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Productivity Increases in SMEs: With Special Emphasis on In-Service Training of Workers in Korea

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Abstract: This paper is about the evolution of an innovative in-service training program and its effects in Korea. In many developing countries, small- and medium- scale enterprises (SMEs) play important roles in outputs, exports, and employment. Therefore, governments have used various policy instruments to promote productivity of SMEs through in-service training of their workers. However, those policy tools have not been effective to date. An exception to this general trend was found in Korea. The Government of Korea tested a pilot in-service training project and achieved significant results. The government encouraged SMEs to organize themselves into training consortiums (TCs) and provided them with institutional and technical assistance by financing employment of training specialists who manages human resources development of TC-member SMEs. Since mainstreaming, nevertheless, the progress of the TC program has been less than magnificent. Some factors responsible for the lukewarm achievements are analyzed and policy measures for reinvigorating the program have been suggested, together with some lessons learned.

JEL Classification: J24, L25

Keywords: SMEs, training consortiums, pilot, in-service, productivity

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INTRODUCTION

In many developing countries, small and medium enterprises (SMEs) account for a large part of national income, exports, and employment. Therefore, governments have used various strategies and policy instruments to develop the human resources of SMEs and improve their productivity and national welfare.

In the case of Korea, SMEs account for 99.9 percent of total enterprises, provide 87.5 percent of total contracted employment opportunities, and about half of the national exports and income (Small and Medium Business Administration and Korea Federation of Small Businesses 2008). However, SMEs continuously complained that securing technical and skilled workers was the most serious business bottleneck (Korea Federation of Small Businesses 2003a, 2003b). The Government of Korea has, therefore, also adopted various policies to encourage private enterprises in general and SMEs specifically to undertake the training of their workers voluntarily. Historically, the policy instruments used by the government since the 1950s included apprenticeship, direct provision of accelerated training by public training institutes, subsidies for training by enterprises, requirement of compulsory training by enterprises, public provision of training again but financed by training levies collected from enterprises, and finally, the levy rebate incentive system introduced in 1995, which obligated all enterprises to pay training levies as part of the fees for the employment insurance of their workers, but paid back the levies as a grant to those enterprises training their workers.

It has been proved, nonetheless, that the levy grant system did not significantly impact on SMEs, and only large enterprises benefited from it. To redress this regressive effect of the levy grant system, the private sector, in collaboration with the government and non-governmental organizations, undertook a pilot SME Training Consortiums (TC) Project in 2001. The pilot project provided a group of SMEs with institutional and technical assistance to train their workers by financing training specialists hired by the group of SMEs collectively. SMEs actively participated in the training of their workers and benefited from productivity increases, resulting in successful outcomes. (For an elaboration of the history of training systems and finance in Korea, refer to Lee 2006.)

In the wake of the Asian financial crisis, the government actively promoted SMEs to organize TCs and carry out training. As a result, the TC project has, on the one hand, become the mainstay of

government-supported training programs. On the other, it still accounts for only a small portion of total SMEs in terms of the number of SMEs participating in TCs, the number of SME workers trained, and the amount of rebates received by SMEs in comparison with the training levies paid by them.

The purpose of this paper is to investigate the causes of the sluggish development of the TC program since the successful completion of its pilot stage and to come up with a set of policy suggestions to solve the problems. This section of the paper is followed by a second section on a brief review of the rationale, objectives, and content of the pilot TC project and its achievements; a third section on the causes of the inactive development of the TC project; and finally a section on the policy suggestions to revitalize the TC project, together with lessons learned.

I. THE PILOT TRAINING CONSORTIUMS PROJECT

1.1 Origins of the Training Consortiums Project

The pilot Training Consortiums (TC) Project was conceived in the wake of the Asian financial crisis. The financial crisis quickly spread to the real sectors of the economy, which in turn devastated the labor market in 1998. The Korean government was desperate to lower the high unemployment rate in the short run and encouraged enterprises to raise their international competitiveness in the long run. It was against this background that the Korean Chamber of Commerce and Industry (KCCI) prepared a pilot project for SME training consortiums (TCs) in 1999 and applied, through the government to the World Bank/Asia and Europe Economic Meeting (ASEM), for a grant to launch it. The project was initially implemented only in Busan City, which was hit hardest by the economic crisis, from June 2001 through December 2002. With the signs of promising prospects, the Ministry of Labor provided additional funds to the KCCI for implementation of the project in two other cities (Incheon and Kwangjoo) in September 2001 and extended the pilot to June 2002.

1.2 Rationale of the Training Consortiums Project

Although the levy rebate system did serve as an effective incentive for job-related skills development, it has worked regressively. Special attention was paid to compensate SMEs with greater financial incentives for their training activities. The level of rebate for large firms was to be at 100 percent of training levies paid. However, SMEs were to receive rebates of training levies up to 270 percent. Despite the special financial incentive, SMEs did not avail themselves of the incentive system as much as large enterprises. Consequently, a regressive situation developed.

Both large firms and SMEs pay training levies, yet a disproportionate share of the reimbursements went to large firms. While 77.6 percent of large enterprises trained 37.5 percent of their total workers, making use of the training-levy rebate incentive system in 2002, only 4.7 percent of SMEs offered training programs to only 4.2 percent of their total workers, receiving the training-levy rebates. Of the total 6.9 million employees who paid the training levy (actually paid by employers as part of employment insurance fees), SME workers accounted for 65 percent (or 4.5 million workers). However, the number of SME workers who undertook training programs and received the training-

levy rebates accounted for only 4.2 percent (or 192,000 workers) of all SME workers in 2002. In contrast, while workers of large enterprises accounted for only 35 percent (or 2.4 million workers) of total workers paying training levies, about 37.5 percent (or 904,000 workers) of their workers participated in training programs and received training-levy rebates (Lee and Kim 2004). Thus, large enterprises were able to recover their training levies at a much higher rate than SMEs. While large enterprises as a whole got about 30 percent of their training levies reimbursed in 2002, SMEs recovered only 15 percent of their training levies.

The (recovery) rate between rebates received per trained worker and the training levy paid per worker—the financial rate of return—was higher among SMEs than large enterprises. While the recovery rate was between 66 and 100 percent for large enterprises in 2002, it was between 126 and 905 percent for different groups of SMEs by the size of employees. In other words, for each worker participating in training, the recovery rate was greater among SMEs than large enterprises due to the more favorable incentive given to SMEs. Despite this favorable financial incentive given to SMEs, it is a striking fact that a regressive situation developed between large enterprises and SMEs.

This situation implies that financial incentives (financial rates of return) were either inadequate or insufficient for SMEs to undertake the training of their workers. For SMEs, the costs or disincentives (e.g., training costs, poaching risks, administrative burdens to arrange training and recover levies, asymmetry of available information on training markets) must have been greater than the financial incentives. Besides the rebate incentive, additional factors should have been considered and the government should have taken greater action to redress the regressive result of the training-levy rebate incentive system.

Some discernible characteristics between large enterprises and SMEs in their training performance enable us to identify possible causes of the regressive utilization of the incentive. They are the scale jeopardy, public good jeopardy, financial jeopardy, and institutional and organizational jeopardy of SMEs in developing their human resources (Lee 2006).

First is the scale jeopardy of SMEs. SMEs, because of their small number of employees, must have found it difficult to organize in-plant training programs or arrange suitable institutional training programs outside the enterprise. SMEs in general do not have the flexibility to send workers for

external training without disrupting their production schedule, and they incur a higher training cost per worker, compared with large enterprises. Furthermore, SME workers usually have to carry out multiple tasks and possess a broader range of skills due to the size of the enterprise and the nature of technology they adopt. Not only do SMEs have justifiable reasons to be compensated for their extra training costs on equity grounds, they also confront difficulties organizing formal in-house training programs for in-service or pre-service training courses or entering into contracts with outside training institutions (i.e., supplier-oriented training courses).

Administrative and managerial workers also participated in training at a higher rate than production-related workers since more educated and skilled workers are inclined to have a higher level of learning efficiency. This tendency reflects employers' recognition that returns to training are higher among administrative and professional workers than production-related workers, which is supported by empirical studies (Groot 1995). With a small number of administrative and managerial workers and little flexibility, SMEs were also disadvantaged in the training of workers who would bring in higher returns.

Second is the public goods jeopardy of SMEs. Like education, training is public or semi-public goods, especially merit goods (Musgrave 1959; Freedman 1962), and both have positive externalities. Trained workers prove more valuable than before not only to the current employers, but to other enterprises. Therefore, trained workers often become a subject of poaching, especially by competing but free-riding enterprises, which usually offer better working conditions and career prospects but do not offer adequate in-service training. Workers in SMEs generally stay with the same employer for a shorter period than in larger enterprises and have a higher separation rate. As such, entrepreneurs are reluctant to provide or finance training with their own funds just like any other public goods. Since the demand for a socially optimal quantity of skills training is larger than the market-determined quantity of training, the cost of training is higher than in an equilibrium market. The government needs to increase the quantity of skills training by subsidizing SMEs adequately to compensate for the higher training costs.

Third is the financial jeopardy of SMEs. Training is an investment in human capital over a relatively long gestation period, and the returns to the investment accrue over a long period. The limited financial and credit situation of SMEs does not allow them to invest in their workers as much as

larger enterprises and have justification to be assisted by the government in financing their training costs for national economic strength.

Fourth is the institutional and technical jeopardy of SMEs. They do not have anyone working exclusively on the planning, organization, and management of the training of their workers. Even though SMEs could identify priority training needs, they did not have specialized staff members who could determine suitable outside training institutions, negotiate with them, enter into a contract for institutional training programs, monitor their training processes, evaluate the training effectiveness, and/or handle the cumbersome processes for the reimbursement of their training expenses. The cost of hiring a training/HRD officer would be higher than the rebated amount of the training levies. These factors contributed to the low level of SME participation in the skills development program, and the government had to take action to address the institutional and technical problems.

SMEs were responsive to the incentive system in terms of choosing the type of training. When the government deregulated the training system between 1995 and 1999, enterprises radically shifted their priorities from pre-service training for new labor market entrants to in-service training of employed workers. The share of in-service training soared from 66 percent in 1994 to 97 percent of all trainees in 1999, and to 98 percent in 2001 (Ministry of Labor, 2003). This implies that SMEs place greater emphasis on in-service training than pre-service or transfer training to adapt their workers to the industrial restructuring, changing technologies for high value-added products, and shortening product cycles. Historically, SMEs have had institutional and informational difficulties in making training arrangements with public training institutes, which focus on pre-service training and do not offer in-service training programs for enterprises, especially for SMEs. Asymmetries of information between the large enterprises—with personnel/HRD officers and the ability to organize and often offer in-service training programs for their own workers in-plant or in the workplace—and the SMEs compounded the regression.

Fifth was the adverse government incentive system. Employers responded to the levy rebate incentive system by initially emphasizing institutional training instead of on-the-job or in-plant training. Rebates for institutional training courses were twice that for in-plant training courses, and a ceiling was placed on the total grants made for on-the-job training conducted by each firm. In 1999, 47.4 percent of enterprises undertaking enterprise training courses carried them out under contracts with outside training institutions. This proportion rose to 53.2 percent in 2000, but

declined to 46 percent of enterprises in 2001 and to 47 percent in 2002 (Lee and Kim 2004). This change reflects the practice of SMEs, which had been increasingly participating in in-service training programs, but in the form of in-plant or on-the-job training. SMEs found the in-plant or on-the-job training mode more compatible with their production technology and comparative advantage of their small size and teamwork, and it also curtailed poaching of their workers by minimizing contact with workers from other enterprises. Although about 52 percent of all enterprises chose in-plant training in 2002, about 80 percent of SMEs relied on it (Korea Small and Medium Business Administration 2002). Nevertheless, the government's incentive system ran against the in-plant or on-the-job training mode, and public training institutions did not offer mobile training programs.

Finally, a greater proportion of male workers underwent training than female workers. While 15.5 percent of male workers participated in training, only 8.9 percent of female workers took training courses. Since female workers in general have a higher incidence of separation and a shorter career due to marriage, childbirth and child rearing, employers tend to eschew female workers in selecting trainees (Lee et al. 2001). SMEs tend to use the training incentive system less actively than large enterprises because women represent a greater portion of total employees among SMEs (31 percent) than in large enterprises (27 percent). Therefore, to promote enterprise-provided training, it would be effective to establish greater incentives for SMEs so that they may more easily select female workers as trainees.

In sum, SMEs participated in training at a much lower rate than larger enterprises, and the training-levy rebate incentive system, alone, proved to be inadequate. Additional or different types of incentives should have been devised to compensate SMEs for their disadvantages in undertaking the training of their workers. Besides financial constraints, SMEs have institutional and informational/technical weaknesses. Lepenies also argued that because of information asymmetries inherent in training markets, there is a strong need for introducing institutionalized *ex-ante* and *ex-post* "voice" in a voucher project for worker training (Lepenies 2004). To help solve the institutional / technical / informational constraints in SMEs, a new incentive system had to be found so that more SMEs could actively train their workers. The answer was the Training Consortiums Project.

1.3 Objectives of the Training Consortiums Project

The project aimed at preventing further aggravation of unemployment and improving the productivity of already-employed workers of SMEs by helping a group of SMEs organize themselves for the management of in-service training of their workers and retraining of unemployed workers.

The pilot project focused on SMEs because they were hit hardest by the Asian crisis, held greater capacity for employment, and had lower productivity. To stem further deterioration of unemployment, SMEs needed to retain their current workers and increase their employment. This would prove impossible unless they improve the skill levels and productivity of their workers. Despite the favorable training-levy rebate incentive, SMEs were not actively participating in the system. The challenge that the government faced was how to encourage SMEs to provide training programs for their workers, taking advantage of the training-levy rebate incentive, and ultimately improving productivity.

1.4 Project Activities and Processes

The project consisted of four phases: (i) planning and organization of a training consortium, (ii) training-needs survey and training program development for each member SME, (iii) training service provision and monitoring, and (iv) outcome evaluations. The focus of the activities was that each local Chamber of Commerce and Industry helped a group of 30-50 SMEs organize into a training consortium (TC) by financing and seconding two training managers to each TC. Each TC formed an operating committee (OC) to manage its training tasks. The OC was composed of representatives of TC members, local Chamber, Ministry of Labor field office, and training experts, and met periodically for the planning and management of the training affairs of the TC members. The objective was to encourage SMEs to organize themselves to launch skills training programs for their workers voluntarily and in partnership with other stakeholders (Lee 2006). To achieve this objective, the project provided a group of organized SMEs with training specialists financed by public funds to relieve the organizational, informational, and financial constraints that SMEs face in developing their human resources. Individually, each SME could not afford to hire its own training specialist.

The two training managers (TMs) were to play key roles for the TC. The TMs were to act as the training specialist of each member SME. They were to establish an information network among TC members (e.g., home page, email systems, and periodic meetings); conduct a training-needs survey

of each member SME through interviews with managers and workers, and through job analysis; plan for and program training activities of member SMEs; contract outside training institutions to train workers collectively as much as possible; collaborate with training institutions to develop training programs and materials; monitor their training activities; and conduct an evaluation study upon completion of major training courses on behalf of the member SMEs.

Other countries have adopted similar systems to provide financial incentives to SMEs so that they undertake the training of their workers, such as tax incentive systems (e.g., World Bank 2002) or levy rebate systems (Gill et al. 1999). However, the TC project was different from the simple tax incentive system in the sense that it obligated all enterprises to pay training levies in advance irrespective of the fact that they offered in-plant training or not. The project mobilized additional public resources for the financial incentives and discouraged free-riders. The TC project also diverged from the simple levy rebate system by providing preferential rebates to SMEs. And, the TC project was unique in the sense that the financial incentives created a structure that limited the hiring of training managers explicitly to groups of SMEs, thus economizing public resources and helping SMEs fill their gap in institutional and technical capacities.

1.5 Main Results of the Training Consortiums Project

1.5.1 *Methodology and Data of Evaluation*

The objective of our study of the pilot Training Consortiums Project is not to compare the costs and benefits of the training programs themselves. Many studies in the literature have already vouched for the efficiency and economic viability of enterprise-provided training programs in different parts of the world, including Korea (Bartel 2000; Barret and O'Connell 2001; Groot 1995; Kim et al. 2003; Lee et al. 2004). On the basis of this accumulated knowledge of the high returns to investment in employer-provided training programs, this study rather attempts to assess whether the government policy through the pilot project has been effective. In other words, did the government policy stimulate and encourage SMEs to undertake training programs for their workers voluntarily, and redress inequities caused by the previous policies. The reason for this focus of our assessment is that even though the training programs' financial and economic returns to individual workers of SMEs were much higher than to those of large enterprises, few SMEs participated in the training of their workers under the training-levy rebate incentive system.

To assess the effectiveness of the government policy scientifically, it is necessary to collect data on the outputs and the effects on the pilot project TC groups, and compare them with the experience of the groups that have similar social and economic characteristics but did not receive the project assistance (Grossman 1994). Since no control groups were selected randomly before launching the pilot project, this scientific and experimental evaluation method could not be used.

Therefore, a quasi-experimental method had to be adopted by selecting control groups after the pilot project was launched and by adjusting for differences in observable and unobservable attributes of the control and experimental groups. As experimental groups, this study takes the SMEs, which were members of the TCs in Busan, Kwangju and Incheon, depending on the data available. As control groups, this study has adopted "all SMEs nationwide" and "all enterprises nationwide." Ideally, the differences in the observable and non-observable attributes of the experimental and control groups have to be adjusted or corrected. However, it is assumed that the experimental groups are randomly selected from the control groups since the individual experimental group is so small compared with the control groups, and there are no clear distinctions between SMEs of different regions in terms of factors affecting training.

For the experimental groups, the data were collected from surveys of the TC-member SMEs, which were conducted through questionnaires with the help of the KCCI at the beginning (June 2001) and at the end of the pilot project (December 2001 and June 2002). These survey data were complemented by intensive interviews with managers and workers of selected SMEs in each of the three cities at the same time as the surveys (Lee 2006).

Data for the control groups were obtained from the Quarterly Employment Trends of the Employment Information Center of the Human Resources Development Service of Korea, and the Current Situation of the Occupational Skills Development Program, an annual report of the Ministry of Labor.

1.5.2 *Organization and Operation of Training Consortiums*

Originally, the project aimed to organize 90-member SMEs into three training consortiums (TCs). However, the project started with 163-member SMEs in three TCs, one in each of the three Chamber areas. By the end of 2002, TC members increased to 732 SMEs—an increase of four and half times. The 557 member SMEs in June 2002 had a total of 14,043 workers with 65 percent of

them being production workers. About 70 percent of the member SMEs were those with less than 50 workers and were located in the industrial zones developed by the government.

Despite the sharp increases in the number of member SMEs, only one TC was maintained in each of three areas throughout the project implementation period. This enabled each TC to enjoy economies of scale. However, each TC's operational effectiveness was gradually lowered to less than optimum, having too many and diverse member SMEs belonging to different industrial associations. As a result, the training managers (TMs) could not provide tailor-made advice and attention to each member SME. Also, a TC lost homogeneity and solidarity among member SMEs. It became difficult to organize training courses to accommodate the diverse but small number of workers of each member SME belonging to different industrial sectors. Each course had too small a number of trainees to offer courses economically. This prodded TMs to increase the number of member SMEs irrespective of the industrial sector. This in turn aggravated the problem of organizing economical courses. 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 between each TM and the number of SMEs of each TC should have been maintained.

1.5.3 *Participation in In-Service Training*

The output of the project was impressive. In the in-service training courses for workers already-employed in SMEs, a total of 6,573 persons were trained. This number far exceeds the number of workers identified initially by employers in the training needs survey as requiring in-service training (3,087) and accounts for almost half the total number of workers in all member SMEs of the three pilot TCs (Table 1). Another notable fact is that about 50 percent of all trainees had more than 10 years of service with the member SMEs (Lee 2006).

Most courses lasted from 1 to 30 days, and about 60 percent of the total workers who participated in the training programs went through only one training course per worker, and the balance of the workers took two or three training courses per worker. The subjects of training courses were not confined to technical skills, but also included management, accounting, tax administration, and motivation skills of middle and high level managers. This is a good sign that was not noted in the past since public training centers did not offer such courses. Studies abroad indicate that among

many types of enterprise training, economic and administrative training yields much higher wage gains than technical training (Groot 1995).

Training programs and materials were developed by contracted training institutions and the training managers. Altogether, 65 training programs were developed on the basis of the analyses of 140 job categories, 147 modular training syllabi and texts were developed for 14 job categories, and 13 programmed learning materials were prepared for trainees to study employing computers.

Table 1: Output of In-Service Training for Employees (2002)

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

Note: * Multiple counted each time a worker was trained.
Source: KCCI.

1.5.4 *Training-Levy Rebates to SMEs*

The project accorded substantial financial benefits to member SMEs by helping them organize the training of their workers and then get reimbursed for training expenses from the training-levy (a part of the unemployment insurance) funds. Before the initiation of this pilot project, SME had rarely provided training opportunities for their workers, and therefore had not been able to get their training levy reimbursed.

With the advent of the pilot project, training managers facilitated training opportunities for SMEs workers, which enabled active participation in the reimbursement process. Consequently, the proportion of TC-member enterprises offering training to their workers increased from 11 percent to 50 percent, an increase of 451 percent. This compares favorably with an increase from 21 percent to 57 percent or an increase of 271 percent for all sizes of enterprises nationwide (Table 2).

Table 2: Number of TC-Member SMEs Participating in Training-Levy Rebates

Area	Pre-Project (Jan.-May 2001)	Post-Project (Jan.-June 2002)	Percentage Increase
Busan	31	127	410
Incheon	56	118	211
Gwangiu	110	172	156

Source: KCCI and Employment Information Center.

The TC-member training-levy recovery rate (the ratio between the training levy paid by member SMEs and the reimbursement received for training workers) of the Busan TC increased from 24 percent of total paid training levies to 48 percent, which contrasts with the decrease from 25.5 to 14.6 percent for all SMEs nationwide. The recovered training levy in the Busan TC area increased by 18 million won during the pilot project period (Table 3). The regressive outcome of the training-levy rebate system was effectively redressed.

Table 3: Training-Levy Recovery Rates (Unit: Won)

	2001 (Jan.-Dec.)	2002 (Jan.-Dec.)	Increases
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.

1.6 Other Results of the TC Project

Although this study does not attempt to make a cost-benefit analysis of the project, it is appropriate to mention some positive effects. The project promoted SME worker productivity, solving the most critical SME problem of skilled manpower shortage, and helped prevent unemployment. In addition, the project also motivated the government and training institutions to change their training policy towards a demand-driven system; developed a new working relationships between SMEs and training institutions; and promoted a partnership between private sector associations and public/non-governmental organizations (Lee 2006).

1.6.1 *Promotion of SME Productivity*

This project enhanced the capability of SME workers and promoted SME productivity. For example, in the welding course, trainees scored only 65 points average in a skills test before the course; however, they scored 93 points average after the course (Busan Chamber area).

At an ex-post evaluation through interviews with member SMEs, employers revealed that workers' job performance and productivity improved sharply after training (81 percent of total responses); savings in maintenance and repair expenses resulted (67 percent of responses); factory machinery utilization factor increased (88 percent of responses); wastage or defective products declined (72 percent of responses) (Incheon Chamber area). Also, many employers indicated that workers attitudes towards their jobs changed most noticeably (88 percent of responses) (Gwangju Chamber area).

Interestingly, the practice of poaching or scouting workers by other enterprises declined substantially since all SMEs of the same trade and area joined the TC. Industry-wide collective action reduced the risks of training and poaching. Thus workers stayed longer with the same SME and consequently, SME productivity was enhanced.

1.6.2 *Prevention of Unemployment*

This project helped prevent SME workers from becoming unemployed. This effect of the project was important in the aftermath of the Asian financial crisis when the level of unemployment was unusually high. According to the TC survey conducted in June 2001, those member SMEs that participated actively in the training programs of a TC were reluctant to lay off their workers and, in fact, slightly increased the overall employment level by 1.7 percent (81 persons). In contrast, those member SMEs that did not participate in the training programs of a TC, suffered from a reduction in the total employment level by 8.8 percent (436 persons), aggravating the unemployment level of their workers (Table 4) (Lee 2005). Although these statistics may be criticized on the basis of possible selection biases, there is no strong reason to suspect that TC members had sharply different business prospects since they all joined the same TC voluntarily at the same time for a similar purpose.

Table 4: Employment Level of Participating versus Non-Participating SMEs in Training

		Pre-Project (June 2001)	Post-Project (June 2002)	Difference in Persons (%)	No. Enterprises Samples
Participating SMEs	Total	4,850	4,931	81 (1.7)	63-
	Busan	1,069	1,057	-12 (1.1)	17
	Incheon	1,691	1,637	-54 (3.2)	17
	Gwangju	2,090	2,237	147 (7.0)	29
Non-Participating	Total	4,960	4,524	-436 (8.8)	97
SMEs	Busan	786	755	-31 (3.9)	19
	Incheon	2,888	2,870	-18 (0.6)	47
	Gwangju	1,286	899	-387 (30.1)	31

Source: KCCI.

1.6.3 *Demand-Driven Training Systems*

The pilot training consortiums project enabled TC-member SMEs to meet their training needs, especially in-service. The project demonstrated the need for, and feasibility of, shifting the emphasis of training from exclusively pre-service training toward in-service training of SME workers on the job. While demographic and economic growth rates have stabilized, reducing the supply of and demand for young trainees, the need for training has increased for already-employed workers to adapt their job skills to restructured industry, changing technology, and shortening product life-cycles.

Before this project, large enterprises could conduct in-service training in their own training facilities, while SMEs lacked the financial or managerial capacity and staff to establish and operate their own or joint-training facilities. Until the training consortium was organized, training in SMEs had depended entirely on public training institutions that concentrated on pre-service training of youth for possible hiring by SMEs and did not offer in-service training.

With the advent of the project, training took place mostly under contracts with outside training institutes; yet, a substantial number of training courses were conducted in-plant of member SMEs, using their own machines, tools, equipment, and materials. In these cases, the SME often closed down their production lines for several days to involve all workers in the training courses. The training institutions took their training instructors and equipment to the plant in a vehicle. This means that micro-enterprises or SMEs often prefer to train all their workers at the same time and in-plant, rather than sending their workers one by one to training institutions at different times. This mode of training met the special needs of micro-enterprises and SMEs, since they prefer to protect

their unique technical know-how and promote teamwork and solidarity among their small number of workers.

This project also motivated the Ministry of Labor to change its training policy toward a demand-oriented training system and aided its decision to provide financial support to replicate the project scheme with two more local chambers in September 2001, then later with three more employers associations in January 2002. In addition, the Ministry replicated the TC concept into two more modalities. One was with SMEs supplying parts and services to large enterprises: A large enterprise helped its cooperative SMEs organize a TC and train their workers in its own in-plant training institute or outside training institutes. The other was with the training institutes: They organized SMEs located in their vicinity and provided in-service training to their workers.

1.6.4 *Enhanced Competition and Cooperation in Training Markets*

The project promoted market-oriented selection of training institutions. In theory, TCs had the freedom to choose the most suitable training institution available in the competitive training market. In practice, TCs hired vocational training institutes (VTIs) of the KCCI for most training courses; TCs preferred KCCI-sponsored VTIs on account of their merits and the TMs who were seconded from the VTIs through government grants. Likewise, other training institutes were also contracted on the basis of their merits (e.g., auto repair and maintenance training institutes, accounting, and motivation training institutes). Since the selection of training institutions were based on their merits, more training institutions were expected to join training markets, and competition in training markets was expected to be keener in the future; hence improved quality of training. From 2006, colleges and universities were allowed, in fact, to offer training courses for TC-member SMEs organized by large enterprises.

The training managers (TMs) of each TC provided useful services to member SMEs, who normally lacked in training specialists and information on the needs for training and training markets. The TMs recommended to each member SME the training priorities to be addressed and the training institutions to be contracted, administered the training-levy rebate documents and processes, monitored and supervised training services, and evaluated the result of training on behalf of member SMEs. TMs filled the organizational and managerial as well as informational gaps prevalent in an average SME.

While most SME members of the Busan TC were located in the newly established industrial zone on the outskirts of the city, most training institutions were located on the opposite side of the city. This long distance discouraged both employers and workers to participate in training programs offered at the training institutes. With the progress of this project, an industrial association of the member SMEs (the machinery manufacturers association) offered a building and other spaces for the establishment of a new training facility right in the center of the industrial zone. This geographical proximity enabled the member SMEs to participate in the training programs actively and enthusiastically. This 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.

1.6.5 *Strengthened Partnerships between Public and Private Entities*

This project strengthened the partnership among central and local government agencies, local and national Chambers of Commerce and Industry, training institutions, training experts, academics, and SMEs for training and human resources development.

Representatives of the government (Ministries of Labor and Industry, 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 also periodically held consultative meetings and seminars to monitor and evaluate the progress in the project, and suggested/appealed for improved/simplified government procedures and processes related to SME training courses and levy rebates. Such close consultations and collaborations between the private and public sectors concerning training and human development had no precedent in Korea. As a result of such practice, for example, the training rebate ceilings for SMEs were lifted from 200 to 270 percent of the training levy paid, or 1.5 million won to 2.5 million won per year; training expenses were reimbursed at the time of the government's approval of training courses, in contrast to the past practice of ex-post reimbursement upon completion of the training courses; and the lead time required for submission of a training plan for the government's approval was shortened substantially.

II. Mainstreaming of the Training Consortiums Project

2.1 Issues

Encouraged by the positive results of the training consortiums (TC) pilot project, the government mainstreamed the TC project across the nation beginning in 2003. The government decided to expand the coverage of the training-levy rebates to SMEs not only for the recurrent expenses of the training managers (i.e., in-service training management, including visits and consultations with TC members and public relations activities) but also capital expenses for training equipment and facilities. Today, together with training programs for unemployed workers, the TC program for the training of workers employed by SMEs is the one of the main programs of the Ministry of Labor in Korea. In 2007, the TC program trained 295,000 workers of 134,000 SME establishments with the training-levy rebates reaching 74.4 billion won (Table 5).[1]

Table 5: Performance of the TC Program

	2001	2002	2003	2004	2005	2006	2007
Number of TCs Assisted (Cumulative)	6	8	19	30	47	57	69
Workers Trained ('000)	4	10	20	38	71	143	295
Number of 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).

About eight years have passed since the launch of the pilot TC project, and six years have elapsed since the mainstreaming of the project. However, the impact of the TC program is less than magnificent and is far from reaching the original objectives. Between large and small-medium enterprises still remains the stark regressiveness in the participation of enterprises in worker training and recovery of training levies through rebates. The majority of large enterprises (with 300 workers or more) trained their workers, and a large part of their workers underwent in-service training programs in 2007. Nevertheless, only 13 percent of SMEs offered training service to their workers, and only 18 percent of their workers went through in-service training programs in the same year. Consequently, large enterprises recovered about 33 percent of their training levies, but

[1] The number of workers and establishments is a cumulative figure since the same workers and firms were counted multiple times that is, every time their training plan proposals were approved and completed.

SMEs recovered only 28 percent (Table 5). The Employment Insurance Corporation, under the supervision of the Ministry of Labor (MOL), collected some 1.14 trillion won from enterprises as training levies but expended only 500 billion won for rebates of training levies and other incentives for in-service training of workers in 2007. Therefore, the government accrued 614 billion won or 56 percent of profits and used the proceeds for purposes other than in-service training of workers in 2007. The Employment Insurance Corporation manages two funds; one for unemployment, the other for training and human resources development. For the unemployment fund, it would be a virtue to save as much as possible in preparation for an economic crisis. However, for the training fund, accumulation of profits or inefficient use of the fund would be interpreted as a negligence or remission of the government's duties and obligations. The fund should have been used mainly for in-service training of workers and not for other purposes such as unemployment or pre-service training. Since training before employment or during unemployment entails training of general skills and not firm-specific skills, it should be financed by general revenues, not by the fund financed by employed workers and their employers (Musgrave 1959, Freedman 1962, Becker 1962, Booth and Snower 1996).

Table 6: Training by Large and SMEs (2007) (Unit: %)

	Enterprises Training Workers*	Workers Trained*	Levy Recovery Rate
All Enterprises	15	40	31
SMEs	13	18	28
Large Enterprises	482	98	33

Note: * Multi-counted figures.
Source: Ministry of Labor (2008).

The original purpose of the TC program was to induce a large proportion of SMEs to train their workers and develop human resources so that productivity and competitiveness would be enhanced. To this end, the results are extremely limited. Only 13 percent of SMEs trained their workers. The fact that 79 percent of those SMEs training their workers were also members of training consortiums (TCs) underscores the need for increasing the proportion of SMEs joining TCs. Currently only 4 percent of all SMEs are TC members (Table 6).

Among total SME workers, a mere 18 percent participated in training. Of these workers, only 24 percent were workers from TC members (79 percent), and the remaining 76 percent represented non-TC members. In other words, 21 percent of those SMEs that trained their workers were non-TC

members, and they accounted for 76 percent of all trained SME workers. This means that most TC-member SMEs (79 percent) trained their workers, but those trained workers accounted for a small proportion of total trained workers (24 percent) and possibly of total workers of those TC-member SMEs. If we assume that all TC-member SMEs participated in the training of their workers, only 2 workers from each TC-member SME were trained, while 26 workers from each non-TC-member SMEs participated. These numbers compare unfavorably with 118 workers trained in each large enterprise participating in training. If we assume the average number of workers in each TC-member SME was about 40 (as was the case with the TCs of the Korea Chamber of Commerce and Industry), only 5 percent of total workers of each SME were trained in 2007. This percentage compares extremely unfavorably with 97 percent in large enterprises and 40 percent in advanced countries (Table 6). Moreover, the percentages for Korea are based on the number of workers counted multiple times (i.e., every time they receive training) while those of advanced countries represent only the real number of workers trained in a year without counting workers multiple times. TC-member SMEs were extremely inactive when compared to non-TC-member SMEs, large enterprises, and all enterprises in advanced countries, that is, their counterparts (Tables 7 and 8).

The government strategy aimed to improve SME productivity through the training of their workers, both currently employed and prospective employees, by organizing them into training consortiums (Employment Insurance Act of 1993, Enforcement Decree of the Employment Insurance Act of 1995, Vocational Training Promotion Act of 1997). However, only 10 percent of SMEs have joined TCs to date, and each TC-member SME has trained only 5 percent of its workers in 2007. As a result, a mere 4 percent of nationwide SME workers were trained in 2007.

Table 7: Training of SME Workers (2007)

	Total SMEs (A)	SMEs Training Workers (B)	Rate (%) (B/A)	TC-Member SMEs *(C)	Rate (%) (C/B)	Rate (%) (C/A)	Non-TC-Member SMEs (D)	Large Enterprises Training Workers (E)
Workers (Trained** '000)	6,625	(1,218)	**18.3**	(295)	**24**	4	(923)	(2,359)
SMEs **('000)	1,284	(169)	**13.2**	(134)	**79**	10	(35)	(20)
Training Levies (Rebates ** Billion Won)	556	(157.8)	28.4	(74.4)	470	133	(83.4)	(250)
* Average No. of Workers (Trained**) per Enterprise	5.2	(7.2)		**(2.2)**			**(26)**	(118)

Notes: *Assumed that all firms train their workers. ** Multiple counted every time training plans were approved and completed.

Source: Ministry of Labor (2008).

Table 8: International Comparison of the Percentages of Workers Trained in a Year

Korea	Canada	Germany	U.K.	U.S.A	Denmark
14	21	29	40	40	40

Source: Ministry of Labor (2008).

Although data are not available on the average number of workers in each TC-member SME and non-TC-member SME, there is no doubt that the participation of SMEs in the training of their workers has not improved noticeably since the completion of the training consortiums pilot project in 2002. Rather, the speed of expansion in the TC membership and the degree of participation in training among TC-member SMEs slowed substantially. During the pilot project period (2001-2002), TC membership expanded threefold in a year despite the start-up difficulties. In contrast, it expanded only 2.16-fold a year since the completion of the pilot project. While the number of workers trained increased at 2.5 times during the pilot project period, it increased only at 1.97 times a year since then to date. Only the training-levy recovery rate increased at a slightly faster rate (1.9 times vs. 2.1 times) although this is due to an approximately 70 percent increase in the rebate ceiling between the two periods (Table 8).

Table 9: TC Program Implementation during Pilot and Mainstreaming Periods

Average Annual Increase	2001-2002 (Pilot Period)	2002-2007 (Mainstreaming Period)
Number of TC-member SMEs	3.00 fold	2.16 fold
Number of Workers Trained	2.50 fold	1.97 fold
Amount of Training Levy Rebated	1.91 fold	2.11 fold

Source: Ministry of Labor (2008).

2.2 Causes of Issues

Why then has the pilot TC project with promising achievements during its pilot stage slumped in its performance since it was mainstreamed in 2003? Although there may be many reasons for the inactive participation of SMEs in the TC program and meek contribution of the TC program to the human resources development activities of SMEs, the following six reasons stand out:

- The training supplier-centered TC program
- Too few a number of training managers in each TC

- The long distance and low priority of the TC program
- Lack of on-the-job or in-plant training programs
- Weak competition and cooperation in training markets
- Inappropriate government financial supports.

Each of these causes deserves to be examined in detail.

2.2.1 *Training Supplier-Centered TC Program*

To recap, the TC pilot program was created to overcome the weaknesses in the incentive system established in the Employment Insurance Act and Decree in 1993 and 1995, respectively. Despite targeted favorable financial incentives, SMEs did not respond positively to them mainly for lack of specialized personnel to manage the training. The aim of the TC program, thus, was to organize a group of SMEs in the same industrial sector and geographical area into a training consortium and to provide the consortium with training managers who then would identify and procure training needs and services, and supervise/evaluate the training programs collectively through the competitive training markets. For example, the first TC in Busan was organized by the SMEs belonging to the Shipbuilding Machinery Industrial Association in the vicinity of Busan City with the help of Korean Chamber of Commerce and Industry (KCCI), which secured the government's financial assistance. Likewise, the Daewoo TC was organized by SMEs supplying intermediate goods to the Daewoo Shipbuilding Corporation. In this case, the Daewoo Corporation secured the government's financial assistance for the TC in order to improve the quality of the products received from the small and medium enterprises.

The nature of the training consortiums changed sharply since mainstreaming of the TC program. Under the latest government regulation for implementation of the TC program (Ministry of Labor Regulation No. 559), it is stipulated that the operator of the TC is the chief of the training institution, and he/she becomes the chairperson of a TC operating committee. One representative of the member SMEs attends meetings together with other stakeholders, such as government representatives and academics. This is starkly different from the pilot stage of the TC program when the SMEs organized the TC (although often assisted by training institutions and government agencies), and one representative of the member SMEs became the chairperson of the TC. There are two other major structural changes. First, TMs report directly to the chief of the training institution

(and not the TCs). Second, the government's additional financial assistance for TCs (e.g., the salaries and operating expenses of TMs and the capital expenses for equipment and buildings) now is allocated to the training institutions in lieu of the training consortiums.

Such a supplier-oriented TC program contrasts readily with the health insurance program in Korea. Although both programs are financed by the insurance fees, the owner of the health insurance is the beneficiary of the insurance scheme, not the health service provider. The decision for choosing a health service provider is made by the beneficiaries, not by the health service supplier. When assistance is needed in choosing a health service provider, health insurance beneficiaries obtain information and advice from relatives, friends, insurance provider, and NGOs, not from the health service provider. Also, the government financial assistance for impoverished groups is provided to them directly, not to the health service provider. Under the current TC program, however, the training institution of a TC decides on and selects the training service provider. In fact, it monopolizes all of the training services for member SMEs effectively eliminating competition with outside training institutions, and the TMs play no role in this respect. The government's financial assistance for the training of SME workers is provided directly to the training service provider, not to the TC. In this sense, a TC is no longer a group organized by SMEs and for SMEs, but an agency organized and operated by a training service provider for the benefit of the training institution directly and for the SMEs indirectly. Under these circumstances, it is natural that few SMEs will take interest in joining a TC and even if they do join, member SMEs will be apathetic towards training their workers.

2.2.2 *Too Few a Number of Training Managers in Each Training Consortium*

The government, since mainstreaming, has tried to take advantage of economies of scale in providing financial assistance for the training consortiums (TCs). It laid down the criteria for providing additional financial assistance to a TC as follows: Each TC composed of about 90 SMEs would be provided with financial assistance equivalent to 80 percent of the salaries and operating expenses of three training managers (TMs) and one assistant as long as they train a cumulative number of 2,400 workers in a year (and 4,800 workers when a large enterprise organizes its associated SMEs who provide parts and supplies to it) (Ministry of Labor 2007). For this purpose, it is counted as one worker trained when he/she undergoes a training course that lasts eight hours a

day. In practice, a worker undertook training of, on average, 18 hours a year. Therefore, the obligation of training 2,400 cumulative workers means in practice 1,067 net workers in a year.

However, to satisfy the training obligation, TMs have to perform abnormally. To train at least 1,067 net workers a year, given the above, three TMs in fact have to represent at least 190 SMEs. This is because, according to the statistics published by the government, the number of trained workers in Korea is about 14 percent of all workers (Table 7 and Ministry of Labor 2008). Since this percentage is an average of all sizes of enterprises, it would be a much lower percentage in SMEs. The Labor Ministry's 2008 data show that participation in training-levy rebates by SMEs and their workers decreased as the number of workers in each SME became smaller (Table 9). To reach the required minimum training target, the TMs would have to increase the TC-member SMEs from 90 to 190 SMEs under the assumption that each SME employs 40 workers on average [1,067 net workers/(40 workers × 0.14) = 190 SMEs]. Then it would take more than two months for three TMs to visit each of the 190 SMEs. If the average number of workers in each SME was fewer than 40, the three TMS would have to counsel a even greater number of SMEs than 190 SMEs. (In fact, the average number of SMEs in each TC was not 90, but 1,940 in 2007. Therefore, TM could not have visited a member SME for more than two months.)

With such an interval of visits, TMs cannot be taken seriously by each SME as its own training manager, and cannot carry out their duties properly. In practice, each TM can reasonably visit two SMEs a day, and can use his/her time to visit member SMEs 15 of the 20 working days a month. This means that a TM can reasonably visit about 30 SMEs a month. For TMs to be taken seriously by SMEs and to be effective in carrying out their duties, they would have to visit each SME at least once a month on average. Therefore, the number of TMs specified in the government's financial assistance should be revised upward by at least two or three times.

Table 10: Rates of Participation in Training and Levy Rebates by Size of Enterprises

	Total Enterprises ('000) (A)	Enterprises Participated ('000)* (B)	Rate (%) (A/B)	Total Workers ('000) (C)	Workers Participated ('000)* (B)	Rate (%) (B/C)
Total	1,288	189	15	9.063	3,576	39
<5	935	38	4	1,452	123	8
5-9	172	31	18	946	116	12
10-29	123	43	35	1,520	201	13
30-49	23	16	70	627	105	17
50-99	17	19	112	840	198	23
100-299	12	22	183	1,258	474	38
SME Sub-Total	1,284	169	13	6,625	1,218	18
Large Enterprises	4	20	500	2,438	2,358	97

Note: *Multiple counted each time they participate.
Source: Ministry of Labor (2008).

2.2.3 *Long Distance and Low Priorities of the Training Consortiums Program*

Since the training consortium (TC) is organized by one training supplier, the training location is often not ideal—quite the contrary, too far—for member SMEs. Consequently, training hours are inconvenient and interest is lost in contracting the training supplier that organized the TC.

Recognizing this distance problem, a training supplier, when it organized a TC, tended to place special emphasis on the location of the prospective member SMEs and not the industrial nature of SMEs. TCs often have had weak homogeneity among member SMEs in terms of the industrial nature and occupational composition. Accordingly, training courses requested by member SMEs tended to be diverse and each course had a relatively small number of workers. The training supplier often found it difficult to organize diversified training courses with small numbers of trainees in each course, while the TC-member SMEs felt that the training supplier gave low priority and did not tailor courses to their demand.

2.2.4 *Lack of On-the-Job or In-Plant Training Programs*

Currently, almost no TC training suppliers offer on-the-job or in-plant training. Prior to becoming the organizing and directing institution of the training consortiums, training suppliers did not offer any mobile training and did not have any mobile training facilities and personnel. Even after the change in their status, the training suppliers have not had any incentives to procure mobile training facilities to offer in-plant or on-the-job training. Government regulations on the TC training program stipulate that training-levy rebates shall be made at 100 percent for institutional training

courses, but at 40 percent for in-plan or on-the-job training courses. From the TC-member SMEs' perspective, the government regulations are unfair and inappropriate since SMEs have to stop production processes and offer their own machinery and equipment as well as training spaces for in-plant and on-the-job training courses. They believe that they should be paid more than 100 percent.

The disincentives against in-plant or on-the-job training are due to the myths of the government officials in charge of SME policies regarding the learning and training in SMEs (Ashton et al. 2008). The processes of learning and training are quite different depending on the size of enterprises. SMEs depend more on informal and on-the-job learning and training processes. Therefore, the government's policy interventions to expand investment in formal and institutional training in SMEs are not justified. ILO's Human Resources Development Recommendation 2004 (No. 195) stresses that member states should promote the expansion of workplace learning and training.

Table 11: Level of Satisfaction with Training Methods by Enterprise Size

Size of Enterprise (No. of Workers)	Institutional Training	In-Plant Training *
5-9	3.17	4.19
10-49	3.78	4.07
50-99	3.67	4.05
100-299	3.69	4.09

Note: *The higher, the more satisfied.
Source: Korea Small Business Institute (2006).

During the pilot period 2001-2002, about half the SMEs preferred in-plant or on-the-job training courses (Lee 2005). Recent surveys of SMEs also showed that SMEs are more satisfied with in-plant training than with institutional and distance (correspondence or e-learning) training. This tendency was stronger among small-scale enterprises (Table 11). There are three basic reasons for this preference: (i) institutional training increases the risk of exposing an SME's technological edge as well as its workers to poaching by other competing enterprises on the basis of their higher wages and better working conditions (Table 12); (ii) SMEs do not have a sufficient number of workers to replace those workers sent for institutional training courses outside the plant (Korean Chamber of Commerce and Industry 2007); and, (iii) SMEs promote teamwork among their small numbers of workers by involving as many workers as possible in training together at one time even stopping production processes for a few days during slack seasons, weekends, or evenings, and enhance their productivity in using their own plant facilities rather than using outlandish or too advanced

machinery and equipment in training institutions (Lee 2005). Through many empirical studies, it has been demonstrated that in-plant and on-the-job training is superior to institutional training in its effects (Bartel 2000; Barret and O'Connell 2001; Groot 1995; Kim et al. 2003; Lee and Kim 2004).

Table 12: Reasons for Not Participating in In-Service Training of Workers By Enterprise Size

Reasons	Enterprise Size (Number of Workers)				
	Total	5-9	10-49	50-99	100-299
Lack of Substituting Workers*	44.3	48.8	40.4	47.8	20.8
Lack of Information on Training*	17.9	18.5	15.6	15.2	37.5
Lack of Worker Interest in Training	13.9	12.9	14.7	17.4	12.5
Lack of Suitable Training Institutes*	13.1	7.0	18.7	17.4	25.0
Concerns about Poaching on Training*	8.1	11.1	5.8	2.2	4.2
Other Reasons	2.7	1.7	4.9	0	0
Total	100	100	100	100	100
(Sample Size: SMEs)	582	287	225	46	24

Note: *Reasons related to the SMEs' preference for in-plant training.
Source: Korea Small Business Institute (2006).

2.2.5 *Weak Competition and Cooperation in Training Markets*

Government policies and incentives have run counter to building up training markets and promoting competition in the markets. Post-mainstreaming has meant not only a near-monopoly of training services by a single supplier but also that any outside services have not been counted as training records, effectively stifling cooperation or collaboration among training institutions. To change a training supplier once a TC has been organized by a training institute, the member SMEs have to leave the TC. Yet, the government has provided no financial assistance to new training institutions in the last eight years; rather it has exclusively and continuously funded the existing TC training institutes, thereby eliminating choice. Monopolization of training services is likely to lower the quality of training services, but there has been no practice of rigorous evaluation of the performances and effects of training courses or institutions to date.

2.2.6 *Inappropriate Government Financial Assistance*

The mainstay of the financial assistance for TCs has been not the recurrent expenses of the training managers (TMs), but the capital expenses for training facilities up to an annual ceiling of 1.5 billion won (the average exchange rate in the past eight years was about US$1.00=1,000 Korean won). Moreover, the training equipment financed to date has not included any mobile training facilities. It has been used primarily to refurbish the existing equipment and facilities and also for pre-employment training programs, which are the core of the training institutes' regular programs. In brief, the government's financial assistance to the training consortiums (TCs) has not served as an incentive for member SMEs to undertake the training of their workers.

The reasons for the government's emphasis on capital assistance may have a dual purpose: to expedite disbursements of annual budget before the end of a fiscal year to help boost the economy in recession; and to compensate for the lack of regular budgets for replacement and upkeep of training equipment and facilities in many education and training institutes on a periodic basis. Even though a TC requires greater recurrent expenses for publicity and personnel services by TMs and their assistants, the government decree requires TCs to finance 20 percent of those recurrent expenses. In view of the non-profit nature of a TC and the monopoly power of the training service supplier of a TC, however, the burden of such counterpart fund requirements must have been shifted from the training institute to member SMEs by lowering the quality of training services.

Of course, the government's financial assistance to the TCs has been made in the context of competition with other human resources development programs. While the government has been stingy in expanding financial assistance for the recurrent expenses of the pilot-tested TCs, it has been generous in financing new but inefficient programs. The budget allocations and incentive systems have sent SMEs confusing or wrong signals. As a result, scarce resources have been wasted, and financial assistance failed to induce SMEs to reinvigorate the TC program. For example, a large amount of funds have been spent for the retraining of workers, especially for the unemployed. It has been pointed out in the research of international organizations that conventional retraining programs for the unemployed are inefficient and non-viable in comparison with in-service training programs; graduates of the former rarely achieved employment rates higher than 60 percent in either OECD or developing countries (Dar et al. 1998; Gil et al. 1999). In Korea, the retraining programs for the unemployed have rarely achieved employment rates higher than 35 percent for

the trainees. Just as pre-service vocational education is not a good instrument for preventing youth unemployment problems (Psacharopoulos 1997), retraining may not be an effective policy instrument for relieving unemployed workers. Another example is the SMEs in-plant learning groups program, which was launched a few years ago. Its emphasis on in-plant training is commendable, but the government's financial assistance for this program per trained worker has been more than 100 times that of the TC program (27,000,000 vs. 250,000 won per worker trained), although no clear evidence has yet been demonstrated of its relative effectiveness. Still another example is the massive pre-service training programs financed by the training levies. As pre-service training and retraining programs impart not firm-specific skills but general skills, these programs should be financed by general revenues, not with earmarked insurance funds financed by enterprises for their employed workers.

III. DIRECTIONS FOR PROMOTING SME PRODUCTIVITY

In order to accelerate the training consortiums (TC) program, which aims to elevate the productivity of SMEs, policy makers will have to focus on the factors that have contributed to the lukewarm performance of the TC Program since it was mainstreamed. Policy makers should encourage a greater number of SMEs to join TCs by transforming the TCs to member-centered or demand-driven organizations. They should also encourage each TC-member SME to participate in the training of their workers more actively than in the past by financing a greater number of training managers (TMs) hired by each TC and emphasizing in-plant or on-the-job training. Also, the government's financial incentive systems for training should focus on efficient programs and be simplified in the processes of training plans and levy rebates.

3.1 Transformation of Training Consortiums into SME-Centered Organizations

The government should change the rules for organizing TCs so that SMEs are the center of the organization and have the power to make operational decisions. An SME representative should be the chairperson of the operating committee, and other members of the committee including the representative of training institutions should play more advisory roles. Also, the training managers (TMs) may be seconded by a training institution but should be hired by the TCs and should be directed by the respective operating committee, not by the training institutions. The TCs should be free to choose training institutions in accordance with the demands of its members and free to enter into a training contract with training institutions in a competitive manner. Such a training contract should not be an exclusive, long-term contract, but be renewable at the discretion of the TC operating committee. The TCs should be able to hire more than one training institutions at a time, depending on the demands for training.

More concretely, the government should help about 100 SMEs located in the same geographic area and belonging to the similar industrial sectors to organize themselves voluntarily into a TC by providing financial assistance for the activities of three TMs and one assistant. In this manner, each SME would be visited by the TMs at least once a month, and a total of 3,500 TCs would be organized in a short period of time. This target compares with a total of 69 TCs in 2007. The target of 3,500 TCs would comprise 350,000 SMEs (26 percent of a total of 1.29 million SMEs), compared with 134,000

SMEs (10 percent of total SMEs) in 2007. This number of SMEs has been selected on the basis of those SMEs with five or more workers. The reason for excluding SMEs with less than five workers is that they account for as much as 73 percent of total SMEs, but have participated in training of their workers at a very low level (Table 9); it will be too costly to cover them in the TC program in the short term.

Table 13: Short-Term Targets for SMEs and Workers for TCs and Training

	Total Trained SME Workers (Million)	% of Total SME Workers (6.62 Million)	TC-Member SMEs ('000)	% of Total SMEs (1.29 Million)	TC-Trained SME Workers ('000)	% of Short-Term Target SME Workers (5.17 Million)	% of Total SME Workers (6.62 Million)
2007 Actual	1.22	18%	134	10%	300	6%	4%
Short-Term Target	2.18	33%	350	26%	2,060	40%	31%

Source: Ministry of Labor 2008 and author's computation.

3.2 Short-Term Targets for Active Participation of SMEs in the TC Program

To promote the participation of SMEs in the TC program, the government should establish short-term targets. In the short term, the government should aim to train 2.18 million SME workers, which would account for 33 percent of total SME workers (6.62 million workers) or 40 percent of the short-term target SME workers (5.17 million workers of 350,000 SMEs). This target number of trained workers (2.18 million) compares with 1.22 million SME workers, which account for 18 percent of total SME workers or 6 percent of short-term target SME workers in 2007. In particular, the target for trained workers (2.06 million), which is 40 percent of the short-term target SME workers (5.17 million), is comparable with the actual percentage of trained workers in advanced countries (Table 7) without double counting, and means that out of 2.18 million total SME trained workers, 2.06 million workers will be trained by TCs.

To attain such short-term targets, the government may have to finance, not 80 percent as at present, but 100 percent of the personnel and operating expenses of three TMs hired by each TC. The only counterpart contribution to be made by each TC may be providing adequate office spaces for the TMs and their assistance. The government may also finance the replacement of existing and additional new facilities for training institutions, but it should be done under a program separate from the TC program, to induce new, and expansion of existing, training institutions. It is difficult

and inappropriate to estimate and finance additional training facilities only for a TC program. To date, there have been no training facilities catering to the TC training program only.

The financial costs of the short-term target for the TC program are estimated at a total of about 700 billion won. This estimation is based on an annual assistance of about 0.2 billion won per TC (personnel costs of 125 million won and operating activities of 75 million won). The total costs are equivalent to 50 percent of the Labor Ministry's total training expenditures of 1.4 billion won in 2007 and 58 percent of the Ministry's total expenses for SME training in 2007. In view of the importance of promoting the productivity of SMEs, this level of expenditures would be reasonable. The government's total financial assistance for the TC program per year and the training cost is equivalent to 450,000 won per trained worker, which is relatively lower than that in advanced countries. This level of unit cost is also much lower than other government investment programs to create more employment opportunities. The accelerated short-term TC program would produce an additional 14,000 jobs for TMs and assistants, which is about 20 percent of the government's target for creating new jobs in 2009. The economic viability of such in-service training programs has been well documented in literature already (Bartel 2000; Barret and O'Connell 2001; Groot 1995; Kim et al. 2003; Lee and Kim 2004).

3.3 Strengthening On-the-Job Training

The SMEs' preference for workplace training has been already pointed out; therefore, the government should repeal the discriminatory training-levy rebate clauses in the TC regulations against workplace training and help SMEs access the skills development opportunities that are tailored to their specific requirements (i.e., on-the-job training and in-plant training). Indeed, the government's capital assistance to training institutions should be confined to mobile training facilities since they are the major additional facilities needed for carrying out the TC program. The government should also encourage training institutions and TMs to spend more time and effort in planning and executing in-plant and mobile training programs. The proximity of public training institutions to the members of the training consortiums should be revisited and the establishment of new training centers considered.

3.4 Flexible Standards for Training Expenses and Simplified Administrative Processes

Government regulations regarding the TC program have become much more flexible, and the processes have been speedier since the program was mainstreamed in 2003. Training course proposals have been approved in shorter periods of time, and the government's approval for training-levy rebates have been obtained not upon completion of training courses, but at the time when the training proposals are approved. The training-levy rebates were paid directly to the training institutions if the involved SMEs requested it when applying for the rebates, and the ceilings for training-levy rebates have been raised a few times.

However, some rigid and unnecessary regulations still remain. These parts of the regulations should be revised or repealed soon to promote the TC programs. The government has been preoccupied with a large number of training outputs and economies of scale in promoting the TC program. As such, its regulations have been inflexible in the minimum size and length of training courses eligible for training-levy rebates. The minimum size and length had been 30 workers for 20 hours until the recent repeal. However, the amount of the training-levy rebate per worker trained still remains the same for any size and length of training course below 30 workers and 20 hours. For such courses, the sum of rebates does not cover direct costs of training. Such inflexible standards for the rebate do not take into account the small scale of training courses due to the small number of workers of TC-member SMEs and discourages SMEs to participate actively in the TC program. The minimum size and length of training courses for the rebate amount per worker should be adjusted downwards. The current standards are inconsistent with those for other training programs assisted by the government. For example, the recently launched SME In-Plant Study Group program receives government financial assistance as long as a study group has five workers or more and more than two meetings a week with no minimum hours required.

The government delegated most but not all tasks related to the TC program to the Human Resources Corporation, making the application process bureaucratic and cumbersome. Recognition of training institutions for participation in the TC program requires approval from the HR Corporation, but approvals for training courses to be eligible for training-levy rebates are done by the Labor Ministry's field offices. To obtain an approval for a training course eligible for training-levy rebates, 18 documents are required altogether. Under these circumstances, the TMs have become bureaucratic paper pushers rather than training managers and specialists.

IV. CONCLUSIONS AND POLICY IMPLICATIONS

To sustain growth with equity and strengthen international competitiveness in the midst of knowledge-based globalization, the Korean government concentrated on elevating the productivity of SMEs, which account for a large part of national production, exports, and employment. This challenge has been accentuated by the current world economic crisis. The financial crisis has turned into a sharp downfall of the real economy, and high unemployment is looming on the horizon. Studies across countries point out that retraining of unemployed workers is not an effective and efficient policy measure, whereas in-service training of currently employed workers helps prevent or mitigate unemployment prospects in a much more efficient way by increasing the labor productivity of SMEs and thereby strengthening their competitiveness.

For a long time, it was understood that SMEs did not invest in their human resources or technological development. However, it has been revealed that they are as interested as large enterprises. The reasons why they are less active in the training of their workers are partly their small scale and financial weaknesses, and partly the failure of training markets and the public goods nature of training (Booth and Snower 1996; Dowson 1997; Tanburn 2002). Many governments mobilized policy tools to make SMEs more active in developing their workers' skills and competences. Some governments used regulations (e.g., Sweden) or levies (France and most Latin American countries) to force SMEs to invest in their workers. Others used general taxes to finance external training (e.g., Mexico and Poland). Still, others used fiscal incentives to reward individual enterprises investing in their workers (e.g., Chile). Nothing worked well for SMEs. Financial incentives alone were not only insufficient to motivate SMEs, but also created an inequitable situation between large and small enterprises.

The TC pilot project reviewed in this paper demonstrated that once SMEs were given institutional/technical assistance through training specialists/managers, in addition to financial incentives, they were willing to adequately invest in their workers and were able to improve their productivity in an effective and sustainable manner. They also forestalled sharp retrenchments and unemployment of their workers. On the one hand, all enterprises including SMEs were required to take collective action to develop their workers' skills by making financial contributions to a common fund, and SMEs in particular were encouraged to organize themselves for training along the same

industry and location (i.e., into a training consortium). SMEs were assisted by their private associations or large enterprises in organizing themselves. On the other hand, SMEs were given a generously high level of rebates for their costs of training workers. The organized SMEs collectively hired training specialists to manage the training affairs of individual member SMEs, but the personnel and operating expenses of the training managers were financed on government accounts. TMs were entrusted to identify training needs, plan training activities, and select quality training suppliers on a competitive market basis, form strong partnership with relevant stakeholders, and learn from their own and peer organizations' experiences (Lee 2006).

Since mainstreamed, the TC program has not been as effective as expected in its achievements. Although the TC program has expanded rapidly in number, its contribution to training outputs of SMEs has not been impressive and substantial. Many factors must have contributed to the less than satisfactory performance of the TC program. The most outstanding reasons are that the TCs have turned into training supplier-centered organizations, with SMEs gradually losing interest and enthusiasm in training. To reinvigorate the TC program, the government will have to change the TC into SME-oriented TCs, and realign incentive systems for the TC program to be demand-driven and SME-centered rather than a administrative convenience for the government.

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Summary Findings

This paper is about the evolution of an innovative in-service training program and its effects in Korea. In many developing countries, small- and medium- scale enterprises (SMEs) play important roles in outputs, exports, and employment. Therefore, governments have used various policy instruments to promote productivity of SMEs through in-service training of their workers. However, those policy tools have not been effective to date. An exception to this general trend was found in Korea. The Government of Korea tested a pilot in-service training project and achieved significant results. The government encouraged SMEs to organize themselves into training consortiums (TCs) and provided them with institutional and technical assistance by financing employment of training specialists who manages human resources development of TC-member SMEs. Since mainstreaming, nevertheless, the progress of the TC program has been less than magnificent. Some factors responsible for the lukewarm achievements are analyzed and policy measures for reinvigorating the program have been suggested, together with some lessons learned.

HUMAN DEVELOPMENT NETWORK