

Training Levy-Rebate Incentive Scheme and SME Training Consortium Program to Address Unemployment and Low Productivity in SMEs – A Korean Policy Case

PROJECT DATA

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CONTACTS

CASE AUTHORS

Prof. Kye woo Lee, Dipan Kumar Sahu

PROJECT EXPERT:

Prof. Kye woo Lee



KDI SCHOOL
KDI School of Public Policy and Management

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Abstract

This case study examines the origin, aims, execution, and achievement of the Small and Medium Enterprises (SMEs) Training Consortium Program in Korea. The success of the Korean government in addressing the issues of low productivity and unemployment in the SME sector stands as an exemplary case for many developing countries. The demand for improved human resources in the growing export-oriented and industrializing Korean economy was effectively achieved by government intervention that promoted an increased role of private players in training markets. These conducive and flexible reforms in the skills development policy, which were brought about in response to the international financial crisis and the changing market needs, caused a structural change in the existing training-levy incentive system and created an institutional mechanism for SMEs to engage voluntarily and collectively in training their workers. Furthermore, the institutional mechanism effectively addressed the financial and institutional bottlenecks of SMEs in training their workers and the inequitable situation that developed between large enterprises and SMEs in the operation of the workers' training levy-rebate system.

Executive Summary

Development Challenges: Thanks to the government's development policy of export-oriented industrialization, the Korean economy grew rapidly, at 7.1 percent per year during the period 1965–1990. As the industrialization proceeded, one

Prof. Kye Woo Lee is an economics professor of the KDI School of Public Policy and Management, Seoul, Korea. Professor Lee served with the World Bank in Washington, DC in various capacities including executive and economist positions. While serving with the World Bank, Professor Lee was accorded the Presidential Award for Excellence in Projects Outcomes in 1997.

Dipan Kumar Sahu worked as Research Assistant to case expert in SoD policy case development during his Master in Development Policy (MDP) study at KDI School, 2015–16. Currently he is working with All India Council for Technical Education (AICTE) for the implementation of National Student Startup Policy in India.

of the major development challenges for the Korean government was to supply qualified technical and skilled human resources as demanded by the rapidly growing economy. Therefore, the Korean government adopted various policies in human resources development, paying particular attention to technical and skilled workforce training. These policies included: the direct training subsidy policy for large enterprises (1967); a regulatory policy of compulsory in-plant training program (1974) along with further compulsory in-plant training-or-training levy optional system (1976) for large enterprises; and, later, a training levy-grant (rebate) based incentive system (1995) for all large and some small enterprises.

Initial Phase of Government Intervention: Under the training levy-grant (rebate) policy, most enterprises were required to pay training levies as part of their unemployment insurance fees for their workers. Employers no longer had the option to pay a training levy instead of providing in-plant training for their workers on a compulsory basis. Enterprises were left free to choose training institutions, courses, and methods voluntarily, to meet their own individual needs, irrespective of in-plant or pre-service type training. As an incentive to encourage the provision of training for workers, enterprises were eligible for the reimbursement of their training expenses. This reimbursement was, in reality, a rebate of the training levy they had already paid.

In 1997, in the aftermath of the Asian financial crisis, the government shifted the emphasis of skill development policy from supporting economic growth towards reductions in poverty and inequality, along with employment creation and protection of disadvantaged groups, such as the unemployed and SMEs. The crisis badly affected the Korean labor markets generally, although the SMEs sector was particularly affected, since it was already suffering from high unemployment and low productivity. In order to stop additional deterioration in the rate of unemployment, the Korean government addressed the issue of low participation of SMEs in training so that these enterprises could raise their international competitiveness. The newly reformed skill development system in alignment with the national agenda was implemented on a full scale by the enactment of the Worker's Vocational Training Promotion Act at the end of 1997. Under this act, government expanded the training levy-rebate policy coverage to all enterprises, including all sizes of SMEs (i.e., including enterprises with one worker only), with a favorable rebate incentive for SMEs.

Delivery Challenges for the Government under the Training Levy-Rebate Incentive System: The levy-rebate incentive system under the Employment Insurance Law regime proved superior to the previous training-or-levy optional system. The new incentive system encouraged both enterprises and workers to participate in training programs voluntarily, which was partly the result of rigorous enforcement of the Employment Insurance Law (EIL) and partly due to the rebate incentive (recovery) system. Therefore, the levy-rebate incentive under the EIL system was found more relevant and efficient, and did serve as an effective incentive for enterprises to carry out job-related skills training for their workers.

However, the new system posed a challenge to the government as it worked against SMEs. SMEs did not make as much use of the levy-rebate incentives as large enterprises did. While most large firms participated in training of their workers and were able to recover the levies they paid through government reimbursement, few SMEs were able to train their workers and were unable to have their levies reimbursed. Due to the gap between large enterprises and SMEs in participation in the training levy-rebate incentive system, the government increased incentives for SMEs by raising the ceiling of total reimbursement of their training levies up to 270 percent of training levies paid. Despite this greater financial incentive for SMEs' training activities, the gap continued to exist.

The levy recovery gap between large enterprises and SMEs was a serious policy issue since SMEs accounted for 99.9 percent of the total enterprises, provided 86 percent of the total contracted employment opportunities, and about half of Korea's exports and income. This imbalanced situation implied that, aside from the financial constraints, other weaknesses (including organizational, informational, technical and managerial constraints) prohibit SMEs voluntary participation in worker training programs. Finally, the government recognized that the training levy-rebate incentive system, along with additional institutional mechanism and incentives, needed to be revised to address the weaknesses and subsequent delivery challenges.

Second Phase of Government Intervention: To address the delivery challenge that arose during the training levy-rebate scheme implementation, the Korean government devised a new incentive system in the form of the SME

Training Consortium (TC) in partnership with the Korea Chamber of Commerce and Industry (KCCI) and piloted it in three cities in the year 2001. The pilot TC program was designed with an institutional approach: To let 30-35 SMEs organize themselves voluntarily and carry out collective training of their workers with additional financial, organizational, and technical assistance from the government. The government enabled each TC to hire two training managers for all member SMEs by financing their personnel and operational expenses. They carried out training need assessments for member SMEs, contracted and monitored outside training services, and evaluated training outcomes for all member SMEs from each TC.

The training managers' services that were made available to member SMEs of each TC helped to economize public resources and effectively addressed the delivery challenge posed by the training levy-rebate incentive system. SME's training of their workers increased sharply, together with their ability to recover the training levies they had paid. In addition to this, workers' productivity increased, and unemployment either remained at the same level or declined. In addition, other benefits were also accrued by both SMEs and government services, such as strengthened relationships between government and the private sector, development of demand-oriented training policy, increased in-service and in-plant training programs, and strengthened competition in the training market.

However, the SME Training Consortium Program also faced a few delivery challenges, such as organizational and gender disparity issues during the pilot implementation phase, which were subsequently corrected during the scale-up phase. The organizational challenge includes a low level of operational effectiveness of TCs, as a result of having too many and diverse member SMEs. The size and diversity of membership resulted in difficulties for the limited number of training managers in each TC, to provide a tailor-made service for each member SME, taking into account each member's level of skill and training required. There was also a gender disparity. Although female workers outnumbered male workers in SMEs, their training requirements did not receive appropriate attention and male workers ended up receiving greater training opportunities.

In spite of the various delivery challenges and limitations, both the training levy-rebate policy and the pilot SME Training Consortium (TC) interventions were largely successful in many ways—in the accumulation of

human capital, improvements of workers' productivity, and competitiveness of Korea internationally. Based on the positive outcome of the pilot SME TC program, it was scaled up to a national program, starting in 2003 and continuing to the present. It has served as the flagship training program of the Ministry of Labor.

In Brief

Development Problem: In the mid-1990s and in the aftermath of Asia's financial crisis 1998, Korea's enterprise sector was badly affected by high unemployment and low productivity of industrial workers. This caused a sharp deterioration in the quality of life of many workers, as well as generally low global competitiveness of Korean enterprises. Mass unemployment drew government attention to the issue of poverty and the importance of protecting and creating jobs by enhancing the skills and productivity of industrial workers.

Program Solution: Considering the lower employment rate and higher Gini-coefficient, the Korean government felt it necessary to increase the skill development budget and system support as a means of enhancing the productivity of enterprises and the social integration of the disadvantaged.

In 1995, Korean government made changes in its existing employer-directed in-service training policy and introduced the training levy-rebate incentive system, including it in the Employment Insurance system. This levy-rebate system was found to be effective for large enterprises, who were carrying out skill development trainings to enhance workers' productivity and reduce unemployment rates.

However, the training levy-rebate incentive system did not work effectively for SMEs suffering from high unemployment and low productivity. Because so few SMEs participated in training their workers and, therefore, did not benefit from the rebate system, the incentive system was, therefore, inequitable. To address this imbalance, in 2001, the Korean government piloted the Training Consortium program for SMEs with a newly designed training incentive system to address the institutional, financial, and informational weakness of SMEs. This program encouraged SMEs to become active participants, voluntarily conducting the training programs.

Program Results: The objective of SME Training Consortium project was to reduce the risk of unemployment of SME workers and increase their productivity, so that SMEs could become more competitive internationally. This pilot program provided SMEs with additional financial, organizational, and technical assistance from the government, encouraging SMEs to voluntarily and collectively organize training for their workers. This pilot intervention was a huge success in many ways: it increased SME participation in training workers, thus enhancing worker productivity, and, as a consequence, the gap between large and SME was filled and the imbalance redressed. Later, in 2003, the Training Consortium Pilot Program was scaled up to the national level with two more methods and it became the successful flagship training program of the Ministry of Labor (MoL).

Introduction

For decades, Korea has strategically focused on developing the skills of its workforce. This strategy is widely recognized on an international level, as it contributed to Korea's rapid economic growth and was a driving force behind Korea's economic development. This case study will demonstrate how Korea's training policy responded to the critical development challenges of high unemployment and low productivity in Small and Medium Enterprises (SMEs) in the 1990s. The case study examines the Government of Korea's incentive-based training policy and training consortium approach, traces how delivery challenges were met during the implementation process, and draws lessons for other developing countries.

- **Development Challenge: An Increasing Unemployment Rate and the Low Productivity of Industrial Workers during the 1990s.** From the 1960s to the mid-1990s, the Korean economy maintained a high growth rate of 6–8 percent per year. However, in the early 1990s corporate restructuring and structural changes began to reshape the Korean economy. In the late 1990s, the Asian financial crisis caused severe economic slowdown in Korea and negatively affected the demand for skilled workforce. GDP growth dipped from 5.8 percent in 1997 to –6.7 percent in 1998, and the unemployment rate went up from two percent in 1996 to 8.6 percent in 1999. SMEs were the most

severely affected by this crisis. Korea's export-driven economy was largely dependent on SMEs. At the time of the crisis, SMEs accounted for about half of the national income and exports and employed 86 percent of the total labor force, playing an instrumental role in growth of outputs, employment, and exports. To prevent further deterioration of unemployment it was necessary for enterprises to retain their current workers and increase their productivity. To address this, the Korean government made major changes in its skill development policy and introduced an incentive based financial support system to improve the productivity and welfare of their workers.

- **Delivery Challenges: the Low Participation of Enterprises in Training Programs.** Korea's skill development system was built up over time. In the year 1967, in its very early phase of economic development, Korea had adopted a government-led skill development policy by enacting a Vocational Training Act to provide skilled workforces for industrialization. Under this policy, large enterprises were legally obligated to undertake in-plant training of their workers in 1974. In 1976, this policy was modified with the introduction of several options: companies had to provide employer-directed in-plant training, or pay a levy to allow the government to arrange public training programs. This government-led skill development policy complemented the growth of Korean industry by supplying skilled workers for export-oriented light industries in the 1960s and 1970, and heavy and chemical industries in the 1970s and 1980s.

However, in the 1990s, the in-plant training obligation policy proved to be ineffective in encouraging enterprises to voluntarily participate in skill enhancement efforts for their workers. The government responded by transforming the in-plant training obligation or training levy option policy into a training levy-grant, or rebate, system as a part of Employment insurance (EI) system in 1995. This policy required all firms to pay training levies in advance. They were then entitled to receive rebates by submitting expenses incurred for training of their workers. This levy-rebate system proved an effective incentive for large enterprises to carry out skill training. In contrast, ***SMEs did not actively participate in training their workers, and while they paid the levy, they did not take advantage of the rebate benefit.*** This situation caught the attention of government, which instituted a greater

financial incentive for SMEs. But the *regressive result continued, and a disproportionate share of training levy rebates went to large enterprises*. This dichotomy posed a major challenge for government, causing it to review the training-levy rebate incentive-based training mechanism in order to create a better institutional mechanism to encourage SMEs train their workers.

In 1999, the Korean government realized the inadequacy of the training levy-rebate incentive system as a standalone scheme to promote SME participation in training programs, and in 2001 launched a SMEs Training Consortium Pilot Program to address the challenges of the existing training-levy grants (rebate) system. This pilot program has provided an institutional mechanism that encouraged a group of 30-50 SMEs to voluntarily organize and collectively train their workers with additional financial, organizational, and technical assistance from government. The ultimate objective of the SME Training Consortium Program was to reduce the risk of unemployment of SME workers and increase their productivity, so that SMEs could become more competitive internationally.

This pilot intervention successfully addressed the issues presented by the levy-grant system, and saw an increase in SMEs training their workers and, therefore, enhanced the productivity of SME workers. In 2003, the Training Consortium Pilot Program was scaled up to the national level with two more methods, becoming the successful flagship training program of the Ministry of Labor (MoL).

This case study traces the implementation of the Training Levy Rebate Incentive Policy in 1995 and SMEs Training Consortium Pilot Program during the period 2001-2002, examining the delivery challenges they encountered and the actions taken to overcome them.

Contextual Conditions: SMEs and the Evolution of the Skills Training Policy in Korea

During the 1990s, SMEs were the greatest source of employment and income for working people in the export driven Korean economy. According to industry composition data from Korea Federation of Small Business Administration (2002), SMEs shared 98.3 percent of total enterprises and 70.7 percent of total employed worker in 1993. In the same year, SMEs contributed 49 percent

of total industrial production, sales, and exports, and 52 percent of the value added in the manufacturing sector. In 2001, this share further increased to 99.8 percent of total number of enterprise and 85.6 percent of total employed workers.

However, this critical sector was also vulnerable. SMEs in Korea were less competitive in terms of productivity, scale, and finance in comparison to large enterprise counterparts. The productivity per worker of manufacturing SMEs was only 34 percent of large enterprises workers' productivity, and the average wage per SME worker stood at 55 percent (Lee 2006) of the average wage of large enterprise workers. Furthermore, the working conditions in SMEs were inferior to those of large enterprises. The major constraint against SME growth was the problem of human resources, including a shortage of qualified and skilled manpower.

In the real labor market and at the early stage of economic development, market failures are inevitable (Ra and Shim 2009). Market failures result in inefficient resource allocation and, when left entirely to market self-correction, it is probable that training will be underprovided. Taking this into consideration, the Korean government has created a skill development policy to produce an optimal level of training (Ra and Shim 2009).

The government-led vocational training policy approach proved to be an appropriate strategy for developing human capital, which has been a driving force of Korea's economy since 1967 (ILO2008, as cited in Ra and Shim 2009). Ra and Shim (2009) also demonstrate that Korea's human development policy was repeatedly adapted to respond to skill shortages as industrialization advanced and succeeding economic development plans were implemented.

There were two phases to the evolution of Korea's skill development system (Ra and Shim 2009). The first phase took place from 1967 through to the mid-1990s, during which time policy was focused on the support of economic development. The second phase occurred from 1995–97 onwards, during which time policies were focused on the reduction of poverty and inequality, and protection of vulnerable groups, such as SMEs.

From 1962 onwards, the Korean government has promoted an export-oriented industrialization strategy to aid the transition from a rural-agriculture based economy to an industrial economy. This structural and technological shift has increased the demand for skilled workers and technicians sharply (Lee 2006; Ra and Shim

2009). To address the supply and demand of training, the government enacted the Vocational Training Act in 1967. This act established a policy for employer-directed training and, since its establishment, the vocational training system in Korea has evolved into an instrument designed to meet the demand for skilled workers and, also, as a supplementary means to promote the wellbeing of industrial workers (Lee 2006). Under a series of five-year plans, this policy has undergone many reforms, from the earlier version of direct training subsidy policy (1967) for large enterprises, to a regulatory policy of compulsory in-plant training program (1974), to a training-or-levy optional system (1976), and then to a training levy-grant (rebate) based incentive system (1995).

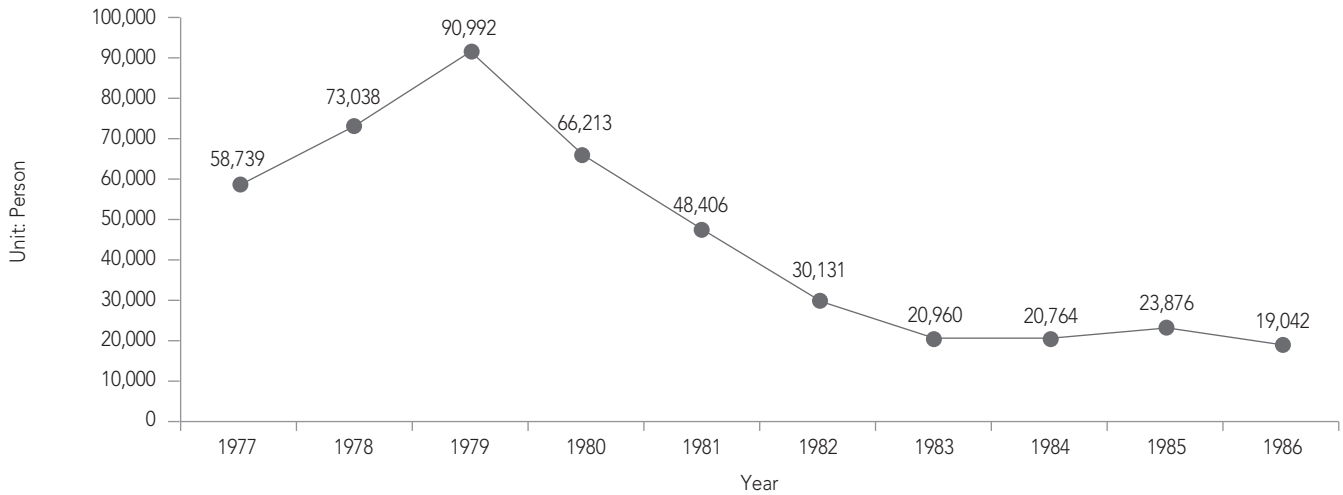
- i. **Prior to 1976:** In 1974, the government recognized that the projected shortage of skilled workers could not be met by enterprises voluntarily training their workers. Therefore, the government promulgated the Vocational Training Special Measure Act, introducing a compulsory in-plant training system during the Third Five-year Development Plan period (1972–76). However, the compulsory in-plant training system received strong resistance from private enterprises against the inflexible and impracticable in-plant training requirement, which led to the introduction of the training-or-levy optional system.
- ii. **Training-or-levy optional system (1976–1995):** During the Fourth Five-year Development Plan period (1977–81), the government introduced the training-or-levy optional system in 1976. This policy obligated large enterprises, with more than 300 workers, to choose between meeting the compulsory in-plant training requirement and paying a training-levy to government. Subsequently, large enterprises conducting in-plant training program accounted for around 70 percent of all obligated enterprises, with the rest opting to pay the training levy in 1978. The government also enacted the Vocational Training Promotion Fund Act (1976), which utilized the training levies collected from enterprises in lieu of undertaking in-plant training. Through this, the government strengthened the public training institutions so that they could supply skilled workers and technicians to meet the demands of the labor market.

The second oil shock of 1979 slowed economic growth and resulted in a sharp decline in in-plant training activities in Korea, while public training activities

continued providing training for a consistent number of workers (Park et.al. 1993 as cited in Ra and Shim 2009). In addition to this, in the 1980s a series of events, such as the world economic downturn caused by the Latin American debt crisis and the severe industrial restructuring during the Fifth and Sixth Five-year Development Plan periods (1982–1986 and 1987–1991, respectively), affected the labor market, resulting in high unemployment. This economic downturn drastically reduced the voluntary participation of large enterprises in in-plant training programs, with the majority opting to pay the training levy instead.

During the Fifth Five-year Plan period (1982–86), the government shifted its focus from quantity-oriented development to quality-oriented growth. This shift in focus created a new demand for skilled occupational training, which rose from industrial structure changes from labor intensive to more technology intensive and from mass production to value-added customized small production. As part of the enterprise restructuring and the protection of workers' employment opportunities, the government enlarged the coverage of the training obligation to all enterprises with more than 200 workers in 1990 and then to all enterprises with more than 150 workers in 1992. Consequently, SMEs (with fewer than 300 workers) were subjected to the same requirement for the in-plant training or levies option without any special assistance or compensation. As a result, the number of enterprises conducting in-plant training programs dropped from 70 percent in 1978 to only 16–20 percent of all obligated enterprises in 1992–93. As the cost of standard training applied by the government in recognition of an in-plant training program carried out by an enterprise was much higher than the actual average training expenses incurred, and the rate of training levy was to be paid optionally, the SMEs saw no advantage in in-plant training programs as it cost them more. One SME representative stated: "I will simply pay the levy and have the government get off my back once and for all." The unwillingness of SMEs to provide in-plant training and the government's inability to update the rate of the training levy, which was significantly lower than the actual in-plant training expenses and the government's standardized cost for recognizing as an in-plant training program, in a timely manner led many enterprises to paying the levy instead of conducting in-plant training (Lee 1983, as cited in Ra and Shim 2009). Such a development reflected the lack of success of the government in correcting the market failure (Lee 2005).

Graph-1: Trend in Number of Skilled Workers Fostered through in-Plant Training (1977–1986)



Source: In-service Training Policy in Korea, Modularization Report, 2013.

Consequently, the compulsory in-plant training scheme was found to be effective in mobilizing funds for expansion of public vocational training, but it was not effective in promoting the voluntary participation of SMEs in workers’ training (Shim, 1997; Lee 1998; Jeong 2002 as cited in Ra and Shim 2009). Furthermore, the skills training offered by the public training institutes tended to be supplier-oriented and disconnected from the demands of private enterprises. The lack of an effective quality control mechanism for training meant that the scheme was ineffective in improving the skills of workers. The skills test was not obligatory for the graduates of the training programs. However, with hindsight, this compulsory in-plant training or training levy option policy made a significant contribution to the enhanced recognition of the need for vocational training and the skilled workforce (Ra and Shim 2009) See Annex 1 for a detailed timeline, including contextual events and policy reforms.

Implementation of the New Policy Interventions and their Delivery Challenges

The final stages of the Government-led economic development occurred during the Sixth Five-year Economic and Social Development Plan (1987–91) and the Seventh Five-year Plan for the New Economy (1993–97). In the free-market economy principle, Korea

aimed to increase the international competitiveness of all enterprises, including SMEs, and to promote the welfare state. The labor market during the period 1987–1997 had undergone major changes in accordance with the structural reforms for transitioning to technology-intensive industry and service industry. This major change in industrial structure reflected increased automation, technology advancement and mechanization. This, in turn, increased the demand for the skilled labor. In line with this socio-economic development plan, the government restructured the skills development system and introduced a training levy-rebate incentive system in the year 1995, as well as piloting a training consortium program in the year 2001 to promote SME training participation for the development of the skills of their workers (see annexes for more details: Annex II contains a detailed timeline, Annex III a stakeholder map, and Annex IV a process map of government interventions).

Training Levy-Rebate Incentive System (1995 Onwards)

In the year 1993, the Korean government dropped the policy of compulsory in-plant training for all enterprises, except for large industries with more than 1,000 workers. Based on the philosophy that training is a public good and cannot be governed completely by perfect competitive market principle, the Korean government decided to intervene in the labor market to encourage and promote

the voluntary participation of enterprises in training their workers. In 1995, the government introduced the Employment Insurance (EI) system, which included a new training (occupational skill development) levy-rebate program to encourage employers to provide life-long training services for their employees. Under this policy, all enterprises would pay training levies as part of the unemployment insurance fees for their workers, and employers no longer had an option to provide in-plant training instead of paying a training levy. Enterprises were left free to choose training institutions, courses, and methods, irrespective of in-service or pre-service type training to meet their needs. By training their workers, enterprises were offered the incentive of reimbursed training expenses.

In 1997, in the aftermath of the Asian financial crisis, the government shifted the emphasis of skill development policy from supporting economic growth towards reduction in poverty and inequality, and employment creation and protection of disadvantaged groups, such as the unemployed and SMEs. The newly reformed skill development system in alignment with the national agenda was implemented in full scale by the enactment of the Worker's Vocational Training Promotion Act at the end of 1997. Under this act, the government expanded the training levy-rebate policy coverage to all enterprises including all sizes of SMEs (i.e., including enterprises with one worker only) with a favorable rebate incentive for SMEs.

i. **Challenges under Training Levy-Rebate Incentive System:** In practice, most of the enterprises utilized the Employment Insurance Law (EIL) incentive system for in-service training rather than pre-service trainings, as occurred before the EIL regime. The levy-rebate incentive system under the EIL regime proved superior to the previous training-or-levy optional system.

The participation rate of both enterprises and workers increased, partly due to the rigorous enforcement of the Employment Insurance Law (EIL) and partly due to the rebate incentive (recovery) system. It was seen as an effective incentive for enterprises to carry out job-related skills training of their workers.

However, the new system worked against SMEs, since they did not make as much use of the levy-rebate incentives as large enterprises did. While most large firms participated in training and had their levies reimbursed, few SMEs participated, and simply forfeited the levies. In response, the government increased the incentives for SMEs by raising the total reimbursement of their training levies up to 270 percent of the training levies paid. However, the imbalance persisted.

The Ministry of Labor's report from 2001 showed that 77.6 percent of total large enterprises trained 37.5 percent of their total workers, making use of the training-levy rebate incentive system, whereas only 4.7 percent of SMEs offered training programs to 4.2 percent of their total workers and received the training levy-rebates (Lee 2006). Large enterprises secured about 30 percent of their total training levies through reimbursement in 2001, while SMEs recovered only 15 percent of their total training levies. This inequitable situation implies that there were institutional and/or informational constraints impeding voluntary participation of SMEs in worker training on a large scale. This levy recovery gap was a serious policy issue, as SMEs accounted for 99.9 percent of the total enterprises, and provided 86 percent of all contracted employment opportunities, representing about half of exports and national income. This posed a major challenge for the government in the delivery of the training-levy rebate incentive mechanism and forced the government to devise a better and more favorable mechanism to encourage SMEs to participate in the use of the newly established training incentive system.

Table-1: Enterprise Participation and Utilization under Training Levy-Rebate System, 2001

	SMEs	Large Enterprises	Total Enterprises
Total training levies rebated (as % of total levies paid in advance)	15%	30%	
Enterprises participating in training (as % of total enterprises)	5%	78%	
Workers participating in training (as % of total workers)	4%	38%	
Workers paying levy (in million workers)	4.5	2.4	6.9
Workers receiving training rebate (per million workers)	0.2	0.9	1.1

Source: Author's Compilation from Skill Development Policy report, MOL .

To meet the delivery challenges of the Training Levy-Rebate Program of 1995–1997, and to come up with a better mechanism, it was essential to analyze the causes of the delivery challenges. A case study on the effectiveness of training policy and SMEs in Korea (Lee 2006) described six problems that caused regressive utilization of the training levy-rebate incentive system by SMEs: scale jeopardy, public good jeopardy, financial jeopardy, informational jeopardy, organization jeopardy, and gender jeopardy. In addition, SMEs' preference for choosing in-service training over pre-service training, and for paying the levy over availing themselves of rebate benefits under the incentive system, also contributed to these delivery challenges. These jeopardies provided disincentives for SMEs, such as high training costs, poaching risks, institutional and administrative burdens to arrange training programs and recover levies, and asymmetry of available information on training markets.

Scale Jeopardy: Firms were supposed to arrange for in-house training (pre- and in-service) or institutional training programs by contracting with outside training institutions. SMEs found it more difficult to organize such in-plant training programs because of their small number of employees, and consequently incurred higher training cost per worker. Moreover, the low technologies adopted in SMEs made it less flexible and affordable to allow their employees to participate in the external training programs without disrupting their production schedule.

Public Good Jeopardy: Skill development is generally treated as a merit good (Musgrave 1959; Freedman 1962, as cited in Lee 2006), a special version of public good. It creates positive externalities in a perfect market situation, but in real labor market, where demand exceeds the supply, market failures like poaching are inevitable. Thus, it creates negative externality, which prevents enterprises training their workers, as they worry that trained workers will be enticed away by other enterprises, especially by large enterprises. Furthermore, workers in SMEs generally stay for shorter period and have high attrition rates compared to large enterprises. This further aggravates the negative externalities and makes SMEs reluctant to provide or finance training for their workers with their own funds.

Finance Jeopardy: In general, training is an investment in human capital, with a relatively long gestation period

in receiving returns on the investment. The limited financial and credit situation does not allow SMEs to invest in long gestation investments, such as training their workers. Moreover, the high cost of training and uncertainty as to whether trained employees will stay with the enterprise for a long period of time discourages SMEs from investing in human capital development. Furthermore, paying unemployment insurance fee including an upfront training levy and claiming for the settlement of training expenses later makes it financially difficult for SMEs to conduct training programs.

Organization Jeopardy: SMEs rarely had staff members exclusively devoted to planning, organizing, and management of training of their workers. Even if SMEs had identified special skill requirements, they often lacked the expertise to negotiate with training institutions to contract, manage, monitor and evaluate the training programs and then handle the cumbersome process of claiming levy-rebates.

Informational Jeopardy: Under the training levy-rebate system, SMEs faced institutional and informational difficulties in managing training contracts with training institutions. Unlike larger enterprises, SMEs did not have staff that were exclusively responsible for the training of their workers, and disproportionately did not have the information or expertise to select suitable external training programs. Furthermore, the public training institutions were designed to offer pre-service training courses only and were imparting supplier-oriented training with a set of standardized training courses only. Therefore, SMEs had limited options and opportunities to choose for their training programs.

Gender Jeopardy: Generally, SMEs employed a larger number of women workers (31 percent) compared to large enterprises (27 percent). Therefore, SMEs tended to use the training incentive system less actively than large enterprises, because in practice the share of male workers (16 percent) who underwent training was greater than the female workers (nine percent). The higher incidence of attrition and the shorter career length of female workers, as a result of family and social obligations, discouraged SMEs from selecting women for training programs (Lee et al., 2001). The training levy-rebate system neglected the gender aspect completely.

Professional Staff Jeopardy: In general, the rate of return to the training of administrative and managerial workers was higher than that of production related workers (Groot 1995, as cited in Lee et al. 2014). A relatively small number of such managerial and administrative workers in SMEs created a disadvantage in getting a high return from training their workers.

ii. **Corrective Measures to Address the Challenges to the Delivery of the Training Levy-Rebate Incentive System:** As the Asian financial crisis of 1997 quickly spread to real sectors of the economy, it badly affected Korean labor markets, especially in the SMEs sector, which was already suffering with high unemployment and low productivity. To stem further deterioration in the rate of unemployment, the government addressed the issue of low participation of SMEs in training in order to raise their international competitiveness in the long run. By this point, the government had recognized that the training-levy rebate incentive system alone was inadequate to encourage SMEs to participate in worker training. Additional institutional mechanisms and incentives would need to be devised to address the jeopardies and challenges of SMEs under the existing training levy-rebate incentive system. Aside from financial constraints, the organizational, informational, technical, and managerial constraints needed to be removed. To address these challenges, a new incentive system in the form of SME Training Consortium System, was devised and piloted in 2001.

SME Training Consortium (TC) Pilot Program

In 1999, in the wake of the Asian financial crisis, a private industrial association, the Korea Chamber of Commerce and Industry (KCCI), devised the Training Consortium (TC) pilot program. The pilot program focused on enterprises with less than 300 workers, as these SMEs suffered most from the Asian financial crisis, but they held greater capacity for employment and had lower productivity in comparison to large enterprises. The SME Training Consortium pilot program was formulated to prevent further deterioration of the unemployment rate in SMEs and to improve the productivity of SME workers and enhance their wages by boosting their skills and knowledge. This program was designed with an institutional approach to organize 30-35 SMEs and

to carry out voluntary collective training of workers with additional financial, organizational, and technical assistance from the government.

Pilot Strategy: In 2000, Ministry of Labor (MOL) made a policy decision to launch a pilot SME in-service training consortium project. The Ministry of Labor (MOL) partnered with the KCCI to implement the pilot program. At the beginning three industrial cities, Busan, Incheon, and Kwangjoo, were selected for the pilot intervention. To secure funding, the Ministry of Labor and KCCI jointly developed a proposal for three pilot projects and submitted it to the World Bank/Asia and Europe Economic Meeting (ASEM) to gain international grant support. However, because of the Asian financial crisis and international budget constraint to support the development projects, the World Bank granted only US\$250,000 against the proposed budget of US\$730,000 for the pilot program. With this insufficient initial fund, the pilot project began in Busan in June 2001. Busan was selected from all the industrial cities as it was so severely affected by the economic crisis. By observing the overwhelming responses from SMEs towards the Training Consortium at the very beginning of the pilot project, the Ministry of Labor (MOL) agreed to provide additional funds to support the pilot program. KCCI utilized this additional funding to refurbish the KCCI's training equipment and facilities, to extend the first pilot project until December 2002, and started two more pilot projects in the cities of Incheon and Kwangjoo in September 2001. The overall implementation of the pilot program was entrusted to the KCCI. The field office of the Ministry of Labor (MOL) and the local chamber of the KCCI in these three cities played an instrumental role in the implementation of the program.

Implementation: The pilot program was designed and implemented in four phases: planning and organization of a training consortium; training need assessments for member SMEs; training service provision; and monitoring and outcome evaluations.

i. **Planning and Organization of Training Consortium:** The local Chamber of Commerce and Industry was given the responsibility of mobilizing 30–50 local SMEs from the same industries and to organize them into a Training Consortium (TC). The objective of the TC was to help SMEs to voluntarily and collectively

organize skills development programs for their workers in partnership with other stakeholders (Lee 2006). Each training consortium set up an Operational Committee (OC), composed of representatives from various stakeholders like member SMEs, local Chamber of Commerce and Industry, Ministry of Labor field office, and training experts to manage and coordinate the training tasks. For the efficient functioning of the TCs, the operating committee (OC) made a mandate to meet periodically to observe, examine, and give support to the planning and management of the training affairs of the Training Consortium. Ministry of Labor (MOL) provided financial support for the coordination and management of these Training Consortia and financed two training specialists to manage the training affairs at the consortium level. Providing such training specialists to each SME would be expensive. Therefore, the government decided to finance two training specialists assigned to each TC, so that TC member SMEs could collectively benefit from the specialists' professional service.

ii. **Training Need Assessment for Member SMEs:**

The two training managers assigned to each Training Consortium played a key role in managing Training Consortium activities. These training managers acted as the training specialists for each member SME. They were given the responsibility of establishing an information network among Training Consortium members, conducting training need assessment surveys of each member SME, planning training program activities of member SMEs, and contracting with outside training institutions and member SMEs to train their workers collectively. Training managers carried out networking activities with consortium stakeholders and SME members, and established strong communication bridges among them through a web page, emails, and periodic meetings. Furthermore, training managers undertook training need assessments through interviews and job analysis of SME managers and workers, for each member SMEs to map the skill gap and to plan a customized skill development program for each member SME. Further, they established good relationships with training institutions and undertook collaborative activities to develop training programs and materials, and monitor their training activities. Training managers also carried out evaluation activities upon completion of major training courses on behalf of the member SMEs.

iii. **Training Service and Innovative Incentive Provision:**

Under the training levy-rebate system it was observed that SMEs participation in worker training was lower mainly because of their financial, human resource management, and organizational constraints, as well as information asymmetry. It was very difficult for individual SMEs to arrange, negotiate and contract with outside training institutes in order to organize training programs because of the small scale of SMEs. So, the objective of providing government-financed training managers/specialists to a consortium was to address these constraints.

In addition to providing training managers, the government also attempted to bring reforms in existing financial incentive systems that were similar to the tax incentive systems (World Bank 2002) and levy rebate systems (Gill et al. 1999) for SMEs found in other countries. However, the reformed financial incentive system for the Training Consortium was different from the simple tax incentive system in the sense that it obligated all enterprises to pay training levies in advance irrespective of whether they offered in-plant training or not. As a result, free riders were discouraged, while SMEs were encouraged to provide training for their workers first. Similarly, government channeled the financial incentives through Training Consortia instead of individual SMEs, so the training managers' services were made available to members, thereby economizing public resources and, at the same time, helping SMEs to overcome institutional and technical constraints.

iv. **Monitoring and Outcome Evaluation:**

The Operational Committees served as an important monitoring and evaluation unit for each consortium. Training managers were accountable to the Operational Committee for their performance. Periodic OC meetings allowed stakeholders to regularly check on the progress of implementation and project results against the project objectives and plans. Furthermore, the involvement of the World Bank in the early stage of project design helped to build a result-based monitoring and evaluation plan with indicators to study the impact, comparing pre and post intervention results. The implementation team at the KCCI and the Ministry of Labor consciously monitored and evaluated the program throughout the implementation process.

In addition, the pre-existing training levy-rebate system and the software infrastructure for

vocational training on a national scale, such as the technical qualification system, the skills test system, the instructor training system, training curricula and materials development programs, and the employment service system, provided strong support for the operation of TCs including a monitoring and evaluation framework. The software infrastructure for vocational training was established under the Vocational Training Law of 1967.

Challenges of the Training Consortium Program

- i. **Organizational Challenge:** The pilot program was originally designed to establish one consortium in each industrial zone with 30-35 SMEs as TC members. However, each of the three Training Consortia actually started with a total of 163 member SMEs, and this number increased to 732 SMEs by the end of the project in 2002. So there was an increase of four and half times the size of SME participation in comparison to the originally planned number of SMEs. Despite the sharp increase in the number of member SMEs, the government maintained only two training managers in each of the three TCs throughout the program implementation period. Although this intervention enabled each Training Consortium to enjoy economies of scale during the early phase, each Training Consortium's operational effectiveness gradually decreased. With so many diverse member SMEs belonging to different industrial associations, training managers (TMs) found it difficult to provide tailor-made advice and attention to each member SME's skill need and training requirement. Thus, it became difficult for training managers to organize training and offer courses economically by accommodating a small number of trainees with diverse needs. As a result, TCs gradually lost its homogeneity and solidarity among member SMEs. Further, the two training managers were overwhelmed by the tasks to serve this large number of SMEs in one consortium. In retrospect, it would have been better to organize each TC by SMEs belonging to the same trade association, as originally planned, and the ratio of two TMs to 30–35 SMEs in each TC should have been maintained.
- ii. **Gender Challenge:** Though the pilot program was able to address the financial, human and organizational constraints of SMEs, it failed to adequately address

the gender issues. Despite the large number of women employees in SMEs, very few women workers participated in the training programs.

Results and Outcome

Reforms in skill development policies addressed the unemployment that followed the financial crisis to a considerable extent. It proved to be a practical measure to alleviate social polarization, especially the rise in the income gap among industrial workers. While initially concentrated on providing training opportunities for vulnerable industrial workers, after the financial crisis policies focused more on increasing the productivity of SME workers.

Results of the Training-Levy-Rebate System

- i. **Increased Training Opportunities for In-Service Workers:** After the introduction of training-levy-rebate incentive policy was integrated into the vocational skill development program under the employment insurance system, the number of training participants rose steeply from a total of just 12,986 in 1988 and 100,000~120,000 during 1992 and 1996, to 667,000 in 1998. Furthermore, this number grew seven-fold to 4,500,000 in 2009 (Lee et al. 2014). The increase in the absolute number of training participants after the integration of the training-levy-rebate system mainly involved the training of in-service workers. Finally, the vocational training system was established as part of the active labor market policies and became a key component within the framework of the employment insurance system. In this way, the employer-directed training program has greatly contributed to expanding training opportunities for incumbent workers in a short period of time. Similarly, a great number of studies on the effectiveness of the employer-directed training program show that the employer-directed training program had a positive impact on employers' overall training investment (Lee et al. 2014).
- ii. **Improved Business Performance and Productivity of Trained Workers:** Various empirical studies have been carried out to assess the impact of in-service training on workers' productivity. Most of these studies supported fully or partially the enhancement

of workers’ productivity, measured in terms of wage increase and/or enhancement of business performance. A study by Chul-in Lee and Kyeong-joon Yoo in 2011 (Lee et al. 2014) found that participation in training caused a statistically significant increase in the wage rate, while research by Ga-woon Ban in 2013 (Lee et al. 2014) found that enterprise investment in training improved enterprise business performance. On balance, Korea’s training levy-rebate incentive system under the employment insurance system accumulated human capital by the in-service training of workers and resulted in a higher productivity and better business performances.

Results of the Training Consortium Program

The training consortium project was successful in promoting SME workers’ productivity, improving levy-rebate utilization by SMEs, solving most critical problem of the shortage of skilled human resource in SMEs, and checking further deterioration of the unemployment rate. In addition, the TC pilot program also helped in setting up a demand-driven training system, building a strong network and partnership among stakeholders, which resulted in three different types of consortium models for its scaling up. During the monitoring and evaluation process, several SME representatives in Busan commented: “This is the first time that the Chamber of Commerce and Industry is doing something useful for its members.”

i. **Increased Participation of SMEs in In-Service Training:** The result of the Training Consortium Pilot Program was quite impressive in terms of SME participation in the training program and utilization of levy. The TC program originally planned to cover 90 SMEs

Table 2: TC-Wide Output of In-Service Training for Employees, 2002. (Unit: Person)

	Total	Busan	Incheon	Gwangio
Actual Trainees	6,573	2,353	1,837	2,383
Planned Trainees	3,087	871	1573	643
Actual/Target (%)	213%	270%	117%	371%

Source: KCCI as cited in In-Service Training Policy in Korea, KSP, 2014.

and to train 3,087 workers. But SME participation in TCs at the end of the pilot in December 2002 was increased by four and half times and reached a total of 732 SMEs. By June 2002, out of a total of 557 SMEs members with 14,043 workers, 6,573 accumulated workers received in-service training, of which 65 percent were production process workers, and about 75 percent of the member SMEs had less than 50 workers located near the industrial zone developed by the government.

With the advent of the Training Consortium Pilot Program, the proportion of TC member SMEs, which offered training for their workers increased from 11 percent before the pilot project to 50 percent after becoming TC members. The growth of 451 percent in SME participation in training is impressive, and this high rate of growth continued, albeit at a slower rate, at the national level during the scaling-up phase of the training consortium model.

ii. **Training Levy-Rebate Utilization by SMEs:** The TC pilot program also helped SMEs in addressing their financial constraints by providing better financial benefits to member SMEs. Prior to the TC program, SMEs were able to recover only 24 percent of

Table 3: Performance of TC Member SMEs: Before and After Comparison

Attributes	SMEs Before Pilot Program (June 2001)	SMEs After Pilot Program (June 2002)
Training Levies Rebated (rate)	24%	48%
Enterprises Participating in Training	11%	50%
Workers Participating in Training	3,087 (Planned)	6,573 (Actual)
Number of TCs	0	3
Number of SMEs in total 3 TCs	90 (Planned)	732 (Actual)
Number of SMEs per TC	30 (Planned)	240 (Actual)
Number of Training Managers in 3 TCs	0	6

Source: Author’s compilation from different reports; Lee (2006) and KSP (2014).

Table 4: Number of TC Member SMEs Who Participated in Training Levy Rebates

Area	Pre-project (Jan–May 2001)	Post Project (Jan–June 2002)	% Increase
Busan	31	127	410
Incheon	56	118	211
Gwangju	110	172	156
Total	980	417	256

Source: KCCI and Employment Information Center, as cited in Lee et al., 2014.

Table 5: Comparison of Training Levy-Recovery in TC Member SMEs with All Enterprises and SMEs at the National Level

(Unit: Won)			
	2001 (Jan–Dec)	2002 (Jan–Dec)	Changes
Busan TC members			
Total Training Levy Paid	116,138,630	95,990,480	–20,147,110
Total Rebates	28,129,250	46,489,050	18,359,800
Recovery Rate	24.2%	48.4%	200%
All Enterprises Nationwide			
Recovery Rate	33.0%	24.8%	–25%
All SMEs Nationwide			
Recovery Rate	25.5%	14.6%	–43%

Source: KCCI/Busan and Employment Information Center

the training levy paid as part of their total unemployment insurance at the national with the advent of the TC program, the levy recovery rate saw a sharp increase to 48 percent: an increase of 200 percent. At the same time, a comparison with the trend of all SMEs at the national level showed a sharp contrast. At the national level, the levy recovery rate of all enterprises nation-wide actually declined by 25 percent, and all SMEs nation-wide by 43 percent.

iii. Improving SME Productivity and Prevention of Unemployment Rate:

The pilot project enhanced the capability of SME workers, especially newly recruited trainees. For an example, trainees in the Busan TC Chamber area scored 93 points in the welding course, compared to the average score of 65 points in non-TC areas. An ex-post evaluation study result mentioned in the 2013 Modularization of Korea's Development Experience with In-Service Training Policy (Lee et al. 2014) provides a clear indication of improvement in workers' job performance and productivity after training. Improved productivity was observed and better performance of its parameters in terms of saving in reduced maintenance and repair expenses, increased factory machine utilizations, declined waste or defect product, and workers' positive attitude towards a longer stay with the original job. In addition, industry-wide collective training has substantially reduced the risk of poaching skilled workers since all of the SMEs of the same trade and area joined the TC and a large number of them trained their workers.

Besides the productivity enhancement, the pilot program also helped SMEs in improving their unusually high unemployment rate since the 1998 financial crisis. A survey conducted in TC areas in June 2002 reveals that member SMEs, which participated in training of their workers, were less willing to lay off their workers and slightly increased the overall employment level by 1.7 percent. In contrast, those SMEs, which did not participate in the TC program, suffered reduction in the total employment level by 8.8 percent (Lee 2005).

iv. Emergence of Demand-Oriented Training System:

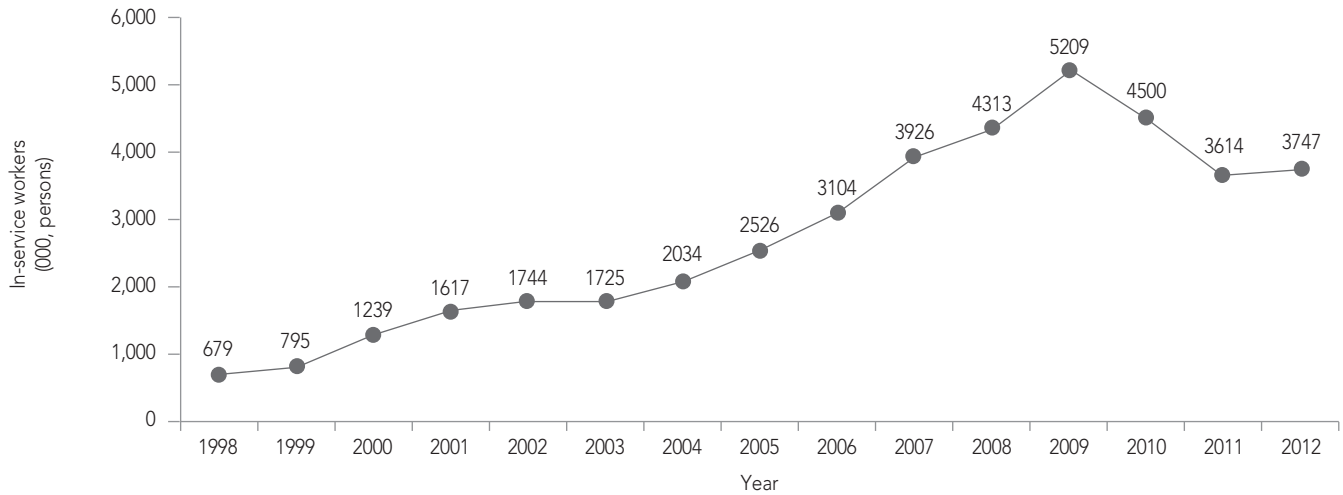
The impressive progress of the pilot TC program motivated the Ministry of Labor to change its supplier-oriented training policy toward a demand-oriented training system. It resulted in three types of SME TC methods. The first type of TC is established when a

Table 6: Employment Rate of Participating vs Non-Participating SMEs in the TC Program

	Pre-project (June 2001) Employment	Post-project (June 2002) Employment	Changes in Employment (%)	No. of Enterprises Sampled
Total Participating SMEs in TC program	4,850	4,931	1.7	63
Total Non-Participating SMEs in TC program	4,960	4,524	–8.8	97

Source: KCCI.

Graph-2: Trend of In-Service Training under Training Levy Rebate Policy (1998–2012)



Source: Author's compilation from In-service Training Policy in Korea, Modularization Report, 2014.

large enterprise helps SMEs, supplying primary parts and services to it, organizing a TC and offering training programs for its cooperative SMEs workers. The second type of TC is organized when a public training institute or a higher educational institute helps SMEs in its vicinity to organize a TC and provide training services to SME workers. The third type of TC is organized by business associations, such as the KCCI, for employees of member SMEs. These TC methods were scaled up at the national level after 2003, and the SME TC program became the national flagship training program for the MOL.

- v. **Enhanced Competition and Cooperation in Training Markets:** With the increased number of methods for organizing SME TCs and the rising rate of SME participation in training, training institutions, both public and private, had to improve their training programs competitively to meet the demand of SME TCs. Sometimes, training institutions had to collaborate to meet the training demands of TCs collectively.
- vi. **Preferential Shift Towards In-Service and In-Plant Training Programs:** During the deregulation period of training systems between 1995 and 1999, large enterprises had radically shifted their preference from pre-service training for new entrants to in-service training of employed workers. Similarly, SMEs also started giving greater emphasis to in-service training than to pre-services or transfer trainings, but they found difficulties in sending their workers to public

training institutions because of their small scale, and financial, technological, and institutional constraints.

With the advent of the pilot SME Training Consortium Program in the year 2001, SMEs conducted a substantial number of training courses in-plant, using their own machines, tools, equipment, and materials, but with instructors sent by outside training institutions under a training contract. This indicated that SMEs preferred to undertake more in-plant or on-the-job training programs, as opposed to institutional training programs outside their establishment when they conducted in-service training. With the scaling up of the SME TC program, this trend of giving priority to in-service training continued more conspicuously.

- vii. **Scaling-up and the Current Situation:** Based on the positive outcome of the pilot project, the training consortium scheme was mainstreamed in 2003. Since then, it has become the flagship program of the Ministry of Labor (MOL), which has expanded the TC project across the nation. The government's financial support for the TC covers not only the recurring expenses of the training managers, including visits and consultations and public relation activities, but also capital expenses for training equipment and facilities. Further, to facilitate the scaling up program, the Korean government made amendments to the Workers' Vocational Training Promotion Act (1997) and promulgated the Workers Vocational Skills Development Act in 2004.

Table 7: Performance of the TC Program at the Scale-Up Phase

	(Unit: Person)						
	2001	2002	2003	2004	2005	2006	2007
Number of TCs Assisted (Cumulative)	3	14	19	30	47	57	69
Workers Trained ('000)	4	10	20	38	71	143	295
Number of Member SMEs ('000)	1	3	8	15	33	63	134
Levies Rebated (Billion Won)	3.2	6.1	14.1	16.8	39.9	45.0	74.4

Source: Ministry of Labor (2008) as cited in KSP, 2014.

Success Factors and Lessons Learned

- i. **Overcoming Informational, Institutional and Management Constraints in SMEs:** The Training Managers (TMs) of each TC addressed the constraints that prevented SMEs from undertaking training programs for their workers. The TMs played an active role in prioritizing training of member SMEs, contracting training institutions, administration of the training-levy rebate documents and processes, monitoring the training services, and evaluation of training programs on behalf of member SMEs.
- ii. **Ownership and Strong Partnerships among Stakeholders:** Although SMEs had ownership of the TC, this project strengthened the partnership among all major stakeholders. The representatives of the government (Ministries of Labor and Industry, Small and Medium Enterprises Administration, provincial and municipal governments) developed a new relationship with the private sector by becoming members of the TC Operating Committee and advising the TC regarding training and human resources development. The TCs periodically held consultative meetings and seminars to monitor and evaluate the progress in the project, and suggested for improved and simplified government procedures and processes related to SME training courses and levy rebates. Such close collaboration between the private and public sectors led to some positive results. For example, the ceiling of training levy rebates was raised from 200 to 270 percent of the training levy paid, and training expenses were reimbursed at the time of the government's approval of training courses. In addition, the lead time required for submission of a training plan for government approval was shortened substantially, and the ceiling imposed on the rebate of training expenses when an SME conducts in-plant training, which was significantly lower than that set for institutional training, was repealed at the request of SMEs.
- iii. **Geographical Proximity of Training Facilities:** The geographical proximity of training facilities contributed to SMEs participation in training programs. For example, the Busan Training Consortium was located in the newly established industrial zone on the outskirts of the city, whereas most training institutions were located on the opposite side of the city. These long distances discouraged both employers and workers from participating in training programs offered at the training institutes. To overcome this hurdle, the machinery manufacturers association offered a building with a new training facility right in the center of the industrial zone. The geographical proximity of training facilities enabled the member SMEs to actively and enthusiastically participate in the training programs. It also encouraged training institutions to consult with their client SMEs closely and more often for the development of training programs, thus being more relevant and demand-responsive.
- iv. **In-Plant Training and Mobile Training Delivery Service to Increase SMEs' Participation:** By regulation, when an enterprise conducted in-plant training, the level of rebate was less than half that of the institutional training outside the enterprise. With the beginning of the SME TC, the regulation was revised to allow the full level of reimbursement, even for in-plant training. This change greatly promoted SMEs' participation in training. Some SMEs closed down their production lines and engaged all workers in the training program for a few days. Some SMEs adopted a different innovative way of delivering the training mechanism in which the contracted training institutions brought their training instructors and equipment to the plant in a vehicle. This mobile training mode increased the opportunity for SMEs to undertake

in-plant training by involving all of their workers at one time rather than by sending their workers individually to outside training institutions at different times. This mobile training mode served the special needs of micro-enterprises and SMEs, since they preferred to protect their unique technical know-how and promote teamwork and solidarity among their small number of workers (Lee et al. 2014).

- v. **Software Infrastructure for Vocational Training Management:** The pre-established software infrastructure under the Vocational Training Law 1967 provided a smooth takeoff of TCs: established standards for vocational training and skill test systems, training systems for vocational training instructors, training related research programs, and vocational training finance system. As a result, TCs were able to induce SMEs to undertake vocational training for their workers.
- vi. **The Government's Financial Assistance for the Training Consortium:** For the successful operation of a TC and the training managers, governmental financial assistance for the recurrent expenses of a TC was thought to be more effective than covering the capital expenses of the training suppliers. Training for the SME workers can be carried out not only by external training institutions, but also by SMEs themselves, both in-plant and on-the-job. However, the training needs of SME workers cannot be identified, or training programs organized, without financial assistance for the provision of training managers for each TC and adequate operation of the training managers.
- vii. **Starting with a pilot program:** The SME Training Consortium program started as a pilot, and subsequently scaled up to a national level. Because the program went through various iterations—some successful and some not—the government was able to benefit from accumulated experience and knowledge, and was, therefore, able to achieve a successful operation of the flagship training program.

Limitations: Despite the sharp increase in the number of member SMEs in the Training Consortium program and the impressive success in enhancing worker productivity and alleviating unemployment, the TC projects nevertheless experienced some problems. Throughout the project period, only one TC was maintained in each of three cities. Because of this, each TC was forced to serve four and half times the number of SME members

initially planned, without an increase in the number of training managers assigned to each TC: only two training managers per TC. Although it enabled each TC to enjoy economies of scale, the operational effectiveness of each TC decreased. This not only sacrificed homogeneity and solidarity of its members, but also each TC could not provide customized services to its member SMEs. It became very difficult for TCs to organize training courses economically and effectively in order to accommodate the diverse training needs of SME workers, since member SMEs belonged to different economic sectors and industrial associations.

Conclusion

The success of the Korean Government in addressing the issues of low productivity and unemployment in the SME sector represents a useful case for many developing countries. The demand for skilled human resources in the growing export-oriented and industrializing Korean economy was effectively met by the government intervention with the increased role of private players in training markets. Flexible reform in skills development policy in response to the international financial crisis and changing market needs has brought a structural change in the existing training-levy incentive system and created an institutional mechanism for SMEs to engage voluntarily and collectively in training of their workers. Furthermore, the institutional mechanism effectively addressed the financial and institutional constraints faced by SMEs in training their workers and the inequitable situation that developed between large enterprises and SMEs in the operations of the workers' training levy-rebate system.

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Annex I: Timeline 1 (1962–1995)

Annex I

Year and Economic Development Plan	Internal and External Events	Driving Force for Skill Development	Stage of Skill Development System	Legislation Change/ Policy Reforms	Main Features	Results/Outcomes
1960s: 1 st and 2 nd Five Year Economic Development Plan (FYEDP)	Structural and technological shift: transition from a rural-agriculture based economy to an industrial one	Increased the demand for skilled workers and technicians for industries	Introduction of government led-Skill Development System: an employer-directed training policy in 1967	1962: The craftsman Training Ordinance under the Labor Standard Act 1967: Enactment of Vocational Training Act	Employers voluntarily train the workforce at a production site using apprenticeship method Direct training subsidy for large enterprises	Budget constraint to provide huge subsidy, low supply of trained workforce and market failures due to frequent scouting and poaching of trained workers.
1970s: 3 rd and 4 th FYEDP	Industrial restructuring: increased focus on heavy chemical industry	Shortage of Skilled workforce in heavy-chemical industries	Government led regulatory policy: Enterprise Training System Take-off	1974: Enactment of Vocational Training Special Measure Act	Compulsory in-plant training program (1974)	Received strong resistance from private enterprises against the inflexible and impracticable training requirement.
1979–81 Second oil shock and Latin American debt crisis in early 1980s		Slowed down the economic growth - recession	Public training activities continued imparting training at the same level	1976: Enactment of Basic Vocational Training Act (BVTA)	Introduction of Training-or-levy optional system (1976)	Strengthening of public training institutions – increase in-plant trainings. Sharp decline in in-plant training activities and low demand for training.
1980s: 5 th and 6 th FYEDP	Stabilization and open economy policy Government shifted focus from quantity oriented development to quality oriented growth Industrial structure changes from labor intensive to more technology intensive and from mass production to value-added customized small production	Demand for skilled occupational training	Expansion of Public Skill development and increase in number of Public Training Institutes	1981: Amendment of BVTA 1987: Amendment of BVTA	Obligate in-plant training; legal ground for in-service worker training was established Deregulation of training levy obligation to boost the training program Extension of obligation to all type of enterprises including SMEs	Employers avoided enterprise training and choose to pay levy, rather to conduct trainings Appearance of government failure A Supplier oriented public training system found to be lost its importance High unemployment rate and low productivity of industrial workers

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Annex I (continued)

Year and Economic Development Plan	Internal and External Events	Driving Force for Skill Development	Stage of Skill Development System	Legislation Change/ Policy Reforms	Main Features	Results/Outcomes
Early 1990s (until 1993): Beginning of 7 th or New Economy Plan	Free market economy: goal to increase international competitiveness of all enterprises including SMEs and to promote welfare state Sign of slow recovery of Korean economy from slowdown	Increasing demand for upgrade training for incumbent	Transition period Reorganization under Employment Insurance Scheme (EIS)	1991: Amendment of BVT 1993: Amendment of BVT 1993: Transfer of Public training institutes to private organization KCCI to bring competitiveness	Vocational training courses were re-organized into a job skill upgrade training system Provision to protect and foster vocational training corporations to promote private vocational trainings. Financial support to KCCI to improve training methods	Abolish of Training-or-levy optional system except large enterprises with 1000 workers Government-led economic development ended Increased number of privately managed public training institutes

Source: Author's compilation from reports on Employer Directed in-service training by Ministry of Labor

Annex II: Timeline 2 (1995–2002)

Annex II

Year	Internal and External Events	Driving force for Skill Development	Stage of Skill Development System	Legislation Change/ Policy Reforms	Main Features	Results	Remarks
Mid 1990s (1995)	Free market economy: goal to increase international competitiveness of all enterprises including SMEs and to promote welfare state	Increasing demand for upgrade training for incumbent	Reorganization under Employment Insurance Law (EIL)	1995: Enacted Employment Insurance Act Introduction of training levy-rebate incentive system	Support employers vocational skills development training of workers covered by employment insurance Mostly covering the large enterprise having 300 workers and above	Increased participation of large enterprises in training programs	Organizational Change
1997–98	Asian financial crisis: further slowdown of Korean Economy SMEs were badly affected, leading to high unemployment and low productivity of industrial workers	Government shifted the emphasis of skill development policy from supporting economic growth towards reduction in poverty, inequality, employment creation and protection of disadvantaged groups, such as the unemployed and SMEs.	Government recognized the need to transformation of the government-led skill system into a private sector-led system for efficient and effective skill development system Increased government emphasis on mass training provision for vulnerable groups, such as SMEs	1997: Enactment of the Worker's Vocational Training Promotion Act 1998: Favorable rebate incentive system for SMEs	Full scale implementation of training levy-rebate incentive program Expanded Training levy-rebate incentive system under Employment Insurance Law (EIL) to SMEs including enterprises with one worker too.	Enterprises utilized EIL incentive system for in-service training rather than pre-service trainings Incentive system encouraged large enterprises to participate voluntarily Low participation of SMEs; they did not make as much use of the levy-rebate incentives	Crisis triggers

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Annex II (continued)

Year	Internal and External Events	Driving force for Skill Development	Stage of Skill Development System	Legislation Change/ Policy Reforms	Main Features	Results	Remarks
1999	Inequitable and Imbalance situation: Large differences in utilizing the training levy-rebate incentive system between large enterprises and SMEs			Improved in-service workers' vocational skills and supported for employers' skills development and updated the reimbursable training costs to actual. Government increased incentives for SMEs by raising the ceiling of total reimbursement of their training levies up to 270% of their training levies paid.		Despite of the greater financial incentive for SMEs' training activities, regressive situation was continued to exist. SMEs suffered with Financial, institutional and informational constraints to conduct trainings and utilizing the levy	Inflection point
	Government recognized that the training-levy rebate incentive system alone proved to be inadequate to encourage SMEs to participate in workers' training.			Institutional mechanisms and incentives need to be devised to address the jeopardies (financial constraints, organizational, informational, technical and managerial constraints) and challenges of SMEs under the existing training levy-rebate incentive system.		Korean Chamber of Commerce and Industry (KCCI), an employers' association, proposed Training Consortium (TC) program	Feedback loop
2000	Ministry of Labor (MOL) made a policy decision to launch the SME in-service training consortium project			MOL & KCCI jointly developed the proposal for three Training Consortium pilot projects.		Proposal was submitted to World Bank for fund support.	Facilitating tool
Jun 2001	World Bank released partial fund for pilot project			MOL partnered with KCCI to implement the pilot.		First pilot project was launched at Bussan city	Facilitating tool
Sept 2001	At the very early stage, the first training consortium pilot project received overwhelmed positive response from SMEs			Ministry of Labor (MOL) agreed to provide additional funds to KCCI for further support.		KCCI utilized additional fund to refurbish KCCI's training equipment and facilities. Extend the first pilot project to till December 2002. Two more pilot projects in Incheon and Kwangjoo cities.	Feedback loop

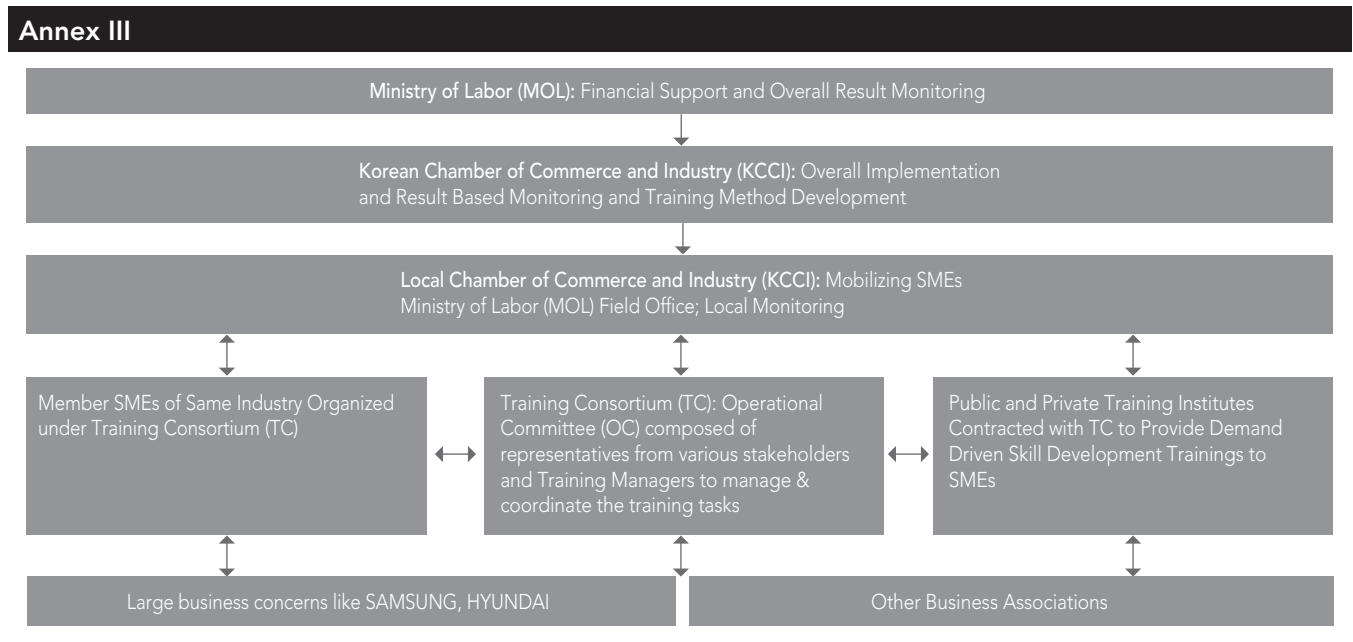
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Annex II (continued)

Year	Internal and External Events	Driving force for Skill Development	Stage of Skill Development System	Legislation Change/ Policy Reforms	Main Features	Results	Remarks
2001–2002	World Bank revisited the program plan and a result based monitoring and evaluation approach adopted			Institutional mechanism with financial incentive and organizational support provided through TC and TC managers acted as key instrumental to deliver the services, network building and removing institutional constraints of SMEs towards conducting trainings.		Promotion of SME productivity Increased participation of SMEs in training and utilization of levy Demand driven training system established	Adaption
Dec 2002	Impact of the TC program felt; Increase productivity and profitability of SMEs alleviated the negative consequences of economic crisis.			Pilot project was completed successfully Scale up model of project adopted by MOL		The number of SMEs organized into TCs increased at 263% The number of workers completed training rose at 154%	Adaption
2003	Transferability of the project at national level;					3435 SMEs organized into 12 TCs in three different types of entities; 4 TCs organized by Business Associations 3 TCs organized by public training institutions 12 TCs organized by large business concerns	Adaption

Source: Author's compilation from reports on Employer Directed in-service training by Ministry of Labor

Annex III: Stakeholder Map



Annex IV: Process Map





KDIS

KDI School of Public Policy and Management was established in 1997 to educate and develop the next generation of leaders in today's rapidly changing and globalizing economy. The School offers an innovative educational program focusing on policy and international issues and aims to transform mid-career professionals into leaders of their respective fields by equipping them with new knowledge, vision and a global perspective. KDI School also draws from a wealth of research and resources from the Korea Development Institute (KDI), Korea's leading economic think tank, to share the nation's unique development experience with the global community.