven institutions were not taken and the system remained latent. As in 1970, no specific targets were set and no formal evaluations of provider performance were conducted.

2010: Increased attention to institutions' performance by both the MOL and MOE prompted more pointed measures to improve institutional responsiveness to demand and brought the system to an emerging level of development. Both ministries began to focus more explicitly on indicators such as graduation rates, job placement rates, employer satisfaction, and student satisfaction. Performance along these indicators was one input into a system of regular reviews of provider performance. These reviews formed the basis for a number of steps meant to incentivize performance, such as the previously-mentioned accolades for well performing institutions as well as the provision of increased technical assistance for and, if necessary, closure of struggling institutions. The provision of discretionary training grants based, in part, on evaluation scores also helped incentivize performance. In addition, the introduction of the JSDP and the increased competition for public funding that it created served as a mechanism for promoting the provision of high quality, market relevant training services by public providers.



Policy Goal 9 is concerned with systemic monitoring and evaluation of the demand for skills, procedures for data collection and management, and level of attention to outcomes, efficiency and innovation in service delivery. Results of the SABER-WFD benchmarking exercise indicate that Korea progressed from an **emerging** level in 1970 and 1990 to an **advanced** level in 2010.

Strengthen monitoring and evaluation



This action scored at an **established** level in 1970 and 1990 and improved to an **advanced** level in 2010.

Overview 1970 – 2010: Extensive data collection and analysis has been a cornerstone of the Korean macroeconomic planning process from the 1960s, with considerable effort focused on measuring and projecting skills demand in an attempt to align WfD policies with economic development goals. Korea improved on its already good practices in the most recent period by both increasing the amount of data gathered and consolidating it into publicly-available national websites.

1970: The EPB instituted labor force surveys to monitor and evaluate the demand and supply of skills. The MOL employed these surveys, along with the Survey of Employed Technical Manpower conducted by the EPB and annual surveys of the supply of skills in economically important and technology-intensive industries conducted by the MOL’s own Vocational Training Division, to monitor and evaluate the demand and supply of skills. Both the MOL and EPB published collected data relating to WfD publicly.

1990: Monitoring skills demand remained a routine and integral part of the WfD planning process. Both the MOL and MOE began to issue reports on an *ad hoc* basis based on the data collected. Both ministries also continued to rely on the labor force surveys conducted by the Office for National Statistics (previously the EPB) and the MOL continued to conduct annual surveys to supplement these efforts.

2010: Both the MOL and MOE collected and employed data more intensively than in previous periods. This, along with the data’s consolidation in two national websites, made the Korean system among the best in the world with respect to this Policy Action. KEIS, jointly sponsored by the MOL and MOE, conducted mid-

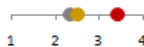
and long-term future skills assessments, which included enterprise surveys (see Box 7). In 2010, KRIVET conducted a comprehensive analysis of vocational skills demands to promote more demand-driven training by vocational high schools at the behest of the MOE. Sponsored by the MOL, KRIVET also conducted a survey of the skills demanded by emerging green industries. The MOL conducted comprehensive annual, economy-wide enterprise surveys and sponsored smaller-scale enterprise surveys conducted by KRIVET on an *ad hoc* basis. These data, along with the resulting reports, were made available on the relevant ministry’s website. In addition, Korea currently maintains two comprehensive websites with data and research on workforce development: HRD-Net and NHRD-Net, administered by the MOL and MOE, respectively.

Box 7: Examples of Surveys of Labor Demand

Labor Cost of Enterprise Survey (MOEL)	
Purpose	Measure labor demand to support measures to try to address mismatches
Coverage	A sample of 32,990 workplaces with 5 or more permanent employees
Frequency	Bi-annually
Survey items	Current number of employees, number of job openings, number of filled job openings, number of unfilled job openings,, reason for unfilled job openings
Labor Force Survey of Establishments (Statistics Korea)	
Purpose	Provide basic data needed to analyze employment trends and labor conditions in support of policy development
Coverage	28,000 sampled establishments with one employee or more across all industries excluding the agriculture, fisheries and forestry sectors
Frequency	Monthly
Survey items	Number of workers, number of job vacancies, number of new hires and terminations, wages, working hours

Source: MOEL; Statistics Korea.

Specify reporting requirements by training institutions



This action scored at an **emerging** level in 1970 and 1990 and moved to an **advanced** level 2010.

Overview 1970 – 2010: Institutional and outcome data have been collected from most TVET providers for the entire period under study and non-reporting has been lightly penalized. Penalties for non-compliance stiffened in the most recent period, coinciding with these data's more intensive use by the WfD authorities to both measure system performance and improve it by allocating discretionary funds to the best performing schools.

1970: All schools and training providers in receipt of public funds were required to comply with specified reporting procedures established by the government. Data that were required to be reported included administrative statistics such as enrolment, staffing, budget, graduation rates and the labor market outcomes of graduates. While providers were required to submit these data, the relevant ministries did not set specific targets for performance. Nonetheless, the submitted data were reviewed, with providers being informally notified of errors or inconsistencies, and were catalogued in central databases. These databases, however, were not open to the public.

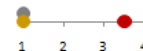
1990: The system retained practices similar to those in place in 1970. All providers were still required to submit basic data but, as in 1970, penalties were not regularly assessed for non-compliance and the data were not extensively used for monitoring provider performance or incentivizing improvement.

2010: The MOE began penalizing schools for submitting late or inaccurate data with lower evaluation scores. It also began using the information submitted by public and private vocational high schools and junior colleges to determine future funding allocation and eligibility to participate in government-funded projects. These data were maintained in a centralized database that, by 2010, had been put online and opened to the public.

Polytechnics funded by the MOL were required to submit administrative data, graduation statistics, job placement rates and wage data. KRIVET collected client feedback on private institutions receiving public funding and also evaluated such institutions based on criteria such as facilities, equipment, instructors, curricula, and the employment outcomes of graduates. The MOL assessed fines and, in serious cases, withdrew

the licenses of institutions that made untimely, inaccurate or inconsistent reports.

Increase focus on outcomes, efficiency and innovation



This action scored at a **latent** level in 1970 and 1990 and moved to an **advanced** level in 2010.

Overview 1970 – 2010: This aspect of the system did not develop until the last two decades. While large quantities of data had been collected and organized during the previous periods, it was neither used to incentivize provider performance nor intensively mined to uncover areas of a good practice or opportunities for improvement. This practice changed dramatically after 1990. Both the MOL and MOE began using the data they were already collecting much more intensively to monitor and incentivize provider performance and to identify opportunities for improving the quality and efficiency of the WfD system.

1970: The data collected from TVET institutions were not accompanied by performance targets or used to monitor and evaluate provider performance. While the government did identify institutions with consistent good practice, this was often based on less rigorous feedback and was more linked to providers' success in implementing established plans and curriculum rather than to practices or innovations that improved efficiency and outcomes.

1990: A culture of rigorous monitoring and evaluation had not yet developed in 1990. Data collected by the MOL and MOE lay largely untapped and the system remained latent.

2010: Both the MOL and MOE put in place robust, integrated systems for monitoring performance, generating insights from cases of good practice, and introducing appropriate system-wide reform. Sponsored by the MOE, the Regional Education Authorities conducted assessments of vocational high schools every three years. The Korean Council for College Education performed a similar function with respect to junior colleges. These assessments, supplemented by occasional, special-purpose research commissioned by the MOE and KRIVET, served as the basis for both tying funding to institutional performance and for identifying, disseminating and institutionalizing good practices.

The Board of Polytechnics funded by MOL annually evaluated and ranked all polytechnics on the basis of institutional performance. Sponsored by the MOL, KRIVET also conducted annual assessments of private training institutions receiving public funding and took

measures to identify and disseminate examples of good practice by hosting conferences. The MOL incorporated these practices into new system-wide reforms and used

the findings to funnel funding to well-performing institutions and programs.

Annex 1 | Analytical Framework of SABER-WfD

Dimension 1: Strategic Framework

Aligning WfD to national goals for productivity, growth and poverty reduction

Policy Goal 1: Articulating a strategic direction for WfD

- Policy Action 1: Advocate for WfD as a priority for economic development
- Policy Action 2: Evaluate economic prospects and its implications for skills
- Policy Action 3: Develop policies to align skills demand and supply

Policy Goal 2: Prioritizing a demand-led approach to WfD

- Policy Action 4: Promote demand-driven approach
- Policy Action 5: Strengthen firms' demand for skills to improve productivity
- Policy Action 6: Address critical challenges in the future supply of skills

Policy Goal 3: Strengthen critical coordination

- Policy Action 7: Ensure coherence of key strategic WfD priorities
- Policy Action 8: Institutionalize WfD roles and responsibilities
- Policy Action 9: Facilitate interaction among all WfD stakeholders

Dimension 2: System Oversight

Governing the system to achieve desired goals

Policy Goal 4: Diversifying pathways for skills acquisition

- Policy Action 10: Foster articulation across levels and programs
- Policy Action 11: Promote life-long learning
- Policy Action 12: Set policies and procedures to renew programs

Policy Goal 5: Ensuring efficiency and equity in funding

- Policy Action 13: Articulate funding strategy
- Policy Action 14: Allocate funds to achieve efficient results
- Policy Action 15: Foster partnerships

Policy Goal 6: Assuring relevant and reliable standards

- Policy Action 16: Specify accreditation standards
- Policy Action 17: Strengthen skills testing and certification
- Policy Action 18: Assure credibility of accreditation and of skills certification

Dimension 3: Service Delivery

Ensuring tangible results on the ground

Policy Goal 7: Fostering relevance in training programs

- Policy Action 19: Link training, industry, and research institutions
- Policy Action 20: Design training with industry inputs
- Policy Action 21: Improve competence of administrators and instructors

Policy Goal 8: Incentivizing excellence in training provision

- Policy Action 22: Promote diversity in training provision
- Policy Action 23: Incentivize private providers to meet WfD standards
- Policy Action 24: Motivate public training institutions to respond to demand for skills

Policy Goal 9: Enhancing accountability for results

- Policy Action 25: Strengthen monitoring and evaluation
- Policy Action 26: Specify reporting requirements by training institutions
- Policy Action 27: Increase focus on outcomes, efficiency and innovation

Annex 2 | Benchmarking Results

Dimension	1970	1990	2010	Policy Goal	1970	1990	2010	Policy Action	1970	1990	2010			
Strategic Framework	2.9	3.0	3.7	Articulating a Strategic Direction for WfD	3.1	3.2	3.7	Advocate for WfD as priority for economic development	3.0	3.0	4.0			
								Evaluate economic prospects and its implications for skills	3.8	3.7	3.8			
								Develop policies to align skills demand and supply	2.3	3.0	3.3			
				Prioritizing a Demand-led Approach to WfD	2.3	2.7	3.7	3.2	3.1	3.8	Promote demand-driven approach	2.0	2.7	3.3
											Strengthen firms' demand for skills to improve productivity	1.3	1.7	3.7
											Address critical challenges in the future supply of skills	3.7	3.7	4.0
				Strengthen Critical Coordination	3.2	3.1	3.8	2.4	3.2	3.4	Ensure coherence of key strategic WfD priorities	3.3	2.7	4.0
											Institutionalize WfD roles and responsibilities	4.0	4.0	4.0
											Facilitate interaction among all WfD stakeholders	2.3	2.7	3.3
System Oversight	2.1	2.7	3.5	Diversifying Pathways for Skills Acquisition	2.2	2.6	3.5	Foster articulation across levels and programs	3.0	3.0	4.0			
								Promote life-long learning	2.0	3.0	3.5			
								Set policies and procedures to renew programs	1.5	1.8	3.0			
				Ensuring Efficiency and Equity in Funding	1.7	2.2	3.4	2.4	3.2	3.4	Articulate funding strategy	2.3	2.3	3.6
											Allocate funds to achieve efficient results	1.7	1.7	3.8
											Foster partnerships	1.0	2.7	2.9
				Assuring Relevant and Reliable Standards	2.4	3.2	3.4	2.4	3.2	3.4	Specify accreditation standards	2.0	2.8	3.3
											Strengthen skills testing and certification	2.3	4.0	4.0
											Assure credibility of accreditation and of skills testing	2.9	2.9	3.1
Service Delivery	1.9	2.1	3.1	Fostering Relevance in Training Programs	2.0	2.5	3.2	Link training providers, industry and research institutions	1.8	2.9	3.9			
								Design training with industry inputs	2.4	2.8	3.0			
								Improve competence of administrators and instructors	2.0	2.0	2.6			
				Incentivizing Excellence in Training Provision	1.5	1.8	2.5	2.1	2.1	3.6	Promote diversity in training provision	2.3	3.0	3.0
											Incentivize private providers to meet WfD standards	1.3	1.5	2.3
											Motivate public training institutions to respond to demand for skills	1.0	1.0	2.3
				Enhancing Accountability for Results	2.1	2.1	3.6	2.1	2.1	3.6	Strengthen monitoring and evaluation	3.0	2.7	4.0
											Specify reporting requirements by training institutions	2.3	2.5	3.4
											Increase focus on outcomes, efficiency and innovation	1.0	1.0	3.5

Annex 3 | Acronyms

ADB	Asian Development Bank
CHAMP	HRD Ability Magnified Program
DCI	data collection instrument
EIS	Employment Insurance System
EPB	Economic Planning Board
GDP	gross domestic product
HRD	human resource development
IBRD	International Bank for Reconstruction and Development
ICT	Information and communication technologies
ITA	Individual Training Account
JSDP	Job Skill Development Program
KDI	Korea Development Institute
KEDI	Korea Education Development Institute
KEIS	Korea Employment Information Service
KRIVET	Korea Research Institute for Vocational Education and Training
KSS	Korea Skills Standards
KRW	South Korean Won
KUT	Korea University of Technology and Education
MEST	Ministry of Education, Science and Technology
MOCE	Ministry of Culture and Education
MOE	Ministry of Education
MOE&HRD	Ministry of Education and Human Resource Development
MOEL	Ministry of Employment and Labor
MOL	Ministry of Labor
NCS	National Competency Standards
NOS	National Occupational Standards
OECD	Organisation for Economic Co-operation and Development
OJT	on-the-job training
PCER	Presidential Commission for Education Reform
PI	Principal Investigator
PISA	Programme for International Student Assessment
RHRD	Regional Human Resource Development [Committees]
SABER	Systems Approach for Better Education Results
SHRDC	Sectoral Human Resource Development Council
SME	small- and medium-scale enterprises
TVET	technical and vocational education and training
WfD	workforce development

Annex 4 | Documents

Documents in Korea

- Chang, M., 1999. A Study on the Operational System and Curriculum Development Model for the Articulation Program between Vocational High Schools and Junior Colleges, KRIVET, Seoul.
- _____, 2006. The Distribution of Best Practices on Teaching and Learning for Two-year College Innovation. KRIVET, Seoul, Korea.
- Chang, M., et al., 1998. Survey Research on Education and Training Program Development for Unemployed Job-Seekers, KRIVET, Seoul.
- Chang, M., et al., 2010. The Direction of Revising Vocational High School Curriculum According to the 2009 Revision, KRIVET, Seoul.
- Chang, S., 1995. Secondary Education in Korea: 1960-1990, Korean Education Development Institute, Seoul.
- _____, 2009. "Outline of Vocational Education," in Choi, Y., et al. (eds.), Study on the Vocational Education and Training of Korea to the Cooperation with Developing Countries: Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training, KRIVET, Seoul.
- Choi, D., 2007. The Measures to Develop and Implement Practice-based After-school Career Guidance Program, KRIVET, Seoul.
- Choi, D., et al., 2011. The Measures to Improve the Flexibility of the Pathways for Vocational Education at High School Level, KRIVET, Seoul.
- Chung, T., 2008. The Changes and Tasks of the Vocational Competencies Development in Korea, KRIVET, Seoul.
- _____, 2009. "Vocational Training Financing," in Choi, Y., et al. (eds.), Study on the Vocational Education and Training of Korea to the Cooperation with Developing Countries: Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training, KRIVET, Seoul.
- Chung, T., et al., 2004. The Development of National Competency Standards. KRIVET, Seoul, Korea.
- Jin, M., 2002. The Establishment of Career-Net Server and the Development of Contents of Career Guidance for Vocational High School Students, KRIVET, Seoul.
- _____, 2010. Providing Cyber Career Guidance, KRIVET, Seoul.
- Jung, J. and I. Shim, 2002. The Diversity of Learning through the Recognition of Prior Learning – Cooperative Study with the OECD and the ILO, KRIVET, Seoul.
- Jung, T., 2007. Consulting to Support Change and Innovation in Vocational High Schools, KRIVET, Seoul.
- Jung, T., et al., 2008. Consulting Project to Support the Change and Innovation in Individual Vocational High School, KRIVET, Seoul.
- Jung, T., 2007. Consulting to Support Change and Innovation in Vocational High Schools, KRIVET, Seoul.
- Jung, T. et al., 2008. The Consulting Project to Support the Change and Innovation in Individual Vocational High School, KRIVET, Seoul.
- Kang, K. et al., 1999. Measures of Work-based Training of Vocational High School Instructors, KRIVET, Seoul.
- _____, 2009. "Secondary Vocational Education," in Choi, Y. et al. (eds.), Study on the Vocational Education and Training of Korea to the Cooperation with Developing Countries: Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training, KRIVET, Seoul.
- KEIS, 2010. Future Skills Assessment for All Industries, Seoul.
- _____, 2010. Mid- and Long-Term Future Skills Assessment for All Industries, Seoul.
- _____, 2010b. Regional Future Skills Assessment, Seoul.
- Keum, J., et al., 2006. Employment Insurance in Korea: The First Ten Years, KLI, Seoul.
- Kim, J., et al., 2010. The support of consulting to Meister High Schools, KRIVET, Seoul.
- Kim, M., Y. Lee and J. Choi., 2009. Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training, KRIVET, Seoul.
- Kim, S., 2009. "Qualification System," in Choi, Y., et al. (eds.), Study on the Vocational Education and Training of Korea to the Cooperation with Developing Countries: Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training, KRIVET, Seoul.
- Kim, S., et al., 2010. The Classification of Qualifications based on Operating Boundary of National Technical Qualifications, KRIVET, Seoul.
- Kim, Y. and Y. Kim, 2012. "My Star, Meister High Schools," in J. Lee (ed.), Positive Changes: the Education, Science and Technology Policies of Korea, Korean Economic Daily and Business Publications Inc., Seoul.
- Oh, Y., 2009. "Vocational Training Infrastructure," in Choi, Y. et al., Study on the Vocational Education and Training of Korea to the Cooperation with Developing Countries: Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training, KRIVET, Seoul.
- Ok, J., et al., 2010. Study on Education Curriculum of Five Areas in Vocational High Schools, KRIVET, Seoul.
- Park, C., 2009. Study on Measures to Improve the Evaluation System of Training Providers, KRIVET, Seoul.

- Park, D., 2011. Korean Policies on Secondary Vocational Education: Efforts to Overcome Skills Mismatch and Labor Force Shortages. In Vocational Training in Research and Practice No. 3/2011, Federal Institute for Vocational Education and Training (BIBB), Bonn.
- Park, Y., et al., 2010. Development of Curriculum and Skills Qualification System of Meister Schools: Meister Schools Specializing in Port Logistics, KRIVET, Seoul.
- _____, 2010. Establishment of a System that Promotes Skills Development in Small and Medium-sized Enterprises, KRIVET, Seoul.
- _____, 2011. Revision of National Curriculum for Vocational High School in the Area of Business, KRIVET and Ministry of Education, Science, and Technology, Seoul.
- Ra, Y., et al., 2009. Evaluation of Government-Supported programs within the Employment Insurance System. KRIVET, Seoul.
- _____, 2010. Measures to Improve the Effectiveness of Training for the Vulnerable Classes, KRIVET, Seoul.
- Suh, S., 2002. The History of Korean Vocational Training System. Korean Chamber of Commerce, Seoul.
- Yoo, K., 2009. "Economic Growth & VET". In Choi, Y. et al., Study on the Vocational Education and Training of Korea to the Cooperation with Developing Countries: Study on the Establishment of a Development Cooperation Model of Korean Vocational Education and Training, KRIVET, Seoul.

Documents in English

- OECD Education Statistics (database). OECD, Paris. http://www.oecd-ilibrary.org/education/data/oecd-education-statistics_edu-data-en.
- Social Expenditure Database. OECD, Paris. <http://www.oecd.org/els/soc/socialexpendituredatabasesocx.htm>.
- Tan, Jee-Peng, Kiong Hock Lee, Alexandria Valerio and Joy Yoo-Jeung Nam (2013), What Matters in Workforce Development: A Framework and Tool for Analysis, SABER Working Paper Series Number 6, Education Department, Human Development Network, World Bank, available at <http://go.worldbank.org/32GZWR8Z0>.
- World Development Indicators (database). World Bank, Washington, DC. <http://data.worldbank.org/data-catalog/world-development-indicators>

Korean Government Acts

- The Act on Credit Recognition
- The Employment Insurance Act
- Enforcement Decree on Establishment and Management of Colleges
- Enforcement Decree on Establishment and Management of Schools
- The Framework Act on Employment Policy
- The Framework Act on Vocational Training
- The Government organization Act
- The Higher Education Act
- The Industrial Education Promotion Act
- The Lifelong Education Act
- The Minimum Wage Act
- The National Technical Qualification Act
- The Polytechnics Act
- The Promotion of Industrial Education and Industry-Academic Cooperation Act
- The Public Education Officials Act
- Regulation of Weekly Meetings between the President and All Ministers
- Regulation on the National Employment Strategy Council, 2010
- Vocational Skills Development Act
- Workers Vocational Skills Development Act

Websites

www.mest.go.kr
www.moel.go.kr
www.krivet.re.kr
<http://hrdi.kut.ac.kr>
<http://kcc.go.kr>
<http://newslibrary.naver.com>
www.academyinfo.go.kr
www.career.go.kr
www.careernet.re.kr
www.hrd.go.kr
www.hrdkorea.or.kr
www.fki.or.kr
www.greengrowth.go.kr
www.kcce.or.kr
www.kedi.re.kr
www.kef.or.kr
www.keis.or.kr
www.kiet.re.kr
www.kli.re.kr
www.kopo.ac.kr
www.kosis.kr
www.law.go.kr
www.meister.go.kr
www.me.go.kr
www.mke.go.kr
www.nhrd.net
www.nile.or.kr
www.sbe.or.kr
www.shrdc.or.kr
www.work.go.kr

Annex 5 | Informants

The following individuals were interviewed to gather additional information. Their contributions are gratefully acknowledged.

Chang, Myung-Hee – Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Chang, Suk-Min – Former Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Chung, Taek-Soo – Former Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Joo, In- Joong – Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Jung, Won-Ho – Government Official in Korean Ministry of Employment and Labor
Kang, Soon-Hee – Professor in Kyunggi University.
Kim, Hwan-Sik – Government Official in Korean Ministry of Education, Science, and Technology
Lee, Duck-Hee – Government Official in Korean Ministry of Employment and Labor
Lee, Ji-Yeon – Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Lee, Jong-Tae –Former Director General in HRD service of Korea
Lee, Kye-Woo – Former World Bank Staff and Government Official in Korean Labor Office
Lee, Young-Hyun – Former Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Oh, Young-Hoon – Former Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Park, Chong-Sung – Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Park, Chun-Soo – Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Park, Dong-Ryul – Research Fellow in KRIVET (Korea Research Institute for Vocational Education and Training)
Park, Kye-Young –Director in HRD service of Korea
Park, Sang-Min – Professor in Korea Polytechnics
Park, Yong-Ung – Former Government Official in Korean Ministry of Labor
Suh, Sang-Sun – Former Government Official in Korean Ministry of Labor.

Annex 6 | Benchmarking Rubrics

Functional Dimension 1: Strategic Framework					
Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
1. Articulating a Strategic Direction for Workforce Development	<i>Advocate for WfD as a priority for economic development</i>	<ul style="list-style-type: none"> WfD is not prioritized in national economic development. 	<ul style="list-style-type: none"> Political and other leaders recognize the importance of WfD for economic development; economic development plans have identified a few WfD priorities. 	<ul style="list-style-type: none"> Political and other key leaders in industry provide sustained support for WfD; economic development plans assess and specify several WfD priorities that are being implemented. 	<ul style="list-style-type: none"> WfD is fully integrated into national policies and strategies, reflecting a holistic approach¹⁴ to WfD; economic development plans formally assess and specify a wide range of WfD priorities that are supported by implementation plans and budgets, these are subject to continuous evaluation and improvements.
	<i>Evaluate economic prospects and its implications for skills</i>	<ul style="list-style-type: none"> The concept of a demand-driven approach¹⁵ to WfD has yet to emerge. 	<ul style="list-style-type: none"> A demand-driven WfD strategy is beginning to take shape but policy reforms are often impeded by various difficulties. 	<ul style="list-style-type: none"> A demand-driven WfD strategy informed by appropriate analyses is accompanied by some policy reforms that have been implemented. 	<ul style="list-style-type: none"> A well-informed demand-driven WfD strategy with continuous evaluation and improvements has been internalized as a standard practice.
	<i>Develop policies to align skills demand and supply</i>	<ul style="list-style-type: none"> Policies are being developed but are not based on formal analyses of skills demand. 	<ul style="list-style-type: none"> A few policies have been developed on the basis of occasional assessments to address imbalances between skills demand and supply; these policies and interventions are subject to in-house reviews. 	<ul style="list-style-type: none"> A range of policies based on occasional and routine assessments by government and independent WfD stakeholders have been implemented to address skills imbalances; these are subject to routine in-house reviews and independent external evaluations. 	<ul style="list-style-type: none"> Policies are formulated on the basis of well-informed analyses, including assessments by independent organizations, and they are routinely reviewed and updated with inputs from relevant stakeholders to ensure program offerings fit the economic climate and demands for new skills.

¹⁴ A holistic approach is one that addresses multiple dimensions of skills development, including: (a) aligning skills training to employers' needs and national goals for productivity, growth and poverty reduction; (b) governing the system to achieved the desired national goals, and (c) ensuring tangible results on the ground.

¹⁵ In a demand-driven strategy, the demand for skills drives the supply of training services. Arrangements to achieve this relationship between skills supply and demand include: the involvement of employers in shaping training policies and provision, financing tied to employment outcomes, etc.

Functional Dimension 1: Strategic Framework

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
2. Prioritizing a Demand-led Approach	<i>Promote a demand-driven approach</i>	<ul style="list-style-type: none"> There is limited or no attempt to incorporate business and industry inputs in establishing and implementing WfD priorities. 	<ul style="list-style-type: none"> Business and industry play an advisory role in establishing and implementing WfD priorities based on occasional studies and assessments. 	<ul style="list-style-type: none"> A demand-driven approach to WfD is in place with business and industry providing inputs for setting WfD priorities based on routine assessments provided by government agencies, employers, trade associations and labor unions. 	<ul style="list-style-type: none"> A demand-driven approach to WfD has been fully established with business and industry playing both advisory and executive roles supported by routine assessments from government agencies, other key WfD stakeholders and independent organizations.
	<i>Strengthen firms' demand for skills to improve productivity</i>	<ul style="list-style-type: none"> Few incentives and services exist to support skills development for technology upgrading by firms. 	<ul style="list-style-type: none"> Incentives and services are in place to provide selective support for technology-related skills upgrading; incentive programs are subject to occasional reviews but often without adequate follow-up of recommendations. 	<ul style="list-style-type: none"> Incentives and services enable firms to expand the skills sets of workers to facilitate technology adaptation and adoption for greater productivity; these measures are supported by routine reviews followed by implementation of some review recommendations. 	<ul style="list-style-type: none"> Incentives and services enabling firms to address skills constraints impeding their ability to upgrade technology and productivity are well established; these are routinely reviewed and adjusted for impact; all key review recommendations are implemented.
	<i>Address critical challenges in the future supply of skills</i>	<ul style="list-style-type: none"> There is limited or no formal assessment of the future supply of skills. 	<ul style="list-style-type: none"> Future supply of skills is assessed on an occasional basis; recommendations from assessments are implemented with some delay, often without adequate funding and assignment of responsibility for implementation. 	<ul style="list-style-type: none"> Assessments of future skills supply are routinely conducted for key sectors at the regional and national levels; recommendations are implemented with little delay; responsibilities for implementation of recommendations are made explicit but without explicit attention to monitorable goals. 	<ul style="list-style-type: none"> Future skills supply is routinely assessed for multiple industries and sectors at the national and international levels; recommendations are implemented promptly; responsibilities for implementation are clearly spelled out and attention is given to the realization of monitorable goals.

Functional Dimension 1: Strategic Framework

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
3. Strengthening Critical Coordination	<i>Ensure coherence of key strategic WfD priorities</i>	<ul style="list-style-type: none"> There is no mechanism in place to ensure coherence of key strategic WfD priorities among WfD leaders. 	<ul style="list-style-type: none"> Coherence of key strategic WfD priorities at the leadership level is achieved through informal processes that yield limited WfD outcomes. 	<ul style="list-style-type: none"> Coherence of key strategic WfD priorities at the apex leadership level is achieved through formal and informal mechanisms that yield positive WfD outcomes. 	<ul style="list-style-type: none"> Formal mechanisms overseeing coordination and implementation of WfD strategies are in place and they support strengthening structures of WfD policy development, budget allocations, and assessments of future skills demand and supply.
	<i>Institutionalize the structure of WfD roles and responsibilities</i>	<ul style="list-style-type: none"> Roles and responsibilities for WfD are not formally defined, leaving the WfD authority without a clear mandate. 	<ul style="list-style-type: none"> Roles and responsibilities of WfD stakeholders are poorly defined, leaving the WfD authority with a limited mandate and limited resources to discharge its responsibilities effectively. 	<ul style="list-style-type: none"> Roles and responsibilities are well-defined and supported by legislation and resources that enable the WfD authority and key stakeholders to discharge their respective functions effectively. 	<ul style="list-style-type: none"> Clear WfD roles and responsibilities have been institutionalized through legislation and the WfD authority has the mandate to formulate and request resources that are needed for the relevant authorities to discharge their responsibilities in a transparent and effective manner.
	<i>Facilitate communication and interaction among all WfD stakeholders</i>	<ul style="list-style-type: none"> No formal process exists for engaging all stakeholders. 	<ul style="list-style-type: none"> Informal structures exist that facilitate communication and interaction among key stakeholders. 	<ul style="list-style-type: none"> Formal structures exist in key economic sectors that support extensive communication and interaction among the relevant stakeholders. 	<ul style="list-style-type: none"> Formal structures fostering extensive interactions among WfD stakeholders that culminate in consensus on WfD priorities and policies are in place in most sectors.

Functional Dimension 2: System Oversight

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
4. Diversifying Pathways for Skills Acquisition	<i>Foster articulation across levels and programs</i>	<ul style="list-style-type: none"> ▪ No functioning articulation arrangements. 	<ul style="list-style-type: none"> ▪ <i>Ad hoc</i> articulation arrangements exist within secondary schools and post-secondary institutions; only ad hoc incentives are in place to foster articulation across levels of instruction. 	<ul style="list-style-type: none"> ▪ <i>Ad hoc</i> articulation arrangements exist across institutions at the secondary and post-secondary levels; a program of incentives is in place to foster articulation arrangements. 	<ul style="list-style-type: none"> ▪ Standardized articulation arrangements exist across secondary and post-secondary programs as well as between TVET and higher education; a system of incentives is in place to foster articulation across programs and levels of education and training.
	<i>Promote life-long learning</i>	<ul style="list-style-type: none"> ▪ No arrangements or public resources are in place to support life-long learning, recognition of prior learning, and disadvantaged groups. 	<ul style="list-style-type: none"> ▪ Ad hoc private resources and arrangements support life-long learning and recognition of prior learning; publicly-funded training programs exist with for disadvantaged groups subject to some restrictions. 	<ul style="list-style-type: none"> ▪ School- and community-based resources and arrangements support life-long learning and recognition of prior learning; publicly-funded training programs with minimal restrictions are available for most disadvantaged groups. 	<ul style="list-style-type: none"> ▪ Integrated regional or national system with one-stop online resources and standardized arrangements support life-long learning and recognition of prior learning; publicly-funded training programs provide open access to all disadvantaged groups.
	<i>Set policies and procedures to renew programs</i>	<ul style="list-style-type: none"> ▪ There are no set policies to manage program offerings; training providers may introduce, adjust or close publicly-funded programs at will. 	<ul style="list-style-type: none"> ▪ Introduction, adjustment and closure of publicly-funded programs are made through ad hoc, non-standardized processes; applications for these changes must be done personally and are vetted by <i>ad hoc</i> committees. 	<ul style="list-style-type: none"> ▪ Introduction, adjustment and closure of publicly-funded programs are based on a few explicit and standardized requirements; applications can be made online and they are vetted by formal committees with some representation from other WfD stakeholders. 	<ul style="list-style-type: none"> ▪ Management of publicly-funded training programs are made on the basis of comprehensive and explicit requirements that include labor market analyses; applications can be made online and they are vetted by formal committees with representation from other WfD stakeholders and they operate with a commitment to act in a timely manner.

Functional Dimension 2: System Oversight

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
5. Ensuring Efficiency and Equity in Funding	<i>Articulate funding strategy</i>	▪ <i>Ad hoc</i> funding of WfD by multiple stakeholders; no evaluation of funding allocation and strategy.	▪ Systematic funding of WfD is determined by government agencies with annual budget appropriations and line-item allocations; only occasional evaluations of funding allocation and strategy.	▪ Systematic funding of WfD is determined by government agencies with advice from key stakeholders; annual budget appropriations are supported by detailed spending plans; there are routine evaluations of funding allocation and strategy.	▪ Systematic funding of WfD is determined through consensus building among government agencies and key stakeholders; annual budget appropriations are supported by detailed spending plans to foster improved performance; routine evaluations of funding allocation and strategy are accompanied by appropriate reforms as needed.
	<i>Allocate funds to achieve efficient results</i>	▪ No formal process for allocating public funds for WfD.	▪ A formal process without explicit criteria is in place; there are no reviews of allocation criteria.	▪ A formal process for allocating public funds based on explicit criteria exists; there are periodic reviews of the criteria but recommended changes face relatively long implemented lags.	▪ Allocation of WfD funds is based on explicit criteria aligned with WfD priorities, including efficiency in resource utilization; there are frequent reviews of the criteria and recommendations are implemented in a timely manner .
	<i>Foster partnerships</i>	▪ Limited or no partnership between WfD authority and stakeholders in business and industry; key stakeholders provide few, if any, resources toward meeting WfD priorities.	▪ Limited partnership with business and industry is in place; partners have access to some public resources; key stakeholders contribute a small range of resources toward WfD priorities.	▪ Extensive partnership between WfD authority and key stakeholders in business and industry; partners have access to some public resources; key stakeholders contribute a broad range of resources for WfD.	▪ An institutionalized partnership network with open membership for all WfD stakeholders is in place; partners have access to wide range of public resources; key stakeholders contribute an extensive range of resources to meet WfD priorities.

Functional Dimension 2: System Oversight

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
6. Assuring Relevant and Reliable Standards	<i>Specify accreditation standards</i>	<ul style="list-style-type: none"> ▪ No accreditation standards have been established; training providers are free to offer any program. 	<ul style="list-style-type: none"> ▪ Some accreditation standards have been established; standards are infrequently reviewed; accreditation applies to public institutions only. 	<ul style="list-style-type: none"> ▪ An accreditation agency has been established with standards developed jointly with relevant stakeholders; standards are reviewed internally on a regular or as needed basis; accreditation applies to public institutions and non-state providers receiving public funding; renewal applies to the latter only. 	<ul style="list-style-type: none"> ▪ An accreditation agency with standards reflecting international best practices is in place; accreditation standards are reviewed frequently both internally and by independent parties; accreditation and renewal of accreditation is compulsory for all public institutions and non-state training providers, regardless of their sources of funding.
	<i>Strengthen skills testing and certification</i>	<ul style="list-style-type: none"> ▪ Competency-based testing has yet to be introduced; testing is largely based on theoretical knowledge and administered by training providers themselves. 	<ul style="list-style-type: none"> ▪ Competency-based testing applies to critical occupations in key sectors; testing may focus on a mix of theory and practice and is administered and certified by independent third parties. 	<ul style="list-style-type: none"> ▪ A standardized competency-based testing system is in place and applies to most occupations; testing may focus on a mix of theory and practice and is administered and certified by independent third parties. 	<ul style="list-style-type: none"> ▪ A standardized competency-based testing system has been established for most occupations; IT-based testing focuses on theory and practice and is administered and certified by independent third parties.
	<i>Assure credibility of accreditation and of skills certification</i>	<ul style="list-style-type: none"> ▪ There is limited attention to accreditation standards. 	<ul style="list-style-type: none"> ▪ Accreditation standards are established through <i>ad hoc</i> arrangements; some support is provided to encourage non-state providers to seek accreditation; credibility of skills testing is ensured through explicit standardized testing protocols. 	<ul style="list-style-type: none"> ▪ Accreditation standards established with inputs from WfD stakeholders apply to all institutions and providers receiving public funding; credibility of skills testing is ensured through explicit standardized testing protocols and accreditation of testing centers. 	<ul style="list-style-type: none"> ▪ A license to operate is issued only to institutions and providers meeting accreditation standards determined by key WfD stakeholders; credibility of skills testing is ensured through standardized testing protocols, accreditation of testing centers and random audits.

Functional Dimension 3: Service Delivery

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
7. Fostering Relevance in Training Programs	<i>Link training industry and research institutions</i>	<ul style="list-style-type: none"> ▪ Weak or no links between training institutions and industry and research institutions. 	<ul style="list-style-type: none"> ▪ Informal links exist between some training institutions and industry and research institutions to improve training relevance and quality. 	<ul style="list-style-type: none"> ▪ Formal links exist between some training institutions and industry and research institutions, leading to significant collaboration in several activities. 	<ul style="list-style-type: none"> ▪ Formal links exist between most training institutions and industry and research institutions, leading to significant collaboration in a wide range of activities such as the provision of industry internships and training, and the introduction and redesign of training programs.
	<i>Design training with industry inputs</i>	<ul style="list-style-type: none"> ▪ Industry has limited or no role in identifying, prioritizing and designing publicly-funded programs. 	<ul style="list-style-type: none"> ▪ Industry has an advisory role in identifying, prioritizing and designing publicly-funded programs in some training institutions, usually through informal contacts. 	<ul style="list-style-type: none"> ▪ Industry has both an advisory and a decision-making role in identifying, prioritizing and designing publicly-funded programs in some training institutions. 	<ul style="list-style-type: none"> ▪ Industry has a widespread advisory and decision-making role in identifying, prioritizing and designing publicly-funded programs in most training institutions.
	<i>Improve competence of administrators and instructors</i>	<ul style="list-style-type: none"> ▪ Few or no measures are in place to enhance the competence of WfD administrators and instructors. 	<ul style="list-style-type: none"> ▪ Recruitment of administrators and instructors is based on minimum academic qualification(s), with provisions for some in-service training and performance-based recruitment and retention measures based on occasional evaluations. 	<ul style="list-style-type: none"> ▪ Recruitment of administrators and instructors is based on minimum academic qualification(s), with provisions for in-service training and performance-based recruitment and retention measures that are based on routine evaluations. 	<ul style="list-style-type: none"> ▪ Recruitment of administrators and instructors occurs through a competitive process based on both academic qualification(s) and industry experience, with a wide range of in-service training programs and performance-based recruitment and retention measures based on routine evaluations.

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
8. Incentivizing Excellence in Training Provision	<i>Promote diversity in training provision</i>	<ul style="list-style-type: none"> ▪ Training occurs through state provision only, with no incentives to promote non-state provision of training. 	<ul style="list-style-type: none"> ▪ Training policies allow some private providers to operate; training is provided mainly by non-profit providers with few incentives in place to foster non-state provision of training. 	<ul style="list-style-type: none"> ▪ Training policies facilitate participation of non-state training providers; training is offered mainly by NGOs, with a system of incentives that are evaluated routinely are in place to foster non-state provision. 	<ul style="list-style-type: none"> ▪ A highly-diverse mix of non-state training providers offer training within a comprehensive system with a wide range of incentives is in place to foster non-state provision; incentives are subject to evaluations and the recommendations are implemented.
	<i>Incentivize private providers to meet WfD standards</i>	<ul style="list-style-type: none"> ▪ No incentives are in place to encourage non-state providers to meet WfD standards. 	<ul style="list-style-type: none"> ▪ At least one incentive that is subject to occasional evaluation is in place to encourage non-state providers to meet WfD standards, but no review system exists to ensure continued adherence to WfD standards. 	<ul style="list-style-type: none"> ▪ A system of financial and non-financial incentives that are subject to occasional and routine evaluations is in place to encourage non-state providers to meet WfD standards; periodic audits are conducted to ensure continued adherence to WfD standards. 	<ul style="list-style-type: none"> ▪ A comprehensive system of incentives that are subject to both occasional and routine evaluations and adjustments is in place to encourage non-state providers to comply with WfD standards; periodic audits with penalties for noncompliance are conducted and enforced to ensure continued adherence to WfD standards.
	<i>Motivate public training institutions to respond to demand for skills</i>	<ul style="list-style-type: none"> ▪ No mechanism or process is in place to ensure training institutions are demand-driven. 	<ul style="list-style-type: none"> ▪ Training institutions are expected to meet target repetition and graduation rates but few incentives are in place ensure they are demand-driven. 	<ul style="list-style-type: none"> ▪ Training institutions are expected to meet a wider range of WfD outcomes; some incentives and penalties that are subject to both occasional and routine evaluations are in place to ensure these institutions respond to the demand for skills. 	<ul style="list-style-type: none"> ▪ Training institutions are expected to meet a wide range of WfD outcomes; a robust system of incentives and penalties that is subject to both occasional and routine evaluations and adjustments is in place to ensure that the training institutions are driven by employers' demands for skills.

Policy Goal	Policy Action	Level of Development			
		Latent	Emerging	Established	Advanced
9. Enhancing Accountability for Results	<i>Strengthen monitoring and evaluation</i>	<ul style="list-style-type: none"> ▪ Limited attention is placed on the monitoring and evaluation of skills demand and supply; an overview of WfD data is available through informal channels only.. 	<ul style="list-style-type: none"> ▪ Occasional monitoring and evaluation of skills demand and supply is in place; an overview of WfD data is available only in government agencies. 	<ul style="list-style-type: none"> ▪ Routine monitoring and evaluation of skills demand and supply is in place; an overview of WfD data is available in published reports and websites. 	<ul style="list-style-type: none"> ▪ Skills demand and supply are monitored and evaluated through routine surveys and specially commissioned studies; WfD data are available from a consolidated website.
	<i>Specify reporting requirements by training institutions</i>	<ul style="list-style-type: none"> ▪ No specific data collection and reporting are required; training providers maintain their own data bases. 	<ul style="list-style-type: none"> ▪ Public institutions and non-state training providers are required to collect and maintain administrative and graduation statistics; data reporting is voluntary for non-state providers but they may be notified of non-compliance. 	<ul style="list-style-type: none"> ▪ Public institutions and non-state training providers are required to collect, maintain and submit a comprehensive list of data through an integrated management information system to the WfD authority; timely submission is fostered through incentives for compliance and penalties for non-compliance. 	<ul style="list-style-type: none"> ▪ Both public institutions and non-state training providers are required to collect, maintain and submit a comprehensive list of data, including client-feedback, to the WfD authority using an integrated management information system; incentives, penalties and data quality audits are performed to ensure timely reporting of reliable data.
	<i>Increase focus on outcomes, efficiency and innovation</i>	<ul style="list-style-type: none"> ▪ No system of evaluation and monitoring is in place to ensure efficiency in delivery of training services. 	<ul style="list-style-type: none"> ▪ Occasional evaluation and monitoring of limited aspects of training services is in place with results used to provide feedback to the training institutions; information on labor market outcomes of graduates is publicly available for some institutions only. 	<ul style="list-style-type: none"> ▪ Routine evaluation and monitoring of several key aspects of training services is in place with results used to provide feedback to training institutions, to prioritize funding allocations, and identify good practices in service delivery; information on labor market outcomes of graduates is publicly available for all institutions. 	<ul style="list-style-type: none"> ▪ Institutionalized routine evaluation and monitoring of all key aspects of the delivery of training services with results used to provide feedback to institutions, to prioritize funding allocations, identify good practices and options for system-level improvements; online dissemination of labor market outcomes of graduates is available to all users.

Authorship and Acknowledgements

This report is a product of collaborative effort between a team at the Korea Research Institute for Vocational Education and Training (KRIVET) composed of Dr. Ko Hye-Won and Dr. Park Yoon-Hee and staff at the World Bank comprising Jee-Peng Tan, Ryan Flynn and Joy Yoo-Jeung Nam (leader and members, respectively, of the SABER-WfD team in the Education Department of the World Bank's Human Development Network). Dr. Ko Hye-Won and Dr. Park Yoon-Hee collected the data using the SABER-WfD data collection instrument, prepared initial drafts of the report, and finalized the report. The Bank SABER-WfD team scored the data, designed the template for report writing, prepared the sections and annexes related to the SABER-WfD methodology, and provided the KRIVET team with technical and substantive support throughout the process of data collection, analysis and report writing. Special thanks go to Joy Yoo-Jeung Nam for assistance with data collection and to Ryan Flynn for help with writing the report.

The current draft has benefited from suggestions and feedback from Professor David Ashton, Dr. Lee Kye Woo, Dr. Lee Young-Hyun, Kim Dug Ho, Dr. Kwon Dae Bong and Dr. Park Sungmin.

The research team acknowledges the support of all who have contributed to the report and its findings, including informants, survey respondents, participants at various consultation workshops, as well as other members of the SABER-WfD team at the World Bank, especially Rita Costa, Kiong Hock Lee, Brent Parton and Alexandria Valerio. The research team gratefully acknowledges the generous financial support of the Government of the United Kingdom through its Partnership for Education Development (PFED) with the World Bank and of the Korean Government through the Korean Trust Fund at the World Bank.

The **Systems Approach for Better Education Results (SABER)** initiative produces comparative data and knowledge on education policies and institutions, with the aim of helping countries systematically strengthen their education systems. SABER evaluates the quality of education policies against evidence-based global standards, using new diagnostic tools and detailed policy data. The SABER country reports give all parties with a stake in educational results—from administrators, teachers, and parents to policymakers and business people—an accessible, objective snapshot showing how well the policies of their country's education system are oriented toward ensuring that all children and youth learn.

This report focuses specifically on policies in the area of Workforce Development

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.



Government of the Republic of Korea



THE WORLD BANK